

## Thursday, February 21

### Military Allergy Program

#### 0001 27<sup>th</sup> Annual Harold S. Nelson Allergy Immunology Symposium

7:20 am to 5:00 pm

Convention Center, Concourse Level, Room 210AB

Pre-registration and ticket required. No fee. Continental breakfast and box lunch included.

Credit: 8.00 CME / 9.60 CE

Moderator: Thomas J. Backenson, MD

7:20 Registration and Breakfast

7:50 Welcome and Overview

Thomas J. Backenson, MD

8:00 Morning Address: Update in Mast Cell Biology and Mast Cell Disorders

Todd Wilson, DO

9:00 Break

9:15 Fellow Research and Clinical Case Presentations

11:00 Vaccine Healthcare Center Update

Renata J.M. Engler, MD FAAAAI

11:30 Lunch and Bruton Lecture: VA Disability and Allergic Disease

Chester R. Zeiss, MD FAAAAI

1:00 Fellow Case Reports

2:45 Break

3:00 Military Aeroallergen Extract Laboratory Updates

Susan E. Kosisky, BS MHA

Consultants to the Surgeons General Updates

3:30 VHA Allergy Committee

Joseph S. Yusin, MD FAAAAI

3:45 Air Force

Stephen E. Scranton, MD

4:00 Army

Michael R. Nelson, MD PhD FAAAAI

4:15 Navy

4:30 Business Meeting and Awards Presentation

Upon completion of this session, participants should be able to: Describe current concepts in mast cell biology; Identify, evaluate and treat conditions along the spectrum of mast cell activation syndromes; Identify the VA disability evaluation process as it relates to those conditions commonly managed by the allergist.

## Friday, February 22

### Fellows-in-Training Program

#### 1011 FIT Symposium

7:00 am to 1:30 pm

Marriott Rivercenter, Third Floor, Grand Ballroom Salon G

Pre-registration and ticket required. No fee. Continental breakfast and box lunch included.

Credit: No CME / No CE

Moderator: Silvia Huebner, MD

7:00 Networking Breakfast Begins

8:00 Introductory Remarks

Mary Beth Fasano, MD FAAAAI

Silvia Huebner, MD

8:05 Networking Organizations

American Academy of Pediatrics Section on Allergy and Immunology

Anne-Marie A. Irani, MD FAAAAI

Federation of Regional, State and Local Allergy, Asthma and Immunology Societies

James M. Tracy, DO FAAAAI

Joint Council of Allergy, Asthma & Immunology

James L. Sublett, MD FAAAAI

New Allergist/Immunologist Assembly

David W. Hauswirth, MD FAAAAI

World Allergy Organization

Ruby U. Pawankar, MD PhD FAAAAI

8:15 American Board of Allergy and Immunology

Stephen I. Wasserman, MD FAAAAI

8:20 Atopic Dermatitis and Food Allergy

Jacqueline Pongracic, MD FAAAAI

8:50 Gastrointestinal Food Allergy

Robert A. Wood, MD FAAAAI

9:20 Break

9:35 Welcome from the AAAAI President

A. Wesley Burks, MD FAAAAI

9:45 Mechanisms of Food Allergy and Immune Tolerance

A. Wesley Burks, MD FAAAAI

10:15 Pollen-Food Allergy Syndrome

Thomas A.E. Platts-Mills, MD PhD FAAAAI

10:45 Food Allergy Evaluation: Oral Food Challenges in the Office Setting

Anna H. Nowak-Wegrzyn, MD FAAAAI

11:15 Oral Immunotherapy for Food Allergy

Kari Nadeau, MD PhD FAAAAI

11:45 Putting it Together: NIAID-Sponsored 2010 Guidelines for Managing Food Allergy

Scott H. Sicherer, MD FAAAAI

12:15 Networking Lunch

Upon completion of this session, participants should be able to: Describe the pathophysiology, initial evaluation and management of patients with food allergy including gastrointestinal food allergy, oral allergy syndrome and type I food allergy; Identify recent advances in the field of food allergy and have some familiarity with published guidelines for managing food allergy; Outline current and emerging treatment modalities for food allergic patients.

## Allied Health Course

### 1101 Advanced Practice Course

7:00 am to 3:30 pm

**Marriott Rivercenter, Third Floor, Grand Ballroom Salon H**

Pre-registration and ticket required. No fee. Box lunch included.

Credit: 6.50 CME / 7.80 CE

*Moderators: Edward O. Corazzalla, MS RPFT*

*Debra A. Sedlak, MSN CPNP*

*Nina A. Zimmermann, MSN RN ANP-BC AE-C*

**7:00 Introduction**

**7:15 Update on Rhinosinusitis**

*Nina A. Zimmerman, MSN RN ANP-BC AE-C*

**8:00 Update on Anaphylaxis**

*Gabriel Ortiz, MPAS PA-C DFAAPA*

**8:45 Update on Immunology**

*Mitchell H. Grayson, MD FAAAAI*

**9:30 Question & Answer**

**9:45 Break**

**10:00 Beyond the Basics: Desensitization Protocols in Office**

*Ashley Marie Hall, MD*

**10:45 Stinging Insect Hypersensitivity**

*Dewey F. Hahlbohm, PA-C AE-C*

**11:30 Question & Answer**

**11:45 Lunch Break**

**12:30 Changes in Pulmonary Function in World Trade Center Rescue Workers After 9/11**

*Edward O. Corazzalla, MS RPFT*

**1:15 Stress Management and Asthma Care: Why Should it Matter?**

*Gailen D. Marshall, Jr., MD PhD FAAAAI*

**2:00 Workshops (Attendees will choose one of the following sessions.)**

Pre-registration and ticket required. Fee: \$20.

Credit: 1.50 CME / 1.80 CE

**1101A: Punch Biopsy: Indications and Techniques**

**Marriott Rivercenter, Third Floor, Grand Ballroom I**

*Jeanette Arnold, MSN RN C-FNP*

*Don Cui, PA-C AE-C*

**1101B: Patch Testing**

**Marriott Rivercenter, Third Floor, Grand Ballroom Salon K**

*Karol G. Timmons, RN MS CPNP*

**1101C: Guidelines for IVIG and SCIG Infusions**

**Marriott Rivercenter, Third Floor, Grand Ballroom Salon J**

*Carla M. Duff, CPNP MSN*

*Debra A. Sedlak, MSN CPNP*

**1101D: Advanced Spirometry**

**Marriott Rivercenter, Third Floor, Grand Ballroom Salon H**

*Edward O. Corazzalla, MS RPFT*

*Maureen George, PhD RN AE-C*

Upon completion of this session, participants should be able to: Discuss concepts of asthma and clinical immunology including: Evidence-based practice concepts and application of the diagnosis and treatment of rhinosinusitis, anaphylaxis and stinging insect hypersensitivity; Discuss desensitization protocols for the office, stress management and asthma and PFT changes in 9/11 rescue workers.

## Medical Administrator Workshop

### 1102 Human Resources: Essentials of Employee Handbooks

8:00 to 9:15 am

**Marriott Rivercenter, Third Floor, Grand Ballroom Salon M**

Credit: 1.25 CME / 1.50 CE

*Moderator: Jeanette Booker*

**8:00 Essentials of Employee Handbooks**

*Denise C. Yarborough, Esq.*

Upon completion of this session, participants should be able to: Recognize how to write or update your employee handbook; Describe the legal ramifications of a poorly written handbook; Discuss how to keep your handbook fresh and up to date.

## Clinical Research Workshop

### 1103 Who Needs a Monitoring Plan? You Do!

8:00 to 9:15 am

**Marriott Rivercenter, Third Floor, Grand Ballroom Salon L**

Credit: 1.25 CME / 1.50 CE

*Moderator: Sally A. Noone, RN MSN CCRC*

*Pamela H. Steele, MSN CPNP AE-C*

Upon completion of this session, participants should be able to: Discuss the regulatory concerns in clinical research; Describe the components of a monitoring plan; Recognize the need for internal monitoring of all research projects.

## Chrysalis Project

### 1111 2013 Chrysalis Project Program

8:00 am to 12:00 pm

**Marriott Riverwalk, Second Floor, Alamo Ballroom Salon C**

Pre-registration and ticket required. No fee. Continental breakfast and box lunch included.

Credit: No CME / No CE

**7:30 Breakfast**

**8:00 Welcome and Introduction to A/I Training**

*Kimberly A. Risma, MD PhD FAAAAI*

**8:15 Welcome from the AAAAI President**

*A. Wesley Burks, MD FAAAAI*

**8:30 Food Allergy**

*A. Wesley Burks, MD FAAAAI*

**9:00 Immunodeficiency**

*Thomas A. Fleisher, MD FAAAAI*

**9:30 Eosinophilic Disorders**

*Amy D. Klion, MD*

**10:00 Break**

**10:15 Asthma**

*Rohit Katial, MD FAAAAI*

**10:45 Atopic Dermatitis**

*Donald Y.M. Leung, MD, PhD*

**11:15 Academic Career Paths**

*Kimberly A. Risma, MD PhD FAAAAI*

**11:30 Industry Career Paths**

*Daniel C. Adelman, MD FAAAAI*

**11:45 Private Practice Career Paths**

*Adina Kay Knight, MD FAAAAI*

## Annual Meeting Allied Health Sessions

Programmed by the AAAAI. Allied Health Sessions funded through an educational grant from Merck.

## TIGERS Program

### 1201 The 4<sup>th</sup> International Gastrointestinal Eosinophil Research Symposium (TIGERS)

8:00 am to 6:00 pm

Programmed by the AAAAI. Funded in part through educational grants from Abbott Nutrition, American Partnership for Eosinophilic Disorders (APFED), Campaign Urging Research for Eosinophilic Disease (CURED Foundation) and Meritage Pharma, Inc.

Convention Center, Grand Ballroom Level, Ballroom C1

Pre-registration and ticket required. Fee varies.

Credit: 6.25 CME / 7.40 CE

#### 8:00 Overview of Consensus Recommendations: The Structure of Controversy

Chris A. Liacouras, MD

#### Pathogenesis

Moderator: Seema Sharma Aceves, MD PhD FAAAAI

#### 8:20 Molecular Factors and Cells

Marc E. Rothenberg, MD PhD FAAAAI

#### 8:35 Genetics

Jonathan M. Spergel, MD PhD FAAAAI

#### 8:50 Fibrosis and Remodeling

Seema Sharma Aceves, MD PhD FAAAAI

#### New Diagnostic Modalities: What's Coming Down the Esophageal Pipeline?

Moderator: Simon P. Hogan, PhD

#### 9:05 Measurement of Histology

Margaret Collins, MD

#### 9:20 New Modalities to Survey the Esophagus and Eosinophils

Glenn Furuta, MD

#### 9:35 QOL and Practicalities of EoE in Adults

Nirmala Gonsalves, MD

#### 9:50 QOL and Practicalities of EoE in Pediatrics

James Franciosi, MD

#### 10:05 Break

#### Seven Talks on Cutting-Edge Research

Moderator: Marc E. Rothenberg, MD PhD FAAAAI

#### 10:25 Therapeutics

Alex Straumann, MD

#### 10:39 Tissue Remodeling

Steven J. Ackerman, PhD

#### 10:53 EoE Phenotypes

Juan Pablo Abonia, MD

#### 11:07 Endoscopic Modalities

Ikuo Hirano, MD

#### 11:21 Clinical Research

John Leung, MD

#### 11:34 Basic Research

Julie M. Caldwell, PhD

#### 11:47 Translational Research

Arjun Andrew Anilkumar, BS

#### Controversies in EoE: Pro-Con Debates

#### 2:00 Finding EoE Triggers: To Test or Not?

Moderator: Jonathan M. Spergel, MD PhD FAAAAI

#### Pro

Terri F. Brown-Whitehorn, MD

#### Con

Amir F. Kagalwalla, MD

#### 2:30 Biopsy vs. Symptoms

Moderator: Carla M. Davis, MD

#### Symptoms

Fred (Dan) McDaniel Atkins, MD FAAAAI

#### Bx

Katrina Jane Allen, MD PhD

#### 3:00 Question & Answer

#### 3:15 What is the Best Therapy? Diet or Swallowed CS

Moderator: Mark Holbreich, MD FAAAAI

#### Diet

Mirna Chehade, MD

#### CS

Robert P. Schleimer, PhD FAAAAI

#### 3:45 Is Eosinophil the Beginning or the End?

Moderator: Matthew J. Greenhawt, MD MBA MSC

#### Pro

Simon P. Hogan, PhD

#### Con

Evan Dellon, MD

#### 4:15 Session Summary and Concluding Remarks: EoE: Where are We and Where Do We Need to Go?

Bruce S. Bochner, MD FAAAAI

#### 4:30 Question & Answer

#### 4:45 Intermission

#### 5:00 Wine & Cheese Poster Session

Upon completion of this session, participants should be able to: Evaluate the current diagnostic tools and best diagnostic parameters for EoE; Summarize the current knowledge on the molecular and genetic pathogenesis of EoE; Explain the role of allergy testing and optimal therapeutic interventions in EoE.

#### 12:30 TIGERS Program Lunch Breakout Sessions (Attendees can choose one of the following one-hour sessions.)

Pre-registration and ticket required. Fee varies.

Credit: 1.00 CME / 1.20 CE

#### 1201A: Diagnostic Tools I Can Use: What is the Best For EoE and How to Best Monitor Remission

Marriott Rivercenter, Third Floor, Conference Room 11

Ikuo Hirano, MD

Javed Sheikh, MD FAAAAI

#### 1201B: BYOP: The Difficult EoE Patient

Marriott Rivercenter, Third Floor, Conference Room 12

Mark Holbreich, MD FAAAAI

Fred (Dan) McDaniel Atkins, MD FAAAAI

#### 1201C: How Do I Choose What Treatment to Use? Diet vs. Steroids, Pros and Cons

Marriott Rivercenter, Third Floor, Conference Room 13

Carla M. Davis, MD

Glenn Furuta, MD

#### 1201D: The Ins and Outs of Managing Dietary and Corticosteroid Therapy Over Time: Maintenance, Dosing, Mixing and Dietary Advancement

Convention Center, Concourse Level, Room 211

Juan Pablo Abonia, MD

Nirmala Gonsalves, MD

Alex Straumann, MD

#### 1201E: Basic to Translating the Bench to the Bedside: Do Animal

1201F continued on next page.



### Models Reflect Human Disease?

Marriott Rivercenter, Third Floor, Conference Room 15

Anil Mishra, PhD FAAAAI

#### 1201F: General Session Panel Discussion

Convention Center, Ballroom Level, Ballroom C1

Seema Sharma Aceves, MD PhD FAAAAI

Stephen J. Ackerman, PhD

Margaret Collins, MD

Chris A. Liacarus, MD

Marc E. Rothenberg, MD PhD FAAAAI

## Course

### 1202 Basic Aeroallergen Course

9:00 am to 5:00 pm

Convention Center, Concourse Level, Room 214D

Pre-registration and ticket required. Fee: \$250.

Credit: 7.00 CME / 8.40 CE

Moderator: Estelle Levetin, PhD FAAAAI

9:00 Introduction to Fungal Aerobiology

W. Elliott Horner, PhD LEED AP FAAAAI

9:50 Fungal Spore Morphology

Estelle Levetin, PhD FAAAAI

10:40 Hands-On Instruction; Question & Answer

12:00 Lunch Break

1:00 Introduction to Pollen Aerobiology

Peter Van De Water, PhD

1:40 Pollen Morphology

Richard W. Weber, MD FAAAAI

2:30 Setting Up a Sampling Station

Estelle Levetin, PhD FAAAAI

3:00 Hands-On Instruction; Question & Answer

Upon completion of this session, participants should be able to: Discuss the fundamentals of fungal and plant reproductive biology, aerobiology and air sampling; Describe the basic features of spore and pollen morphology; Identify the major airborne pollen types and fungal spores.

## Course

### 1203 Drug Hypersensitivity and Allergy: From Diagnosis to Treatment

9:00 am to 12:00 pm

Convention Center, Ballroom Level, Ballroom C3

Credit: 2.75 CME / 3.30 CE

Moderator: Anahita Dioun, MD FAAAAI

9:00 Diagnostic Skin Testing

Miguel Blanca, MD PhD

9:30 Basophil Activation Test

Marta M. Ferrer, MD PhD FAAAAI

10:00 Drug Challenges

Antonino G. Romano, MD PhD

10:30 Break

10:45 Antibiotic Reactions

Anahita Dioun, MD FAAAAI

11:15 Chemotherapy Reaction

Joana Caiado, MD

11:45 Question & Answer

Upon completion of this session, participants should be able to: Discuss the clinical presentation of drug allergy and hypersensitivity; Describe the use of skin testing and drug challenges; Interpret algorithms for the treatment and management of drug hypersensitivity.

## Course

### 1204 The Development of the Immune System: When Does Allergy Begin?

9:00 am to 12:00 pm

Convention Center, Ballroom Level, Ballroom C2

Credit: 2.75 CME / 3.30 CE

Moderator: Alkis Togias, MD FAAAAI

9:00 Development of Innate Immunity

Tobias Kollmann, MD PhD

9:25 Development of Adaptive Immunity

Charlotte Cunningham-Rundles, MD FAAAAI

9:50 Early Signs of Immune Deviation Toward Allergy

Patrick Holt, DSc

10:15 Break

10:30 Development of Innate and Adaptive Immune Responses in U.S. Children Living in the Inner City

James Gern, MD FAAAAI

10:55 The Role of the Environmental Microbiome in the Development of Allergy

Susan V. Lynch, PhD

11:20 The Role of Airway and Gut Microbiome in the Development of Allergy

Maria C. Jenmalm, PhD

11:45 Question & Answer

Upon completion of this session, participants should be able to: List stages of the innate and adaptive immune system development in humans and identify potential targets for immunologic interventions; List early events in the development of allergic immune responses; Discuss the possible roles of microbial exposure in the development or prevention of allergic diseases.

## Course

### 1205 Aspirin Exacerbated Respiratory Disease (AERD): From Observation to Pathophysiology to Treatment (Part 1) Clinical/Pathological Observations

(In Memory of Professor Andrew Szczeklik, 1938-2012)

9:00 am to 12:00 pm

Convention Center, Concourse Level, Room 214A

Credit: 2.75 CME / 3.30 CE

Moderator: Donald D. Stevenson, MD FAAAAI

#### 9:00 Overview of AERD: Clinical, Physiologic and Pharmacologic Characteristics

Andrew A. White, MD FAAAAI

#### 9:25 Sub-Phenotypes of Aspirin-Exacerbated Respiratory Disease (AERD)

Ewa Nizankowska-Mogilnicka, MD PhD

#### 9:50 Pathophysiologic Lessons: Studies from Aspirin Tolerant and Intolerant Rhinosinusitis with Nasal Polyps

Robert P. Schleimer, PhD FAAAAI

#### 10:15 Break

#### 10:30 Pathophysiologic Lessons: Immunohistochemical Analyses of Biopsies and Tissues

Chris J. Corrigan, MD PhD FAAAAI

#### 10:55 Pathophysiologic Lessons: Mediator Measurements and Idiosyncrasies of Arachidonic Acid Metabolism

Marek L. Kowalski, MD PhD

#### 11:20 Desensitization to Aspirin: Mechanisms of Efficacy

Katherine M. Woessner, MD FAAAAI

#### 11:45 Question & Answer

Upon completion of this session, participants should be able to: Discuss the natural history of AERD; Describe the potential microbial pathogenesis of AERD; Recognize the potential for lipid mediator-directed therapy in AERD.

## Course

### 1206 Developing Clinical Skills to Promote Adherence and Maximize Asthma Outcomes (Part 1)

9:00 am to 12:00 pm

Convention Center, Concourse Level, Room 210AB

Credit: 2.75 CME / 3.30 CE

Moderator: Marcus S. Shaker, MD MS FAAAAI

#### 9:00 Overview: Why are Patients Non-Adherent?

Bruce G. Bender, PhD FAAAAI

#### 9:30 Clinical Management Strategies to Promote Adherence of Pediatric Asthma Patients and Families

Cynthia S. Rand, PhD

#### 10:00 Methods to Diagnose Adherence Status

Andrew G. Weinstein, MD FAAAAI

#### 10:30 Break

#### 10:45 Shared Decision Making: A Communication Practice Proven to Enhance Adult Asthma Patients' Adherence and Outcomes

Sandra Wilson, PhD

#### 11:15 The Role of Motivational Interviewing to Help Guide Patients to Favorable Asthma Management Actions

Belinda Borrelli, PhD

#### 11:45 Question & Answer

Upon completion of this session, participants should be able to: Identify the reasons why patients are non-adherent with health care providers' plans; List objective means to diagnose adherence status; Demonstrate motivational interviewing and other patient-centered techniques to help patients and families follow asthma treatment plans.

## Course

### 1207 Diagnosis and Treatment of Angioedema Without Urticaria

9:00 am to 12:00 pm

Convention Center, Concourse Level, Room 217AB

Credit: 2.75 CME / 3.30 CE

Moderator: Marco Cicardi, MD

#### 9:00 Treatment of Angioedema

Bruce L. Zuraw, MD

#### 9:30 Kinin Generation in Angioedema

Allen P. Kaplan, MD FAAAAI

#### 10:00 Break

#### 10:15 Mechanisms of Histamine Release in Angioedema

Massimo Triggiani, MD

#### 10:45 Sporadic Angioedema

Marco Cicardi, MD

#### 11:15 Hereditary Angioedema

Konrad Bork, MD

#### 11:45 Question & Answer

Upon completion of this session, participants should be able to: Differentiate angioedema without urticaria; Derive correct therapy out of the different clinical presentations; List laboratory tests to be used in patients with angioedema.

## Course

### 1208 COFSTER: Community-Based Forum for Systematic Team Evaluation Aimed at Remission of Cough

9:00 am to 5:00 pm

Convention Center, Concourse Level, Room 217CD

Credit: 6.75 CME / 8.20 CE

Moderator: Arvind Madaan, MD FAAAAI

#### 9:00 Cough Pathophysiology: Recent Advances in Understanding of Cough Receptors and Pathways

Brendan J. Canning, PhD

#### 9:40 Evolutionary Basis of Cough Reflex

Stuart Brooks, MD

#### 10:20 Break

#### 10:30 Cough Pathophysiology: Upper Airway Perspective (Including Idiopathic Cough): Is it Laryngeal Hypersensitivity?

Ronald C. Balkissoon, MD MSc

#### 11:10 Cough Pathophysiology: Lower Airway Perspective (Including Mechanics of Cough Variant Asthma)

Diane Loughheed, MD MSc

#### 11:50 Question & Answer

#### 12:10 Lunch Break

#### 1:10 Current and Emerging Diagnostics in Chronic Cough

Ronald C. Balkissoon, MD MSc

#### 1:50 Chronic Cough: Overview of Management

Peter Diczpinigaitis, MD

#### 2:30 Break

#### 2:45 Cough Center Experience in Private Practice

Mandel R. Sher, MD FAAAAI

#### 3:25 Cough Center Experience in an Academic Center

Ronald C. Balkissoon, MD MSc

#### 4:05 Seeing is Believing: Why Visualization Matters in Chronic Cough

Gary J. Stadtmauer, MD FAAAAI

#### 4:45 Question & Answer

Upon completion of this session, participants should be able to: Present state-of-the-art understanding of cough pathophysiology; Discuss appropriate use of available and investigational diagnostic tools; Encourage use of direct visualization (rhinolaryngoscopy) by allergists who can be positioned as community cough experts.

## Course

### 1209 Difficult Cases (Part 1)

9:00 am to 12:00 pm

Convention Center, River Level, Room 006

Pre-registration and ticket required. Fee: \$10.

Credit: 2.75 CME / 3.20 CE

Moderators: Dorothy S. Cheung, MD FAAAAI

Pramod S. Kelkar, MD FAAAAI

#### 9:00 Contact Dermatitis

Luz S. Fonacier, MD FAAAAI

Druhan Howell, MD

#### 9:35 Ocular Allergy

Leonard Bielory, MD FAAAAI

Paige G. Wickner, MD

#### 10:10 Break

#### 10:30 Drug Desensitization

Mariana C. Castells, MD PhD FAAAAI

David R. Stukus, MD FAAAAI

#### 11:05 Vaccines: Reactions or Responses

Renata J.M. Engler, MD FAAAAI

Wan-Yin Chan, MD

#### 11:40 Question & Answer

Upon completion of this session, participants should be able to: Identify and address difficulties in the clinical management of contact dermatitis, ocular allergy and drug desensitization.

## Course

### 1210 Advances and Novel Approaches in the Genetics of Allergic Disease: 21<sup>st</sup> Century (Part 1)

9:00 am to 12:00 pm

Convention Center, River Level, Room 007

Credit: 2.75 CME / 3.30 CE

Moderator: Ulus Atasoy, MD FAAAAI

#### 9:00 Keeping Pace with Technology: What the Allergy Researcher Should Know

Gurjit K. Khurana Hershey, MD PhD FAAAAI

#### 9:25 Making Sense of Genome-Wide Association Studies: Insights from a Meta-Analysis Study

Dan L. Nicolae

#### 9:50 The Filaggrin Story: A Tale of Gene Discovery and Function

Sara Brown, MBChB MD

#### 10:15 Break

#### 10:30 Genome Sequencing and Rare Variants

Kathleen C. Barnes, PhD FAAAAI

#### 10:55 Studying Missing Heritability in Asthma

Carol Ober, PhD

#### 11:20 Integrating Genetics and Asthma Heterogeneity: Personalized Medicine and Translational Research

Eugene R. Bleeker, MD FAAAAI

#### 11:45 Question & Answer

Upon completion of this session, participants should be able to: Recognize recent technologic advances and future directions in genetics approaches, including experimental platforms, database resources and data integration strategies; Analyze the limitations and successes of genome-wide association studies (the applications of whole genome sequencing to identify rare variants, and the concept of "missing heritability"); Describe how genetic approaches provide insight into asthma phenotypes and contribute to personalized treatment.



## Course

### 1211 Allergy Diagnostics and Immunotherapy: The Nuts, the Bolts, the Science and the Art (Part 1)

9:00 am to 12:00 pm

**Convention Center, River Level, Room 008**

Pre-registration and ticket required. No fee.

Credit: 1.00 CME / 1.20 CE

*Moderator: Ira Finegold, MD FAAAAI*

*Michael S. Tankersley, MD FAAAAI*

#### 9:00 Molecular Allergy Diagnostic: Who, Why, When and What

*Robert G. Hamilton, PhD D.ABMLI FAAAAI*

#### 9:30 Accelerated Immunotherapy Schedules: More Convenient? Just as Safe?

*David A. Khan, MD FAAAAI*

#### 10:00 Hands-On Workshops (Attendees will rotate between two workshops.)

Pre-registration and ticket required. Fee: \$25.

Credit: 2.00 CME / 2.40 CE

##### 1211A/C: Allergen Extract Preparation and Take the Media Fill Test

**Convention Center, River Level, Room 004**

*Michael S. Blaiss, MD FAAAAI*

*Susan E. Kosisky, MHA*

*Bryan L. Martin, DO FAAAAI*

*Cecilia Mikita, MD MPH FAAAAI*

*Michael R. Nelson, MD PhD FAAAAI*

##### 1211B/D: Practical Aspects of Allergen Immunotherapy: Prescription Writing

**Convention Center, River Level, Room 005**

*Christopher W. Calabria, MD*

*Jose E. Jereda, MD*

*Richard W. Weber, MD FAAAAI*

Upon completion of this session, participants should be able to: Discuss the different options and application possibilities in U.S. of the new *in vitro* diagnostic techniques; Discuss rush and cluster immunotherapy schedules, premedication and patient selection; Propose immunotherapy schedule adjustments after a gap in administration, adverse reactions and switching from one manufacturer to another.

## Course

### 1212 Technology in the Clinical Practice Made Ridiculously Simple

9:00 am to 12:00 pm

**Convention Center, Concourse Level, Room 214BC**

Credit: 3.00 CME / 3.40 CE

*Moderator: Tao Le, MD MHS FAAAAI*

#### 9:00 What Can Technology Do for Your Practice

*Tao Le, MD MHS FAAAAI*

#### 9:20 Making the Technology Work and Pay Off

*David J. Shulan, MD FAAAAI*

#### 9:40 EHRs and the Meaningful Use of Life

*Russell B. Leftwich, MD FAAAAI*

#### 10:10 Break

#### 10:20 iPhones, iPads and Androids, Oh My!

*Melinda M. Rathkopf, MD FAAAAI*

#### 10:50 Social Media Tools for Marketing and Communications

*Vesselin Dimov, MD*

#### 11:20 Practice Management Systems and Other Office Automation Tools

*Linda D. Green, MD FAAAAI*

#### 11:50 Question & Answer

Upon completion of this session, participants should be able to: Describe EHRs, practice management systems and office automation technologies appropriate for the clinical practice; Explain the role of mobile technologies in the practice; List web and social media tools for practice marketing and communications.

## Course

### 1213 NHLBI: Beyond FEV1: Lung Function Measures in Assessment of Asthma

9:00 am to 12:00 pm

**Convention Center, Concourse Level, Room 213AB**

Credit: 2.75 CME / 3.30 CE

*Moderator: Leonard B. Bacharier, MD FAAAAI*

*James P. Kiley, PhD*

#### 9:00 Beyond FEV1: Lung Function Tests to Diagnose Adult and Pediatric Asthma: Diagnostic Pulmonary Function Testing: Spirometry (FEV1, FVC), Airway Hyper-Responsiveness, Challenge Testing and Plethysmography

*Wayne Joseph Morgan, MD*

#### 9:20 What Measurements to Use When Monitoring and Managing Adult and Pediatric Asthma and Why: What to Do if There is Discordance of Asthma Symptoms and Lung Function Testing

*Leonard Bacharier, MD FAAAAI*

*Anne L. Fuhlbrigge, MD MS*

#### 10:10 Break

#### 10:25 Measures of Airways Disease in the Diagnosis and Management of the Wheezy Preschooler: Can Asthma be Predicted?

*Theresa W. Guilbert, MD*

#### 11:15 Question & Answer

Upon completion of this session, participants should be able to: Describe the role of lung function testing in the diagnosis of asthma, and the differential diagnosis in difficult-to-treat wheezing; Discuss the role of lung function testing in young children (infants/preschoolers).

## Medical Administrator Workshop

### 1301 Coding Audit

9:30 to 10:45 am  
**Marriott Rivercenter, Third Floor, Grand Ballroom Salon M**  
 Credit: 1.25 CME / 1.50 CE  
*Moderator: John D. Milewski, Med. Admin.*  
*Teresa Thompson, CPC CMSCS CCC*

Upon completion of this session, participants should be able to: Integrate knowledge regarding coding audits; Describe options for responding to a negative audit report.

## Clinical Research Workshop

### 1302 FDA Audit: What's Involved and How Do You Prepare?

9:30 to 10:45 am  
**Marriott Rivercenter, Third Floor, Grand Ballroom Salon L**  
 Credit: 1.25 CME / 1.50 CE  
*Moderator: Kathy L. Pinzone, RN AE-C CCRC*  
*Kim E. Mudd, MSN CCRP*

Upon completion of this session, participants should be able to: Discuss the various types of FDA audits; Discuss what is included in an FDA audit; Describe methods to keep a clinical trial site prepared for an FDA audit.

## Medical Administrator Workshop

### 1401 Financial: How Do We Use Information Applicable to Operations, Benchmarks and RVUs, Etc.

11:00 am to 12:15 pm  
**Marriott Rivercenter, Third Floor, Grand Ballroom Salon M**  
 Credit: 1.25 CME / 1.50 CE  
*Moderator: John D. Milewski, Med. Admin.*  
*Larry Armor, PA MHA*

Upon completion of this session, participants should be able to: Interpret financial data; Recognize where to find benchmarking data; Discuss how to calculate RVU's.

## Clinical Research Workshop

### 1402 Environmental Control Measures

11:00 am to 12:15 pm  
**Marriott Rivercenter, Third Floor, Grand Ballroom Salon L**  
 Credit: 1.25 CME / 1.50 CE  
*Moderator: James L. Sublett, MD FAAAAI*  
*James L. Sublett, MD FAAAAI*

Upon completion of this session, participants should be able to: Implement evidence-based research when discussing specific targeted interventions to reduce allergen exposure.

## Clinical Research Workshop

### 1403 Managing Atopic Dermatitis

11:00 am to 12:15 pm  
**Marriott Rivercenter, Third Floor, Grand Ballroom Salon K**  
 Credit: 1.25 CME / 1.50 CE  
*Moderator: Lynda C. Schneider, MD FAAAAI*  
*Karol G. Timmons, RN MS CPNP*

Upon completion of this session, participants should be able to: Interpret pathophysiology, causes and management of atopic dermatitis (AD); Discuss common treatments and therapies for AD; List common issues in family management of atopic dermatitis.

## Medical Administrator Workshop

### 1501 Ask the Experts Roundtable Luncheon

12:30 to 1:45 pm  
**Marriott Riverwalk, Second Floor, Alamo Ballroom Salon AB**  
 Pre-registration and ticket required. Fee: \$40.  
 Credit: 1.25 CME / 1.50 CE  
*Moderator: Jeanette Booker*  
*Teresa Thompson, CPC CMSCS CCC*  
*Denise C. Yarborough, Esq.*

Upon completion of this session, participants should be able to: Describe skills of a strong administrator; Recognize practice problems and develop solutions; Identify practice issues that they are facing.

## Program Directors' Business Meeting

2:00 to 4:00 pm  
**Convention Center, Concourse Level, Room 213AB**  
 All Program Directors and Co-Directors are invited to attend this business meeting.

## Course

### 1601 Career Development for the Junior Investigator

2:00 to 5:00 pm  
**Convention Center, Concourse Level, Room 210AB**  
 Credit: 2.75 CME / 3.20 CE  
*Moderator: Nora A. Barrett, MD*

#### 2:00 Identifying and Developing Great Mentors and Great Projects

*Susan M. MacDonald, MD FAAAAI*  
*Wayne G. Shreffler, MD PhD FAAAAI*

#### 2:35 Grantsmanship and the NIH

*Priti Mehrotra, MD*  
*Alkis Togias, MD FAAAAI*

#### 3:10 Break

#### 3:30 Preparing a K Award Application: Avoiding Common Pitfalls

*David H. Broide, MBChB FAAAAI*  
*R. Stokes Peebles, Jr., MD FAAAAI*  
*Marsha A. Wills-Karp, PhD*

#### 4:05 Transitioning to Independence: You Got Your K, Now What?

*Gurjit K. Khurana Hershey, MD PhD FAAAAI*  
*Thomas A.E. Platts-Mills, MD PhD FAAAAI*  
*Sally E. Wenzel, MD FAAAAI*

#### 4:40 Question & Answer

Upon completion of this session, participants should be able to: Describe how to identify, secure, and develop productive mentoring relationships; Identify NIH funding priorities; Describe the process of grant review, and common pitfalls in preparing K08, K23, and R01 applications.

## Annual Meeting Allied Health Sessions

*Programmed by the AAAAI. Allied Health Sessions funded through an educational grant from Merck.*



## Course

### 1602 Update on Drug Allergy: Penicillin and Beyond

2:00 to 5:00 pm

Convention Center, Ballroom Level, Ballroom C2

Credit: 2.75 CME / 3.30 CE

Moderator: Antonino G. Romano, MD PhD

- 2:00 Overview of Penicillin and Beta-Lactam Allergy: Epidemiology, Cross-Reactivity, Costs and Utility of Penicillin Skin Testing**  
*Roland Solensky, MD FAAAAI*
- 2:25 Penicillin and Other Beta-Lactam Diagnostic Testing: Skin Testing, In Vitro Testing and Challenges**  
*Miguel A. Park, MD*
- 2:50 Challenging Cases of Beta-Lactam Hypersensitivity**  
*Eric M. Macy, MD FAAAAI*
- 3:15 Break**
- 3:30 Update on Hypersensitivity Reactions to RCM**  
*Paul A. Greenberger, MD FAAAAI*
- 3:55 Evaluation and Management of Hypersensitivity Reactions to Monoclonal Antibodies**  
*David Sloane, MD*
- 4:20 ASA/NSAID Hypersensitivity Without AERD**  
*Katharine M. Woessner, MD FAAAAI*
- 4:45 Question & Answer**

Upon completion of this session, participants should be able to: Evaluate various aspects of penicillin allergy, including diagnostic testing, cross-reactivity with other beta-lactams, and utility of penicillin skin testing; Discuss recent advances in diagnosis and management of immediate and delayed reactions to RCM; Analyze different types of reactions to monoclonal antibodies, and the role of skin testing and desensitization.

## Course

### 1603 Food Allergy and Its Relation to Anaphylaxis

2:00 to 5:00 pm

Convention Center, Concourse Level, Room 217AB

Credit: 2.75 CME / 3.30 CE

Moderators: Motohiro Ebisawa, MD PhD FAAAAI

Anne-Marie A. Irani, MD FAAAAI

Mario Geller, MD FAAAAI

Nelson A. Rosario, MD PhD FAAAAI

- 2:00 Changing Concepts of Food Allergy in the Past Three Decades**  
*Hugh A. Sampson, MD FAAAAI*
- 2:25 Early Dietary Exposure to Food Allergens**  
*Mona I. Kidon, MD*
- 2:50 Food Allergen Sensitization and Its Relation to Atopic Eczema**  
*George Du Toit, MD FAAAAI*
- 3:15 Break**
- 3:30 Oral vs. Sublingual Immunotherapy for Food Allergy**  
*A. Wesley Burks, MD FAAAAI*
- 3:55 Oral Immunotherapy for Anaphylactic Food Allergies**  
*Motohiro Ebisawa, MD PhD FAAAAI*
- 4:20 Oral Mite Anaphylaxis**  
*Mario Sanchez-Borges, MD FAAAAI*
- 4:45 Question & Answer**

Upon completion of this session, participants should be able to: Discuss concept change on food allergy in the past three decades; Explain onset of food allergy and importance of dietary exposure; Describe food associated anaphylaxis and its countermeasures.

## Course

### 1604 NIAID Clinical Research: Advances in Food Allergy, Asthma and Atopic Dermatitis

2:00 to 5:00 pm

Convention Center, Ballroom Level, Ballroom C3

Credit: 2.75 CME / 3.30 CE

Moderator: Marshall Plaut, MD FAAAAI

- 2:00 Food Allergen Immunotherapy and Tolerance Induction**  
*Stacie M. Jones, MD*
- 2:25 Future Directions in Food Allergen Immunotherapy**  
*Wayne G. Shreffler, MD PhD FAAAAI*
- 2:50 Abnormalities in Arachidonic Acid Products in Patients with Aspirin-Exacerbated Respiratory Disease**  
*Joshua A. Boyce, MD FAAAAI*
- 3:15 Break**
- 3:30 Phenotypic Analyses of Inner City Children with Asthma Symptoms**  
*William W. Busse, MD FAAAAI*
- 3:55 Atopic Dermatitis and Reduced Cutaneous Immune Responses**  
*Donald Y.M. Leung, MD PhD FAAAAI*
- 4:20 Atopic Dermatitis, Vitamin D and Antimicrobial Responses**  
*Lynda C. Schneider, MD FAAAAI*
- 4:45 Question & Answer**

Upon completion of this session, participants should be able to: Discuss current and future approaches to immunotherapy to treat food allergy; Discuss emerging concepts of asthma phenotypes in children and the systemic immunologic effects of airway allergen exposure; List cutaneous immune response abnormalities that have been identified in patients with atopic dermatitis.

**Course**

**1605 Aspirin Exacerbated Respiratory Disease (AERD): From Observation to Pathophysiology to Treatment (Part 2): Basic Mechanisms of AERD: From Mouse to Man to Novel Treatment**

(In Memory of Professor Andrew Szczeklik, 1938-2012)

2:00 to 5:00 pm

Convention Center, Concourse Level, Room 214A

Credit: 2.75 CME / 3.30 CE

Moderator: Larry Borish, MD FAAAAI

**2:00 Mechanisms of AERD: Lessons from Animal Models: More Than One Way to Get There**

Joshua A. Boyce, MD FAAAAI

**2:25 Lipid Mediators as Therapeutic Targets in AERD**

Sven-Erik Dahlén, MD PhD

**2:50 Genetics of AERD: Candidate Gene and Unbiased Approaches**

Hae-Sim Park, MD PhD

**3:15 Break**

**3:30 Mechanisms of AERD: Identification of New Leukotriene Receptors as Molecular Targets**

Yoshihide Kanaoka, MD PhD

**3:55 Mechanisms of AERD: Convergence of the Leukotriene and Prostaglandin Pathways at the Platelet/Leukocyte Complex**

Tanya M. Laidlaw, MD

**4:20 Clinical Trials in AERD: Mechanism-Based Interventions**

Tanya M. Laidlaw, MD

**4:45 Question & Answer**

Upon completion of this session, participants should be able to: Explain the natural history of AERD; Describe the potential genetic pathogenesis of AERD; Recognize the potential for lipid mediator-directed therapy in AERD.

**Course**

**1606 Developing Clinical Skills to Promote Adherence and Maximize Asthma Outcomes (Part 2)**

2:00 to 5:00 pm

Convention Center, Concourse Level, Room 211

Credit: 3.00 CME / 3.60 CE

**Hands-On Instruction**

Belinda Borrelli, PhD

Upon completion of this session, participants should be able to describe medication adherence strategies such as cueing, diaries, reinforcement and tailoring.

**Course** ▼

**1607 Finding a Job and Getting Started in Practice**

2:00 to 5:00 pm

Convention Center, Concourse Level, Room 214BC

Credit: 3.00 CME / 3.40 CE

Moderators: Tao Le, MD MHS FAAAAI

Brian A. Smart, MD FAAAAI

**2:00 Overview and Introductions**

Tao Le, MD MHS FAAAAI

**2:05 Finding a Job and Negotiating the Agreement**

Tao Le, MD MHS FAAAAI

**2:40 Getting Licensed and Transitioning into Practice**

Brian A. Smart, MD FAAAAI

**2:55 Secrets of an Efficient Allergy Practice**

David L. Patterson, MD MBA FAAAAI

**3:30 Break**

**3:40 Practice Finances 101**

Marshall P. Grodofsky, MD FAAAAI

**4:15 Marketing Your Practice and Referral Development**

Stanley M. Fineman, MD MBA FAAAAI

**4:50 Question & Answer**

Upon completion of this session, participants should be able to: Explain how to identify and join the right practice opportunity; Discuss the fundamentals of office management; Identify strategies for marketing a practice and building a patient base.

**Course**  

**1608 Endoscopic Evaluation and Management of Chronic Rhinosinusitis (Pre- and Post-Surgery) Including Cultures**

2:00 to 5:00 pm

Convention Center, Concourse Level, Room 216A

Pre-registration and ticket required. Fee: \$25.

Credit: 2.75 CME / 3.30 CE

Moderator: Wellington S. Tichenor, MD FAAAAI

**2:00 Anatomy of the Sinuses: Surgical Evaluation**

Robert Kern, MD

**2:50 Radiology of the Sinuses**

S. James Zinreich, MD

**3:40 Break**

**3:55 Endoscopic Evaluation of the Sinuses**

Wellington S. Tichenor, MD FAAAAI

**4:45 Question & Answer**

Upon completion of this session, participants should be able to: Describe the anatomy of the sinuses and related structures and identify pathology on CT scan; Perform endoscopy in patients with CRS as well as cultures of middle meatus and/or sinuses; Recall indications for surgery and complications of surgery.

**Course**    

**1609 Difficult Cases (Part 2)**

2:00 to 5:00 pm  
**Convention Center, River Level, Room 006**  
 Pre-registration and ticket required. Fee: \$10.  
 Credit: 2.75 CME / 3.20 CE  
*Moderators: David W. Hauswirth, MD FAAAAI*  
*Michael H. Land, MD, FAAAAI*

**2:00 Chronic Sinusitis**

*Jonathan Corren, MD*  
*David R. Naimi, DO*

**2:35 Oral Food Challenges**

*Edwin Kim, MD MS*  
*Jennifer S. Kim, MD FAAAAI*

**3:10 Break**

**3:30 Immunosuppressive Therapy**

*Ivan Chinn, MD*  
*Lanny Rosenwasser, MD FAAAAI*

**4:05 Mystery Difficult Cases**

*Jason W. Caldwell, DO*  
*Kevin J. Kelley, MD FAAAAI*

**4:40 Question & Answer**

Upon completion of this session, participants should be able to: Identify and address difficulties in the clinical management of chronic sinusitis, oral food challenges and immunosuppressive therapy.

**Course** 

**1610 Advances and Novel Approaches in the Genetics of Allergic Disease: 21<sup>st</sup> Century (Part 2)**

2:00 to 5:00 pm  
**Convention Center, River Level, Room 007**  
 Credit: 2.75 CME / 3.30 CE  
*Moderator: Kathleen C. Barnes, PhD FAAAAI*

**2:00 Introduction to Gene-Environment Interactions in Asthma: Nuisance or Opportunity?**

*Donata Vercelli, MD*

**2:25 Environmental Exposures in Asthma: Regulation of Gene Expression by Micro RNAs**

*Avrum Spira, MD MSc*

**2:50 The Epigenome and Asthma: Interactions Between Imprinted Genes and Environmental Exposures**

*Rachel L. Miller, MD FAAAAI*

**3:15 Break**

**3:30 The Microbiome and Inflammation**

*Gary B. Huffnagle, PhD*

**3:55 The Future of Environmental Genomics and Allergic Disease**

*David Schwartz, MD*

**4:20 Genetics of Host/Virus Interactions and Asthma**

*James E. Gem, MD FAAAAI*

**4:45 Question & Answer**

Upon completion of this session, participants should be able to: Describe current knowledge of how gene-environment interactions impact transcriptional and post-transcriptional events that regulate gene expression and functional outcomes relevant to allergic disease; Discuss how the genetics of the airway and gut microbiome contribute to inflammatory processes; Analyze future directions in environmental epigenomics and the feasibility of using systems-based genetics approaches to study environmental exposures in humans.

**Course**  

**1611 Allergy Diagnostics and Immunotherapy: The Nuts, the Bolts, the Science and the Art (Part 2)**

2:00 to 5:00 pm  
**Convention Center, River Level, Room 008**  
 Pre-registration and ticket required. No fee.  
 Credit: 1.00 CME / 1.20 CE  
*Moderators: Désirée E.S. Larenas Linnemann, MD FAAAAI*  
*Punita Ponda, MD FAAAAI*

**2:00 Immunotherapy for Food Allergy**

*Kari Nadeau, MD PhD FAAAAI*

**2:30 Future of Inhalant Allergen Immunotherapy: Intralymphatic, Epicutaneous and Peptide Fragments: Are We Just Scratching the Surface?**

*Thomas M. Kundig, MD*

Upon completion of this session, participants should be able to: Expose several new forms of allergen immunotherapy; Discuss positive and negative findings of their use in clinical trials and argue if they might become available in the future; Discuss the usefulness of immunotherapy in food allergy and the current status of these investigations.

**3:00 Hands-On Workshops (Attendees will rotate between two workshops.)**

Pre-registration and ticket required. Fee: \$25.  
 Credit: 2.00 CME / 2.40 CE

**1611A/C: Allergy Skin Testing**

**Convention Center, River Level, Room 004**

*Moderators: Warner Carr, MD FAAAAI*

*Linda Cox, MD FAAAAI*

This session will have three 10-minute lectures followed by 30-minutes of hands-on instruction. Attendees will choose one of the three hands-on activities.

**Skin Prick/Puncture Tests and Devices**

*John Oppenheimer, MD FAAAAI*

**Skin Prick/Puncture Tests, Allergen and Proficiency Testing**

*Sten K.G. Dreborg, MD PhD FAAAAI*

**Skin Tests in Research**

*Peter Creticos, MD FAAAAI*

Upon completion of this session, participants should be able to: Compare the different devices and other equipment and their characteristics; Explain the importance of standardized allergen extracts for the test result; Demonstrate the importance of standardized testing technique and its control by proficiency testing.

**1611B/D: Coding, Documentation and ABCs of Regulatory Guidelines**

**Convention Center, River Level, Room 005**

*Donald W. Aaronson, MD FAAAAI*

*David A. Brown, MD*

*Gary N. Gross, MD FAAAAI*

Upon completion of this session, participants should be able to: Apply adequately the coding, documentation and regulatory guidelines for immunotherapy.



**Course**  

**1612 Interpretation of Pulmonary Function Tests**

2:00 to 5:00 pm

**Convention Center, Concourse Level, Room 212AB**

Pre-registration and ticket required. Fee: \$40.

Credit: 3.00 CME / 3.50 CE

*Moderator: Mark F. Sands, MD FAAAAI*

**2:00 Introductory Remarks**

**2:05 Audience Response System Pre-Test**

**2:10 Lung Pathophysiology and the PFT**

*Mark F. Sands, MD FAAAAI*

**2:35 Performing PFT Video Demonstration**

*John M. Weiler, MD FAAAAI*

**2:45 Putting It All Together: From Physiology to Interpretation**

*Donald P. Tashkin, MD*

**3:15 Audience Response System Post-Test**

**3:20 Question & Answer**

**3:25 Break**

**3:30 Hands-On Workshop**

*Donald Cockcroft, MD FAAAAI*

*Meredith C. McCormack, MD*

*Riccardo Polosa, MD PhD FAAAAI*

*Mark F. Sands, MD FAAAAI*

*Donald P. Tashkin, MD*

*John M. Weiler, MD FAAAAI*

Upon completion of this session, participants should be able to: Describe the physiology of restrictive and obstructive pulmonary function abnormalities; Recognize simple and complex pulmonary dysfunction findings on pulmonary function tests; Demonstrate ability to independently interpret PFTs including flow-volume loop pattern recognition and technical flaws therein.

**Medical Administrator Workshop** 

**1711 Evaluation and Management Coding Essentials**

2:00 to 3:15 pm

**Marriott Rivercenter, Third Floor, Grand Ballroom Salon M**

Credit: 1.25 CME / 1.50 CE

*Moderator: John D. Milewski, Med. Admin.*

*Teresa Thompson, CPC CMSCS CCC*

Upon completion of this session, participants should be able to: Discuss the various levels for E&M Codes; Interpret and review physician orders for coding; Apply an understanding of E&M guidelines.

**Clinical Research Symposium** 

**1712 FDA Guidance of Clinical Research: Risk Based Monitoring Plans**

2:00 to 3:15 pm

**Marriott Rivercenter, Third Floor, Grand Ballroom Salon L**

Credit: 1.25 CME / 1.50 CE

*Moderator: Kim E. Mudd, RN MSN CCRP*

**2:00 Clinical Research Monitoring: How to Integrate Risk-Based Methods**

*Sarah D. Knorr, RN MPH CCRP*

**2:25 Clinical Research Monitoring Plans: The Current Status**

*Kathy L. Pinzone, RN AE-C CCRC*

**2:50 Clinical Research Monitoring**

*Pamela H. Steele, MSN CPNP AE-C*

Upon completion of this session, participants should be able to: Describe existing monitoring methods and their application; Discuss the differences between risk-based monitoring and traditional monitoring methods; Discuss ways to integrate risk-based monitoring methods.

**Allied Health Plenary**   

**1801 Technology in the Office: Improving Outcomes While Containing Cost**

4:00 to 5:15 pm

**Marriott Riverwalk, Second Floor, Alamo Ballroom Salon ABC**

Credit: 1.25 CME / 1.50 CE

*Moderator: Maureen George, PhD RN AE-C*

**4:00 Opening Remarks**

*Maureen George, PhD RN AE-C*

**4:15 Benefits and Risks of Technology**

*Denise C. Yarborough, Esq.*

**4:45 How Technology Can Meet the Needs of the Geriatric Patient**

*Sameer K. Mathur, MD PhD FAAAAI*

Upon completion of this session, participants should be able to: Describe the impact technology can have on enhancing the patient/practice interaction; Recognize the impact technology can have on the geriatric population.

**AAAAI Federation of RSLAAIS Assembly Forum and Business Meeting**

4:45 to 6:30 pm

**Convention Center, River Level, Room 008**

The Federation of Regional, State and Local Allergy, Asthma and Immunology Societies invites all AAAAI members and delegates to attend this meeting. No fee. No pre-registration required.

**4:45 Wine and Cheese Reception**

**5:10 Official RSLAAIS Assembly Business Meeting**

*James M. Tracy, DO FAAAAI*

*Sharon Markovics, MD FAAAAI*

*A. Wesley Burks, MD FAAAAI*

**5:20 "A How-to Guide for Advocating for our Patients"**

*Lynn Morrison*

*Other Members of the AAAAI Advocacy Committee*

**5:35 Building Bridges- Experience with Allergy, Asthma and Immunology related Lay (Patient-based) Organizations**

*Frank Twarog, MD PhD FAAAAI*

**5:45 Experience from the Field: Local Issues- National Impact!**

*James H. Sussman, DO FAAAAI*

*Andrew "Drew" Murphy, MD FAAAAI*

**6:05 Open "Mic" Q & A**

*RSLAAIS Chair, RSLAAIS Vice Chair, Governors; JCAAI Representative*

**6:20 Where do we go in 2013 and beyond?-Stay Tuned**

*Sharon Markovics, MD FAAAAI*

*James M. Tracy, DO FAAAAI*

**Annual Meeting Allied Health Sessions**

*Programmed by the AAAAI. Allied Health Sessions funded through an educational grant from Merck.*

## Seminars

5:15 to 6:15 pm

Programmed by the AAAAI. Seminars funded through an educational grant from Merck.

Pre-registration and ticket required. Fee: \$40. Refreshments included. Sessions and refreshments limited to 30 people.

Credit: 1.00 CME / 1.20 CE

### 1811 Patients with Antibody Deficiency: Non-Infectious Complications

Charlotte Cunningham-Rundles, MD PhD FAAAAI

Francisco J. Espinosa-Rosales, MD

Marriott Rivercenter, Third Floor, Conference Room 11

Upon completion of this session, participants should be able to: Identify the complications which occur in patients with primary antibody disorders; Describe clinical elements and laboratory tests for surveillance of these non-infectious complications; Appreciate therapeutic approaches to non-infectious complications in primary immunodeficiency.

### 1812 Challenges of Managing Multiple Food Allergies

Julie Wang, MD FAAAAI

Michael C. Young, MD FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 12

Upon completion of this session, participants should be able to: Identify the diagnostic and management challenges of multiple food allergies; Recognize the nutritional, feeding and social risk factors; Develop and implement a feeding plan for adequate nutrition, feeding skill and social development of children with multiple food allergies

### 1813 SLIT vs. SCIT in Children

Giovanni Passalacqua, MD

David P. Skoner, MD

Marriott Rivercenter, Third Floor, Conference Room 13

Upon completion of this session, participants should be able to: Summarize experience with SLIT and compare and contrast its safety/efficacy vs. SCIT; Appreciate recent data describing SLIT; Appreciate methodologic variation in SLIT.

### 1814 Approach to the Evaluation of Immunodeficiency in Adults

Zuhair K. Ballas, MD FAAAAI

Joyce E. Yu, MD

Marriott Rivercenter, Third Floor, Conference Room 14

Upon completion of this session, participants should be able to: Discuss the workup and management of adults with suspected immunodeficiency; Compare and contrast the differential diagnosis for hypogammaglobulinemia in adult patients; List key differences between the immunodeficiency diagnostic spectrum in adults vs. adolescents and children.

### 1815 Exercise-Induced Anaphylaxis and Food-Dependent Exercise-Induced Anaphylaxis

Anna M. Feldweg, MD

Kirsi M. Jarvinen-Seppo, MD PhD

Marriott Rivercenter, Third Floor, Conference Room 15

Upon completion of this session, participants should be able to: Review the most common clinical presentations of EIA and typical foods that can trigger FD-EIA; Discuss recent publications relevant to EIA and FD-EIA; Describe treatment options for EIA and FD-EIA.

### 1816 Vitamin D in Allergic and Immune Disorders

Audreesh Banerjee, MD

Marianne Frieri, MD PhD FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 17

Upon completion of this session, participants should be able to: Discuss the results of the NHANES survey related to vitamin D; Explain the role vitamin D on various allergic and immune conditions, the science of the immune response, findings in asthmatic children and steroid resistance; Discuss the importance of both the clinical and basic science of vitamin D.

### 1817 Let's Take the Myth-stery Out of Mold

James J. Anderson, MLT

Charles S. Barnes, PhD

Peter J. Pityn, PhD

Marriott Rivercenter, Third Floor, Conference Room 18

Upon completion of this session, participants should be able to: Provide evidence that the risk of mold is often overstated; Describe the proven risk presented by mold; Explore challenges of workplace mold investigations.

### 1818 Immunodeficiencies Discovered in the Last Five Years

Thomas A. Fleisher, MD FAAAAI

Gulbu Uzel, MD

Marriott Rivercenter, Third Floor, Grand Ballroom Salon M

Upon completion of this session, participants should be able to: Discuss the new primary immunodeficiency Diseases, with a focus on those described during the past five years; Appreciate the newer technologies used for discovery of these and future disorders; Appreciate the expanding overlap between immunodeficiency and inflammatory disorders.

### 1819 Allergic Reactions to Vaccines

Amanda L. Cox, MD

John M. Kelso, MD FAAAAI

Marriott Rivercenter, Third Floor, Grand Ballroom Salon L

Upon completion of this session, participants should be able to: Review allergies which present a risk of reaction to certain vaccines; Describe the current data on the safety of the influenza vaccination for egg-allergic individuals; Discuss approaches to testing or appropriate administration of vaccines where there is a concern about vaccine allergy.

### 1820 Management of Children and Adult Patients with Atopic Dermatitis

Mark Boguniewicz, MD FAAAAI

Dagmar Simon, MD

Marriott Rivercenter, Third Floor, Grand Ballroom Salon J

Upon completion of this session, participants should be able to: Describe the presentation, pathophysiology and complications of atopic dermatitis; Discuss the management of these patients, including their education; Discuss possible therapeutic consequences due to new insights into the pathogenesis of atopic dermatitis.

## International Assembly Business Meeting and Reception

5:15 to 7:15 pm

Convention Center, Concourse Level, Room 210AB

All international members and delegates are invited to attend this business meeting and reception. No fee. No pre-registration required.

## Allied Health Wine and Cheese Reception

5:30 to 6:30 pm

Marriott Riverwalk, Floor P1, Riverview

All allied health members and their guests are invited to attend this reception for an evening of networking with other allied health professionals.

**Seminars**  

7:00 to 8:00 am

Programmed by the AAAAI. Seminars funded through an educational grant from Merck.

Pre-registration and ticket required. Fee: \$40. Continental breakfast included. Sessions and meals limited to 30 people.

Credit: 1.00 CME / 1.20 CE

**2001 Problem-Based Learning: If I Care for Asthma I Need to Know About Alpha-1-Antitrypsin Deficiency**

Timothy J. Craig, DO FAAAAI

Laura H. Fisher, MD

Marriott Rivercenter, Third Floor, Grand Ballroom Salon B

Upon completion of this session, participants should be able to: Describe the presentation of alpha-1 deficiency; Diagnose alpha-1; Improve outcomes by successfully diagnosing and treating alpha-1 deficiency.

**2002 Understanding Modern Flow Cytometry Testing in Clinical Allergy and Immunology**

Kimberly A. Risma, MD PhD FAAAAI

Marriott Rivercenter, Third Floor, Grand Ballroom Salon C

Upon completion of this session, participants should be able to: Recognize the technical and technological advantages and limitations of standard multicolor flow cytometry; Discuss major advances in flow cytometry technologies and applications to clinical research; Review the potential clinical applications of new and emerging cytometry technology.

**2003 Problem-Based Learning: Effective Tools in Making the Diagnosis of Occupational Asthma**

André Cartier, MD FAAAAI

Karin A. Pacheco, MD MSPH FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 13

Upon completion of this session, participants should be able to: Recognize the history clues pointing to potential work-related asthma; Develop familiarity with the approach needed to establish the diagnosis of occupational asthma; Discuss the strengths and weaknesses of the tools available to establish work-relatedness.

**2004 Physical Urticarias**

Mario Geller, MD FAAAAI

Paul A. Greenberger, MD FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 2

Upon completion of this session, participants should be able to: Identify physical urticarias; Evaluate and educate patients with physical allergies; Manage and treat physical urticarias with the recent data.

**2005 Selection and Implementation of an Electronic Medical Record**

David J. Shulan, MD FAAAAI

Richard L. Wasserman, MD PhD FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 3

Upon completion of this session, participants should be able to: Discuss methods to utilize in EMR selection; Discuss best practices to implement your EMR 3; Discuss aspects of EMR selection unique to the allergist.

**2006 Evaluating Experimental Models of Allergic Rhinitis**

Anne K. Ellis, MD MSc FAAAAI

Martin Wagenmann, MD FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 4

Upon completion of this session, participants should be able to: Describe the most commonly used methodologies for experimental nasal allergen challenge in the investigation of allergic rhinitis; Describe the commonly used methodologies utilized in environmental exposure unit type studies of allergic rhinitis; Describe the advantages and disadvantages of both experimental models pertaining to the study of allergic rhinitis.

**2007 Siglecs and Their Role in Immune Responses**

Bruce S. Bochner, MD FAAAAI

Nives Zimmermann, MD FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 14

Upon completion of this session, participants should be able to: Provide examples of siglecs and their function in immune responses relevant to the allergist and immunologist; Summarize existing and future therapies involving siglecs and their glycan ligands.

**2008 Pulmonary Function Testing in Infants and Children**

Howard Eigen, MD

Amy G. Filbrun, MD MS

Marriott Rivercenter, Third Floor, Conference Room 8

Upon completion of this session, participants should be able to: Identify different pulmonary function techniques used with infants and small children; Discuss the reliability and predictive values for infant and small child PFTs; Review the indications for performing PFTs on this population.

**2009 When to Suspect and How to Diagnose and Treat Pediatric Cutaneous and Systemic Mastocytosis**

Melody C. Carter, MD

Dean D. Metcalfe, MD FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 9

Upon completion of this session, participants should be able to: Review the diagnosis of cutaneous vs. systemic disease; Restate how to treat pediatric mastocytosis; Describe how to identify those whose disease may persist.

**2010 Rethinking Allergen Avoidance**

Elizabeth Matsui, MD

Euan Tovey, PhD

Marriott Rivercenter, Third Floor, Conference Room 10

Upon completion of this session, participants should be able to: Define current guidelines for allergen avoidance in asthma management; Describe methods of reducing allergen exposure and evidence based studies of their effectiveness; Discuss new strategies for allergen avoidance that take into account the complex interactions between allergens, the innate immune system and genetic markers.

**2011 Perioperative Anaphylaxis: Which Tests and How to Interpret**

Pascal M. Demoly, MD PhD

Gerald W. Volcheck, MD FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 11

Upon completion of this session, participants should be able to: Explain to patients the meaning of allergy tests performed for perioperative anaphylaxis.

**2012 Achieving Expertise in Asthma Adherence**

Andrea J. Apter, MD MA MSc FAAAAI

Bruce G. Bender, PhD FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 12

Upon completion of this session, participants should be able to: Appreciate the prevalence and implications of suboptimal adherence in asthma; Recognize clues which may suggest suboptimal adherence; Develop strategies to facilitate optimal controller use in specific asthmatic patients.

**2013 Mechanisms and Biomarkers Related to Sublingual and Subcutaneous Immunotherapy**

Carsten B. Schmidt-Weber, PhD

Mohamed H. Shamji, BSc MSc PhD

Marriott Rivercenter, Third Floor, Conference Room 1

Upon completion of this session, participants should be able to: Discuss humoral mechanisms of SCIT and SLIT; Discuss cellular mechanisms of SCIT and SLIT; Discuss novel biomarkers of successful SCIT and SLIT.



## 2014 Advanced Seminar: Quantifying Th2 Immunomodulation in Clinical Trials and Drug Discovery

William W. Kwok, PhD  
 Calman Prussin, MD FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 7

Upon completion of this session, participants should be able to: Discuss the utility of measuring Th2 responses as a surrogate marker for immunotherapy and drug discovery; Explain the different techniques available to measure total and allergen specific IgE; Apply these techniques to clinical trials of allergen immunotherapy and immunomodulator therapy.

## 2015 Update on Neutrophils in Asthma and Allergic Diseases

Dorothy S. Cheung, MD FAAAAI  
 Larry L. Thomas, PhD

Marriott Rivercenter, Third Floor, Conference Room 15

Upon completion of this session, participants should be able to: Discuss the expression and function of the high affinity IgE receptor on neutrophils; Discuss how different subsets of neutrophils may influence both the innate and adaptive responses; Explain the role of neutrophils to both initiating and resolving the inflammatory response.

## Medical Administrator Workshop

### 2021 Cybersecurity: Technology in Practice

6:45 to 8:00 am

Marriott Rivercenter, Third Floor, Grand Ballroom Salon M

Credit: 1.25 CME / 1.50 CE

Moderator: Jeanette Booker

Speaker to be announced.

Upon completion of this session, participants should be able to: Recognize how to detect and protect hardware and software; Implement security measures to protect a practice; Discuss how to set up emergency plans in case of a breach.

## Clinical Research Workshop

### 2022 Motivational Interviewing: Motivating Behavior Change in Patients with Asthma

6:45 to 8:00 am

Marriott Rivercenter, Third Floor, Grand Ballroom Salon L

Credit: 1.25 CME / 1.50 CE

Moderator: Michael S. Tankersley, MD FAAAAI

Beth A. Allison, NP

Upon completion of this session, participants should be able to: Discuss motivation and confidence about health behavior change; Apply negotiating strategies based on a patient's readiness to consider change; Address patient resistance without confronting or persuading.

## Allied Health Workshop

### 2023 'Healthy' Diet and Allergy Development: Evidence and Interpretation for Allergy Practice

6:45 to 8:00 am

Marriott Rivercenter, Third Floor, Grand Ballroom Salon K

Credit: 1.25 CME / 1.50 CE

Moderator: G. Lynn Christie, MS RD

Kathryn E. Grimshaw, RD

Upon completion of this session, participants should be able to: Develop an appreciation of the literature concerning the immunomodulatory effect of individual nutrients and the diet as a whole; List the main constituents of an 'allergy healthy' diet; Discuss how to give general 'allergy healthy' dietary advice and when referral to a dietitian for specific dietary advice is needed.

## Allied Health Workshop

### 2024 A Clinician's Experience with FeNO: Significance of This Biomarker and its Clinical Application

6:45 to 8:00 am

Marriott Rivercenter, Third Floor, Grand Ballroom Salon D

Credit: 1.25 CME / 1.50 CE

Moderator: Dee Mallam, RN AE-C

John G. Winant, MD FAAAAI

Upon completion of this session, participants should be able to: Explain FeNO testing as it relates to asthma; Identify practical applications of FeNO testing; Discuss how FeNO testing guides asthma management.

## Allied Health Workshop

### 2025 Basic Spirometry Interpretation for Allied Health Professionals

6:45 to 8:00 am

Marriott Rivercenter, Third Floor, Grand Ballroom Salon J

Credit: 1.25 CME / 1.50 CE

Edward O. Corazalla, MS RPFT

Upon completion of this session, participants should be able to: Identify ATS/ERS criteria for PFTs; Demonstrate proper PFT maneuvers; Identify basic interpretation schemes.

## Presidential Plenary

### 2101 Sensitization and Tolerance in Allergic Disease

8:15 to 9:45 am

Convention Center, Street Level, Exhibit Hall D

Credit: 1.50 CME / 1.80 CE

Moderator: A. Wesley Burks, MD FAAAAI



### 8:15 Role of Filaggrin Mutations in Human Disease and Allergic Sensitization

Alan David Irvine, MD

### 8:45 Early Life Environmental Influences on Development in Allergic Diseases

Susan Prescott, MD PhD

### 9:15 Immune Tolerance and Allergy: Can We Produce True Tolerance?

A. Wesley Burks, MD FAAAAI

Upon completion of this session, participants should be able to: Describe the role of filaggrin mutations in allergic disease; Identify environmental factors that may impact the development of allergic disease; Debate the question of whether or not tolerance can be induced in patients with allergic disease.

## Annual Meeting Allied Health Sessions

Programmed by the AAAAI. Allied Health Sessions funded through an educational grant from Merck.

## Posters

9:45 to 10:45 am  
**Convention Center, Street Level, Exhibit Hall C**  
 Credit: No CME / No CE  
 Refer to pages 86-139 for abstracts and authors.

- 2201 Emerging Asthma Therapeutics**
- 2202 Pattern Recognition Receptor, T Cells, B Cells and Dendritic Cells**
- 2203 Biologic Therapies, Vaccines, HIV**
- 2204 Occupational and Environmental Exposures**
- 2205 Allergens and Epitopes**
- 2206 Food Allergens/Food Disease Epi/Insect Hypersensitivity**
- 2207 Urticaria/Angioedema**
- 2208 Provider Education, Knowledge and Specialty**
- 2209 Treatment of Allergic and Immune Disorders**
- 2210 Immunotherapy I**
- 2211 Rhinitis I**
- 2212 Allergic Inflammation**
- 2213 Allied Health Saturday Poster 1**

## Symposium ▼

### 2301 Management of Early Loss of Asthma Control or What to Do When Your Patient Reaches the Yellow Zone

10:45 am to 12:00 pm  
**Convention Center, Ballroom Level, Ballroom C1**  
 Credit: 1.25 CME / 1.50 CE  
 Moderator: *John Oppenheimer, MD FAAAAI*

- 10:45 Our Understanding of Asthma Exacerbations**  
*Pedro C. Avila, MD FAAAAI*
- 11:05 Definition of Early Loss of Asthma Control and Present Recommended Interventions**  
*Chitra Dinakar, MD FAAAAI*
- 11:25 Role of the Maintenance and Reliever Approach in Early Loss of Asthma Exacerbation**  
*Daniel J. Jackson, MD*
- 11:45 Question & Answer**

Upon completion of this session, participants should be able to: Examine our understanding of the causes and pathophysiology of asthma exacerbations; Stratify level of asthma exacerbations, stressing determinants of early loss of asthma control; Discuss the evidence regarding therapeutic interventions following the early loss of asthma control.

## Symposium ▼

### 2302 Biome and Immune Interactions

10:45 am to 12:00 pm  
**Convention Center, Ballroom Level, Ballroom C2**  
 Credit: 1.25 CME / 1.50 CE  
 Moderator: *Mitchell H. Grayson, MD FAAAAI*

- 10:45 Sorting Out Microbiota, Diet, and Immune Interactions: Lessons from Malnutrition**  
*Andrew Kau, MD PhD*
- 11:05 The Biome in Atopic Disease Development**  
*Harald E. Renz, MD*
- 11:25 The Gut Microbiome's Role in the Lung Immune Response**  
*Mitchell H. Grayson, MD FAAAAI*
- 11:40 Question & Answer**

Upon completion of this session, participants should be able to: Appreciate the interaction between bacterial members of the biome; Discuss how the biome modulates the immune system; Discover how atopic disease development is affected by the biome.

## Symposium ▼

### 2303 EAACI: Allergen Specific Immunotherapy From Bench to Bedside



10:45 am to 12:00 pm  
**Convention Center, Ballroom Level, Ballroom C3**  
 Credit: 1.25 CME / 1.50 CE  
 Moderators: *Cezmi A. Akdis, MD FAAAAI*  
*A. Wesley Burks, MD FAAAAI*

- 10:45 The Difference Between Perceptions and Facts in Allergen Immunotherapy**  
*Pascal M. Demoly, MD PhD*
- 11:05 Recent Big Clinical Trials in SCIT and SLIT**  
*Moises A. Calderon, MD PhD*
- 11:25 Recombinant Allergen Immunotherapy Vaccines**  
*Marek Jutel, MD PhD*
- 11:45 Question & Answer**

Upon completion of this session, participants should be able to: Comprehend the common perceptions and public knowledge compared to scientific evidence for the clinical usage of allergen immunotherapy; Describe the results of recent big clinical trials in subcutaneous and sublingual immunotherapy; Discuss novel developments in recombinant immunotherapy vaccines.

## Symposium ▼

### 2304 Primary Immunodeficiency Diseases on the Horizon: An International CONsensus Symposium

10:45 am to 12:00 pm

Convention Center, River Level, Room 006

Credit: 1.25 CME / 1.50 CE

Moderator: Kathleen E. Sullivan, MD PhD FAAAAI

#### 10:45 Induced Pluripotent Stem Cells and Human Primary Immunodeficiencies

Luigi D. Notarangelo, MD

#### 11:05 How Many Immunodeficiencies are Out There?

Francisco A. Bonilla, MD PhD FAAAAI

#### 11:25 Use of Genomic Technologies to Diagnose Primary Immunodeficiency Diseases

John M. Routes, MD FAAAAI

#### 11:45 Question & Answer

Upon completion of this session, participants should be able to: Discuss induced pluripotent stem cells and their role in evaluating primary immune defects; Describe how new sequencing technologies may lead to an explosion in the identification of immunologically important mutations; Recognize how gene chips may be used as future diagnostic tools.

## Symposium ▼

### 2305 Immunity of Air Pollution and Organic Particulate Airway Disease

10:45 am to 12:00 pm

Convention Center, River Level, Room 007

Credit: 1.25 CME / 1.50 CE

Moderator: Neil Alexis, PhD

#### 10:45 Particles and Oxidative Stress: Good or Bad?

Steve N. Georas, MD

#### 11:05 Ozone Injury and Airway Disease: Mechanistic Focus

John W. Hollingsworth, MD

#### 11:25 Innate Immunity of Occupational Organic Dust Exposures

Jill A. Poole, MD FAAAAI

#### 11:45 Question & Answer

Upon completion of this session, participants should be able to: Outline new and updated knowledge in the area of air pollutants and organic dust from urban and rural areas leading to airway diseases; Recognize the innate immune response to complex organic dusts and air pollutants; Discuss how different environmental exposures activate the lung's innate immune system, leading to susceptibility to allergic airway inflammation.

## Symposium ▼

### 2306 Chronic Rhinosinusitis: Surgical Perspectives from the American Rhinological Society

10:45 am to 12:00 pm

Convention Center, Concourse Level, Room 217AB

Credit: 1.25 CME / 1.50 CE

Moderator: Robert M. Naclerio, MD FAAAAI

#### 10:45 The Indications for Sinus Surgery in CRS Management

Robert Kern, MD

#### 11:05 Surgical Treatment Outcomes for CRS

Timothy L. Smith, MD MPH

#### 11:25 Management of CRS in Special Cases: CF, AFS and ASA Triad

Rodney J. Schlosser, MD

#### 11:45 Question & Answer

Upon completion of this session, participants should be able to: Discuss indications for sinus surgery; Describe the goals of sinus surgery for CRS; Review the definition of surgical success.

## Symposium ▼

### 2307 Accountable Care and Population Management for the Asthma Patient in 2013 and Beyond

10:45 am to 12:00 pm

Convention Center, Concourse Level, Room 217CD

Credit: 1.25 CME / 1.50 CE

Moderator: Daniel G. Steinberg, MD FAAAAI

#### 10:45 Accountable Care, Risk Adjustment and the Future of Allergy/ Asthma Care

Jonathan Niloff, MD

#### 11:05 Principles for Management of a Population of Asthma Patients

Barry Lachman, MD MPH

#### 11:25 Utilizing Technology to Optimize Disease State Management for an Asthma Population

Andrew G. Weinstein, MD FAAAAI

#### 11:45 Question & Answer

Upon completion of this session, participants should be able to: Describe the organization of ACOs and reimbursement strategies; Review the methods of managing populations; List the types of technology that can be used to manage a population of asthma patients.

## Symposium ▼

### 2308 Food Allergy Prevention and Treatment: How Does it Start and How Can it Be Stopped?

10:45 am to 12:00 pm

Convention Center, Street Level, Exhibit Hall D

Credit: 1.25 CME / 1.50 CE

Moderator: Anna H. Nowak-Wegrzyn, MD FAAAAI

#### 10:45 Prevention of Food Allergy: Is it Possible?

Susan Prescott, MD PhD

#### 11:05 The Role of Food Allergy in EGID

Seema Sharma Aceves, MD PhD FAAAAI

#### 11:25 Treatment for Food Allergy

J. Andrew Bird, MD

#### 11:45 Question & Answer

Upon completion of this session, participants should be able to: Outline the current international guidelines for the prevention of food allergy; Discuss the role of food allergy in EGID and the appropriate diagnostic testing; Review the latest studies and the safety of the new studies on immunotherapy for food allergy.



**Medical Administrator Workshop** 

**2311 Patient Centered Medical Home (PCMH)**

10:45 am to 12:00 pm  
**Marriott Rivercenter, Third Floor, Grand Ballroom Salon M**  
 Credit: 1.25 CME / 1.50 CE  
 Moderator: *Jeanette Booker*  
*Richard W. Honsinger, MD ACP FAAAAI*

Upon completion of this session, participants should be able to: Interpret how to network with primary care to establish PCMH cells; Discuss how to understand your role in this emerging modality of patient care; Describe the responsibilities of allergist/immunologists.

**Clinical Research Workshop** 

**2312 The Anatomy of the Clinical Research Contract, Budget and Successful Negotiation**

10:45 am to 12:00 pm  
**Marriott Rivercenter, Third Floor, Grand Ballroom Salon L**  
 Credit: 1.25 CME / 1.50 CE  
 Moderator: *Donna W. Mitchell, RN MSN NP*  
*Cheryl Koff Bernstein, RN BSN CCRC*

Upon completion of this session, participants should be able to: Identify and discuss the language used in reciprocal or crossed indemnification and offer alternative indemnification language; Identify and discuss adherence protocol language that is acceptable to the research center; Discuss successful methods and techniques used during contract and budget negotiation with the sponsor and CRO.

**Allied Health Workshop** 

**2313 Review of Experience Performing Baked Milk and Baked Egg Food Challenges**

10:45 am to 12:00 pm  
**Marriott Rivercenter, Third Floor, Grand Ballroom Salon K**  
 Credit: 1.25 CME / 1.50 CE  
 Moderator: *Teri Holbrook, CRNP*  
*Kim E. Mudd, RN MSN CCRP*

Upon completion of this session, participants should be able to: Identify which children can be considered for a food challenge to baked milk and baked egg; Describe a protocol to use in your practice to conduct a baked milk and baked egg food challenge; Describe how children who pass a baked milk and baked egg food challenge go home and increase the food in their diet.

**Allied Health Workshop** 

**2314 2012 NIOSH Report: Is Your Office Meeting Spirometry Quality Assurance Standards?**

10:45 am to 12:00 pm  
**Marriott Rivercenter, Third Floor, Grand Ballroom Salon D**  
 Credit: 1.25 CME / 1.50 CE  
 Moderator: *Stephen J. McGeady, MD FAAAAI*

**10:45 Standards for a Valid Normal Test**  
*Maureen George, PhD RN AE-C*

**11:10 Common Errors: Part I**  
*Concettina Tolomeo, DNP APRN FNP-BC AE-C*

**11:35 Common Errors: Part II**  
*Mary Kay Bossard, BS RRT AE-C*

Upon completion of this session, participants should be able to describe how common errors impact spirometry results.

**Allied Health Symposium** 

**2315 The A Team: A Multidisciplinary Approach to Asthma Education**

10:45 am to 12:00 pm  
**Marriott Rivercenter, Third Floor, Grand Ballroom Salon A**  
 Credit: 1.25 CME / 1.50 CE  
 Moderator: *Antonina G. Evans, BSPHarm AE-C*

**10:45 Respiratory Therapists: Making a Difference in Asthma Education and Management**

*Jeanette Arnold, MSN RN C-FNP*

**11:10 Pharmacist's Role on the A Team**  
*Antonina G. Evans, BSPHarm AE-C*

**11:35 Nurse Practitioners on the A Team: Measuring and Reporting Outcomes**

*Nina A. Zimmermann, MSN RN ANP-BC AE-C*

Upon completion of this session, participants should be able to: Discuss the components of an effective multidisciplinary asthma education program; Recognize the roles and responsibilities of each member of the multidisciplinary asthma education team; Apply and report on asthma education outcome measures.

**Allied Health Workshop** 

**2316 IC and FVC: The "How To" for Reliable Results**

10:45 am to 12:00 pm  
**Marriott Rivercenter, Third Floor, Grand Ballroom Salon J**  
 Credit: 1.25 CME / 1.50 CE  
 Moderator: *Karen L. Gregory, DNP APRN-BC RRT AE-C*  
*James M. Quinn, MD FAAAAI*

Upon completion of this session, participants should be able to: Identify the ATS/ERS criteria for SVC, IC and FVC maneuvers; Demonstrate proper FVC and IC maneuvers; Discuss basic interpretation schemas.

**Allied Health Professional Assembly Forum** 

12:30 to 1:30 pm  
**Marriott Rivercenter, Third Floor, Grand Ballroom Salon G**

All allied health professionals are invited to attend this forum. Box lunches included.

**Annual Meeting Allied Health Sessions**

*Programmed by the AAAAI. Allied Health Sessions funded through an educational grant from Merck.*

**Seminars**  

12:30 to 1:30 pm  
*Programmed by the AAAAI. Seminars funded through an educational grant from Merck.*  
 Pre-registration and ticket required. Fee: \$40. Box lunch included.  
 Sessions and meals limited to 30 people.  
 Credit: 1.00 CME / 1.20 CE

**2501 Comorbidities in Asthma: Which Matter Most?**

*Jonathan Corren, MD*  
*Eli O. Meltzer, MD FAAAAI*

**Marriott Rivercenter, Third Floor, Grand Ballroom Salon B**

Upon completion of this session, participants should be able to: Describe the impact of comorbid conditions on asthma diagnosis; Discuss the effects of comorbid conditions on asthma severity; Review the effects of specific therapies on asthma outcomes.

## 2502 An Update on Neutrophil Disorders: Diagnosis and Treatment

Steven M. Holland, MD  
 Gulbu Uzel, MD

Marriott Rivercenter, Third Floor, Grand Ballroom Salon C

Upon completion of this session, participants should be able to: List current diagnostic tests, including genetic, for different neutrophil disorders; Review treatment options for patients with neutrophil disorders including CGD.

## 2503 Occupational Disease: New Agents, New Diseases, Prevention and Epidemiology

Wanda Phipatanakul, MD MS FAAAAI  
 Santiago Quirce, MD PhD

Marriott Rivercenter, Third Floor, Conference Room 1

Upon completion of this session, participants should be able to: Apply new and updated knowledge in the areas discussed; Review updated strategies for diagnosis and treatment of occupational diseases.

## 2504 Problem-Based Learning: So the Patient Has Eosinophilia: What Next?

Amy D. Klion, MD  
 Catherine R. Weiler, MD PhD FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 2

Upon completion of this session, participants should be able to: Review diagnosis of variants of hypereosinophilic syndrome; Describe identification of secondary eosinophilia; Discuss therapeutic approaches to hypereosinophilic syndrome.

## 2505 Advanced Coding for the Allergist

Noga Askenazi, MD FAAAAI  
 Teresa Thompson, CPC CMSCS CCC

Marriott Rivercenter, Third Floor, Conference Room 3

Upon completion of this session, participants should be able to: Discuss the use of codes pertinent to A/I practice; Describe details of coding for patients' allergy testing and immunotherapy.

## 2506 CRD in Clinical Allergy Practice

Jean-Christoph Caubet, MD  
 Peter Schmid-Grendelmeier, MD PD

Marriott Rivercenter, Third Floor, Conference Room 13

Upon completion of this session, participants should be able to: Review evidence-based clinical use of CRD; Describe molecular allergens with highest clinical significance.

## 2507 Regulation of Allergic Inflammation by Airway Epithelium

Zoulfia Allakhverdi, PhD FAAAAI  
 Angela Haczk, MD PhD FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 7

Upon completion of this session, participants should be able to: Describe how epithelial cells play an active role in the initiation, regulation and resolution of immune responses; Discuss the role of epithelial cell-derived cytokines/immune modulators in chronic airway inflammation; Describe the activity of epithelial cell-derived cytokines/immune modulators on cells of the innate immune system and allergic airways changes.

## 2508 Exhaled NO: Time to Clear the Air!

Chitra Dinakar, MD FAAAAI  
 Stanley Szefler, MD FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 8

Upon completion of this session, participants should be able to: Discuss the application of eNO in the context of ATS guidelines and AAAAI/ACAAI position statements; Recognize the relationship between the levels of evidence and practice guidelines for clinical eNO use; Explain potential weakness/strengths of eNO for managing asthmatics.

## 2509 When is an Elevated IgE Level a Sign of Immunodeficiency?

Alexandra F. Freeman, MD  
 Hans D. Ochs, MD

Marriott Rivercenter, Third Floor, Conference Room 9

Upon completion of this session, participants should be able to: Review the differential diagnosis of an elevated IgE level; Discuss the work up necessary in patients with elevated IgE levels; Review the hyper IgE syndromes.

## 2510 Principles of Healthy Homes

Carl Grimes, HHS CIEC  
 Kevin Kennedy, MPH CIEC

Marriott Rivercenter, Third Floor, Conference Room 10

Upon completion of this session, participants should be able to: Identify and describe the 7 principles of healthy homes; Describe the healthy home movement and the comprehensive approach to housing hazards it represents.

## 2511 Office Evaluation of Patients with Multiple Antibiotic Allergies

Rebecca S. Gruchalla, MD PhD FAAAAI  
 Roland Solensky, MD FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 11

Upon completion of this session, participants should be able to describe how to approach patients with multiple antibiotic allergies with appropriate diagnostic testing and challenge procedures.

## 2512 Efficacy vs. Effectiveness in Asthma

Andrea J. Apter, MD MA MSc FAAAAI  
 Anne L. Fuhlbrigge, MD MS

Marriott Rivercenter, Third Floor, Conference Room 12

Upon completion of this session, participants should be able to: Distinguish between the concepts of treatment efficacy and treatment effectiveness; Explain how controlled trials and pragmatic trials measure effectiveness differently; Discuss how to design a pragmatic trial for asthma treatment.

## 2513 Problem-Based Learning: The Allergist and Sleep Disorders

Samuel L. Friedlander, MD  
 Bernard Silverman, MD FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 4

Upon completion of this session, participants should be able to: Describe the relationship between allergic rhinitis, rhinosinusitis and sleep disorders; Discuss the impact of rhinitis-disturbed sleep; Identify the role of an allergy specialist in the treatment of rhinitis-disturbed sleep and obstructive sleep apnea.

## 2514 Mechanism of Anaphylaxis

Mary Beth Hogan, MD FAAAAI  
 Wei Zhao, MD PhD

Marriott Rivercenter, Third Floor, Conference Room 15

Upon completion of this session, participants should be able to: Describe the role of basophils and neutrophils in the pathogenesis of anaphylaxis; Distinguish IgE from IgG mediated anaphylaxis.

## 2515 Managing Stress as a Therapeutic Option for Allergy Patients

Renata J.M. Engler, MD FAAAAI  
 Gailen D. Marshall, Jr., MD PhD FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 14

Upon completion of this session, participants should be able to: Describe the accurate definition of psychological stress as it applies to allergy immunology pathophysiology and care; Describe evidence-based approach to modalities that reduce/manage stress for allergy, asthma and immunologically diseased patients; Discuss approach to intercatating/advising patients who use stress reduction/management techniques that are not evidenced-based.

Pro/Con Debate ▼

**2521 Multiallergen SCIT is Better Than Monoallergen SLIT**

12:30 to 1:30 pm

Convention Center, Ballroom Level, Ballroom C1

Credit: 1.00 CME / 1.20 CE

Moderator: B. Lauren Charous, MD FAAAAI

**Pro**

Linda Cox, MD FAAAAI

**Con**

Moises A. Calderon, MD PhD

Upon completion of this session, participants should be able to: Discuss the benefits of single allergen IT; Review the benefits of multi-allergen IT; Describe the different expected benefits of the two methods described above.

Pro/Con Debate ▼

**2522 Maintenance Steroids Should be Used for Preschool Wheezers**

12:30 to 1:30 pm

Convention Center, Ballroom Level, Ballroom C2

Credit: 1.00 CME / 1.20 CE

Moderator: Dorothy S. Cheung, MD FAAAAI

**Pro**

Theresa W. Guilbert, MD

**Con**

Leonard B. Bacharier, MD FAAAAI

Upon completion of this session, participants should be able to: Review the safety of continuous administration of low dose ICS; Appreciate the effectiveness of intermittent treatment of preschool asthma; Identify predictors of persistent asthma in children who present with intermittent preschool wheeze.

Pro/Con Debate ▼

**2523 Pets Prevent Allergies**

12:30 to 1:30 pm

Convention Center, River Level, Room 006

Credit: 1.00 CME / 1.20 CE

Moderator: Diane R. Gold, MD

**Pro**

Dennis R. Ownby, MD FAAAAI

**Con**

Matthew S. Perzanowski, PhD

Upon completion of this session, participants should be able to: Describe the settings where pet exposure could be recommended vs. where it should be avoided; Develop tools to counsel parents on keeping or getting rid of a pet; Summarize the public debate on pets in the home.

Pro/Con Debate ▼

**2524 Chronic Urticaria is an Autoimmune Disorder**

12:30 to 1:30 pm

Convention Center, River Level, Room 007

Credit: 1.00 CME / 1.20 CE

Moderator: Sarbjit S. Saini

**Pro**

Allen P. Kaplan, MD FAAAAI

**Con**

Jonathon A. Bernstein, MD FAAAAI

Upon completion of this session, participants should be able to: Increase understanding of the pathogenic factors in urticaria; Examine the evidence for autoimmune testing in urticaria.

Pro/Con Debate ▼

**2525 Genetic Testing is Useful to the Practicing Allergist**

12:30 to 1:30 pm

Convention Center, Concourse Level, Room 217AB

Credit: 1.00 CME / 1.20 CE

Moderator: John W. Steinke, PhD FAAAAI

**Pro**

Scott T. Weiss, MD MS

**Con**

Larry Borish, MD FAAAAI

Upon completion of this session, participants should be able to: Determine whether or not the money spent to find allergy genes will lead to clinical diagnostics.

Pro/Con Debate ▼

**2526 Airborne Exposure to Aeroallergens Has a Role in the Disease Process of EoE**

12:30 to 1:30 pm

Convention Center, Concourse Level, Room 217CD

Credit: 1.00 CME / 1.20 CE

Moderator: John Jhe-Yun Lee, MD

**Pro**

Jonathan M. Spergel, MD PhD FAAAAI

**Con**

Chris A. Liacouras, MD

Upon completion of this session, participants should be able to: Recognize the epidemiology of food and aeroallergen sensitivity in EoE; Outline the data on aeroallergen sensitivity and EoE; Discuss the current controversy on whether aeroallergens can trigger the disease process of EoE.

Pro/Con Debate ▼

**2527 Accountable Care Organizations (ACOs) are Good for the Practicing Allergist**

12:30 to 1:30 pm

Convention Center, Concourse Level, Room 214BC

Credit: 1.00 CME / 1.20 CE

Moderator: Robert J. Holzhauer, MD MBA FAAAAI

**Pro**

Michael B. Foggs, MD FAAAAI

**Con**

Daniel Ein, MD FAAAAI

Upon completion of this session, participants should be able to: Describe ACOs in the greater context of health care reform; Review what an ACO is and how it may affect the practice of allergy; Develop strategies toward integrating with ACOs if necessary.



## Oral Abstract

### 2601 Asthma and the Environment

2:00 to 3:15 pm

Convention Center, Ballroom Level, Ballroom C1

Credit: 1.25 CME / 1.50 CE

Heather K. Lehman, MD

Stephen P. Peters, MD PhD FAAAAI

#### 2:00 Contributing and Protective Risk Factors for Asthma Exacerbation in Latinos (GALA-II Study)

Ulysses W. Burley III

#### 2:15 Aeroallergen Sensitization Is Associated with Asthma Severity in Latinos (GALA-II Study)

S.Joy Hsu, MD

#### 2:30 Influence of Cigarette Smoking On Airway Inflammation and Inhaled Corticosteroid Treatment in Asthmatic Patients

Terufumi Shimoda, MD

#### 2:45 Correlation Between Aeroallergen Sensitization and Pediatric Asthma Severity - Data From the Severe Asthma Research Program (SARP)

Marc D. Ikeda, MD

#### 3:00 House Dust Mite Sensitization Is the Main Risk Factor for the Increase in Prevalence of Wheeze in 13-14 Year Old Schoolchildren in Guangzhou City, China

Jin Li, MD MSc

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

## Oral Abstract

### 2602 Immunogenetics

2:00 to 3:15 pm

Convention Center, River Level, Room 006

Credit: 1.25 CME / 1.50 CE

Christina L. Nance, PhD

#### 2:00 Next Generation Sequencing May Be More Efficient and Economical Than Targeted Gene Testing in Patients with Primary Immune Deficiency (PID)

Talal Mousallem

#### 2:15 Interactions Between SLC22A5, IL13 and SMAD3 Modulate Spirometric Indices in Chinese Children

Tin Fan Leung, MD FAAAAI

#### 2:30 Effects of Maternal Allergy On Umbilical Cord Blood Regulatory T Cell Forkhead Box Protein 3 (FOXP3) DNA Methylation

Michelle North, PhD

#### 2:45 Sequencing of the ST2 Gene Reveals a Haplotype That Determines Serum Total ST2 Levels in Individuals of African Ancestry

Lili Huang, MPH

#### 3:00 Whole Genome Sequence Reveals a Haplotype Conferring Protection From Asthma Common to Subjects of European and African Ancestry

Abdellah Hedjoudje

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

## Oral Abstract

### 2603 How Inner-City Exposures Lead to Disparities in Children's Asthma

2:00 to 3:15 pm

Convention Center, River Level, Room 007

Credit: 1.25 CME / 1.50 CE

Moderator: Jonathen A. Bernstein, MD FAAAAI

#### 2:00 Classroom Fungal Spore Exposure and Asthma Morbidity in Inner-City School Children

Sachin N. Baxi, MD

#### 2:15 Exposure to Polycyclic Aromatic Hydrocarbons Is Associated with Higher Levels of Total IgE, Decreased Function of T Regulatory Cells and an Increase of Asthma Occurrence in Children

Annett I. Walker, MD

#### 2:30 Association Between Asthma-Related Emergency Department Visits and Pollen Concentration in the Bronx, 2001-2008

Sayantani B. Sindher, MD

#### 2:45 Report of Exercise-Induced Wheeze Predicts Urgent Medical Visits for Asthma Among Inner-City Children

Matthew S. Perzanowski, PhD

#### 3:00 Allergen Exposure Influences the Relationship Between Community Violence and Asthma Morbidity: The Inner City Asthma Study

Michelle L. Sever, PhD

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

## Oral Abstract

### 2604 Urticaria/Angioedema

2:00 to 3:15 pm

Convention Center, Grand Ballroom Level, Ballroom C3

Credit: 1.25 CME / 1.50 CE

David A. Khan, MD FAAAAI

#### 2:00 Pediatric Presentation of Hereditary Angioedema (HAE) Due to C1 Inhibitor Deficiency

Sandra C. Christiansen, MD FAAAAI

#### 2:15 High Serum Levels of Mast Cell Chymase and Carboxypeptidase in Mastocytosis

Xiaoying Zhou, MD

#### 2:30 Overexpression of Epidermal Filaggrin in Patients with Chronic Idiopathic Urticaria Correlates with Urticaria Severity

Young-Min Ye, MD

#### 2:45 Genetic Analysis and Etiology of Angioedema

Jonathan Levy

#### 3:00 Hereditary Angioedema Type III: Mutation in Factor XII Gene in Brazilian Families

Adriana S. Moreno, PhD

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

**Oral Abstract**

**2605 New Insights in Food Allergy Treatment**

2:00 to 3:15 pm  
**Convention Center, Concourse Level, Room 217AB**  
 Credit: 1.25 CME / 1.50 CE  
 Moderator: Sami L. Bahna, MD DrPH FAAAAI  
 Sakina S. Bajowala, MD FAAAAI

**2:00 Oral Food Challenge and Food Allergy Quality of Life in Caregivers of Food Allergic Children**

Timothy J. Franxman, MD

**2:15 Racial and Ethnic Disparity in Food Allergy in the United States: A Systematic Review**

Matthew J. Greenhawt, MD MBA

**2:30 Multi-Allergen Oral Immunotherapy Improves Quality of Life in Subjects with Food Allergies**

Iris Otani, MD

**2:45 Is Molecular Allergology Cost-Effective and Cost Saving in Children with Suspected Peanut Allergy Compared to Double Blind Placebo Controlled Food Challenge (DBPCFC) and Skin Prick Test in US, Europe and Asia?**

Lisse-Lotte Hermansson

**3:00 Question & Answer**

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

**Oral Abstract**

**2606 Rhinosinusitis and Nasal Polyposis: Pathophysiology**

2:00 to 3:15 pm  
**Convention Center, Ballroom Level, Ballroom C2**  
 Credit: 1.25 CME / 1.50 CE  
 Moderator: Martin Wagenmann, MD FAAAAI

**2:00 Excessive Fibrin Deposition Caused by a Fibrinolytic Disorder Associated with Reduction of Tissue Plasminogen Activator Expression in Nasal Polyps**

Tetsuji Takabayashi, MD PhD

**2:15 A Proposed Model to Study Immunologic Changes During Chronic Rhinosinusitis Exacerbations: Data From a Pilot Study**

Shefali Samant, MD

**2:30 The Impact and Nature of Inflammation in the Olfactory Cleft On Olfaction in Patients with Chronic Rhinosinusitis**

Jennifer Lavin

**2:45 Effect of Prostaglandin E2 On VEGF Production Through the E-Prostanoid 4 Receptor in Nasal Polyp-Derived Fibroblasts**

Byoung Joon Baek

**3:00 Elevated Presence of Dendritic Cell Subsets in Chronic Rhinosinusitis**

Sarah Peterson, MD

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

**Oral Abstract**

**2607 Mechanisms in the Control of Asthma**

2:00 to 3:15 pm  
**Convention Center, Concourse Level, Room 217CD**  
 Credit: 1.25 CME / 1.50 CE  
 Moderator: Anthony A. Horner, MD FAAAAI

**2:00 Elevation of Plasminogen Activator Inhibitor-1 Levels in Sputum and Nasal Lavage Fluids of Asthmatics with Common Colds**

Seong Ho Cho, MD

**2:15 Human Mast Cells and Nuocytes Activate Gene Expression and Mucus Secretion in Primary Mucociliary Differentiated Human Bronchial Epithelial Cells Via IL-13**

Deepti Nagarkar

**2:30 Effects of Cigarette Smoke Exposure On RGS2 Expression and Airway Hyperresponsiveness**

Ningxi Zhu, MD

**2:45 Exposure to Cigarette Smoke Impacts Myeloid-Derived Regulatory Cell Function and Exacerbates Airway Hyper-Responsiveness**

Jessy Deshane, PhD

**3:00 Antagonistic Roles of Thymic Stromal Lymphopoietin (TSLP) and Surfactant Protein-D (SP-D) in Dendritic Cell Regulation During Ozone-Induced Exacerbation of Allergic Airway Inflammation in Mice**

Angela Haczku, MD PhD FAAAAI

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

**Allied Health Workshop**  

**2621 Oral Food Challenges: What, Where, When and Why**

2:00 to 3:15 pm  
**Marriott Rivercenter, Third Floor, Grand Ballroom Salon M**  
 Credit: 1.25 CME / 1.50 CE  
 Moderator: Sally A. Noone, RN MSN CCRC  
 Beth D. Strong, RN CCRC

Upon completion of this session, participants should be able to: Identify types of oral food challenges and when and why to use each; Discuss how patients are referred for food challenges.

**Allied Health Workshop** 

**2622 An Update in the Diagnosis and Management of the 0-4 Year Old Asthmatic**

2:00 to 3:15 pm  
**Marriott Rivercenter, Third Floor, Grand Ballroom Salon K**  
 Credit: 1.25 CME / 1.50 CE  
 Moderator: Donna R. Oberkfell, RN MSN CPNP

**A Review of Current Literature Pertaining to the Diagnosis and Management of the 0-4 Year-Old Asthmatic**

Lila C. Kertz, MSN RN CPNP

Upon completion of this session, participants should be able to discuss the evidence for diagnosis and treatment of the 0-4 year old asthmatic.

## Allied Health Workshop

### 2623 Immunotherapy Guideline Update: Third Edition and USP 797 Compliance

2:00 to 3:15 pm

Marriott Rivercenter, Third Floor, Grand Ballroom Salon A

Credit: 1.25 CME / 1.50 CE

Moderator: Cheryl Koff Bernstein, RN BSN CCRC

Michael R. Nelson, MD PhD FAAAAI

Sheelagh Stewart, MPH RN AE-C

Upon completion of this session, participants should be able to: Describe the compliance requirements for allergen extract preparation according to the USP chapter 797 and immunotherapy practice parameters guidelines third edition update; Discuss the practical applications of the guidelines in the private practice and identify practical approaches for implementation of the guidelines.

## Allied Health Workshop

### 2624 Smoking Cessation: Helping Our Patients Quit

2:00 to 3:15 pm

Marriott Rivercenter, Third Floor, Grand Ballroom Salon D

Credit: 1.25 CME / 1.50 CE

Moderator: Michael Tankersley, MD FAAAAI

Beth A. Allison, NP

Upon completion of this session, participants should be able to: Describe how to educate patients about the process of quitting including those who are resistant to quitting; Discuss evidence-based use of smoking cessation medications; Describe nicotine dependence and nicotine withdrawal.

## Clinical Research Symposium

### 2625 Psychoneuroimmunology in Atopic Disease

2:00 to 3:15 pm

Marriott Rivercenter, Third Floor, Grand Ballroom Salon L

Credit: 1.25 CME / 1.50 CE

Moderator: Stephen J. McGeedy, MD FAAAAI

#### 2:00 The Physiology of Stress, the Human Immune System and Atopic Disease

Gerald B. Lee, MD

#### 2:25 Mental Health Issues in Primary Care and the Allergy Office: Opening Pandora's Box

David Wayne Unkle, MSN APN FCCM

Upon completion of this session, participants should be able to: Discuss the interrelationship between the immune system and the psychoneuroimmune system; Recognize the role of psychopathology and personality factors in the management of atopic disease; Describe the relationship between depression, suicidality and atopic disease.

## Keynote

### 2701 Dining in with Trillions of Fascinating Friends: The Microbiome in Health and Disease

3:30 to 4:30 pm

Convention Center, Street Level, Exhibit Hall D

Credit: 1.00 CME / 1.20 CE

Moderator: Stuart Abramson, MD PhD FAAAAI

Jeffrey Gordon, MD

Dr. Robert J. Glaser Distinguished University Professor and Director of the Center for Genome Sciences & Systems Biology, Washington University School of Medicine



Upon completion of this session, participants should be able to describe the impact of the microbiome on human health and the development of disease.

## Problem-Based Learning Workshop

### 2801 An Adult with Chronic Cough

4:45 to 6:00 pm

Convention Center, River Level, Room 004

Pre-registration and ticket required. Fee: \$50.

Credit: 1.25 CME / 1.50 CE

Moderator: Steven F. Weinstein, MD FAAAAI

John Oppenheimer, MD FAAAAI

Upon completion of this session, participants should be able to: Discuss an adult who presents with a chronic cough; Review in depth the differential diagnoses of an adult with a chronic cough and the appropriate diagnostic evaluation; Debate therapeutic options for an adult with a chronic cough.

## Hands-On Workshop

### 2802 Contact Dermatitis and Patch Testing: An Update for the Allergist

4:45 to 6:00 pm

Convention Center, River Level, Room 005

Pre-registration and ticket required. Fee: \$50.

Credit: 1.25 CME / 1.50 CE

Moderator: Mary Ann Michelis, MD FAAAAI

Instructors: Luz S. Fonacier, MD FAAAAI

Karin A. Pacheco, MD MSPH FAAAAI

Upon completion of this session, participants should be able to: Discuss the clinical correlation of the patch test results to the patient's condition; Develop a current understanding of allergic contact dermatitis and patch testing to cosmetics, medical devices and other allergens; Demonstrate the technique of application and interpretation of non-standardized allergens as in personal products.

## Annual Meeting Allied Health Sessions

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## Q & A Workshop

### 2803 The Diagnosis and Management of Autoimmunity in Primary Immunodeficiency (PI) Disorders

4:45 to 6:00 pm

Convention Center, River Level, Room 007

Credit: 1.25 CME / 1.50 CE

Moderator: Charlotte Cunningham-Rundles, MD PhD FAAAAI

### 4:45 Use of Immunosuppressants in Primary Immunodeficiencies

John M. Routes, MD FAAAAI

### 5:00 Autoimmunity in CVID

Arnold I. Levinson, MD FAAAAI

### 5:15 Autoimmunity in Other Forms of PID (APECED, ALPS, SCID)

Luigi D. Notarangelo, MD

### 5:30 Question & Answer

Upon completion of this session, participants should be able to: Provide a mechanistic framework on which to think about autoimmunity in the setting of immune deficiency; Discuss diagnostic and treatment guidelines for common autoimmune features of immune deficiency for the practicing allergist/immunologist.

## Panel Discussion Workshop

### 2804 IgG Therapy: The Nuts and Bolts of Gamma Globulin Treatment

4:45 to 6:00 pm

Convention Center, River Level, Room 006

Credit: 1.25 CME / 1.50 CE

Moderator: Itai Pessach, MD PhD

Panelists: Vincent R. Bonagura, MD FAAAAI

Francisco A. Bonilla, MD PhD FAAAAI

Upon completion of this session, participants should be able to: Understand the factors to consider in choosing a dose of IgG for PIDD patients; Discuss the different types of adverse reaction to immunoglobulin therapy; Discuss the strategies to prevent and treat adverse reactions to immunoglobulin infusion.

## Panel Discussion Workshop

### 2805 The Safety of Allergy and Asthma Medications During Pregnancy: Principles and Practice

4:45 to 6:00 pm

Convention Center, River Level, Room 008

Credit: 1.25 CME / 1.50 CE

Moderator: Nancy K. Ostrom, MD FAAAAI

Panelists: Christina Chambers, PhD MPH

Carol Louik, ScD

Jennifer A. Namazy, MD FAAAAI

Upon completion of this session, participants should be able to: Discuss the strengths and limitations of cohort methodology in the study of medication safety during pregnancy; Review the strengths and limitations of case-control methodology in the study of medication safety during pregnancy; Apply current information on the gestational safety of allergy and asthma medications to the clinical care of pregnant patients.

## Hands-On Workshop

### 2806 ABAI: How to Use the Web Portal for Maintenance of Certification (MOC) Activities

4:45 to 6:00 pm

Convention Center, Concourse Level, Room 210AB

Pre-registration and ticket required. Fee: \$50.

Credit: 1.25 CME / 1.50 CE

Moderator: Mary Beth Fasano, MD FAAAAI

Instructors: John James, MD FAAAAI

Sarah Johnson

Stephen I. Wasserman, MD FAAAAI

Upon completion of this session, participants should be able to: Discuss the four major components of the ABAI MOC program; Discuss how to successfully report MOC activities to the ABAI using the web portal; Demonstrate how to access, navigate and utilize the ABAI web portal for tracking and documenting personal progress through the MOC program.

## Q & A Workshop

### 2807 Introductory Course in Rhinology

4:45 to 6:00 pm

Convention Center, Concourse Level, Room 211

Pre-registration and ticket required. Fee: \$50.

Ticket included with registration for Workshop 4801: Hands-On

Rhinology

Credit: 1.25 CME / 1.50 CE

Moderator: Jerald W. Koepke, MD FAAAAI

Upon completion of this session, participants should be able to: Describe the surgical anatomy of the upper airway, including the nasal cavity, pharynx and larynx; Identify examples of normal and abnormal anatomy, as well as disease presentations and post operative changes found with endoscopic examination of the upper airway; Review the indications for and the use of the fiberoptic rhinoscope in the allergist's office.

## BYOP Workshop

### 2808 Mast Cell Disorders

4:45 to 6:00 pm

Convention Center, Concourse Level, Room 212AB

Pre-registration and ticket required. No fee.

Credit: 1.25 CME / 1.50 CE

Moderator: Cem Akin, MD PhD FAAAAI

### 4:45 Mastocytosis

Mariana C. Castells, MD PhD FAAAAI

### 5:00 Pediatric Mastocytosis

Melody Carter, MD

### 5:15 Venom Allergy and Mastocytosis

Patrizia Bonadonna, MD

### 5:30 Question & Answer

Upon completion of this session, participants should be able to: Recognize the patients with high diagnostic possibility for having mastocytosis; List diagnostic criteria for clonal and non clonal mast cell disorders.

## Q & A Workshop

### 2809 Cellular Players in Asthma/Allergy

4:45 to 6:00 pm

Convention Center, Concourse Level, Room 213AB

Credit: 1.25 CME / 1.50 CE

Moderator: Joshua A. Boyce, MD FAAAAI

#### 4:45 T Cell Interaction with Epithelial Cells

Cezmi Akdis, MD FAAAAI

#### 5:00 Dendritic Cell and T Cell Responses in Food Allergy

Pamela A. Frischmeyer-Guerrero, MD PhD

#### 5:15 Th9 Cells: In Front and Beyond Th2

Paul S. Foster, PhD DSc

#### 5:30 Question & Answer

Upon completion of this session, participants should be able to: Describe how tissues regulate inflammation; Discuss the interaction of the immune system with epithelial cells; Review epithelial tight junctions.

## Q & A Workshop

### 2810 Mechanisms of Immune Tolerance to Allergens

4:45 to 6:00 pm

Convention Center, Concourse Level, Room 214A

Credit: 1.25 CME / 1.50 CE

Moderator: Monica Vasudev, MD

#### 4:45 T and B Regulatory Cells

Mubeccel Akdis, MD PhD

#### 5:00 Mucosal Tolerance Mechanisms

Liam O'Mahony, MD

#### 5:15 Dendritic Cells, T Reg and Asthma Protection

Ian P. Lewkowich, PhD

#### 5:30 Question & Answer

Upon completion of this session, participants should be able to: Review mechanisms of immune tolerance by T and B regulatory cells; Discuss how IL-10 and TGF- $\beta$  induce tolerance; Describe how IgG4 regulated.

## Panel Discussion Workshop

### 2811 HAE Treatment: Guideline-Based Approaches

4:45 to 6:00 pm

Convention Center, Concourse Level, Room 214BC

Credit: 1.25 CME / 1.50 CE

Moderators: Henriette Farkas, MD

Henry H. Li, MD PhD

Panelists: Marco Cicardi, MD

Timothy J. Craig, DO FAAAAI

Bruce L. Zuraw, MD

Upon completion of this session, participants should be able to: Discuss the major HAE treatment guidelines; Outline the similarities and differences in different HAE treatment guidelines; Describe the practical impact of these guidelines in clinical practice.

## Panel Discussion Workshop

### 2812 Asthma Guidelines, P4P and the Medical Home: Notes from an Urban Allergist and a Health Insurance Payer

4:45 to 6:00 pm

Convention Center, Concourse Level, Room 214D

Credit: 1.25 CME / 1.50 CE

Moderator: Michael A. LeNoir, MD FAAAAI

Panelists: Andrea J. Apter, MD MA MSc FAAAAI

Michael B. Foggs, MD FAAAAI

Michael A. LeNoir, MD FAAAAI

Upon completion of this session, participants should be able to: Describe the barriers to optimal care of asthma and its role in disparities of urban asthmatics; Review the growing model of health care delivery of the patient centered home in the diagnosis and management of asthma; Discuss strategies to increase the role of allergist/immunologists in the patient centered medical home.

## Problem-Based Learning Workshop

### 2813 Atopic Dermatitis

4:45 to 6:00 pm

Convention Center, Concourse Level, Room 215

Pre-registration and ticket required. Fee: \$50.

Credit: 1.25 CME / 1.50 CE

Moderator: Russell A. Settipane, MD FAAAAI

Peck Y. Ong, MD FAAAAI

Upon completion of this session, participants should be able to: Identify triggers of atopic dermatitis; Develop a treatment plan for atopic dermatitis; Design an action plan to treat worsening of atopic dermatitis.

## Problem-Based Learning Workshop

### 2814 A Child with Suspected Peanut Allergy

4:45 to 6:00 pm

Convention Center, Concourse Level, Room 216A

Pre-registration and ticket required. Fee: \$50.

Credit: 1.25 CME / 1.50 CE

Moderator: Ray S. Davis, MD FAAAAI

Hugh A. Sampson, MD FAAAAI

Upon completion of this session, participants should be able to: Discuss a child who presents with suspected food allergy; Evaluate and make recommendations for a patient with suspected food allergy; Discuss food challenges in an office-based practice and potential use of oral food desensitization by clinical allergists.

## Annual Meeting Workshops

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**Q & A Workshop**

**2815 Eating Issues in Eosinophilic Esophagitis (EoE): Nutritional Concerns and Feeding Dysfunction**

4:45 to 6:00 pm

Convention Center, Concourse Level, Room 217AB

Credit: 1.25 CME / 1.50 CE

Moderator: *Maya D. Srivastava, MD PhD FAAAAI*

**4:45 Nutritional Issues in EoE**

*Marion E. Groetch, MS RD*

**5:00 Feeding Dysfunction in Children with EoE**

*Sherri Cohen, MD MPH*

**5:15 When to Refer to Specialty Services**

*David Mark Fleischer, MD FAAAAI*

**5:30 Question & Answer**

Upon completion of this session, participants should be able to: List the common nutritional deficiencies in patients presenting with EoE and those that might occur as a result of dietary management using elimination diets; Describe the important aspects of monitoring dietary nutritional adequacy longitudinally in patients with EoE; Describe the aberrant feeding behaviors observed in young children with EoE who have feeding dysfunction and when referral to a feeding therapist is indicated.

**Q & A Workshop**

**2816 FDA: Update From the U.S. Food and Drug Administration (FDA)**

4:45 to 6:00 pm

Convention Center, Concourse Level, Room 217CD

Credit: 1.25 CME / 1.50 CE

Moderator: *F. Estelle R. Simons, MD FAAAAI*

**4:45 Year-in-Review at the FDA**

*Badrul A. Chowdhury, MD PhD FAAAAI*

**5:00 Immunotherapeutic Lessons for the Allergist from Rheumatology**

*Keith Hull, MD PhD*

**5:15 Issues in Drug Product Development for Allergic Rhinitis**

*Susan Lee Limb, MD FAAAAI*

**5:30 Question & Answer**

Upon completion of this session, participants should be able to: Recognize recent issues of scientific importance at FDA and their regulatory implications; Review the scientific importance of potential differences among TNF inhibitors and explore the anaphylactic potential of immunotherapeutic drugs; Describe issues in the clinical development of drug products for allergic rhinitis.

**Q & A Workshop**

**2817 Is it SLIT? Understanding the Role, Mechanisms and Appropriate Use of SLIT**

4:45 to 6:00 pm

Convention Center, Ballroom Level, Ballroom C1

Credit: 1.25 CME / 1.50 CE

Moderator: *Deborah A. Gentile, MD*

**4:45 Update on Safety and Efficacy of SLIT**

*David P. Skoner, MD*

**5:00 Practical Considerations of SLIT**

*Peter Creticos, MD FAAAAI*

**5:15 Hurdles of Bringing SLIT to the United States**

*Gary N. Gross, MD FAAAAI*

**5:30 Question & Answer**

Upon completion of this session, participants should be able to: Summarize the safety and efficacy of SLIT; Explore the mechanism of action of SLIT; Provide a treatment protocol for SLIT.

**BYOP Workshop**

**2818 Pediatric Dilemmas: Allergy and Beyond**

4:45 to 6:00 pm

Convention Center, Ballroom Level, Ballroom C2

Pre-registration and ticket required. No fee.

Credit: 1.25 CME / 1.50 CE

Moderator: *Paul V. Williams, MD FAAAAI*

**4:45 The Pediatric Patient with Hypogammaglobulinemia**

*Vivian P. Hernandez-Trujillo, MD FAAAAI*

**5:00 Idiopathic Anaphylaxis in Children**

*Scott P. Commins, MD PhD*

**5:15 The Child with Recalcitrant Atopic Dermatitis**

*Mark Boguniewicz, MD FAAAAI*

**5:30 Question & Answer**

Upon completion of this session, participants should be able to address diagnostic and treatment challenges in the care of pediatric patients.

**Q & A Workshop**

**2819 Immunotherapy Preparation for Allergists**

4:45 to 6:00 pm

Convention Center, Ballroom Level, Ballroom C3

Credit: 1.25 CME / 1.50 CE

Moderator: *John E. Duplantier, MD FAAAAI*

**4:45 Guide to Immunotherapy Administration and Enhancing Safety in the Office Setting**

*Dana V. Wallace, MD FAAAAI*

**5:00 Immunotherapy Dosing: Facts and Open Questions**

*Désirée E.S. Larenas Linnemann, MD FAAAAI*

**5:15 Optimal Duration of Immunotherapy**

*Stephen R. Durham, MA MD FRCP*

**5:30 Question & Answer**

Upon completion of this session, participants should be able to: Achieve competency in immunotherapy preparation; Discuss the office setting and precautions to ensure safety; Discuss evidence for duration of immunotherapy and adequate dosing regimens.

**Clinical Research Workshop**

**2821 Anaphylaxis: Advancing Proficiency in Clinical Practice**

4:45 to 6:00 pm

Marriott Rivercenter, Third Floor, Grand Ballroom Salon J

Credit: 1.25 CME / 1.50 CE

Moderator: *Dee Mallam, RN AE-C*

*Karen L. Gregory, DNP APRN-BC RRT AE-C*

*Gregory M. Metz, MD*

Upon completion of this session, participants should be able to: Describe criteria for anaphylaxis; Identify signs and symptoms of anaphylaxis; Apply in a simulated environment appropriate treatment for anaphylaxis.

**Annual Meeting Workshops**

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## Clinical Research Workshop

### 2822 Bring Your Own Pediatric Food Challenge Experience

4:45 to 6:00 pm

Marriott Rivercenter, Third Floor, Grand Ballroom Salon M

Credit: 1.25 CME / 1.50 CE

Moderator: Kim E. Mudd, RN MSN CCRP

Teri Holbrook, CRNP

Upon completion of this session, participants should be able to: Discuss solutions to common problems experienced by health care providers conducting pediatric food challenges; Identify other health care providers performing similar clinical activities and network with them as needed throughout the year.

## Allied Health Workshop

### 2823 A Walk Through Mast Cell Activation Disorders for the Allied Health Provider

4:45 to 6:00 pm

Marriott Rivercenter, Third Floor, Grand Ballroom Salon K

Credit: 1.25 CME / 1.50 CE

Moderator: Kristin E. Olson Kloos, RN

Catherine R. Weiler, MD PhD FAAAAI

Upon completion of this session, participants should be able to: Identify diagnostic criteria of systemic mastocytosis according to WHO; Identify the major triggers for mast cell activation disorders; Discuss the treatment plan and resources for the patients with mast cell disorders.

## Allied Health Workshop

### 2824 Hands-On Spirometry Training for the Office

4:45 to 6:00 pm

Marriott Rivercenter, Third Floor, Grand Ballroom Salon D

Pre-registration and ticket required. \$20

Credit: 1.25 CME / 1.50 CE

Moderator: Mary Kay Bossard, BS RRT AE-C

#### 4:45 Spirometry Basics

Rosemary Stinson, RN MSN CRNP

#### 5:10 Obtaining Good Quality Tests

Mary Kay Bossard, BS RRT AE-C

#### 5:35 Data Entry

Concettina Tolomeo, DNP APRN FNP-BC AE-C

Upon completion of this session, participants should be able to demonstrate basic skills in the performance of office spirometry.

## Allied Health Workshop

### 2825 IgG Testing: Is it All It's Cracked Up to Be?

4:45 to 6:00 pm

Marriott Rivercenter, Third Floor, Grand Ballroom Salon L

Credit: 1.25 CME / 1.50 CE

Moderator: Kathy L. Pinzone, RN AE-C CCRC

David R. Naimi, DO

Megan T. Ott, MSN CRNP

Upon completion of this session, participants should be able to: Recognize advertisements and community claims in regards to benefits of IgG testing for foods; Discuss literature review regarding efficacy and interpretation of IgG testing for foods.

## Annual Meeting Allied Health Sessions

Programmed by the AAAAI. Allied Health Sessions funded through an educational grant from Merck.

## Allied Health Workshop

### 2826 Hereditary Angioedema: Update in Classification and Management

4:45 to 6:00 pm

Marriott Rivercenter, Third Floor, Grand Ballroom Salon A

Credit: 1.25 CME / 1.50 CE

Moderator: Debra A. Sedlak, MSN CPNP

#### 4:45 Overview of Types of HAE and Diagnostic Evaluation

Michael Frank, MD FAAAAI

#### 5:05 Overview of Management and Resources Available for Patients

William R. Blouin, ARNP

Upon completion of this session, participants should be able to: Develop understanding of HAE classifications; Develop understanding of HAE evaluation; Recognize the management and resources available to patients.

## Q & A Workshop

### 2827 Reviewing and Publishing Workshop: Getting Involved in the JACI and JACI: In Practice

4:45 to 5:45 pm

Marriott Riverwalk, Second Floor, Alamo Ballroom Salon AB

Credit: 1.25 CME / 1.50 CE

Moderator: Donald Y.M. Leung, MD PhD FAAAAI

#### 4:45 JACI: In Practice-Desired Contents

Michael Schatz, MD MS FAAAAI

#### 5:00 An Editor's Tip for Reviewers 1

Stanley J. Szefler, MD FAAAAI

#### 5:15 An Editor's Tip for Reviewers 2

Scott Sicherer, MD FAAAAI

Upon completion of this session, participants should be able to: Review and evaluate a scientific journal article; Describe strategies used to identify findings in medical literature that can be used to improve the practice of allergy/immunology; Compare and contrast the aims, scope and missions of the two AAAAI journals.

## New Allergist/Immunologist Assembly Business Meeting and Reception

4:45 to 6:15 pm

Marriott Rivercenter, Third Floor, Grand Ballroom Salon F

The AAAAI invites all new allergy/immunology specialists to attend this business meeting and reception. No fee. No pre-registration required.

## Chrysalis Reception

6:00 to 7:00 pm

Marriott Rivercenter, Third Floor, Grand Ballroom Salon I

Chrysalis participants are encouraged to attend this closing reception along with their FIT mentors.

## Allergy, Asthma & Immunology Education and Research Trust Event "Lights, Camera, Auction!"

7:00 to 10:00 pm

Convention Center, Street Level, Lila Cockrell Theatre

All AAAAI members, delegates and guests are invited to attend this Saturday evening event. The auction, hosted by Steve and Nancy Carell, will take place at the beautiful Lila Cockrell Theatre. Admission by ticket only. See page 13 for more details.

AMERICAN ACADEMY OF ALLERGY, ASTHMA & IMMUNOLOGY



2014  AAAI  
ANNUAL MEETING  
February 28 - March 4 | San Diego, CA



## Seminars

7:00 to 8:00 am

Programmed by the AAAAI. Seminars funded through an educational grant from Merck.

Pre-registration and ticket required. Fee: \$40. Continental breakfast included. Sessions and meals limited to 30 people.

Credit: 1.00 CME / 1.20 CE

### 3001 Mechanisms of Corticosteroid Insensitivity in Asthma

Elena Goleva, PhD

Faoud T. Ishmael, MD PhD

Marriott Rivercenter, Third Floor, Conference Room 10

Upon completion of this session, participants should be able to: Review current approaches for clinical evaluation of potential insensitivity to oral and inhaled CS; Discuss management of patients with suspected CS insensitivity and alternative therapeutic strategies for these patients; Describe glucocorticoid receptor function and current understanding of the molecular pathways that lead to CS insensitivity.

### 3002 Problem-Based Learning: Evaluating and Managing the Patient with Recurrent Infections

Kenneth Paris, MD MPH

Richard L. Wasserman, MD PhD FAAAAI

Marriott Rivercenter, Third Floor, Grand Ballroom Salon B

Upon completion of this session, participants should be able to: Recognize which patients with recurrent infection should be evaluated for primary immunodeficiency; Review which laboratory studies to perform based on the patient's infection history; Explain the options for managing recurrent infection.

### 3003 Biodiversity, Environmental Change and Allergy

Christina E. Ciaccio, MD

Jeffrey G. Demain, MD FAAAAI

Marriott Rivercenter, Third Floor, Grand Ballroom Salon C

Upon completion of this session, participants should be able to: Discuss current research on how climate variability is impacting allergies; Describe the biodiversity hypothesis in the context of the effects of changes in our internal and external environment; Describe how the interaction between our innate immunity and microbes promote allergic disease.

### 3004 Novel Therapies for Chronic Urticaria and Angioedema

W. A. Carrock Sewell, MD PhD FAAAAI

David H. Dreyfus, MD PhD FAAAAI

Marriott Rivercenter, Third Floor, Grand Ballroom Salon D

Upon completion of this session, participants should be able to: Discuss novel therapy for chronic urticaria and angioedema; List novel diagnostic testing for chronic urticaria and angioedema; Review practical considerations for application of novel therapy and diagnosis.

### 3005 Motivational Interviewing to Improve Adherence and Outcomes

Andrew G. Weinstein, MD FAAAAI

Sandra Wilson, PhD

Marriott Rivercenter, Third Floor, Conference Room 1

Upon completion of this session, participants should be able to: Assess a patient's readiness and confidence to accept an asthma treatment recommendation; Help patients with their ambivalence to change; Diffuse patient resistance.

### 3006 Chronic Rhinosinusitis Subtypes and Implications for Treatment

Joseph K. Han, MD

Amber U. Luong, MD PhD

Marriott Rivercenter, Third Floor, Conference Room 2

Upon completion of this session, participants should be able to: Describe the classification of sinusitis; Describe the clinical subtypes of chronic rhinosinusitis; Explain the different non-surgical treatment options for the different chronic rhinosinusitis subtypes.

### 3007 Prostaglandins as Regulators of Allergic Inflammation

Joshua A. Boyce, MD FAAAAI

R. Stokes Peebles, Jr., MD FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 3

Upon completion of this session, participants should be able to: Define the role of prostaglandins on innate immunity; Discuss the therapeutic options of prostaglandins as therapy for allergic diseases.

### 3008 Does Phenotype/Endotype Identification Help in the Treatment of Severe Asthma?

Eugene R. Bleecker, MD FAAAAI

Stephen P. Peters, MD PhD FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 4

Upon completion of this session, participants should be able to: Describe phenotypes and endotypes that are present in severe asthma; Review tests that can be performed in the office to better characterize a patient's phenotype and endotype; Review which therapies are most suited to various phenotypes and endotypes.

### 3009 When Autoimmunity Mimics Allergy: How to Recognize and Refer

Mildred Kwan, MD

Teresa K. Tarrant, MD FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 7

Upon completion of this session, participants should be able to: Identify and distinguish between the upper and lower airway mimics of asthma including Churg Strauss, Relapsing Polychondritis, and ANCA vasculitis; Recognize the overlap in clinical presentations between Hepatitis C mixed cryoglobulinemia and Systemic Lupus Erythematosus with urticaria and urticarial vasculitis, and appropriately evaluate these conditions when clinical symptoms and history are suggestive; Describe the utility of autoantibody assessment in their sensitivity and specificity of diagnosing autoimmune disease.

### 3010 Problem-Based Learning: How to Be a Mold Sleuth

Anupma B. Dixit, PhD

H. James Wedner, MD FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 8

Upon completion of this session, participants should be able to: Discern quality of building inspection for mold colonization and water damage; Interpret mold sampling data to determine significance of the level of exposure indoors

### 3011 Anaphylaxis in Pregnancy: The Role of the Allergist/Immunologist

Michael Schatz, MD MS FAAAAI

F. Estelle R. Simons, MD FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 9

Upon completion of this session, participants should be able to: Describe the appropriate workup of the pregnant patient with allergies; Discuss the proper treatment of the pregnant patient with anaphylaxis.

### 3012 Making the Most of Your EMR: Meeting Meaningful Use

Melinda M. Rathkopf, MD FAAAAI

David J. Shulan, MD FAAAAI

Marriott Rivercenter, Third Floor, Grand Ballroom Salon A

Upon completion of this session, participants should be able to: Explain the capabilities of EMR for meeting proposed meaningful use targets; Discuss how EMR can help improve clinical and outcomes research activities.



**3013 What to Do with a Patient Who Cannot Smell**

Joaquim Mullol, MD PhD FAAAAI  
 Jayant M. Pinto, MD

Marriott Rivercenter, Third Floor, Conference Room 11

Upon completion of this session, participants should be able to: Review the importance of the sense of smell in patients with sinonasal and broncho-pulmonary diseases; List which diagnostic tools should be used and in which order; Discuss treatment approaches for patients with loss of smell.

**3014 Effect of Structural Biology of Allergens, IgE and IgE Receptors on Mechanism of Allergic Disease**

Rob C. Aalberse, PhD  
 Martin D. Chapman, PhD FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 12

Upon completion of this session, participants should be able to: Review the present knowledge of mechanisms of allergic disease; Recognize how the structural biology of molecules involved in disease defines molecular interactions and therefore mechanisms of disease; Describe how molecular interactions determine allergic and/or immunologic disease and new possible therapies.

**3015 RCM Reactions: Myths, Mechanisms, Prevention and Treatment**

Vivian P. Hernandez-Trujillo, MD FAAAAI  
 Suzanne S. Teuber, MD FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 16

Upon completion of this session, participants should be able to: List the risk factors for immediate RCM adverse reactions; Describe the types of delayed cutaneous reactions to RCM; Write a protocol for initiation of treatment of anaphylaxis in a radiology suite.

**Allied Health Seminars**



7:00 to 8:00 am

Programmed by the AAAAI. Seminars funded through an educational grant from Merck.

Pre-registration and ticket required. Fee: \$10.

Credit: 1.00 CME / 1.20 CE

**3041 Pharmacology Update in Asthma and Allergy**

Maureen George, PhD RN AE-C  
 Mary Lou Hayden, RN MS FNP-C AE-C

Marriott Rivercenter, Third Floor, Grand Ballroom Salon M

Upon completion of this session, participants should be able to: Discuss the recently approved line extensions of medications for asthma and allergic rhinitis; Describe the controversy of prescribing antibiotics for acute sinusitis and otitis media.

**3042 Climate Change and Air Quality: What You and Your Patients Need to Know**

Wade G. Hill, PhD APRN  
 Linda Ford, MD FAAAAI

Marriott Rivercenter, Third Floor, Grand Ballroom Salon L

Upon completion of this session, participants should be able to: Interpret how climate change affects air pollution; Describe to patients how to interpret air quality index alerts; List critical ways to protect respiratory health in response to climate change.

**3043 Providing Asthma and Allergy Care to Patients with Autistic Spectrum Disorders: Meeting the Challenge**

Jennifer M. Darr, MSW LCSW  
 Melissa T. Korenblat-Hanin, ACSW LCSW

Marriott Rivercenter, Third Floor, Grand Ballroom Salon K

Upon completion of this session, participants should be able to: Identify various autistic spectrum disorders and the corresponding challenges of managing asthma/allergy within this population; Apply helpful techniques to improve cooperation during testing/evaluation.

**3044 Management of Food Allergy: What is New at the Table?**

Suzanne K. Carlisle, RN BSN CCRP  
 Sally A. Noone, RN MSN CCRC

Marriott Rivercenter, Third Floor, Grand Ballroom Salon J

Upon completion of this session, participants should be able to: Describe the process for integrating clinical history and laboratory test results to determine when it is appropriate to offer an open graded food challenge to patients.

**Plenary**

**3101 Epigenetics: How the Environment Affects Gene Expression and the Development of Asthma and Allergic Disease**

8:15 to 9:45 am

Convention Center, Street Level, Exhibit Hall D

Credit: 1.50 CME / 1.80 CE

Moderator: Rachel L. Miller, MD FAAAAI

**8:15 Epigenetics Overview**

Shuk-Mei Ho, PhD

**8:45 Epigenetic Modulation of Helper T Cell Differentiation and Plasticity**

John J. O'Shea, Jr., MD

**9:15 Environmental Exposures and Epigenetics**

Ian A. Yang, MBBS FRACP PhD Grad Dip Clin Epid

Upon completion of this session, participants should be able to: Describe how specific exposures during pregnancy can predispose the child to allergic disease and asthma; Discuss how the environment and epigenetics can skew the development of the immune system; Interpret the epigenetic effects of common environmental exposures on the expression of asthma.

**Posters**

7:00 am to 5:30 pm

Convention Center, Street Level, Exhibit Hall C

Posters on display from 7:00 am to 5:30 pm. Authors present from 9:45 to 10:45 am.

Credit: No CME / No CE

Refer to pages 86-139 for abstracts and authors.

**3201 Diagnostic Methods in Asthma**

**3202 Autoimmunity and Immunodiagnosics**

**3203 Immunodeficiency**

**3204 How Viral and Bacterial Infections Drive Asthma**

**3205 Measuring Pollen Exposures**

**3206 Food Allergy I**

**3207 Food Allergy Related Issues/Immune Mediated Skin Disease**

**3208 New Developments in the Treatment of Asthma and Allergic Diseases**

**3209 Immunotherapy II**

**3210 Rhinitis/Conjunctivitis I**

**3211 Mast Cells, Basophils and IGE**

**3212 Eosinophils**

## Symposium ▼

### 3301 Dermatology for the Allergist

10:45 am to 12:00 pm

Convention Center, Ballroom Level, Ballroom C1

Credit: 1.25 CME / 1.50 CE

Moderator: David A. Khan, MD FAAAAI

#### 10:45 The Latest in Contact Dermatitis

John Browning, PhD

#### 11:05 Atopic Dermatitis and the Skin Barrier

Donald Y.M. Leung, MD PhD FAAAAI

#### 11:25 Autoimmune Progesterone Dermatitis

Jonathan A. Bernstein, MD FAAAAI

#### 11:45 Question & Answer

Upon completion of this session, participants should be able to: Discuss common dermatological diseases; Review perspectives from both specialties on treatment of common dermatologic problems; Describe advances in the understanding of the mechanisms of dermatologic allergy problems such as contact dermatitis, atopic dermatitis and drug rashes.

## Symposium ▼

### 3302 Asthma Guidelines: Do They Need Modification and are Physicians and Patients Accepting Them?

10:45 am to 12:00 pm

Convention Center, Ballroom Level, Ballroom C2

Credit: 1.25 CME / 1.50 CE

Moderator: Nora A. Barrett, MD

#### 10:45 Where Do the Current Asthma Guidelines Need 'Tweaking'?

Stephen P. Peters, MD PhD FAAAAI

#### 11:05 Incorporating Newer Pharmacologic Agents into Existing Asthma Guidelines

William W. Busse, MD FAAAAI

#### 11:25 Should Guidelines or Individualized Care be Utilized by Specialists?

Robert Wise, MD

#### 11:45 Question & Answer

Upon completion of this session, participants should be able to: Describe how existing guidelines should be modified to incorporate newer therapeutic options and safety data; Describe where and when LABAs, newer inhaled steroids, anticholinergics and biologics should be employed; Recognize the strengths and weaknesses of utilizing an algorithmic vs. individualized treatment plan in a specialist practice.

## Symposium ▼

### 3303 An Update on the Efficacy and Safety of Subcutaneous (SCIT) vs. Sublingual (SLIT) Allergen Immunotherapy for the Practicing Allergist

10:45 am to 12:00 pm

Convention Center, GBallroom Level, Ballroom C3

Credit: 1.25 CME / 1.50 CE

Moderator: Désirée E.S. Larenas Linnemann, MD FAAAAI

#### 10:45 How Does the Efficacy of Sublingual Allergen Immunotherapy Compare with Subcutaneous Immunotherapy?

Ana Isabel Tabar Purroy, MD

#### 11:05 Assessing the Relative Risks of Subcutaneous and Sublingual Allergen Immunotherapy

Tolly Epstein, MD MS

#### 11:25 How Can We Measure Adherence and Outcomes with Allergen Immunotherapy? A Guide for the Practicing Allergist

Cheryl S. Hankin, PhD

#### 11:45 Question & Answer

Upon completion of this session, participants should be able to: Describe the clinical efficacy of subcutaneous and sublingual immunotherapy in treating allergic rhinitis, sinusitis and atopic dermatitis; Define the relative safety of subcutaneous vs. sublingual immunotherapy; Synthesize available data regarding clinical outcomes and adherence patterns in order to develop evidence-based prescribing patterns for subcutaneous and sublingual immunotherapy.

## Symposium ▼

### 3304 Advances in the Understanding of Common Variable Immunodeficiency: An International CONSENSUS Symposium

10:45 am to 12:00 pm

Convention Center, River Level, Room 006

Credit: 1.25 CME / 1.50 CE

Moderator: Francisco A. Bonilla, MD PhD FAAAAI

#### 10:45 Morbidity and Mortality: Four Decades of CVID

Charlotte Cunningham-Rundles, MD PhD FAAAAI

#### 11:05 B Cell Patterns: What They Tell Us About CVID Pathophysiology

Klaus Warnatz, MD PhD

#### 11:25 Calcium Signaling Defects in CVID Disorders

Annick van de Ven, MD PhD

#### 11:45 Question & Answer

Upon completion of this session, participants should be able to: Recognize how B cell pattern analysis contributes to a better understanding of CVID pathogenesis; Discuss the presence of calcium channel signaling defects in some patients with CVID; Identify common complications that increase morbidity and mortality in patients with CVID.

**Symposium** ▼

**3305 Mechanisms of Respiratory Infections Driving Th2 Immunity: Highlights from the Work of the Asthma and Allergic Diseases Cooperative Research Centers**

10:45 am to 12:00 pm

Convention Center, River Level, Room 007

Credit: 1.25 CME / 1.50 CE

Moderator: Tina V. Hartert, MD MPH

**10:45 Viruses and the Innate IL-13 Axis in Asthma**  
*R. Stokes Peebles, Jr., MD FAAAAI*

**11:05 Mechanisms by Which RSV Induces Th2 Immune Responses**  
*Martin L. Moore, PhD*

**11:25 The Role of Mycoplasma Pneumonia CARDS Toxin in the Induction and Exacerbation of Th2 Inflammation**

*Peter Dube, PhD*

**11:45 Question & Answer**

Upon completion of this session, participants should be able to: Describe the mechanisms by which viral infections induce IgE receptor expression on dendritic cells; Define the mutations in the respiratory syncytial virus genome that induce Th2 immune responses; Outline the mechanisms behind bacterial induced Th2 inflammation.

**Symposium** ▼

**3306 World Allergy Forum: Advances in Tolerance Induction to Allergens**



10:45 am to 12:00 pm

Programmed by the AAAAI and WAO. Funded through an educational grant from Novartis.

Convention Center, Concourse Level, Room 217AB

Credit: 1.25 CME / 1.50 CE

Moderators: A. Wesley Burks, MD FAAAAI, Ruby U. Pawankar, MD PhD FAAAAI

**10:45 New Frontiers in the Mechanisms of Tolerance Induction to Allergens**

*Paul Bryce, PhD*

**11:05 Early Intervention for Primary Tolerance to Allergens**

*Katrina Jane Allen, MD PhD*

**11:25 Update on the Role of SLIT in Tolerance Induction to Allergens: Safety and Efficacy**

*Giovanni Passalacqua, MD*

**11:45 Question & Answer**

Upon completion of this session, participants should be able to: Discuss the mechanism of tolerance induction at many levels from molecules to cells and individual subjects; Identify the role of tolerance in primary prevention in food allergy; Review the practical role of tolerance in immunotherapy including SLIT.

**Symposium** ▼

**3307 Practice Parameters on Environment Assessment and Exposure Reduction**

10:45 am to 12:00 pm

Convention Center, Concourse Level, Room 217CD

Credit: 1.25 CME / 1.50 CE

Moderator: James L. Sublett, MD FAAAAI

**10:45 Practice Parameter on Household Pets**  
*Wanda Phipatanakul, MD MS FAAAAI*

**11:05 Practice Parameter on Rodents**  
*Elizabeth Matsui, MD*

**11:25 Practice Parameter on Cockroaches**  
*Ginger L. Chew, ScD*

**11:45 Question & Answer**

Upon completion of this session, participants should be able to: Recommend measures to reduce exposure to furry animal allergens even if the animal continues to live in the house; Identify evidence of a rodent or cockroach infestation; Implement an integrated pest management program.

**Symposium** ▼

**3308 Asthma Quality Markers: What Should We Be Measuring?**

10:45 am to 12:00 pm

Convention Center, Concourse Level, Room 214BC

Credit: 1.25 CME / 1.50 CE

Moderator: Chitra Dinakar, MD FAAAAI

**10:45 Quality Markers for Asthma Care in the Emergency Department**  
*Speaker to be announced.*

**11:05 Asthma Quality Markers: Rationale and Interpretation**  
*Sami L. Bahna, MD DrPH FAAAAI*

**11:25 How Do Asthma Quality Markers Correlate with Asthma Morbidity Markers?**  
*Michael Schatz, MD MS FAAAAI*

**11:45 Question & Answer**

Upon completion of this session, participants should be able to: Outline the selection process for asthma quality markers; Describe the evidence base that is used to determine asthma quality markers; List how quality measures relate to real world outcomes.

**Allied Health Symposium** ◆ ▼

**3311 C.A.R.E. of Patients with Primary Immune Deficiency**

10:45 am to 12:00 pm

Marriott Rivercenter, Third Floor, Grand Ballroom Salon M

Credit: 1.25 CME / 1.50 CE

Moderator: William R. Blouin, ARNP

**10:45 Clinical Care of PIDD Patients**  
*M. Elizabeth M. Younger, CRNP PhD*

**11:10 The Impact of Genetic Discoveries at the Bedside**  
*Karin Chen, MD*

**11:35 Advocacy Strategies to Improve Quality of Life**  
*Margaret R. Dodds, RN MS CPNP*

Upon completion of this session, participants should be able to: Describe the impact genetic testing can have on clinical care of patients with PIDD; Discuss strategies to apply resources to facilitate improvement in the quality of care and life for patients with PIDD; Apply strategies to optimize clinical outcomes for patients with PIDD.



## Allied Health Symposium

### 3312 Vitamin D Update: Implications for Allergy and Asthma Clinical Practice

10:45 am to 12:00 pm

Marriott Rivercenter, Third Floor, Grand Ballroom Salon L

Credit: 1.25 CME / 1.50 CE

Moderator: *Carla M. Duff, CPNP MSN*

#### 10:45 A Literature Review

*Nicolette De Jong, PhD*

#### 11:10 Its Emerging Role in Asthma and Allergy

*Karen L. Gregory, DNP APRN-BC RRT AE-C*

#### 11:35 Clinical Pearls: Patient Education and Dosing/Administration

*Marciarose Winston, MSN CPNP AE-C*

Upon completion of this session, participants should be able to: Discuss vitamin D and its major forms, as well as the recommended daily intake; Describe the four proposed actions of vitamin D and how skin types affect its synthesis; Discuss the most recent research on vitamin D and its implications for allergy and asthma clinical practice.

## Allied Health Workshop

### 3313 Chronic Urticaria: Causes, Clinical Manifestations and Treatment

10:45 am to 12:00 pm

Marriott Rivercenter, Third Floor, Grand Ballroom Salon K

Credit: 1.25 CME / 1.50 CE

Moderator: *Pinkus Goldberg, MD FAAAAI*

*Karen Rance, DNP RN CPNP AE-C*

*Pinkus Goldberg, MD FAAAAI*

Upon completion of this session, participants should be able to: Identify common causes of urticaria; Discuss the clinical manifestations of urticaria; Discuss the various treatment approaches for urticaria.

## Allied Health Workshop

### 3314 The Asthma Toolbox: New Concepts to Think Outside of the Box

10:45 am to 12:00 pm

Marriott Rivercenter, Third Floor, Grand Ballroom Salon J

Credit: 1.25 CME / 1.50 CE

Moderator: *Stephen J. McGeady, MD FAAAAI*

*Ginger G. LaBelle, CPNP*

*Amy Polen Stallings, MD*

Upon completion of this session, participants should be able to: Discuss the impact recent studies on rhinovirus can have on the management of atopic asthmatics.

## Allied Health Workshop

### 3315 The Psychosocial Dynamics of Living with Food Allergies

10:45 am to 12:00 pm

Marriott Rivercenter, Third Floor, Grand Ballroom Salon D

Credit: 1.25 CME / 1.50 CE

Moderator: *Melissa T. Korenblat-Hanin, ACSW LCSW*

*Jennifer M. Darr, MSW LCSW*

*Melissa T. Korenblat-Hanin, ACSW LCSW*

Upon completion of this session, participants should be able to: Explore the psychosocial dynamics of living with food allergies: challenges, emotions and accomplishments; Discuss approaches that build and enhance stability, security, and sensibility; Identify successful resources for assisting the food allergic patient and family.

## Allied Health Workshop

### 3316 Skin Testing for the Allied Health Professional

10:45 am to 12:00 pm

Marriott Rivercenter, Third Floor, Grand Ballroom Salon C

Pre-registration and ticket required. No fee.

Credit: 1.25 CME / 1.50 CE

Moderator: *Debra A. Sedlak, MSN CPNP*

#### 10:45 Minor Details that Can Improve Your Skin Prick Testing Accuracy

*John Oppenheimer, MD FAAAAI*

#### 10:55 Extracts and Devices

*Jeanette Arnold, MSN RN C-FNP*

#### 11:05 Documentation of Skin Test Results

*Sheelagh Stewart, MPH, RN, AE-C*

#### 11:15 Hands-On Instruction

Upon completion of this session, participants should be able to: Identify proper technique for skin testing; Identify how to take a proficiency test; Experiment with different SPT devices (mono and multitest).

## Allied Health Oral Abstract Session

### 3520 Allied Health Oral Abstract Session

12:15 to 1:30 pm

Marriott Rivercenter, Third Floor, Grand Ballroom Salon I

Pre-registration and ticket required. Fee: \$40. Box lunch included.

Credit: 1.25 CME / 1.50 CE

Moderator: *Maureen George, PhD RN AE-C*

#### 12:15 Effect of Sensitization and Exposure to Mold On Asthma Morbidity in Inner-City Children

*Jean Curtin-Brosnan, MA*

#### 12:30 Evaluation of the Animated Cartoon-Aided Teaching of Intranasal Corticosteroid Administration Technique Among Thai Children with Allergic Rhinitis

*Somying Indradat, MD*

#### 12:45 Change in Food Allergy Attitudes Among Urban Public School Nurses After a Standardized Educational Curriculum

*Humaira Robinson, RN, BSN*

#### 1:00 Both Bronchodilator Reversibility and FEV1/FVC, but Neither FEV1 Nor FEF25-75, Are Predictors of Future Acute Visits Among Urban Children and Adolescents with Persistent Asthma

*Mary Jane C. Ong*

#### 1:15 Circumstances of Medically Unadvised Purposeful Exposure to Food Allergens in an Observational Study (Consortium of Food Allergy Research, COFAR)

*Kim E. Mudd, RN MSN CCRP*

Upon completion of this session, participants should be able to discuss the diversity in care provided to the allergy and immunology patient population.

## Annual Meeting Allied Health Sessions

Programmed by the AAAAI. Allied Health Sessions funded through an educational grant from Merck.

**Interest Section Forum**    

**3521 ADT: American Lung Association: Asthma Clinical Research Centers Research Reports**

12:30 to 2:30 pm  
**Convention Center, Ballroom Level, Ballroom C3**  
 Pre-registration and ticket required. No fee. Box lunch included.  
 Credit: 1.25 CME / 1.50 CE  
 Moderator: *Stephen I. Wasserman, MD FAAAAI*

- 12:30 **Lunch**
- 12:35 **Business Meeting**
- 1:05 **Question & Answer**
- 1:15 **ALA-ACRC Overview and Ongoing Studies**  
*Robert Wise, MD*
- 1:45 **Highlights of Completed Studies: SIIVA, LODO, LOCCS, SARA and SARCA**  
*Stephen P. Peters, MD PhD FAAAAI*

**2:15 Question & Answer**  
 Upon completion of this session, participants should be able to: Be aware of the latest research findings in asthma; Describe of ongoing research studies conducted by the ALA-ACRC network.

**Interest Section Forum**    

**3522 BCI: Advances in Basic and Clinical Immunology**

12:30 to 2:30 pm  
**Convention Center, River Level, Room 007**  
 Pre-registration and ticket required. No fee. Box lunch included.  
 Credit: 1.25 CME / 1.50 CE  
 Moderator: *Francisco A. Bonilla, MD PhD FAAAAI*

- 12:30 **Lunch**
- 12:35 **Business Meeting**
- 1:05 **Question & Answer**
- 1:15 **Biologic Therapies for Allergic and Immunologic Disease: Mechanisms and Applications**  
*William W. Busse, MD FAAAAI*
- 1:45 **Natural Killer Cell Defects: At the Crossroads of Innate and Adaptive Immunity**  
*Jordan Orange, MD PhD FAAAAI*

**2:15 Question & Answer**  
 Upon completion of this session, participants should be able to: Describe with NK cell biology and the implications of NK dysfunction for human disease; Recognize the mechanisms and applications of new biologic therapies for allergic and immunologic disorders.

**Interest Section Forum**    

**3523 EORD: Sampling the Secrets of Immunity Through the Skin: Patch Testing Pearls in Adults and Children**

12:30 to 2:30 pm  
**Convention Center, River Level, Room 006**  
 Pre-registration and ticket required. No fee. Box lunch included.  
 Credit: 1.25 CME / 1.50 CE  
 Moderator: *Karin A. Pacheco, MD MSPH FAAAAI*

- 12:30 **Lunch**
- 12:35 **Business Meeting**
- 1:05 **Question & Answer**

- 1:15 **Patch Testing in Adults: Environmental and Occupational Exposures and Sources of Allergen Panels**  
*Dorothy Linn Holness, MD*
- 1:45 **Patch Testing in Children: Common Environmental Causes and the Use of Atopy Patch Testing**  
*Luz S. Fonacier, MD FAAAAI*
- 2:15 **Question & Answer**  
 Upon completion of this session, participants should be able to: Identify skin exposures and allergens specific to different occupations and jobs; Recognize common environmental causes of contact dermatitis in children; Distinguish the differences in appearance between positive, negative, irritant, and angry back responses to patch testing.

**Interest Section Forum**    

**3524 FADDA: Primer on Mast Cell Diseases and Hypersensitivity to Drugs**

12:30 to 2:30 pm  
**Convention Center, Ballroom Level, Ballroom C1**  
 Pre-registration and ticket required. No fee. Box lunch included.  
 Credit: 1.25 CME / 1.50 CE  
 Moderator: *Sarbjit S. Saini*

- 12:30 **Lunch**
- 12:35 **Business Meeting**
- 1:05 **Question & Answer**
- 1:15 **Mast Cell Activation Syndromes: Anaphylaxis and Mastocytosis in the 21<sup>st</sup> Century**  
*Mariana C. Castells, MD PhD FAAAAI*
- 1:45 **Hypersensitivity to Drugs: From Skin Testing to Desensitizations**  
*David A. Khan, MD FAAAAI*
- 2:15 **Question & Answer**  
 Upon completion of this session, participants should be able to discuss recent research development in the field of allergy/immunology.

**Interest Section Forum**    

**3525 HEDQ: Where Does the Allergist Reside in the Patient-Centered Medical Home/ Neighborhood?**

12:30 to 2:30 pm  
**Convention Center, Concourse Level, Room 217AB**  
 Pre-registration and ticket required. No fee. Box lunch included.  
 Credit: 1.25 CME / 1.50 CE  
 Moderator: *Giselle Mosnaim, MD MS FAAAAI*

- 12:30 **Lunch**
- 12:35 **Business Meeting**
- 1:05 **Question & Answer**
- 1:15 **What is a Patient Centered Medical Home? How Do I Get Invited into the Building?**  
*M. Carol Greenlee, MD*
- 1:45 **What is the Role of the Allergist/Immunologist Caring for Asthma Patients in the Patient Centered Medical Home?**  
*Richaard W. Honsinger, MD MACP FAAAAI*
- 2:15 **Question & Answer**  
 Upon completion of this session, participants should be able to: Discuss the key elements of a successful PCMH and PCMH-N relationship which include: 1) effective communication, coordination, and integration with PCMH practices in a bidirectional manner to provide high-quality and efficient care; 2) appropriate and timely consultations and referrals that complement the aims of the PCMH practice; and 3) efficient, appropriate, and effective flow of necessary patient and care information.

## Interest Section Forum

### 3526 IRSOC: Updates on Ocular Allergy and Cough

12:30 to 2:30 pm

Convention Center, Ballroom Level, Ballroom C2

Pre-registration and ticket required. No fee. Box lunch included.

Credit: 1.25 CME / 1.50 CE

Moderator: Fuad Baroody, MD FAAAAI

12:30 Lunch

12:35 Business Meeting

1:05 Question & Answer

1:15 Overview of Ocular Allergy: Pathophysiology and Treatment Options

Leonard Bielory, MD FAAAAI

1:45 The Role of the Allergist in Cough Management

Arvind Madaan, MD FAAAAI

2:15 Question & Answer

Upon completion of this session, participants should be able to: Review the latest practice parameters related to ocular allergy; Discuss the management of cough by the allergist.

## Interest Section Forum

### 3527 MAAI: Recent Advances in Understanding the Mechanisms of Allergic Disease

12:30 to 2:30 pm

Convention Center, Concourse Level, Room 214BC

Pre-registration and ticket required. No fee. Box lunch included.

Credit: 1.25 CME / 1.50 CE

Moderator: Mitchell H. Grayson, MD FAAAAI

12:30 Lunch

12:35 Business Meeting

1:05 Question & Answer

1:15 Allergy and the Microbiome

Gary B. Huffnagle, PhD

1:45 The Complexity of HRF: Not Just for Allergies Anymore!

Adam Telerman, MD

2:15 Question & Answer

Upon completion of this session, participants should be able to: Describe how the intestinal microbiome regulates basophil responses; Describe novel discoveries in mechanisms of allergic disease over the past year.

## Annual Meeting Allied Health Sessions

Programmed by the AAAAI. Allied Health Sessions funded through an educational grant from Merck.

## Allied Health Course

### 3551 Association of Asthma Educators National Asthma Educator Certification and Re-Certification Review Course

12:30 to 5:00 pm

Marriott Rivercenter, Third Floor, Grand Ballroom Salon G

Pre-registration and ticket required. Fee varies. Refreshments included.

Credit: 4.00 CME / 4.80 CE

12:30 Registration

1:00 Asthma Epidemiology/Pathophysiology

Karen L. Gregory, DNP APRN-BC RRT AE-C

2:00 History, Physical Exam and Assessment of Severity/Control

Marcia Rose Winston, MSN CPNP AE-C

3:30 Co-Morbidities and Treatment Interventions: Behavioral, Environmental and Pharmacological

Marcia Rose Winston, MSN CPNP AE-C

4:30 Cultural Sensitive Approaches to Asthma

Karen L. Gregory, DNP APRN-BC RRT AE-C

Upon completion of this session, participants should be able to: Describe trends in asthma prevalence; Determine individual patient's levels of severity and control; Interpret barriers to adherence as they apply to self-assessment and self-management of asthma.

## Oral Abstract

### 3601 Asthma Epidemiology

3:00 to 4:15 pm

Convention Center, River Level, Room 007

Credit: 1.25 CME / 1.50 CE

Moderator: Mark F. Sands, MD FAAAAI

3:00 United States Asthma Hospitalization Rates in the 21st Century Show a Peak Female Predominance in the 5th and 6th Decades of Life

Robert Yao-wen Lin, MD FAAAAI

3:15 Comparison of Prepubertal Gender Differences in Pulmonary Physiologic Outcome Measures

Amy Lynn O'Brien, MD

3:30 Estimated Prevalence and Economic Burden of Severe, Uncontrolled Asthma in the United States

Cheryl S. Hankin, PhD

3:45 Factors Associated with Asthma Readmissions in Children in Rural Wisconsin

Ejaz Yousef, MD

4:00 Older Adults with Asthma: Comparisons of Those with Long-Standing Asthma to Those with Late Onset Asthma

Alan P. Baptist, MD MPH FAAAAI

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.



**Oral Abstract**

**3602 Dendritic Cells**

3:00 to 4:15 pm

Convention Center, River Level, Room 006

Credit: 1.25 CME / 1.50 CE

Angela Haczu, MD PhD FAAAAI

Wayne G. Shreffler, MD PhD FAAAAI

**3:00 Dendritic Cells From X-Linked Hyper-IgM Patients Present Impaired Responses to Candida Albicans and Paracoccidioides Brasiliensis That Can Be Reversed by Exogenous Soluble CD40L**  
*Otávio C. Marques*

**3:15 Molecular Mechanisms Involved in Dendritic Cell-Dependent Regulatory T Cell Generation During Immunotherapy**  
*Marco A. Garcia*

**3:30 Human Dendritic Cells Stimulated with a Novel Peanut Protein Express High Levels of RALDH2 and Induce RA-Sensitive Genes in Naïve T Cells**  
*Bert Ruiter, PhD*

**3:45 The C-Lectin Receptor Dendritic Cell Immunoreceptor (DCIR) Mediates the Tolerogenic Effects of Intravenous Immunoglobulin in Pulmonary Inflammation**  
*Amir Hossein Massoud, PhD*

**4:00 Aspergillus Fumigatus (Af) Induced Airway Epithelial Accumulation and Decreased Lymph Node Homing of Myeloid Dendritic Cells (DC) in the Lung of Mice with Chronic Granulomatous Disease (CGD)**  
*Lisa R. Forbes, MD*

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

**Oral Abstract**

**3603 Mother and Child: Prevention and Disease**

3:00 to 4:15 pm

Convention Center, Concourse Level, Room 217CD

Credit: 1.25 CME / 1.50 CE

Rana S. Bonds, MD FAAAAI

Harald E. Renz, MD

**3:00 Maternal Vitamin D Status During Pregnancy and Asthma in the Offspring Among Participants in the Norwegian Mother and Child Cohort Study**  
*Maria C. Magnus, MPH*

**3:15 Maternal Probiotic Intake and Respiratory and Allergy Outcomes in Early Childhood**  
*Randi J. Bertelsen*

**3:30 Potential Role for IFN $\gamma$  in Promoting Asthma After Prenatal Exposure to BPA**  
*Terumi Midoro-Horiuti, MD PhD FAAAAI*

**3:45 The Impact of Caesarian Section On the Relationship Between Inhalent Allergen Exposure and Allergen-Specific IgE At Age 2 Years**  
*Christine Cole Johnson, PhD MPH FAAAAI*

**4:00 Does Presence of Animals in the Home Increase the Risk of Sensitization to the Same Animals?**  
*Anusha Raj*

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

**Oral Abstract**

**3604 Food Allergy**

3:00 to 4:15 pm

Convention Center, Ballroom Level, Ballroom C3

Credit: 1.25 CME / 1.50 CE

Moderator: Stacie M. Jones, MD

Robert A. Wood, MD FAAAAI

**3:00 Long-Term Outcomes of Milk Oral Immunotherapy in Children**  
*Corinne Keet, MD MS*

**3:15 Tolerance Induction in an Interim Analysis of Peanut Sublingual Immunotherapy**  
*Edwin Kim, MD MS*

**3:30 Basophil Activation Test Discriminates Between Allergy and Tolerance Among Peanut Sensitized Children**  
*Alexandra F. Santos, MD MSc*

**3:45 Low-Dose Oral Immunotherapy As an Early Intervention Strategy for Peanut Allergy**  
*Brian P. Vickery, MD FAAAAI*

**4:00 Development of Tolerance Following Peanut Immunotherapy Is Associated with Basophil Hyporesponsiveness and Low Peanut-IgE:IgG4 Ratio**  
*Michael D. Kulis, Jr., PhD*

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

**Oral Abstract**

**3605 EGID**

3:00 to 4:15 pm

Convention Center, Ballroom Level, Ballroom C2

Credit: 1.25 CME / 1.50 CE

Carla M. Dauls, MD

**3:00 Antigen-Specific IL-13 Secretion in Children with Eosinophilic Esophagitis**  
*Benedicte Michaud, MD*

**3:15 Misregulation of Suppressors of Cytokine Signaling in Eosinophilic Esophagitis**  
*Maria Paz Zafra*

**3:30 Key Function of Cadherin-Like 26 in Eosinophilic Gastrointestinal Disorders**  
*Julie M. Caldwell, PhD*

**3:45 A Transforming Growth Factor Beta-1 Gene Single Nucleotide Polymorphism May Influence Phenotype in Pediatric Eosinophilic Esophagitis**  
*Arjun Andrew Anilkumar, BS*

**4:00 MMP-14 Is Elevated in Pediatric Subjects with Eosinophilic Esophagitis**  
*Lisa Beppu, BS*

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

## Oral Abstract

### 3606 Adherence and Asthma Treatment

3:00 to 4:15 pm

Convention Center, Concourse Level, Room 217AB

Credit: 1.25 CME / 1.50 CE

Moderator: Marcus S. Shaker, MD MS FAAAAI

- 3:00** **Texting for Adherence to Asthma Medication in Adolescents**  
*Wagas Jehangir, MD*
- 3:15** **The Use of Coping Peer Support and MP3 Technology to Improve Adherence to Inhaled Corticosteroids Among Low-Income Minority Adolescents**  
*Giselle Mosnaim, MD MS FAAAAI*
- 3:30** **Adherence Risk Patterns in Adult Patients with Asthma in an Inner City Cohort Over a 25 Month Period**  
*Edan Sarid, MD*
- 3:45** **Association Between Medication Adherence Report Scale (MARS-5) and Asthma Outcomes in Inner City Children with Asthma**  
*Seojin Yang*

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

## Oral Abstract

### 3607 Rhinitis Pathophysiology

3:00 to 4:15 pm

Convention Center, Ballroom Level, Ballroom C1

Credit: 1.25 CME / 1.50 CE

Moderator: David Amrol, MD FAAAAI

David W. Hauswirth MD FAAAAI

- 3:00** **Anti-Histaminergic Responses On TRPV1 Channels**  
*Umesh Singh, MD PhD*
- 3:15** **Allergen Exposure Affects Sinonasal Microbiota**  
*Chris Choi*
- 3:30** **Invariant Natural Killer T Cells Populations in Peripheral Blood From Allergic Rhinitis Patients: Regulatory or Pathologic Role?**  
*Soledad Lopez, PhD*
- 3:45** **TRPV1 Ion Channel Activation Is Enhanced by Bradykinin in Sensory Neuronal Cells**  
*Jonathan A. Bernstein, MD*
- 4:00** **The Allergic Rhinitis Clinical Investigator Collaborative (AR-CIC) – a Multicentre Pilot Study to Optimize a Standard Nasal Allergen Challenge Protocol**  
*Anne K. Ellis, MD MSc*

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

## Oral Abstract

### 3608 Advances in Controlling Allergic Inflammation

3:00 to 4:15 pm

Convention Center, Concourse Level, Room 214BC

Credit: 1.25 CME / 1.50 CE

Moderator: Dorothy S. Cheung, MD FAAAAI

- 3:00** **Role of Mannose Receptor (MR) in Cockroach Allergen-Induced Allergic Inflammation**  
*Peisong Gao, MD PhD*
- 3:15** **DNA Methylation Profiling in Asthmatic and Non Asthmatic Nasal Epithelial Cells During Respiratory Virus Infection**  
*Peter McErlean, PhD*
- 3:30** **Vitamin D Supplementation Reduces Airway Hyperresponsiveness and Allergic Airway Inflammation in a Murine Model**  
*Tanupriya Agrawal*
- 3:45** **IL-4R $\alpha$  Expression by Airway Epithelial Cells Promotes Allergen-Induced Airway Hyperresponsiveness**  
*Christopher G. McKnight, MD*
- 4:00** **Novel Phosphodiesterase-4 Inhibitors Decrease Allergic Sinus Congestion and Inflammation**  
*Bill T. Ameredes*

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

## Featured Poster Session and Reception

5:30 to 7:30 pm

Convention Center, Concourse Level, Park View

All Annual Meeting delegates and their guests are invited to attend this event. No fee and no pre-registration required.

Credit: No CME / No CE

Featured Posters highlight the highest quality abstracts submitted for presentation at the Annual Meeting. These posters will be displayed throughout the meeting on the Concourse Level in the Park View area of the Convention Center. During the Featured Poster Session and Reception on Sunday evening, authors will be present with their posters to discuss their research. Take this opportunity to talk with these authors and network with other meeting delegates.

- 3801 Asthma Mechanisms**
- 3802 BCI Featured Posters**
- 3803 Allergen Exposures at Home, School and Work**
- 3804 Best of FADDA**
- 3805 Best of HEDQ**
- 3806 Immunotherapy: Pathophysiology and Clinical Efficacy**
- 3807 Mechanisms of Allergy: Best of the Best**
- 3811 Allied Health Featured Poster**

## First Annual 5K Run/Walk - Race for Allergy & Asthma Research

5:30 pm

HemisFair Park

This event is open to everyone: serious runners, casual runners, walkers, families and the general public. Registration required. See page 13 for more information.



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## Seminars



7:00 to 8:00 am

Programmed by the AAAAI. Seminars funded through an educational grant from Merck.

Pre-registration and ticket required. Fee: \$40. Continental breakfast included. Sessions and meals limited to 30 people.

Credit: 1.00 CME / 1.20 CE

### 4001 Does Impulse Oscillometry Play a Role in Asthma Management?

James W. Baker, MD

Joseph Spahn MD

Marriott Rivercenter, Third Floor, Conference Room 1

Upon completion of this session, participants should be able to: Discuss the physiologic basis of impulse oscillometry; Compare impulse oscillometry to other methods for measuring small airway function; Assess outcomes studies of asthma which employed impulse oscillometry.

### 4002 Ordering TLR-Receptor Testing in Patients with Recurrent Infections

Antonio Condino-Neto, MD PhD

Troy R. Torgerson, MD PhD

Marriott Rivercenter, Third Floor, Grand Ballroom Salon B

Upon completion of this session, participants should be able to: Recognize the clinical presentation of toll-like receptor defects; State how to interpret results of TLR testing; Discuss treatment options for patients with TLR defects.

### 4003 Afterburn: Asthma, Bronchiolitis, Sarcoidosis and Titanium Lung Injury After Deployment to Iraq and Afghanistan

Debra Milek, MD PhD MPH

Anthony Szema, MD FAAAAI

Marriott Rivercenter, Third Floor, Grand Ballroom Salon C

Upon completion of this session, participants should be able to: Discuss the concept of Iraq War Lung Injury; Review potential causes of IAW-LI; Discuss animal models of IAW-LI and novel therapeutic strategies.

### 4004 How to Assess and Manage a Child with Multiple Positive Environmental and Food Allergy Tests

Kirsi M. Jarvinen-Seppo, MD PhD

Anna H. Nowak-Wegrzyn, MD FAAAAI

Marriott Rivercenter, Third Floor, Grand Ballroom Salon D

Upon completion of this session, participants should be able to: Explain the prevalence and difference between classic food allergies and pollen-food allergy syndrome; Describe the utility of skin prick, fresh food skin prick, serum specific IgE testing, component resolved diagnostics and oral food challenge in assessment of complex patients with multiple food and environmental sensitizations; Discuss the management of complex patients with multiple food and environmental sensitizations.

### 4005 Cracking the Code: Preparing for ICD-10

A. Sean McKnight, MD FAAAAI

Marriott Rivercenter, Third Floor, Grand Ballroom Salon A

Upon completion of this session, participants should be able to: Contrast ICD-10 with ICD-9-CM; Describe the impact of ICD-10 on billing and coding; Identify strategies for implementing ICD-10 in clinical practice.

### 4006 Immunotherapy: Practical Office Paradigms

Michael B. Wein, MD FAAAAI

Hugh H. Windom, MD FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 2

Upon completion of this session, participants should be able to: Maximize your immunotherapy clinic efficiency in an era of changing reimbursement; Explain purchasing co-operatives for obtaining immunotherapy supplies; Recall systems to remind patients and improve compliance as well as complying with regulatory issues.

### 4007 The Relationship Between Allergies and Infections

Soman N. Abraham, PhD

Mitchell H. Grayson, MD FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 3

Upon completion of this session, participants should be able to: Discuss the ability of bacteria to induce basophil activation; Review the data suggesting that the production of IgE is part of the antiviral immune response; Discuss how mast cells play a role in the clearance of bacterial and viral infections.

### 4008 Update on Anti-IL-5: Indications in Asthma and Beyond

Jonathan Corren, MD

Sally E. Wenzel, MD FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 4

Upon completion of this session, participants should be able to: Review cytokine blockers in eosinophilic diseases; Identify currently available cytokine blockers; Describe the effects of cytokine blockers in asthma.

### 4009 Advances in the Treatment of RA: Where are We Now?

Clifton O. Bingham, MD

John S. Sundry, MD PhD FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 7

Upon completion of this session, participants should be able to: Identify the new treatments available for RA; Describe complications induced by the new drugs; List options for limiting these complications.

### 4010 Damp Buildings are Unhealthy: What are Damp Buildings and How Do They Cause Problems?

W. Elliott Horner, PhD LEED AP FAAAAI

Kevin Kennedy, MPH CIEC

Marriott Rivercenter, Third Floor, Conference Room 8

Upon completion of this session, participants should be able to: Review the multiple expert panels/reports and position statements concluding that there is adequate evidence for respiratory health impacts, including new onset asthma, due to damp buildings; Describe the challenges of quantifying dampness and establishing acceptable moisture levels; Recognize the several plausible mechanisms that underlie the adverse respiratory impacts of the damp building effect.

### 4011 Mastocytosis Mimics: Cutting Through the Clutter

Joseph H. Butterfield, MD FAAAAI

Melody C. Carter, MD

Marriott Rivercenter, Third Floor, Conference Room 9

Upon completion of this session, participants should be able to: List the criteria for diagnosing systemic mastocytosis; Review the criteria for diagnosing mast cell activation syndrome; List the differential diagnosis possibilities when faced with a patient with symptoms suggestive of systemic mastocytosis.

### 4012 The Use of Social Media in Your Practice

Sakina S. Bajowala, MD FAAAAI

Vesselin Dimov, MD

Marriott Rivercenter, Third Floor, Conference Room 10

Upon completion of this session, participants should be able to: Implement social media and search engine optimization to market a practice; Identify appropriate tools for developing and maintaining a practice website; Discuss strategies for optimizing listings on healthcare rating websites.

### 4013 Local Allergic Rhinitis: How Do You Make the Diagnosis?

Paloma Campo, MD PhD

Marriott Rivercenter, Third Floor, Conference Room 11

Upon completion of this session, participants should be able to: Recognize that patients may still have allergic rhinitis even if skin testing and/or *in vitro* tests for specific IgE antibodies are negative; Review the methods for identifying patients with local allergic rhinitis; Discuss the potential for performing nasal challenge in the office.

**4014 Th17 Cells in Allergy and Asthma**

Jay K. Kolls, MD  
 Dawn C. Newcomb, PhD

Marriott Rivercenter, Third Floor, Conference Room 12

Upon completion of this session, participants should be able to: Analyze the current evidence for involvement of the Th17 subset in allergic diseases and asthma; Define regulation of Th17 cytokines by Th2 cytokines; Delineate implications of therapies which target these Th2 cytokine pathways on Th17 driven inflammation.

**4015 Outcomes Measures in Allergy Practice and Research**

Mary M. Krote, MD  
 Sandra Wilson, PhD

Marriott Rivercenter, Third Floor, Conference Room 16

Upon completion of this session, participants should be able to: List outcomes measures for asthma and other allergic diseases; Identify the importance of outcomes measures in clinical allergy practice; Explain how to design a clinical outcomes research study for asthma and/or allergy.

**Plenary**

**4101 Immune Defects: Insights and Opportunities**

8:15 to 9:45 am

Convention Center, Street Level, Exhibit Hall D

Credit: 1.50 CME / 1.80 CE

Moderator: Luigi D. Notarangelo, MD

**8:15 Patients Don't Lie: Connecting Infections and Immune Phenotypes**

Steven M. Holland, MD

**8:45 Random Germline Mutagenesis in the Analysis of Immunity**

Bruce Beutler, MD

**9:15 New Insights and Opportunities in Curative Therapies for Primary Immunodeficiency**

Lisa Filipovich, MD

Upon completion of this session, participants should be able to: Recognize cardinal infections and linked immune pathways, using these to identify causative genes; Understand how one can experimentally create inherited immune deficiencies and rapidly determine the causative mutations; Outline recent therapeutic developments for patients with primary immune deficiencies.

**Annual Meeting Allied Health Sessions**

Programmed by the AAAAI. Allied Health Sessions funded through an educational grant from Merck.

**Asthma Educators Course**

**4151 Association of Asthma Educators National Asthma Educator Certification and Re-Certification Review Course**

8:30 am to 5:30 pm

Marriott Rivercenter, Third Floor, Grand Ballroom Salon I

Pre-registration and ticket required. No fee. Ticket included with registration for session 3551. See page 63 for more information. Credit: 8.00 CME / 9.60 CE

**8:30 Spirometry Interpretation for Asthma Educators**

Marciarose Winston MSN CPNP AE-C

**9:30 Pharmacotherapy**

Karen L. Gregory, DNP APRN-BC RRT AE-C

**11:30 Educational Needs**

Marciarose Winston MSN CPNP AE-C

**12:30 Networking Lunch**

**1:30 Problem Based-Learning Workshop: Devices**

Marciarose Winston MSN CPNP AE-C

**3:00 Professional Networking, Referral and Outcomes**

Karen L. Gregory, DNP APRN-BC RRT AE-C

**3:30 Problem-Based Learning Workshop: Complicated Asthma Comprehensive Case**

Karen L. Gregory, DNP APRN-BC RRT AE-C

**4:30 Taking the National Asthma Educator Certification Exam**

Karen L. Gregory, DNP APRN-BC RRT AE-C

Upon completion of this session, participants should be able to: Describe trends in asthma prevalence; Discuss an individual patient's levels of severity and control; Identify barriers to adherence as they apply to self-assessment and self-management of asthma.

**Posters**

7:00 am to 6:00 pm

Convention Center, Street Level, Exhibit Hall C

Posters on display from 7:00 am to 6:00 pm. Authors present from 9:45 to 10:45 am.

Credit: No CME / No CE

Refer to pages 86-139 for abstracts and authors.

**4201 Nature vs. Nurture in Asthma**

**4202 Immunodeficiency**

**4203 Immunogenetics and Immunodeficiency**

**4204 Asthma and Epidemiology I**

**4205 Asthma and Allergy Epidemiology II**

**4206 Drug Allergy I**

**4207 EGID/Immunologic GI Disorders II**

**4208 Immunotherapy III**

**4209 Rhinitis/Conjunctivitis II**

**4210 Cytokines and Chemokines**

**4211 T Cells in Allergic Responses**

## Symposium ▼

### 4301 Anaphylaxis: Novel Mechanisms and Therapeutic Implications

10:45 am to 12:00 pm

Convention Center, Ballroom Level, Ballroom C1

Credit: 1.25 CME / 1.50 CE

Moderator: Vivian P. Hernandez-Trujillo, MD FAAAAI

#### 10:45 C-Kit Mutations and Conal Mast Cell Disease in Anaphylaxis

Cem Akin, MD PhD FAAAAI

#### 11:05 Fatal Peanut Anaphylaxis: Role of Platelet Activating Factor

Peter Vadas, MD PhD

#### 11:25 Vitamin D in Atopy and Anaphylaxis

Augusto A. Litonjua, MD MPH

#### 11:45 Question & Answer

Upon completion of this session, participants should be able to: Discuss the role of clonal mast cell disease in idiopathic and hymenoptera anaphylaxis; Recognize the involvement of PAF and PAF hydrolase levels in anaphylaxis; Learn the relation between vitamin D and atopic disease and anaphylaxis.

## Symposium ▼

### 4302 New Developments in the Pathophysiology of Allergic Rhinitis

10:45 am to 12:00 pm

Convention Center, Ballroom Level, Ballroom C2

Credit: 1.25 CME / 1.50 CE

Moderator: Fuad M. Baroody, MD FAAAAI

#### 10:45 Understanding the Concept of Local IgE Production

Philippe Gevaert, MD

#### 11:05 Cytokine Networks in Allergic Rhinitis

Martin Wagenmann, MD FAAAAI

#### 11:25 Treatment Choices for Allergic Rhinitis

Alkis Togias, MD FAAAAI

#### 11:45 Question & Answer

Upon completion of this session, participants should be able to: Explain the concept of local IgE production in the nose; Recognize the relevance of cytokines in the pathophysiology of allergic rhinitis; Review treatment options for allergic rhinitis.

## Symposium ▼

### 4303 Key Players in the Immune Basis of Atopic Dermatitis

10:45 am to 12:00 pm

Convention Center, River Level, Room 006

Credit: 1.25 CME / 1.50 CE

Moderator: Donald Y.M. Leung, MD PhD FAAAAI

#### 10:45 Roles of Dendritic Cells in Atopic Dermatitis

Thomas Werfel, MD

#### 11:05 TSLP: A Master Switch for Allergic Disease

Steven Ziegler, PhD

#### 11:25 IL-33 and Inflammatory Responses in Atopic Dermatitis

Cezmi A. Akdis, MD FAAAAI

#### 11:45 Question & Answer

Upon completion of this session, participants should be able to: Describe the role of TSLP as a master switch of allergic responses; Review the role of IL-33 in inducing a Th2 response; Identify the dendritic cell as the cell which responds to TSLP and IL-33 and directs Th0 towards a Th2 response.

## Symposium ▼

### 4304 New Developments in the Pathogenesis and Treatment of Angioedema

10:45 am to 12:00 pm

Convention Center, River Level, Room 007

Credit: 1.25 CME / 1.50 CE

Moderator: Sarbjit S. Saini

#### 10:45 Factor XII-Independent Initiation of the Bradykinin Cascade

Allen P. Kaplan, MD FAAAAI

#### 11:05 Type III Angioedema

Konrad Bork, MD

#### 11:25 Idiopathic Angioedema

Aleena Banerji, MD

#### 11:45 Question & Answer

Upon completion of this session, participants should be able to: Improve understanding of angioedema subtypes; Examine the clinical treatments available for angioedema subtypes.

## Symposium ▼

### 4305 What Every Clinician Should Know About IVIG

10:45 am to 12:00 pm

Convention Center, Concourse Level, Room 217AB

Credit: 1.25 CME / 1.50 CE

Moderator: Elena E. Perez, MD PhD FAAAAI

#### 10:45 Adverse Reactions to Immunoglobulin Infusions

Rima A. Rachid, MD FAAAAI

#### 11:05 New Guidelines: What Do We Know About Dosing and Administration?

Helen Chapel, MA MD

#### 11:25 Mechanisms of IVIG-Mediated Tolerance Induction

Bruce D. Mazer, MD FAAAAI

#### 11:45 Question & Answer

Upon completion of this session, participants should be able to: Describe mechanisms by which the IgG molecule can suppress inflammation and autoimmunity; Recognize the strengths and weaknesses of different IVIG dosing strategies; Discuss the use of IVIG in IgA-deficient patients.

## Symposium ▼

### 4306 Molecular Allergy: Emerging Concepts for the Practicing Allergist

10:45 am to 12:00 pm

Convention Center, Concourse Level, Room 217CD

Credit: 1.25 CME / 1.50 CE

Moderator: Robert G. Hamilton, PhD D.ABMLI FAAAAI

#### 10:45 The World of Protein Allergens: Sources, Structures and Significance

Heimo Breiteneder, PhD

#### 11:05 Allergenic Molecules in Anaphylactic Reactions: Improved Differentiation and Higher Analytical Sensitivity

Markus Ollert, MD

#### 11:25 Relevant Sensitizing Allergens and Optimizing SIT

Thomas B. Casale, MD FAAAAI

#### 11:45 Question & Answer

Upon completion of this session, participants should be able to: Explain the concept of protein families and how structurally related allergenic molecules will effect our interpretation of crossreactivity and (seeming) multisensitizations to protein allergens; Describe the diagnostic value of inhalant and food components and how they will lead to improved diagnostic answers and advices to the patient; Appreciate recently identified components from bee and wasp venom, latex and other protein allergens facilitating definitive answers in case of presumed sensitizations and enhancing analytical sensitivity.



**Symposium** ▼

**4307 The Allergist's View of Green and Sustainable Housing and Buildings**

10:45 am to 12:00 pm

Convention Center, Concourse Level, Room 214BC

Credit: 1.25 CME / 1.50 CE

Moderator: W. Elliott Horner, PhD LEED AP FAAAAI

**10:45 Recent Trends in Buildings and Associated Exposures**

Charles Barnes, PhD

**11:05 Indoor Home Mold Assessments**

Kevin Kennedy, MPH CIEC

**11:25 Evaluation and Effects of Traditional and Green Buildings on Asthma**

Nathan Rabinovitch, MD MPH

**11:45 Question & Answer**

Upon completion of this session, participants should be able to: Review the changes that have occurred in the last half century and the continuing trends in indoor environments; Recognize the constraints and benefits of current assessment tools for indoor pollutant exposure; Apply the results from comparisons of asthmatic children living in different types of housing.

**AAAAI Business Meeting**

12:30 to 1:30 pm

Convention Center, Ballroom Level, Ballroom C3

All AAAAI Fellows and members should attend this annual business meeting. Box lunches included. No fee. No pre-registration required.

**Oral Abstract**

**4601 What's New in Asthma Diagnostics**

2:00 to 3:15 pm

Convention Center, Concourse Level, Room 214BC

Credit: 1.25 CME / 1.50 CE

Moderators: Timothy J. Craig, DO FAAAAI

Gisoo Ghaffari, MD FAAAAI

**2:00 Serum Periostin Levels Correlate with Bronchial Hyperresponsiveness to Mannitol and Methacholine in Children with Asthma**

Heyshung Baek, MD PhD

**2:15 Meta Analysis of Asthma Exacerbation Rates in Pediatric Studies During Asthma Managed Using Fractional Exhaled Nitric Oxide Versus Standard Clinical Parameters Alone**

Joseph D. Spahn, MD

**2:30 Exhaled Nitric Oxide Concentration During Pediatric Acute Asthma Exacerbations Is Associated with Severity and African-American Race**

Emily W. Langley, MD

**2:45 Mannitol Challenge for Diagnosis of Exercise -Induced Bronchoconstriction**

Christopher C. Randolph, MD FAAAAI

**3:00 Establishing Normal Exhaled Nitric Oxide (FeNO) Values in Young Children**

Chris Cleveland, MD

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

**Oral Abstract**

**4602 Biological Therapies**

2:00 to 3:15 pm

Convention Center, River Level, Room 006

Credit: 1.25 CME / 1.50 CE

Moderator: Ivan Chinn, MD

**2:00 Persistent Hypogammaglobulinemia After Rituximab Treatment**

Yelena Kopyltsova, MD

**2:15 Thymus Transplantation Restores the Repertoire of Foxp3+ T Cells in Complete DiGeorge Anomaly**

Ivan Chinn, MD

**2:30 Immunotolerance Mechanisms Depend On High Vs Low Dose of Sublingual Immunotherapy**

Kari Nodeau, MD PhD FAAAAI

**2:45 Mechanisms of Th2 to Treg Vs Th2 to Th1 in Non Rush Vs Rush Food OIT**

Shu-Chen Lyu

**3:00 Resolvin D1 Inhibits IL-1beta Induced Alveolar Epithelial Cell Activation**

Ruan R. Cox, Jr.

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

**Oral Abstract**

**4603 Inflammatory Responses to Pollutants, Pesticides, and Endotoxin**

2:00 to 3:15 pm

Convention Center, River Level, Room 007

Credit: 1.25 CME / 1.50 CE

Moderator: Neil Alexis, PhD

**2:00 Interactions of Natural Killer (NK) Cells and Surfactant Protein D (SP-D) in Regulation of Ozone Induced Airway Inflammation: Involvement of NKp46**

Moyar Q. Ge

**2:15 Association Between Dichlorophenol Exposure, Asthma Medication Use, and Serum Immunoglobulin E**

Purvi Parikh, MD

**2:30 MyD88-Dependent Signaling Is Critical for Acute Organic Dust-Induced Airway Inflammation in Mice**

Jill A. Poole, MD FAAAAI

**2:45 IL-1B Induces IL-8 Production From Human Airway Epithelial Cells**

Michelle L. Hernandez, MD

**3:00 Exposure to Silica Crystals and Poly (I:C) Induces Caspase-Dependent Apoptosis of Human Bronchial Epithelial Cells**

Hirotohi Unno, MD

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

## Oral Abstract

### 4604 Anaphylaxis

2:00 to 3:15 pm

Convention Center, Ballroom Level, Ballroom C1

Credit: 1.25 CME / 1.50 CE

Moderator: Scott P. Commins, MD PhD

- 2:00** **Activation of the Plasma Contact-System in Patients with Anaphylaxis**  
*Anna Sala-Cunill*
- 2:15** **An IgE Receptor Mimetic Peptide (PepE) Protects Mice From IgE Mediated Anaphylaxis**  
*Joseph S. Zhou, MD PhD*
- 2:30** **SHIP-1 Regulates IgG/PAF Mediated Allergen-Induced Fatal Anaphylaxis Through the PI3 Kinase Pathway**  
*Sun Young Oh, PhD*
- 2:45** **Preclinical Study: Dose Comparison of New-Generation Taste-Masked Epinephrine (E) Sublingual Tablets**  
*Keith Simons, PhD*
- 3:00** **Anatomical and Anthropometric Determinants of Intramuscular Versus Subcutaneous Administration in Children with Epinephrine Auto-Injectors**  
*Peter D. Arkwright, MD PhD FAAAAI*

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

## Oral Abstract

### 4605 Management of Allergies: New Insights

2:00 to 3:15 pm

Convention Center, Concourse Level, Room 217AB

Credit: 1.25 CME / 1.50 CE

Moderator: Melinda M. Rathkopf, MD FAAAAI

- 2:00** **Allergic Disease in US Children Is Associated with Increased Prevalence of Epilepsy**  
*Helen G. Durkin, PhD*
- 2:15** **Nasal Congestion Worsens Sleep Disturbance and Psychological Wellness in Allergic Rhinitis Patients**  
*Rosa Munoz-Cano, MD*
- 2:30** **Relationship Between Maternal Mid Pregnancy Folate Levels and the Risk of Allergic and Respiratory Diseases in Early Childhood: The Mothers and Children's Environmental Health (MOCEH) Study**  
*Ja Hyeong Kim, MD*
- 2:45** **The Role of Molecular Allergology in Allergen-Specific Immunotherapy Adherence and Patient Quality of Life in A Complex Pollen Area: A Simulation Model**  
*Barbara Mascialino*
- 3:00** **Follow-up Patterns Among Children with Anaphylaxis and Other Allergic Diseases Referred from an Urban Emergency Department to Allergy Clinic**  
*Jonathan Hemler, MD*

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

## Oral Abstract

### 4606 Immunotherapy

2:00 to 3:15 pm

Convention Center, Grand Ballroom Level, Ballroom C2

Credit: 1.25 CME / 1.50 CE

Moderator: Désirée E.S. Larenas Linnemann, MD FAAAAI

- 2:00** **Dose Adjustment During Pollen Seasons in Build-up and Maintenance Vials Lowers the Risk of Severe Systemic Reactions (SRs) to Subcutaneous Allergen Immunotherapy (SCIT): Year 4 of the AAAAI/ACAAI Surveillance Study**  
*Tolly Epstein, MD MS*
- 2:15** **Is a 30 Minute Vs. 20 Minute Immunotherapy (IT) Waiting Period Justified?**  
*Leon S. Greos, MD FAAAAI*
- 2:30** **Local Nasal 'Protective' Immunoglobulin G4 (IgG4) Responses in Nasal Fluid Following Grass Pollen Sublingual Immunotherapy**  
*Nausheen Saleem, BSc*
- 2:45** **Antigen-Specific TH Cell Monitoring by CD154 Expression in Japanese Cedar-Specific SCIT**  
*T. Nomura*
- 3:00** **Immunological Mechanism of Sublingual Immunotherapy**  
*Reza Farid, MD FAAAAI*

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

## Oral Abstract

### 4607 The Role of Lymphocytes in Mediating Asthma and Allergic Inflammation

2:00 to 3:15 pm

Convention Center, Concourse Level, Room 217CD

Credit: 1.25 CME / 1.50 CE

Moderator: Kari Nadeau, MD PhD

- 2:00** **Th2 Mediated Airway Diseases Strongly Linked to Fungal T Cell Memory**  
*Paul Porter, PhD*
- 2:15** **LIGHT Is Associated with Increased Cellular Infiltrate and Levels of Th1 Cytokines As Well As Well As Reduced Lung Function in Human Asthma**  
*Jonathan Romeo, DO*
- 2:30** **Immunomodulatory Effects of IL-27 On Allergen-Induced Th2 Responses**  
*Tomakazu Matsuoka*
- 2:45** **Grass Pollen Allergics Have Fewer IL-10-Producing B Cells Than Non-Atopic Controls**  
*James E.G. Charlesworth*
- 3:00** **Rab11+ Recycling Endosomes Controls Signaling Output and Cellular Response of Memory CD4 T Cells in Asthma**  
*Chaoyu Chen*

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

## Late Breaking Oral Abstract Session

### 4611 Late Breaking Oral Abstract I

2:00 to 3:15 pm

Convention Center, River Level, Room 008

Credit: 1.25 CME / 1.50 CE

Stephen C. Dreskin, MD PhD FAAAAI

**2:00 Exome Chip Genotyping Reveals Association with LAMA3 (laminin, alpha 3) Gene and Eczema Herpeticum in a Population of European Descent**

Nicholas Rafaels, MS

**2:15 Identification of Der p 23, a Peritrophin-Like Protein, As a New Major Dermatophagoides Pteronyssinus Allergen Associated with the Peritrophic Matrix of Mite Fecal Pellets**

Susanne Vrtala

**2:30 Efficacy and Safety of Omalizumab in Chronic Idiopathic/ Spontaneous Urticaria (CIU/CSU): Results From a Phase III, Randomized, Double-Blind, Placebo-Controlled Trial**

Thomas Casale, MD FAAAAI

**2:45 Leukotriene D4 Induces Type 2 Innate Lymphoid Cell Cytokine Production Through CysLT1R**

Taylor Alan Doherty, MD

**3:00 IL-21 Receptor Mutation in Humans Leads to Disseminated Cryptosporidiosis, Antibody Defects, and Abnormal B and T Cell Function**

Monica G. Lawrence, MD

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

## Cutting-Edge Research Keynote

### 4701 Exploring Frontiers in Innate and Specific Immune Systems

3:30 to 4:30 pm

Convention Center, Street Level, Exhibit Hall D

Credit: 1.00 CME / 1.20 CE

Moderator: James E. Gem, MD FAAAAI

**3:00 Personalized Vaccine Therapy as a Strategy for Prevention of Cancer Relapse**

Larry W. Kwak, MD PhD

**3:30 Phenotypic Diversity of Mast Cell Subsets is Tissue Determined and Likely Expands Functions**

K. Frank Austen, MD FAAAAI

Upon completion of this session, participants should be able to: Describe techniques used in vaccine therapy for cancer; Describe the mechanisms involved in generating mast cell diversity and the functional implications..

## Hands-On Workshop

### 4801 Hands-On Rhinolaryngoscopy

4:45 to 6:00 pm

Convention Center, River Level, Room 004

Pre-registration and ticket required. No fee. Ticket included with registration for Workshop 2807: Course in Introductory Rhinolaryngoscopy.

Credit: 1.25 CME / 1.50 CE

Allen D. Adinoff, MD FAAAAI

Jerald W. Koepke, MD FAAAAI

Kevin R. Murphy, MD

Garet C. Olson, MD

Donald W. Pulver, MD FAAAAI

C. Ross Westley, MD FAAAAI

Upon completion of this session, participants should be able to: Describe the surgical anatomy of the upper airway, including the nasal cavity, pharynx and larynx; Identify examples of normal and abnormal anatomy, as well as disease presentations and post operative changes found with endoscopic examination of the upper airway; Identify indications for and the use of the fiberoptic rhinoscope in the allergist's office.

## Problem-Based Learning Workshop

### 4802 Eosinophilic Esophagitis

4:45 to 6:00 pm

Convention Center, Concourse Level, Room 216A

Pre-registration and ticket required. Fee: \$50.

Credit: 1.25 CME / 1.50 CE

Carla M. Davis, MD

Roger A. Friedman, MD FAAAAI

Upon completion of this session, participants should be able to: Describe the risk benefit ration of elemental diet; Review team approach to care of complex disease; List the pros and cons to use of medication vs. diet in EE.

## Q & A Workshop

### 4803 Insect Allergy Update: Unique and New Antigens and Difficult Cases

4:45 to 6:00 pm

Convention Center, River Level, Room 006

Credit: 1.25 CME / 1.50 CE

Moderator: Theodore M. Freeman, MD FAAAAI

**4:45 New *In Vitro* Testing vs. Skin Testing for Insect Allergy**

David B.K. Golden, MD FAAAAI

**5:00 The Alpha-Gal Story and Longhorn Ticks**

Scott P. Commins, MD PhD

**5:15 When and How to Use Cross-Reactivity in Venom Allergy**

James M. Tracy, DO FAAAAI

**5:30 Question & Answer**

## Annual Meeting Workshops

Programmed by the AAAAI. Annual Meeting Workshops funded through an educational grant from Merck.



Upon completion of this session, participants should be able to: Evaluate insect reactions; Review treatment of insect allergy; Discuss importance of alpha-gal reactions.

## Q & A Workshop ▼

### 4804 Vaccines 101: Expanding the Role of the Allergist/Immunologist

4:45 to 6:00 pm

Convention Center, River Level, Room 007

Credit: 1.25 CME / 1.50 CE

Moderator: *Limone C. Collins, MD*

#### 4:45 Diagnostic and Therapeutic Uses for Vaccines in the Older Adult

*Monroe J. King, DO FAAAAI*

#### 5:05 IgE-Mediated Adverse Reactions to Vaccines

*John M. Kelso, MD FAAAAI*

#### 5:25 Non-IgE-Mediated Adverse Reactions to Vaccines

*Renata J.M. Engler, MD FAAAAI*

Upon completion of this session, participants should be able to: Review the childhood and adult vaccination schedules; Identify vaccination requirements for specific diseases and conditions; Discuss types of adverse reactions to vaccines and management options.

## Q & A Workshop

### 4805 Difficult Situations in Practice Management

4:45 to 6:00 pm

Convention Center, River Level, Room 008

Credit: 1.25 CME / 1.50 CE

Moderator: *Tao Le, MD MHS FAAAAI*

#### 4:45 Employment Agreements and Partnerships

*Marshall PI Grodofsky, MD FAAAAI*

#### 5:00 Hiring and Firing

*Stanley M. Fineman, MD MBA FAAAAI*

#### 5:15 Marketing and Referral Development

*Weily Soong, MD*

#### 5:30 Question & Answer

Upon completion of this session, participants should be able to: Evaluate difficult situations in employment agreements and partnership; Identify and address difficult situations regarding hiring and firing; Investigate difficult situations in marketing and referral development.

## Panel Discussion Workshop ▼

### 4806 How to Get Your Manuscript Published

4:45 to 6:00 pm

Convention Center, Concourse Level, Room 210AB

Credit: 1.25 CME / 1.50 CE

Moderator: *Michael H. Clayton, MD FAAAAI*

Panelists: *Donald Y.M. Leung, MD PhD FAAAAI*

*Michael Schatz, MD MS FAAAAI*

*Hans-Uwe Simon, MD PhD FAAAAI*

*Stanley J. Szefer, MD FAAAAI*

#### 4:45 Question & Answer

Upon completion of this session, participants should be able to: Describe best practices for manuscript preparation; Discuss appropriate journal selection for submission, to include

the new journal JACI-In Practice; Outline the process of manuscript review; Review how to accept critiques and how to handle manuscript revision.

## Hands-On Workshop

### 4807 Preparing Your Office for Anaphylaxis and Other Emergencies

4:45 to 6:00 pm

Convention Center, Concourse Level, Room 211

Pre-registration and ticket required. Fee: \$50.

Credit: 1.25 CME / 1.50 CE

Moderator: *Dana V. Wallace, MD FAAAAI*

#### 4:45 Hands-On Mock Anaphylactic Reaction with CPR on a Mannequin

*Dana V. Wallace, MD FAAAAI*

#### 5:00 Anaphylaxis: Presentation and Management

*Nabil El Sanadi, MD*

#### 5:15 Hands-On Instruction

Upon completion of this session, participants should be able to: Work with office staff as a team to manage emergencies; Formulate and execute a logical plan for treatment of anaphylaxis; Respond appropriately to cardiac emergencies and other non-respiratory emergencies.

## Q & A Workshop

### 4808 CD4+ T Cell Subsets in Asthma Phenotypes

4:45 to 6:00 pm

Convention Center, Concourse Level, Room 212AB

Credit: 1.25 CME / 1.50 CE

Moderator: *Marsha A. Wills-Karp, PhD*

#### 4:45 Defining the CD4 Phenotypes of Asthma

*Speaker to be announced.*

#### 5:00 Th17 Cells in Asthma

*Dawn C. Newcomb, PhD*

#### 5:15 Th9 Cells in Asthma

*Mark H. Kaplan, PhD*

#### 5:30 Question & Answer

Upon completion of this session, participants should be able to: Determine various biomarkers used to identify Th2 high and Th2 low asthma patients using periostin as a biomarker; Define the role of Th9 and Th17 cells in asthma; Describe the crosstalk between Th2, Th17 and Th9 pathways and cytokines.

## Panel Discussion Workshop

### 4809 Methacholine vs. Mannitol Challenge in the Evaluation of Asthma

4:45 to 6:00 pm

Convention Center, Concourse Level, Room 213AB

Credit: 1.25 CME / 1.50 CE

Moderator: *Hee-Bom Moon, MD PhD*

Panelists: *Sandra D. Anderson, PhD DSc*

*Louis-Philippe Boulet, MD*

*James M. Quinn, MD FAAAAI*

Upon completion of this session, participants should be able to: Compare positive and negative predictive values of methacholine and mannitol inhalation tests; Evaluate

methacholine and mannitol as potential tests for monitoring asthma treatment.

**Panel Discussion Workshop** ▼

**4810 Bronchial Thermoplasty for Severe Asthma**

4:45 to 6:00 pm

Convention Center, Concourse Level, Room 214A

Credit: 1.25 CME / 1.50 CE

Moderators: Mark F. Sands, MD FAAAAI

Neil Thomson, MD

Panelists: Mario Castro

Monica Kraft, MD

Sally E. Wenzel, MD FAAAAI

Upon completion of this session, participants should be able to: Describe the risks and benefits of bronchial thermoplasty in severe asthma; Review the studies to date on thermoplasty outcomes; Describe the areas requiring further research.

**Panel Discussion Workshop**

**4811 Difficult Cases in Anaphylaxis: Biphasic and Prolonged Anaphylaxis**

4:45 to 6:00 pm

Convention Center, Concourse Level, Room 217CD

Credit: 1.25 CME / 1.50 CE

Moderators: James J. Herman, MD FAAAAI

Carmen Vidal, MD PhD

Panelists:

S. Allan Bock, MD FAAAAI

Stephen F. Kemp, MD FAAAAI

Phillip Lieberman, MD FAAAAI

Upon completion of this session, participants should be able to: Describe multiphasic and prolonged anaphylactic reactions; Review the literature for risk factors related to reactions that have been multiphasic and/or prolonged; Review proper treatment and current recommendations for these patients.

**Q & A Workshop** ▼

**4812 Skin Immunity, Barrier and Food Allergy**

4:45 to 6:00 pm

Convention Center, Concourse Level, Room 214D

Credit: 1.25 CME / 1.50 CE

Moderator: Lisa A. Beck, MD FAAAAI

**4:45 Mechanisms of Primary Sensitization to Food Allergens Through the Skin**

Cecilia Berin, PhD

**5:00 Induction of Tolerance by Epicutaneous Immunotherapy**

Christophe Dupont, MD PhD

**5:15 Impact of Skin Barrier Function on Sensitization**

Michiko K. Oyoshi, PhD

**5:30 Question & Answer**

Upon completion of this session, participants should be able to: Describe immune mechanisms leading to sensitization to food proteins through the skin; Review the mechanisms underlying tolerance induction by epicutaneous immunotherapy; Discuss changes in skin barrier function can contribute to allergic sensitization.

**Annual Meeting Workshops**

Programmed by the AAAAI. Annual Meeting Workshops funded through an educational grant from Merck..

**Problem-Based Learning Workshop**  

**4813 Advanced Laboratory Studies for Primary Immune Deficiency Disorders**

4:45 to 6:00 pm

Convention Center, Concourse Level, Room 215

Pre-registration and ticket required. Fee: \$50.

Credit: 1.25 CME / 1.50 CE

Moderator: Richard L. Wasserman, MD PhD FAAAAI

Roshini S. Abraham, PhD FAAAAI

Upon completion of this session, participants should be able to: Explain B cell flow analysis in CVID; Review application of tests of NK and Cytotoxic T lymphocyte function: when to order and clinical relevance; Identify the tests of TLR function.

**Q & A Workshop**  

**4814 JCAAI: The Allergist and Healthcare in 2013**

4:45 to 6:00 pm

Convention Center, River Level, Room 005

Pre-registration and ticket required. No fee.

Credit: 1.25 CME / No CE

Moderator: Richard W. Honsinger, MD MACP FAAAAI

**4:45 Compliance with Guidelines and Federal Regulations: Extract Preparation, Skin Testing, etc.**

Donald W. Aaronson, MD FAAAAI

**5:10 Legal and Coding Updates: New Codes for Food Challenges, Venom and Drug Testing**

Gary N. Gross, MD FAAAAI

**5:35 Question & Answer**

Upon completion of this session, participants should be able to: Review requirements for compliance with federal regulations, rewards and penalties; Identify changing allergy CPT codes, ICD-10 and other new developments; Describe strategies to position a practice for success.

**Q & A Workshop** ▼

**4815 Consequences of Perennial Allergic Rhinitis in Children: Adenotonsillar Hypertrophy, Sleep Disordered Breathing and Behavioral Problems**

4:45 to 6:00 pm

Convention Center, Concourse Level, Room 217AB

Credit: 1.25 CME / 1.50 CE

Moderator: Fuad M. Baroody, MD FAAAAI

**4:45 Evaluation and Treatment of Obstructive Sleep Apnea in Children**

Fuad M. Baroody, MD FAAAAI

**5:00 Contribution of Sleep Disordered Breathing to ADHD and Other Behavioral Disorders**

Hari Bandla, MD

**5:15 Role of Allergic Rhinitis in Sleep Disordered Breathing and Behavioral Disorders in Children**

Bernard Silverman, MD FAAAAI

**5:30 Question & Answer**

Upon completion of this session, participants should be able to: Identify the associations and theories of causality among allergic rhinitis, adenotonsillar hypertrophy, sleep disordered breathing and attention related behavioral disorders in children; List the demonstrated effects and possible benefits of intranasal corticosteroids and other allergic rhinitis treatment in improving each of the latter three disorders; Define the spectrum of SDB and OSA in children and the role of rhinoscopy and polysomnography in establishing the diagnosis and response to treatment; Identify the role of the allergist/immunologist in identifying these patients and coordinating care among pediatrician, ENT, neurologist/psychiatrist/developmental pediatrician and sleep specialist.

## Year-in-Review Workshop ▼

### 4816 Research From USIDNET

4:45 to 6:00 pm

Convention Center, Concourse Level, Room 214BC

Credit: 1.25 CME / 1.50 CE

Moderator: Charlotte Cunningham-Rundles, MD PhD FAAAAI

### 4:45 What Have We Learned from the U.S. and Other PIDD Registries and Where It's All Going

Kathleen E. Sullivan, MD PhD FAAAAI

### 5:00 An Example of How the USIDNET Registry Can Empower Research

Vivian P. Hernandez-Trujillo, MD FAAAAI

### 5:15 How You Can Participate in USIDNET

Ramsay Fuleihan, MD

### 5:30 Question & Answer

Upon completion of this session, participants should be able to: Review the efforts of USIDNET; State how to participate in USIDNET research; Identify less common features of PIDD that are medically significant and can impact management.

## Q & A Workshop ▼

### 4817 New Tools to Make Specific Immunotherapy More Specific

4:45 to 6:00 pm

Convention Center, Ballroom Level, Ballroom C1

Credit: 1.25 CME / 1.50 CE

Moderator: Michael R. Nelson, MD PhD FAAAAI

### 4:45 Identifying the Relevant Sensitizing Allergens and Optimizing SIT: Is There a Role for Component Resolved During Diagnosis and Basophil Activation Testing?

Joaquin Sastre, MD PhD FAAAAI

### 5:00 Peptides and Modified Recombinants

Rudolf Valenta, MD

### 5:15 Epicutaneous and Intralymphatic Immunotherapy

Thomas M. Kundig, MD

### 5:30 Question & Answer

Upon completion of this session, participants should be able to: Debate how using new diagnostic tools might improve the specific selection of immunotherapy; Review the status of immunotherapy with recombinant, modified recombinant and peptide molecules and on the safety profiles of these options; Discuss the other application forms being evaluated in clinical trials and which pitfalls still have to be overcome by this treatment modality to offer a viable alternative to standard immunotherapy.

## Q & A Workshop

### 4818 Drug Allergy: You Have Questions, We Have Answers

4:45 to 6:00 pm

Convention Center, Ballroom Level, Ballroom C3

Credit: 1.25 CME / 1.50 CE

Moderator: Rebecca S. Gruchalla, MD PhD FAAAAI

### 4:45 Multiple Antibiotic Allergies

Roland Solensky, MD FAAAAI

### 5:00 Allergy to Chemotherapeutics

Aleena Banerji, MD

### 5:15 Beta-Lactams Including Issues of Cross-Reactivity

Eric Macy, MD FAAAAI

### 5:30 Question & Answer

Upon completion of this session, participants should be able to: Discuss how to approach patients presenting with multiple antibiotic allergies; Describe how to approach patients with PCN or other beta lactam allergies; Review how to approach patients with reactions to chemotherapeutics.

## Q & A Workshop ▼

### 4819 AAP: Hot Topics in Pediatric Allergy and Immunology

4:45 to 6:00 pm

Convention Center, Grand Ballroom Level, Ballroom C2

Credit: 1.25 CME / 1.50 CE

Moderator: John M. James, MD FAAAAI

### 4:45 Pediatric Allergic Respiratory Disease

Chitra Dinakar, MD FAAAAI

### 5:00 Atopic Dermatitis

Lynda C. Schneider, MD FAAAAI

### 5:15 Food, Drugs and Bugs

Jennifer S. Kim, MD FAAAAI

### 5:30 Question & Answer

Upon completion of this session, participants should be able to: Describe the most recent clinical research findings in pediatric asthma, eczema, food, drug and insect allergy; Apply recent advances in pediatric allergy/immunology.

## Seminars

4:45 to 5:45 pm

Programmed by the AAAAI. Seminars funded through an educational grant from Merck.

Pre-registration and ticket required. Fee: \$40. Refreshments included.

Sessions and refreshments limited to 30 people.

Credit: 1.00 CME / 1.20 CE

### 4821 Viral and Bacterial Interactions in Asthma

William W. Busse, MD FAAAAI

Philippe Gevaert, MD

Marriott Rivercenter, Third Floor, Conference Room 1

Upon completion of this session, participants should be able to: Describe the role of viruses as triggers of asthma exacerbations; Discuss the relevance of Staph aureus for asthma development and severity.

### 4822 CVID: Molecular and Immunological Testing

Elena E. Perez, MD PhD FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 2

Upon completion of this session, participants should be able to: Describe the common features of CVID; Review the lab testing available to be used in the workup of a patient with suspected CVID.

### 4823 Pollen Forecasting and Exposure: A View from Space

Estelle Levetin, PhD FAAAAI

Alan P. Zelicoff, MD

Marriott Rivercenter, Third Floor, Conference Room 3

Upon completion of this session, participants should be able to: Describe how estimates of pollen production can be determined; Describe the value of remote sensing data in pollen forecasting; Describe the role of the allergist in using the pollen alerts.

### 4824 Tree Nut and Peanut: Complexity in Cross-Reactivity

Soheila J. Maleki, PhD

Suzanne S. Teuber, MD FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 4

Upon completion of this session, participants should be able to: Distinguish between clinical cross-reactivity and *in vitro* cross-reactivity; List the main seed storage proteins involved in cross-reactivity; Review the closely related tree nuts that are often clinically cross-reactive.



## 4825 Quality Improvement and Patient Safety in Allergy Practice

*Paul M. Carter, MD MHCM FAAAAI*

*Matthew A. Rank, MD FAAAAI*

**Marriott Rivercenter, Third Floor, Conference Room 7**

Upon completion of this session, participants should be able to: Appreciate the recent experiences attendees may have had while considering, planning or performing quality projects; Discuss fundamental principles guiding quality improvement of allergic/immunologic diseases in the U.S.; Recognize potential quality improvement opportunities that could positively influence the outcomes of allergy/immunology education, research and patient care at the local and national level.

## 4826 The Four Ws of IgE Testing: Why, What, Who and When?

*Robert G. Hamilton, PhD D.ABMLI FAAAAI*

*Joerg Kleine-Tebbe, MD FAAAAI*

**Marriott Rivercenter, Third Floor, Conference Room 8**

Upon completion of this session, participants should be able to: Describe how to use IgE testing to inhalants (pollen, ped, mite, mold allergens/molecules); Discuss how to use IgE testing to foods (plant- and non-plant-related); Review how to use IgE testing to hymenoptera venoms (extracts, single venom components).

## 4827 Highlights in the Cytokine Network of Allergic Diseases

*Paul S. Foster, PhD DSc*

*Yui-Hsi Wang, PhD*

**Marriott Rivercenter, Third Floor, Conference Room 9**

Upon completion of this session, participants should be able to: Discuss the emerging roles of novel cytokines, such as TSLP, IL-9 and IL-33 in allergic diseases.

## 4828 Allergen Immunotherapy or Omalizumab in Asthma: When to Use Which?

*Thomas B. Casale, MD FAAAAI*

*Harold S. Nelson, MD FAAAAI*

**Marriott Rivercenter, Third Floor, Conference Room 10**

Upon completion of this session, participants should be able to: Review efficacy of IT in asthma and safety of AIT in moderate to severe asthma; Review studies of omalizumab alone and in combination with AIT in asthma; Make recommendations on individual use of these drugs and in combination for asthma.

## 4829 Identification and Functional Assessment of Regulatory T Cells in Health and Disease

*Christine M. Seroogy, MD FAAAAI*

*Dat Q. Tran, MD*

**Marriott Rivercenter, Third Floor, Conference Room 11**

Upon completion of this session, participants should be able to: Review markers for identification of regulatory T Cells and their subsets; Discuss strategies for isolation and expansion of regulatory T Cells; Describe methods for functional assessment of regulatory T Cells.

## 4830 Impact of Tobacco Smoke Exposure on Atopic Disease and Prevention/Treatment Strategies

*Christina E. Ciaccio, MD*

*Deborah A. Gentile, MD*

**Marriott Rivercenter, Third Floor, Conference Room 12**

Upon completion of this session, participants should be able to: Demonstrate the effects of exposure to tobacco smoke on the pathogenesis of atopic disorders; Summarize effective strategies to prevent/treat exposure to tobacco smoke; Emphasize the role of allied health care providers in prevention/treatment of exposure to tobacco smoke.

## Seminars

7:00 to 8:00 am

Programmed by the AAAAI. Seminars funded through an educational grant from Merck.

Pre-registration and ticket required. Fee: \$40. Continental breakfast included. Sessions and meals limited to 30 people.

Credit: 1.00 CME / 1.20 CE

### 5001 Recurrent Infections in Pediatrics: Allergies or Immunodeficiency?

Jason W. Caldwell, DO

Laurence E. Cheng, MD PhD

Marriott Rivercenter, Third Floor, Conference Room 9

Upon completion of this session, participants should be able to: Describe the factors that increase the risk of recurrent infections; Describe the workup of patients to determine if a clinically significant immune defect is present; Explain the "red flags" for rare vs. common presentations of routine infectious presentations to the allergy office.

### 5002 Approach to Patients Presenting with Reactions to NSAIDs

Ronald A. Simon, MD FAAAAI

Katharine M. Woessner, MD FAAAAI

Marriott Rivercenter, Third Floor, Grand Ballroom Salon C

Upon completion of this session, participants should be able to: Describe the different types of pseudoallergic and allergic reactions to ASA/NSAIDs and underlying diseases; Discuss the approach to the evaluation of patients who give a history of reactions to ASA and other NSAIDs; Discuss the approach to identifying and describing skin lesions.

### 5003 Oral Immunotherapy for Food Allergy: Contrasting Practices in the U.S. and in Europe

Giovanni B. Pajno, MD FAAAAI

Rushani W. Saltzman, MD

Marriott Rivercenter, Third Floor, Grand Ballroom Salon D

Upon completion of this session, participants should be able to: Discuss the right patients for the right OIT; Describe food allergens which are worth OIT; Review food allergies which are worth active treatment.

### 5004 New Insect Allergens: Fire Ant, Mosquito, Deerfly and Asian Lady Beetle

Christopher W. Calabria, MD

Richard F. Lockey, MD

Marriott Rivercenter, Third Floor, Grand Ballroom Salon E

Upon completion of this session, participants should be able to: Describe the epidemiology and diagnosis of mosquito and deerfly allergy; Discuss eventual indications for immunotherapy in these cases; Describe the pros and cons of the available whole body extracts.

### 5005 What's New in Testing for Primary Immunodeficiency Disorders?

Roshini S. Abraham, PhD FAAAAI

Harry R. Hill, MD

Marriott Rivercenter, Third Floor, Conference Room 7

Upon completion of this session, participants should be able to: Review the laboratory tests used to work up patients with recurrent infection, including a description of the assays; Describe the clinical value of these tests and interpretation of the results; Appreciate how newer technologies are being applied to diagnostic laboratories for primary immunodeficiency.

### 5006 Food Challenges in the Office Setting

S. Allan Bock, MD FAAAAI

Justin M. Skripak, MD

Marriott Rivercenter, Third Floor, Conference Room 8

Upon completion of this session, participants should be able to: Determine which subjects are suitable for office food challenges; List which foods are most likely to be safely challenged in an office and how to choose them; Describe which challenge procedures are most useful, including baked egg and milk challenges.

### 5007 Advanced Therapeutics: Managing the Severe and Refractory Eczema Patient

Luz S. Fonacier, MD FAAAAI

Jennifer S. Kim, MD FAAAAI

Marriott Rivercenter, Third Floor, Grand Ballroom A

Upon completion of this session, participants should be able to: Identify common pitfalls in the treatment of eczema, with special emphasis on compliance; Describe the rationale for an extended therapeutic ladder for patients refractory to standard treatments; Evaluate treatments and interventions that have been shown to be of no benefit in the disease.

### 5008 Problem-Based Learning: Immunodeficiency Evaluation

Mark Ballow, MD FAAAAI

Meredith L. Heltzer, MD

Marriott Rivercenter, Third Floor, Conference Room 10

Upon completion of this session, participants should be able to: Determine an alternative diagnosis of a patient with recurrent infections; Order lab tests to evaluate a patient for immune deficiency; Interpret lab tests for suspected immune deficiency.

### 5009 Physical Urticaria and Idiopathic Urticaria: Clinical Perspectives

Laura M. Gober, MD

David R. Weldon, MD FAAAAI

Marriott Rivercenter, Third Floor, Conference Room 11

Upon completion of this session, participants should be able to: Discuss the differential diagnosis for physical urticaria and idiopathic urticaria; Explain the diagnostic approaches; Review the treatment options.

### 5010 Eosinophilic Esophagitis: Practical Aspects of Assessing Immediate and Delayed Food Hypersensitivity

Mark Holbreich, MD FAAAAI

Amir F. Kagalwalla, MD

Marriott Rivercenter, Third Floor, Conference Room 12

Upon completion of this session, participants should be able to: Complete a comprehensive food allergy evaluation in children and adults with eosinophilic esophagitis; Explain the practical aspects of the preparation of food allergens for prick and patch testing; Describe the role of immunoassays for foods in eosinophilic esophagitis.

### 5011 Dermatology for the Allergist

Peter Lio, MD

Marriott Rivercenter, Third Floor, Grand Ballroom Salon I

Upon completion of this session, participants should be able to: Describe the basic clinical features of atopic dermatitis, other eczemas, allergic contact dermatitis and drug eruptions; Discuss the approach to identifying and describing skin lesions; Discuss the role of biopsy in diagnosis and management.

### 5012 There's An App for That: iPhone/iPad, Android and Web Tools for Clinical Practice

Linda D. Green, MD FAAAAI

Melinda M. Rathkopf, MD FAAAAI

Marriott Rivercenter, Third Floor, Grand Ballroom Salon J

Upon completion of this session, participants should be able to: Discuss novel applications of the iPhone/iPad, Android and other smart devices in daily practice; Present use case scenarios of web tools for improving patient care, education and outreach; Navigate and find features of the new AAAAI website.

### 5013 Novel Therapies for Chronic Urticaria and Angioedema

David H. Dreyfus, MD PhD FAAAAI

Marriott Riverwalk, Second Floor Level, Alamo Ballroom Salon A

Upon completion of this session, participants should be able to: Discuss novel therapy for chronic urticaria and angioedema; List novel diagnostic testing for chronic urticaria and angioedema; Review practical considerations for application of novel therapy and diagnosis.

**5014 Problem-Based Learning: So the Patient Has Eosinophilia: What Next?**

Amy D Klion, MD

Catherine R. Weiler, MD PhD FAAAAI

Marriott Riverwalk, Second Floor, Alamo Ballroom Salon B

Upon completion of this session, participants should be able to: Review diagnosis of variants hypereosinophilic syndrome; Describe identification of secondary eosinophilia; Discuss therapeutic approaches to hypereosinophilic syndrome.

**5015 Exhaled NO: Time to Clear the Air!**

Mark F. Sands, MD FAAAAI

Stanley J. Szeffler, MD FAAAAI

Marriott Riverwalk, Second Floor, Alamo Ballroom Salon C

Upon completion of this session, participants should be able to: Discuss the application of eNO in the context of ATS guidelines and AAAAI/ACAAI position statements; Recognize the relationship between the levels of evidence and practice guidelines for clinical eNO use; Explain potential weakness/strengths of eNO for managing asthmatics.

**Plenary**

**5101 Neurogenic Pathways of Inflammation**

8:15 to 9:45 am

Convention Center, Street Level, Exhibit Hall D

Credit: 1.50 CME / 1.80 CE

Moderator: Michael A. Kaliner, MD FAAAAI

**8:15 The Cough that is Getting on My Nerves**

Bradley Udem, PhD

**8:45 Your Nose Acts Through Your Nerves**

Alkis Togias, MD FAAAAI

**9:15 Pruritus Beyond Antihistamines**

Gil Yosipovitch, MD

Upon completion of this session, participants should be able to: Describe neurogenic mechanisms and treatment options for chronic non-allergic rhinopathy; Discuss neuro-reflex mechanisms for chronic cough; Describe the role of taste receptors and other related neuronal receptors in airway smooth muscle.

**Posters**

7:00 am to 5:00 pm

Convention Center, Street Level, Exhibit Hall C

Posters on display from 7:00 am to 5:00 pm. Authors present from 9:45 to 10:45 am.

Credit: No CME / No CE

Refer to pages 86-139 for abstracts and authors

**5201 Asthma Updates**

**5202 Other BCI Topics**

**5203 Anaphylaxis I**

**5204 Food Allergy II**

**5205 Rhinitis/Rhinosinusitis**

**5206 Immunotherapy/Immune Deficiencies**

**Symposium**

**5301 Assessing Eosinophil Functions in Asthma, Eosinophilic Esophagitis and Hypereosinophilic Syndromes**

10:45 am to 12:00 pm

Convention Center, River Level, Room 006

Credit: 1.25 CME / 1.50 CE

Moderator: Rafeul Alam, MD PhD FAAAAI

**10:45 Eosinophils in Immune Regulation and Remodeling: New Insights**

Steven J. Ackerman, PhD

**11:05 Eosinophil Depletion by Antibody Treatment: Lessons Learned from Clinical Trials**

Amy D. Klion, MD

**11:25 Extracellular Eosinophil DNA Traps: How to Assess and Their Role in Disease**

Hans-Uwe Simon, MD PhD FAAAAI

**11:45 Question & Answer**

Upon completion of this session, participants should be able to: Discuss the role of eosinophils in asthma, eosinophilic esophagitis and hypereosinophilic syndromes; Describe the power of clinical investigations as an *in vivo* approach to understand eosinophil biology; Discuss new insights obtained from specific anti-eosinophil treatment approaches.

**Symposium**

**5302 New Phenotypes in Pediatric Asthma**

10:45 am to 12:00 pm

Convention Center, River Level, Room 007

Credit: 1.25 CME / 1.50 CE

Moderator: Scott T. Weiss, MD MS

**10:45 New Approaches Identifying Asthma Phenotypes in Childhood**

Adnan Custovic, MD PhD FAAAAI

**11:05 What Clinical Lessons Can We Learn from Phenotyping Asthma in Childhood?**

Anne M. Fitzpatrick, PhD

**11:25 Prediction of Persistence and Remission of Asthma in Adolescence: Differences Between Male and Female**

Ronina Covar, MD

**11:45 Question & Answer**

Upon completion of this session, participants should be able to: Discuss if different phenotypes of pediatric asthma require different therapies; Review if genetics help in phenotyping pediatric asthma.



## Symposium ▼

### 5303 Advances in Immunotherapy: Mechanisms and Approaches

10:45 am to 12:00 pm

Convention Center, Ballroom Level, Ballroom C1

Credit: 1.25 CME / 1.50 CE

Moderator: Robert A. Wood, MD FAAAAI

#### 10:45 Overview of Immunotherapy in Children with Asthma

Jacqueline Pongracic, MD FAAAAI

#### 11:05 T Cell Epitope in Immunotherapy

Alessandro Sette, Dr. Biol. Sci.

#### 11:25 Blocking Antibodies and their Role in the Effectiveness of Immunotherapy

Stephen R. Durham, MA MD FRCP

#### 11:45 Question & Answer

Upon completion of this session, participants should be able to: Review principles of IT as they apply to inner city asthma; Discuss potential biomarkers in the application of IT; Discuss the unique contribution and use of T cell epitopes in IT.

## Symposium ▼

### 5304 Evolving Understanding of the Contributions of Mast Cells to Immune and Inflammatory Disease Models

10:45 am to 12:00 pm

Convention Center, Concourse Level, Room 214BC

Credit: 1.25 CME / 1.50 CE

Moderator: Francesca Levi-Schaffer, PhD FAAAAI

#### 10:45 New Insights Into the Contributions of Mast Cells to Immune and Inflammatory Responses Through New Strains of Mast Cell-Deficient Mice

Stephen J. Galli, MD

#### 11:05 The Adjuvant Effects of Mast Cells

Soman N. Abraham, PhD

#### 11:25 Mast Cells and Immune Tolerance

Paul Bryce, PhD

#### 11:45 Question & Answer

Upon completion of this session, participants should be able to: Discuss new models of mast cell deficient mice; Review mast cell models with adjuvant effects; Discuss the contribution of mast cells in immune tolerance.

## Symposium ▼

### 5305 New Insights into Mold-Related Symptoms and Disease and Potential Housing-Related Solutions

10:45 am to 12:00 pm

Convention Center, Concourse Level, Room 214D

Credit: 1.25 CME / 1.50 CE

Moderator: Leslie C. Grammer, MD FAAAAI

#### 10:45 Irritant Effects of Mold Exposure: What to Tell Your Patient When There is No Evidence of Disease

Kari E. Reijula, MD PhD FAAAAI

#### 11:05 Effect of Mold Constituents on Innate Immune Responses

Charles S. Barnes, PhD

#### 11:25 Unusual But Important Sources of Industrial and Home Mold Exposure

Karin A. Pacheco, MD MSPH FAAAAI

Upon completion of this session, participants should be able to: Describe how mold components can drive the innate immune response; Define the irritant effects of mold exposure in non-mold-allergic patients, and how to diagnose and treat these; Review potential exposures to mold at work and at home.

## Symposium ▼

### 5306 Response to Viral Infections in the Atopic Host: Is it Deficient?

10:45 am to 12:00 pm

Convention Center, Concourse Level, Room 217AB

Credit: 1.25 CME / 1.50 CE

Moderator: Peter W. Heymann, MD

#### 10:45 Innate Response to Viral Infections and Asthma

Sebastian L. Johnston, MD PhD

#### 11:05 Adaptive Immune Response to Viral Infections and Asthma

Larry Borish, MD FAAAAI

#### 11:25 Viral Determinants of Rhinovirus Virulence

James E. Gern, MD FAAAAI

#### 11:45 Question & Answer

Upon completion of this session, participants should be able to: Describe why allergic individuals may be more susceptible to symptoms caused by viral infections; Discuss whether deficiencies in the response to viral infections in the atopic host involve both the innate and acquired immune systems; Discuss how the susceptibility to symptoms caused by viral infections affects patients with asthma and atopic dermatitis.

**Symposium** ▼

**5307 Comprehensive Allergy Programs: A Systematic Approach to Reduce the Burden**

10:45 am to 12:00 pm

Convention Center, Concourse Level, Room 217CD

Credit: 1.25 CME / 1.50 CE

*Richard F. Lockey, MD FAAAAI*

**10:45 Global Burden of Allergy and Future Predictions**

*Ruby U. Pawankar, MD PhD FAAAAI*

**11:05 From Guidelines to Action Programs: The Finnish Experience**

*Erkka Valovirta, MD PhD*

**11:25 Is Allergy Preventable?**

*Thomas A.E. Platts-Mills, MD PhD FAAAAI*

**11:45 Question & Answer**

Upon completion of this session, participants should be able to: Describe how the burden of allergy (as a disease affecting QoL and as a health cost) has augmented over the last decades; Comment on strategies that can be used to improve the implementation of guidelines, meant to enhance the direction of diagnostic and treatment resources; Discuss methods to reduce the development of allergy, as applied in the National Finnish Allergy Program.

**Pro/Con Debate** ▼

**5501 Empiric Elimination Diets are Better than Targeted Elimination Diets for the Management of Eosinophilic Esophagitis**

12:30 to 1:30 pm

Convention Center, River Level, Room 006

Mark Holbreich, MD FAAAAI

**Pro**

*Katrina Jane Allen, MD PhD*

**Con**

*Carla M. Davis, MD*

Upon completion of this session, participants should be able to: Highlight the discrepancy between the approach towards EoE between allergists and gastroenterologist and enable enhanced communication between the two subspecialties by providing the rationale behind the diversity of approach; Describe evidence on the effectiveness of various protocols for dietary elimination; Explain how the choice of elimination diet can have an impact on patient compliance of both diet as well as the feasibility of endoscopic follow-up.

**Pro/Con Debate** ▼

**5502 Antibiotics Have a Role in Asthma Treatment**

12:30 to 1:30 pm

Convention Center, River Level, Room 007

Credit: 1.00 CME / 1.20 CE

*Moderator: R. Stokes Peebles, Jr., MD FAAAAI*

**Pro**

*Monica Kraft, MD*

**Con**

*Thomas A.E. Platts-Mills, MD PhD FAAAAI*

Upon completion of this session, participants should be able to: Describe the role of bacteria and atypical bacteria in provoking asthma symptoms; Discuss whether or when antibiotics can be used routinely, or selectively in treating flares of asthma; Discuss the potential of antibiotics to reduce airway inflammation (e.g. azithromycin).

**Pro/Con Debate** ▼

**5503 Basophils are Key Antigen Presenting Cells in Allergic Inflammation**

12:30 to 1:30 pm

Convention Center, Concourse Level, Room 214A

Credit: 1.00 CME / 1.20 CE

*Moderator to be announced.*

**Pro**

*Speaker to be announced.*

**Con**

*Speaker to be announced.*

Upon completion of this session, participants should be able to: Describe the evidence that basophils can function as antigen-presenting cells; Discuss the role of dendritic cells in Th2 initiation; Describe how to reconcile data on basophils and dendritic cells which support and refute a role in Th2 initiation.

**Pro/Con Debate** ▼

**5504 Anaphylaxis vs. Mastocytosis: A Bone Marrow Biopsy is Always Necessary**

12:30 to 1:30 pm

Convention Center, Concourse Level, Room 214BC

Credit: 1.00 CME / 1.20 CE

*Moderator: Mariana C. Castells, MD PhD FAAAAI*

**Pro**

*Cem Akin, MD PhD FAAAAI*

**Con**

*Paul A. Greenberger, MD FAAAAI*

Upon completion of this session, participants should be able to: Review the indications for bone marrow biopsy in patients with anaphylaxis (severe hypotension, hymenoptera sting reactions, recurrent episodes without trigger); Review the data on frequency of patients presenting with anaphylaxis and elevated tryptase who have MMCAS or mastocytosis.

**Pro/Con Debate** ▼

**5505 Integrative Medicine Should Be a Component of Allergy/Immunology Practice**

12:30 to 1:30 pm

Convention Center, Concourse Level, Room 214D

Credit: 1.00 CME / 1.20 CE

*Moderator: William Silvers, MD FAAAAI*

**Pro**

*Gailen D. Marshall, Jr., MD PhD FAAAAI*

**Con**

*Richard F. Lockey, MD FAAAAI*

Upon completion of this session, participants should be able to: List what comprises the principles of integrative medicine and the evidence-based components that include allergy-immunology; Describe the components of complementary therapies that can be useful in the practice of allergy, asthma/immunology; Discuss CAM therapies used in allergy/immunology patients that have the greatest evidence to support their use.

## Pro/Con Debate ▼

### 5506 SLIT and SCIT Duration: Three Years is Enough

12:30 to 1:30 pm

Convention Center, Concourse Level, Room 217AB

Credit: 1.00 CME / 1.20 CE

Moderator: Andrew M. Smith, MD

#### Pro

Stephen R. Durham, MA MD FRCP

#### Con

Giovanni Passalacqua, MD

Upon completion of this session, participants should be able to: Discuss the duration of immunotherapy according to findings of clinical trials for SCIT; Discuss the duration of immunotherapy according to findings of clinical trials for SLIT.

## Oral Abstract

### 5601 Asthma Therapeutic Updates

2:00 to 3:15 pm

Convention Center, Ballroom Level, Ballroom C1

Credit: 1.25 CME / 1.50 CE

Moderator to be announced.

#### 2:00 A Randomized Placebo-Controlled Safety and Pharmacodynamic Study of KB002, a Chimeric Anti-GM-CSF Monoclonal Antibody, in Patients with Asthma

Nestor A. Molfino, MD MSc

#### 2:15 Over-Expression of the LTC4 Synthase Gene in Mice Reproduces Human Aspirin-Induced Asthma

Tatsuya Yokoyama

#### 2:30 Effect of Inhaled Corticosteroids (ICS) Vs. Inhaled Corticosteroid with Long-Acting Beta2 Agonists (ICS/LABA) On Asthma Control: Results From National Asthma Survey

Neeth Talreja

#### 2:45 A Randomized, Double-Blind, Placebo-Controlled, Multiple-Dose Study to Evaluate the Safety, Tolerability, and Efficacy of Brodalumab (AMG 827) in Subjects with Moderate to Severe Asthma

William W. Busse, MD FAAAAI

#### 3:00 Calcium-Dependent Pathways Are Essential for Canonical Glucocorticoid [GR] Receptor Signaling

Ashwini Reddy, MD

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

## Oral Abstract

### 5602 Immunodeficiency

2:00 to 3:15 pm

Convention Center, River Level, Room 006

Credit: 1.25 CME / 1.50 CE

Moderator to be announced.

#### 2:00 Evaluation of the B Cell Compartment in CVID and Respi Patients

Tracy Hwangpo, MD PhD

#### 2:15 Continuous G-CSF Treatment Induces Complete Clinical Remission and Restoration of IL-17 Secretion in Autosomal Dominant Chronic Mucocutaneous Candidiasis

Eduardo Shahar, MD

#### 2:30 Bacterial Specificity of IgM and Susceptibility to Pneumonia in Primary Humoral Immunodeficiency

Paul J. Maglione, MD PhD

#### 2:45 TREC Newborn Screening Can Identify Patients with Leaky SCID and May Improve Outcome

Alice Chan, MD PhD

#### 3:00 Disseminated HPV Following Stem Cell Transplant (SCT) in NK(-) Severe Combined Immune Deficiency (SCID) and Association with NK Cell Dysfunction

Kapil Saxena, MS

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

## Oral Abstract

### 5603 Effects of Viral and Bacterial Infections on Asthma

2:00 to 3:15 pm

Convention Center, River Level, Room 007

Credit: 1.25 CME / 1.50 CE

Moderator: Daniel J. Jackson, MD

#### 2:00 Characterization of RV-Specific T Cell Responses in Healthy and Infected Individuals

John W. Steinke, PhD FAAAAI

#### 2:15 Differential Effects of HRV Species On Cold and Asthma Symptoms

Hiba Bashir, MD

#### 2:30 Effects of Human Rhinovirus Species On Viral Replication in Differentiated Sinus Epithelial Cells

Kazuyuki Najagome, MD

#### 2:45 Role of Mycoplasma Pneumoniae in Childhood Asthma

Edward G. Brooks, MD

#### 3:00 Detection of Streptococcus Pneumoniae and Human Rhinovirus Is Associated with Loss of Asthma Control

Kirsten Kloepfer, MD

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.



**Oral Abstract**

**5604 Drug/AD**

2:00 to 3:15 pm

Convention Center, Ballroom Level, Ballroom C3

Credit: 1.25 CME / 1.50 CE

David A. Khan, MD FAAAAI

Anna H. Nowak-Wegrzyn, MD FAAAAI

**2:00 Safely Diagnosing Clinically Significant Penicillin Allergy with Only Penicilloyl-Poly-Lysine, Penicillin, and Oral Amoxicillin**

Eric M. Macy, MD FAAAAI

**2:15 Protein Haptenation by Amoxicillin: Immunological Detection with Monoclonal Anti-Amoxicillin Antibodies and Identification of Candidate Target Proteins in Human Serum**

Adriana Ariza

**2:30 Th2 Cytokines and Filaggrin Deficiency Enhance Staphylococcus Aureus Alpha-Toxin Induced Keratinocyte Death**

Anne M. Brauweiler, PhD

**2:45 An Open Label Study in Adults with Atopic Dermatitis to Assess Immune Response to Fluzone® Intradermal Vaccine**

Donald Y.M. Leung, MD PhD FAAAAI

**3:00 Selective Transgenic Expression of IL-22 in the Skin Induces Atopic Dermatitis (AD) Like Dermatitis**

Hongfei Lou, MD

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

**Oral Abstract**

**5605 Improving Asthma Outcomes**

2:00 to 3:15 pm

Convention Center, Concourse Level, Room 217AB

Credit: 1.25 CME / 1.50 CE

Moderator to be announced.

**2:00 School-Based Asthma Clinic Improves Asthma Outcomes**

Alysa G. Ellis, MD

**2:15 Factors Related to Decision Making and Substance Use in Adolescents with Asthma: A Presenting Clinical Profile**

Mary C. O'Laughlen, PhD RN FNP-BC

**2:30 Interviewing Adolescents with Asthma: Are We Doing Enough?**

Matthew Altman, MD

**2:45 Comparative Effectiveness of Budesonide/Formoterol Combination (BFC) and Fluticasone/Salmeterol Combination (FSC) Among Asthma Patients**

Setareh Williams

**3:00 University and Public Health System Partnership: A Systematic Intervention for Assistance of Patients with Asthma in Brazil**

Marcos R. Goncalves, MD

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

**Oral Abstract**

**5606 Rhinitis and Rhinosinusitis Pathophysiology**

2:00 to 3:15 pm

Convention Center, Ballroom Level, Ballroom C2

Credit: 1.25 CME / 1.50 CE

Moderator: Anju T. Peters, MD FAAAAI

Jayant M. Pinto, MD

**2:00 Evaluation of in Vivo and in Vitro Responses to Nole e1 in Systemic and Local Allergic Rhinitis**

Paloma Campo, MD PhD

**2:15 Levels of the Cytokines IL-5, IL-13 and Rantes in Nasal Lavage Fluids Parallel the Cytokine Content of Nasal Polyps in Patients with Chronic Rhinosinusitis with Nasal Polyps (CRSwNP)**

Christopher Ocampo, MD PhD

**2:30 Aeroallergen Wheal Area Especially for Molds At Ages Two and Three Predicts Allergic Rhinitis At Age Four: The Cincinnati Childhood Allergy and Air Pollution Study (CCAAPS)**

Christopher D. Codispoti, MD PhD

**2:45 Decreased Production of Antimicrobial Peptides in Chronic Rhinosinusitis Associated with Age and Elevated Soluble gp130**

Sun Hye Lee, PhD

**3:00 Inhibitory Effects of Mometasone Furoate and Azithromycin On Phorbol Ester-Induced Mucin Production From Human Airway Epithelial Cells**

Orapan Poachanukoon, MD

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

**Oral Abstract**

**5607 Recent Advances in Eosinophil and Mast Cell Biology**

2:00 to 3:15 pm

Convention Center, Concourse Level, Room 217CD

Credit: 1.25 CME / 1.50 CE

Moderator: Lisa A. Spencer, PhD

**2:00 Mice with Attenuated Expression of the  $\alpha$ 2,3 Sialyltransferase ST3gal-III (St3gal3) Display Enhanced Allergic Eosinophilic Airway Inflammation**

Takumi Kiwamoto, MD PhD

**2:15 Epicutaneous Sensitization in Filaggrin Gene-Depleted Mouse Induces Prolonged Airway Eosinophilia without Obvious Dermatitis**

Yusuke Suzuki

**2:30 Thymic Stromal Lymphopoietin Promotes Peripheral Blood CD34+ Cell Eosinophilic Lineage Commitment**

Claudia C.K. Hui, MSc

**2:45 Hypoxia Inducible Factor (HIF) Alpha Subunits Modulate Eosinophil Migration, Oxidative Burst, and Degranulation**

Laura E. Crotty Alexander, MD

**3:00 Functional Expression of the Novel C5a Receptor C5L2 in Human Mast Cells**

Priyanka Pundir, DVM

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

## Late Breaking Oral Abstract Session

### 5611 Late Breaking Oral Abstract II

2:00 to 3:15 pm

Convention Center, River Level, Room 008

Credit: 1.25 CME / 1.50 CE

William J. Calhoun, MD FAAAAI

**2:00 Antibiotic Exposure and the Risk of Food Allergy in Young Children**

*Bryan L. Love, PharmD BCPS*

**2:15 Deficiency of Inducible PGE2 Is Sufficient to Cause Aspirin Sensitivity in the Setting of Pulmonary Inflammation**

*Tao Liu, PhD*

**2:30 VRC 311: Phase I Clinical Trial of a Virus-Like Particle Chikungunya Vaccine in Healthy Adults**

*Lee-Jah Chang, MD*

**2:45 Chronic Sub-Cutaneous Exposure to a Staphylococcus Aureus Superantigen, Staphylococcal Enterotoxin B, Elicits an Eosinophilic Airway Inflammation in HLA Class II Transgenic Mice - Linking Atopic Dermatitis (AD) to Asthma**

*Govindarajan Rajagopalan, DVM PhD*

**3:00 Detection and Quantitation of Total and Allergen-Specific IgE in the Bronchial Mucosa of Atopic and Non-Atopic Asthmatics**

*Prathap Chellappan Pillai, MD*

Upon completion of this session, participants should be able to discuss recent research developments in the field of allergy/immunology.

## Problem-Based Learning Workshop

### 5701 Problem-Based Learning: A Child with a Chronic Cough

3:30 to 4:45 pm

Convention Center, River Level, Room 004

Pre-registration and ticket required. Fee: \$50.

Credit: 1.25 CME / 1.50 CE

*Don A. Bukstein, MD*

Upon completion of this session, participants should be able to: To interactively discuss the case of a child with a chronic cough; To discuss in depth the differential diagnoses of a child with a chronic cough and the appropriate diagnostic evaluation; Debate therapeutic options for a child with a chronic cough.

## Problem-Based Learning Workshop

### 5702 Problem-Based Learning: Intermittently Wheezing Infant

3:30 to 4:45 pm

Convention Center, River Level, Room 005

Pre-registration and ticket required. Fee: \$50.

Credit: 1.25 CME / 1.50 CE

*Moderator: Ray S. Davis, MD FAAAAI*

*Leonard B. Bacharier, MD FAAAAI*

Upon completion of this session, participants should be able to: Discuss how the Asthma Predictive Index can aid in making a presumptive diagnosis of asthma in an infant with intermittent wheezing; Discuss the NAEPP Guidelines recommendations for daily ICS therapy for intermittent wheezing in an infant who needs several courses of oral corticosteroids per year; Outline the most recent data from the MIST and TREXA studies from the CARES Network regarding an alternative-high dose ICS/SABA intermittently-for an infant with intermittent-severe wheezing.

## Q & A Workshop

### 5703 Allergy Diagnosis 2013: Between Scientific Progress and Unproven Methods

3:30 to 4:45 pm

Convention Center, Concourse Level, Room 217AB

Credit: 1.25 CME / 1.50 CE

*Moderator: Sarbjit S. Saini*

**3:30 In Vivo Veritas: From Skin Testing to Challenges with Allergens: Kinesiology**

*Martin Wagenmann, MD FAAAAI*

**3:45 Antibody Based Tests: IgE in Immediate Type Hypersensitivity: IgG4 to Foods**

*Robert G. Hamilton, PhD D.ABMLI FAAAAI*

**4:00 Cellular Allergy Testing: Basophil and Lymphocyte-Based Tests: ALCAT**

*Joerg Kleine-Tebbe, MD FAAAAI*

**4:15 Question & Answer**

Upon completion of this session, participants should be able to: Acknowledge new findings in the diagnosis or IgE-mediated reactions and disorders using *In vivo*, *In vitro* and *Ex vivo* methods; Utilize recent developments in diagnostic methods for advancing the interpretation of individual test results; Identify unproven methods like kinesiology, bioresonance, IgG tests with foods.

## Q & A Workshop

### 5704 Chronic Rhinosinusitis: From Bench to Bedside

3:30 to 4:45 pm

Convention Center, River Level, Room 007

Credit: 1.25 CME / 1.50 CE

*Moderator: Patricia A. Takach, MD FAAAAI*

**3:30 Research in Mucociliary Clearance in CRS**

*Noam A. Cohen, MD PhD*

**3:45 Research in Barrier Dysfunction in CRS**

*Anju Peters, MD*

**4:00 Treatment Modalities In CRSsNP and CRSwNP**

*Daniel L. Hamilos, MD FAAAAI*

**4:15 Question & Answer**

Upon completion of this session, participants should be able to: Describe mucociliary dysfunction in CRS; Describe barrier dysfunction in CRS; Discuss treatment modalities in CRS.

## Annual Meeting Workshops

*Programmed by the AAAAI. Annual Meeting Workshops funded through an educational grant from Merck.*

## Q & A Workshop ▼

### 5705 Advances in Desensitization

3:30 to 4:45 pm

Convention Center, River Level, Room 008

Credit: 1.25 CME / 1.50 CE

Moderator: Aleena Banerji, MD

#### 3:30 Desensitization to Drugs

Aleena Banerji, MD

#### 3:45 Desensitization to Foods

Stacie M. Jones, MD

#### 4:00 Rapid Desensitization to Aeroallergens

David A. Khan, MD FAAAAI

#### 4:15 Question & Answer

Upon completion of this session, participants should be able to: Discuss the principles and application of rapid desensitization to drugs, such as antibiotics, chemotherapeutics and monoclonal antibodies; Describe the current state of knowledge of desensitization to foods; Discuss the current state of knowledge of rapid desensitization to aeroallergens.

## Panel Discussion Workshop ▼

### 5706 Are Your Baked Milk and Egg Challenges Half-Baked?

3:30 to 4:45 pm

Convention Center, Ballroom Level, Ballroom C1

Credit: 1.25 CME / 1.50 CE

Moderators: Pamela H. Steele, MSN CPNP AE-C

Kirsten Beyer, MD

Panelists: Marion E. Groetch, MS RD

Sally A. Noone, RN MSN CCRC

Anna H. Nowak-Wegrzyn, MD FAAAAI

Upon completion of this session, participants should be able to: Identify when to offer a baked milk or egg challenge; Conduct a baked milk or egg challenge; Educate patients about a diet that avoids milk or egg but includes baked milk or egg.

## Problem-Based Learning Workshop

### 5707 Problem-Based Learning: Approach to a Patient with Primary Immunodeficiency Disease

3:30 to 4:45 pm

Convention Center, Concourse Level, Room 210AB

Pre-registration and ticket required. Fee: \$50.

Credit: 1.25 CME / 1.50 CE

Moderator: Meredith L. Heltzer, MD

Elena E. Perez, MD PhD FAAAAI

Upon completion of this session, participants should be able to: Make a differential diagnosis of patient with recurrent infections; Make a stepwise plan for testing; Interpret test results in the setting of the patient's overall presentation.

## Q & A Workshop

### 5708 Airway Smooth Muscle Signaling: New Insights in Asthma

3:30 to 4:45 pm

Convention Center, Concourse Level, Room 212AB

Credit: 1.25 CME / 1.50 CE

Raymond Penn, PhD

#### 3:30 Airway Tone and Regulator of G-Protein Signaling (RGS) Proteins: Intracellular Modulators of Gpcrs

Yaping Tu, PhD

#### 3:45 OGR1 a pH Sensor for ASM

Raymond Penn, PhD

#### 4:00 New Therapeutic Strategies Targeting Airway Smooth Muscle

Reynold A. Panettieri, Jr., MD

#### 4:15 Question & Answer

Upon completion of this session, participants should be able to: Review important intracellular signaling events controlling airway tone and remodeling; Discuss the role of RGS proteins in the pathobiology of asthma; Describe novel approaches aimed at GPCRs for the management of asthma.

## Q & A Workshop ▼

### 5709 Technology-Based Interventions to Improve Asthma Management and Adherence

3:30 to 4:45 pm

Convention Center, Concourse Level, Room 214A

Credit: 1.25 CME / 1.50 CE

Moderator: William Vollmer, PhD

#### 3:30 Patient Preferences for Use of Social Media, Text Messaging and Email for Asthma Management

Alan P. Baptist, MD MPH

#### 3:45 Electronic Medical Record-Based Interventions to Improve Adherence

William Vollmer, PhD

#### 4:00 A Smartphone Intervention to Improve Adherence and Asthma Self-Management in Urban Minority Adolescents

Giselle Mosnaim, MD MS FAAAAI

#### 4:15 Question & Answer

Upon completion of this session, participants should be able to: Discuss patient preferences for use of social media, text messaging and email for patient-provider communication; Explore the use of electronic medical records to improve adherence; Explore the use of smartphone technologies to improve adherence in urban minority adolescents.



## Q & A Workshop

### 5710 Novel Insights into the Pathobiology of Eosinophilic Esophagitis

3:30 to 4:45 pm

Convention Center, Concourse Level, Room 213AB

Credit: 1.25 CME / 1.50 CE

Jonathan M. Spergel, MD PhD FAAAAI

### 3:30 Main Conclusions from Genetic Studies and Future Aspects

Jonathan M. Spergel, MD PhD FAAAAI

### 3:45 The Spectrum of Allergen Sensitization: Similarities and Differences Between Pediatric and Adult Eosinophilic Esophagitis

Seema Sharma Aceves, MD PhD FAAAAI

### 4:00 Lessons Learned from Investigator-Initiated Trials

Hans-Uwe Simon, MD PhD FAAAAI

### 4:15 Question & Answer

Upon completion of this session, participants should be able to: Describe the immunopathogenesis of eosinophilic esophagitis; Discuss recent findings obtained in genetic studies; Discuss the main conclusions of clinical studies performed in pediatric and adult eosinophilic esophagitis patient groups.

## Year-in-Review Workshop

### 5711 Year-in-Review: Changes in Health Care Reform

3:30 to 4:45 pm

Convention Center, Concourse Level, Room 214BC

Credit: 1.25 CME / 1.50 CE

Moderator: James C. Sublett, MD FAAAAI

### 3:30 Implementing the Patient Protection and Affordable Care Act in Your Practice

Richard W. Honsinger, MD MACP FAAAAI

### 3:45 Maintaining Excellence in Subspecialty Care within Accountable Care Organizations and the Patient Centered Medical Home

Michael B. Foggs, MD FAAAAI

### 4:00 Engineering Systems that Work: Meaningful Use, EHR and Medical Informatics in 2013 and Beyond

James C. Sublett, MD FAAAAI

### 4:15 Question & Answer

Upon completion of this session, participants should be able to: Describe the current state of proposed models of health care; Discuss the status of EHR implementation and meaningful use requirements; Review the current health care laws.

## Q & A Workshop

### 5712 Type I Interferons, Rhinovirus and Viral Infection in the Allergic Response

3:30 to 4:45 pm

Convention Center, Concourse Level, Room 214D

Credit: 1.25 CME / 1.50 CE

Moderator: Dorothy S. Cheung, MD FAAAAI

### 3:30 Expression Patterns of Type I IFN in Response to Respiratory Viruses

Philippa Hillyer, MD

### 3:45 Which is More Important in Asthma Exacerbations: Rhinovirus A or C?

James Gern, MD FAAAAI

### 4:00 The Role of IgE in Antiviral Immune Responses

Peter W. Heymann, MD

### 4:15 Question & Answer

Upon completion of this session, participants should be able to: Describe that despite signaling through one set of receptors, individual type I IFN family members may have unique roles or biological functions in mediating the inflammatory response to viral infection; Clarify the importance of the different groups of rhinoviruses in asthma exacerbations; Discuss the data suggesting that the production of IgE is part of the antiviral immune response.

## Q & A Workshop

### 5713 EGIDs: Shining a Light on Eosinophils Below the Esophagus

3:30 to 4:45 pm

Convention Center, River Level, Room 006

Credit: 1.25 CME / 1.50 CE

Moderator: David Mark Fleischer, MD FAAAAI

### 3:30 Eosinophils in the Gut: What is Abnormal?

Margaret Collins, MD

### 3:45 Recognition and Medical Management of EGIDs

Mirna Chehade, MD

### 4:00 Allergy Testing and Elimination Diets in EGIDs

Fred (Dan) McDaniel Atkins, MD FAAAAI

### 4:15 Question & Answer

Upon completion of this session, participants should be able to: Discuss the clinical presentation and histopathological findings associated with EGIDs; List the differential diagnosis of eosinophilic inflammation in different areas of the gastrointestinal tract; Identify difficulties encountered in the clinical management of EGIDs.

## Q & A Workshop

### 5714 FDA CBER Update on Regulation of Allergenic Products

3:30 to 4:45 pm

Convention Center, Concourse Level, Room 217CD

Credit: 1.25 CME / 1.50 CE

Moderator: Michael R. Nelson, MD PhD FAAAAI

### 3:30 Current Status of the Categorization of Non-Standardized Allergenic Extracts

Jay E. Slater, MD

### 3:45 Clinical Proof of Efficacy of Novel Allergenic Therapeutics

Ronald L. Rabin, MD FAAAAI

### 4:00 Statistical Proof of Efficacy of Novel Allergenic Therapeutics

Tammy Massie, PhD

### 4:15 Question & Answer

Upon completion of this session, participants should be able to: Describe the current and potential future status of non-standardized allergenic extracts in the use of diagnosis and treatment of allergic diseases; Discuss the requirements for clinical proof of efficacy for licensure of novel allergenic therapeutics; Discuss the requirements for statistical proof of efficacy for licensure of novel allergenic therapeutics.

## Annual Meeting Workshops

Programmed by the AAAAI. Annual Meeting Workshops funded through an educational grant from Merck.

# Scientific Abstract Sessions

## Emerging Asthma Therapeutics

2201

Saturday, February 23rd, 2013, 9:45 AM - 10:45 AM

- 1 Induction of IL-10 Production by Dendritic Cells From a Human Myeloblast Cell Line and Peripheral Blood Mononuclear Cells From Asthmatic Patients by an Alkaloid Compound From *Sophorae Flavescentis***  
William Holder<sup>1</sup>, Changda Liu, PhD<sup>1</sup>, Ying Song, MD<sup>1</sup>, Nan Yang, PhD MS<sup>1</sup>, Jody R. Tversky, MD, PhD<sup>1,2</sup> and Xiu-Min Li, MD<sup>1</sup>, <sup>1</sup>Mount Sinai School of Medicine, New York, NY, <sup>2</sup>Johns Hopkins Medical Center
- 2 Efficacy of Tiotropium in Patients with Asthma in Relation to Allergic Status**  
Mark L. Vandewalker, MD<sup>1</sup>, Michael Engel, MD<sup>2</sup>, Hendrick Schmidt<sup>3</sup>, Wolfgang Siebold<sup>4</sup>, Petra Moroni-Zentgraf<sup>2</sup>, Huib Kerstjens<sup>5,6</sup>, Eric Donn Bateman, MD<sup>7</sup> and Donald P. Tashkin, MD<sup>8</sup>, <sup>1</sup>Clinical Research of the Ozarks, Columbia, MO, <sup>2</sup>Boehringer Ingelheim Pharma GmbH & Co. KG, Ingelheim Am Rhein, Germany, <sup>3</sup>Boehringer Ingelheim Pharma GmbH & Co. KG, Ingelheim am Rhein, Germany, <sup>4</sup>Boehringer Ingelheim Pharma GmbH & Co. KG, Biberach an der Riss, Germany, <sup>5</sup>University Medical Center Groningen, University of Groningen, Groningen, Netherlands, <sup>6</sup>Groningen Research Institute for Asthma and COPD (GRIAC), Groningen, Netherlands, <sup>7</sup>University of Cape Town, Cape Town, South Africa, <sup>8</sup>David Geffen School of Medicine at UCLA, Los Angeles, Los Angeles, CA
- 3 Ganoderic Acid  $\alpha$  Suppressed Th2 Responses and Induced Th1/Tregs in Cultures of Peripheral Blood Mononuclear Cells From Asthmatic Patients**  
Changda Liu, PhD<sup>1</sup>, Ying Song, MD<sup>1</sup>, Nan Yang, PhD MS<sup>1</sup>, Jody R. Tversky, MD, PhD<sup>1,2</sup>, Jessica Reid-Adam<sup>1</sup> and Xiu-Min Li, MD<sup>1</sup>, <sup>1</sup>Mount Sinai School of Medicine, New York, NY, <sup>2</sup>Johns Hopkins Medical Center
- 4 Pre-Clinical Efficacy of RP6503 in PI3K $\delta$ / $\gamma$  Mediated Airway Disorders**  
Swaroop Vakkalanka, PhD<sup>1</sup>, Babu Govandarajulu, PhD<sup>2</sup>, Kasiviswanath Routhu, PhD<sup>2</sup>, Sridhar Veeraraghavan, M.Pharm<sup>2</sup>, Srikant Viswanadha, PhD<sup>2</sup> and Dhanapalan Nagarathnam, PhD<sup>3</sup>, <sup>1</sup>Rhizen Pharmaceuticals S A, La Chaux-de-Fonds, Switzerland, <sup>2</sup>Incozen Therapeutics Pvt. Ltd., Hyderabad, India, <sup>3</sup>DNSK International, Hamden, CT
- 5 Preclinical and Early Clinical Development of a GATA-3-Specific Dnazyme Intended for the Treatment of Th2-Driven Asthma**  
Agnieszka Turowska<sup>1</sup>, Ursula Homburg<sup>1</sup>, Jens Kuhlmann<sup>1</sup>, Anke Müller<sup>1</sup>, Joachim Bille<sup>1</sup>, Harald E. Renz, MD<sup>2</sup> and Holger Garn<sup>2</sup>, <sup>1</sup>sterna biologicals GmbH & Co. KG, Marburg, Germany, <sup>2</sup>Phillipps University of Marburg, Marburg, Germany
- 6 Incidence of Oral Candidiasis Among Patients with Asthma Receiving Fluticasone Propionate / Salmeterol Dry Powder Inhaler Versus Beclomethasone Dipropionate Hydrofluoroalkane: Large-Scale Retrospective Claims Analysis**  
Stephen P. Peters, MD PhD FAAAAI<sup>1</sup>, Michael Benninger, MD<sup>2</sup>, Cheryl S. Hankin, PhD<sup>3</sup>, Zhaohui Wang, MS<sup>3</sup>, Amy Bronstone, PhD<sup>3</sup>, Philip Buck, PhD, M.P.H.<sup>4</sup> and Mark S. Lepore, MD FAAAAI<sup>4</sup>, <sup>1</sup>Wake Forest University School of Medicine, Winston Salem, NC, <sup>2</sup>Cleveland Clinic, Cleveland, OH, <sup>3</sup>BioMedEcon, LLC, Moss Beach, CA, <sup>4</sup>Teva Pharmaceuticals, Inc., Frazer, PA
- 7 Accuracy of Canister Weight to Predict the Number of Doses Remaining in Metered-Dose Inhalers**  
Tharinee Sahajarupat, MD, prince of songkla university, Prapasri Kulalert, MD, Prince of Songkla University, Songkla, Thailand, Araya Yuenyongviwat, MD, Price of Songkla University, Songkhla, Thailand and Pasuree Sangsupawanich, MD, Prince Songkklanagarind hospital, Hadyai, Thailand
- 8 Comparative Effectiveness of Extrafine Hydrofluoroalkane Beclomethasone (EF HFA-BDP) and Fluticasone Propionate (FP) in Smoking Asthmatic Patients — a Retrospective, Real-Life Observational Study in a UK Primary Care Asthma Population**  
David Price, FRCGP, MRCP, DRCOG<sup>1,2</sup>, Richard J. Martin, MD<sup>3</sup>, Mark Milton-Edwards<sup>4</sup>, Elliot Israel, MD, FAAAAI<sup>5</sup>, Nicolas Roche<sup>6</sup>, Annie Burden<sup>2</sup>, Julie von Ziegenweid<sup>2</sup>, Shuna E. Gould<sup>2</sup>, Elizabeth Hillyer<sup>2</sup> and Gene L. Colice, MD<sup>7</sup>, <sup>1</sup>University of Aberdeen, United Kingdom, <sup>2</sup>Research In Real Life, Cambridge, United Kingdom, <sup>3</sup>National Jewish Health, Department of Medicine, Denver, CO, <sup>4</sup>TEVA Pharmaceuticals, <sup>5</sup>Brigham and Women's Hospital, Boston, MA, <sup>6</sup>Hôpital de l'Hôtel-Dieu, France, <sup>7</sup>Washington Hospital Centre and George Washington University School of Medicine, Washington, DC
- 9 Trifolirhizin Isolated From *Radix Sophorae Flavescentis* Inhibited Airway Smooth Muscle Contraction**  
Nan Yang, PhD MS<sup>1</sup>, Banghao Liang<sup>2</sup>, Jixun Zhan<sup>3</sup>, Joseph Goldfarb<sup>2</sup>, Hugh A. Sampson, MD, FAAAAI<sup>1</sup> and Xiu-Min Li, MD<sup>1</sup>, <sup>1</sup>Mount Sinai School of Medicine, New York, NY, <sup>2</sup>Mount Sinai School of Medicine, <sup>3</sup>Utah State University
- 10 Determinants of Prescribing Inhaled Long-Acting Beta-Agonist Bronchodilators As Monotherapy to Adults with Asthma**  
Ayad K. Ali, BPharmSc, MSPHarm, PhD, University of Florida, FL; Eli Lilly and Company, IN
- 11 Wearing a Mask During Sleep Improved Asthma Control in Children**  
Keigo Kainuma, MD, Institute for Clinical Research, Mie National Hospital, Akihiko Terada, MD, PhD, Terada Pediatric Allergy Clinic, Reiko Tokuda, Tokuda Family Clinic, Mizuho Nagao, MD, Mie National Hospital, Nobuo Kubo, Unicharm Corporation and Takao Fujisawa, MD, FAAAAI, Mie National Hospital, Mie, Japan
- 12 Study of Antioxidants in Combination with Choline Chloride in Mouse Model of Allergic Airway Disease**  
Preeti Bansal, Sanjay Saw, Dhanapal Govindaraj and Naveen Arora, CSIR Institute of Genomics and Integrative Biology, New Delhi, India
- 13 The Observed Incidence of Anaphylaxis in Patients Receiving Omalizumab in a Tertiary Allergy and Asthma Clinic in Canada**  
Megan MacRae, RN, BScN<sup>1</sup>, Stephanie Santucci, RN<sup>1</sup>, Caroline Rizk, MD<sup>2</sup>, Jacob Karsh, MD, FRCPC<sup>3</sup> and William H. Yang, MD, FRCPC, FAAAAI<sup>4,5</sup>, <sup>1</sup>Allergy and Asthma Research Centre, Ottawa, ON, Canada, <sup>2</sup>University of Ottawa, Ottawa, ON, Canada, <sup>3</sup>University of Ottawa, Canada, <sup>4</sup>University of Ottawa Medical School, Ottawa, ON, Canada, <sup>5</sup>Allergy and Asthma Research Corp., Ottawa, ON, Canada
- 14 A Double-Blind Placebo-Controlled, Multicenter, Cross-Over, Dose-Ranging Study to Compare the Efficacy and Safety of Albuterol Spiromax and Proair HFA in Adult and Adolescent Patients Ages 12 and Older with Persistent Asthma**  
Edward M. Kerwin, MD, FAAAAI<sup>1</sup>, Herminia Taveras, PhD<sup>2</sup>, Harald Iverson, PhD<sup>2</sup>, Denise Wayne, PhD<sup>2</sup>, Tushar Shah, MD<sup>3</sup> and Mark S. Lepore, MD FAAAAI<sup>3</sup>, <sup>1</sup>Allergy and Asthma Center of Southern OR, Medford, OR, <sup>2</sup>Teva Pharmaceuticals, Inc., Miami, FL, <sup>3</sup>Teva Pharmaceuticals, Inc., Frazer, PA

- 15 **Responder Analysis Evaluating the Effect of Budesonide/Formoterol Pressurized Metered-Dose Inhaler (BUD/FM pMDI) in Patients with Moderate to Severe Asthma with Versus without Fixed Airflow Obstruction (FAO)**  
Donald P. Tashkin, MD<sup>1</sup>, Bradley E. Chipps, MD, FAAAAI<sup>2</sup>, Tom Uryniak<sup>3</sup> and Frank Trudo<sup>3</sup>, <sup>1</sup>University of California, Los Angeles, CA, <sup>2</sup>Capital Allergy & Respiratory Disease Center, Sacramento, CA, <sup>3</sup>AstraZeneca LP, Wilmington, DE
- 16 **Novel Anti-Allergic Vaccine Candidate From House Dust Mite Together with a Combination Adjuvant: Treatment or Prevention of Respiratory Allergy**  
Wendy Ramirez Gonzalez, MSc<sup>1</sup>, Alexis Labrada, PhD<sup>2</sup>, Arelis Más<sup>3</sup>, Beatriz Tamargo<sup>4</sup>, Virgilio Bourg<sup>5</sup>, Oliver Pérez<sup>6</sup> and Gustavo Sierra<sup>6</sup>, <sup>1</sup>National Center of Bioproducts, Mayabeque, Cuba, <sup>2</sup>National Center for Bioproducts, Havana, Cuba, <sup>3</sup>National Center of bioproducts, <sup>4</sup>Pharmacy and Food Institution, <sup>5</sup>National center of Bioproducts, <sup>6</sup>Finlay Institut
- 17 **Resident Education: Proper Usage of Metered Dose Inhaler and Chamber**  
Min Jung Lee and James C. Fagin, MD, Steven & Alexandra Cohen Children's Medical Center of New York, Great Neck, NY
- 18 **Anti-IgE Therapy for Asthma in a Patient with Allergic Granulomatosis and Angiitis**  
Christine Song, MD, FRCPC<sup>1</sup> and Jason Kihyuk Lee, MD, FRCPC<sup>1,2</sup>, <sup>1</sup>University of Toronto, ON, Canada, <sup>2</sup>St. Michael's Hospital, Division of Allergy and Clinical Immunology, Toronto, ON, Canada
- 19 **Oral Steroid-Sparing Effect of Omalizumab in Severe Asthma Patients Treated with Systemic Steroids – the Real-Life Experience From Poland**  
Izabela R. Kuprys-Lipinska, MD PhD<sup>1</sup>, Damian Tworek<sup>2</sup> and Piotr Kuna, MD PhD<sup>1</sup>, <sup>1</sup>Dept. of Internal Medicine, Asthma and Allergy, Medical University in Lodz, Poland, <sup>2</sup>Dept. of Internal Medicine, Asthma and Allergy, Barlicki University Hospital of Medical University in Lodz, Poland
- 20 **Allergic Bronchopulmonary Mycosis in Non-Atopic Patients: A Treatment Alternative**  
Robert M. Ramirez, MD and Robert L. Jacobs, MD, Biogenics Research Institute, San Antonio, TX
- 23 **Protective Function of FoxP3+ Regulatory T Cells in Experimental Necrotizing Enterocolitis**  
Dat Tran, Bridgette Dingle, Nicole Fatheree, Juleen Min, Yuying Liu and Marc Rhoads, UTHealth, Houston, TX
- 24 **Protease Activity of Per a 10 Activates Human Airway Derived Epithelial Cell Line**  
Sagar Laxman Kale, CSIR-Institute of Genomics and Integrative Biology, Delhi, India and Naveen Arora, CSIR- IGIB, Delhi, India
- 25 **Human Primary Central Memory T Lymphocytes As an Ex Vivo Model in HIV-1 Latency**  
Christina L. Nance, PhD<sup>1</sup>, Daniel Grant, BS<sup>1</sup> and William T. Shearer, MD, PhD, FAAAAI<sup>2</sup>, <sup>1</sup>Baylor College of Medicine, <sup>2</sup>Baylor
- 26 **Defective B-Cell Maturation in Chromosome 22q11.2 Deletion Syndrome**  
Solrun Melkorka Maggadottir, MD<sup>1</sup>, Kelly A Maurer<sup>2</sup> and Kathleen E. Sullivan, MD, PhD, FAAAAI<sup>1</sup>, <sup>1</sup>Children's Hospital of Philadelphia, Philadelphia, PA, <sup>2</sup>Children's Hospital of Philadelphia, Philadelphia, PA
- 27 **Differential Gene Expression in Young Vs Aged Mice Infected with Respiratory Syncytial Virus**  
Terianne M. Wong, MSc<sup>1</sup>, Sandhya Boyapalle, DVM MS PhD<sup>1,2</sup>, Siddarth Kamath, MS<sup>3</sup>, Huy Nguyen, BSc<sup>1</sup>, Subhra Mohapatra, MS PhD<sup>4</sup> and Shyam S. Mohapatra, PhD, FAAAAI<sup>4,5</sup>, <sup>1</sup>University of South Florida-Morsani College of Medicine, Tampa, FL, <sup>2</sup>JA Haley VA Hospital, Tampa, FL, <sup>3</sup>University of South Florida-College of Public Health, Tampa, FL, <sup>4</sup>The University of South Florida Morsani College of Medicine, Tampa, FL, <sup>5</sup>James A Haley VA Hospital, Tampa, FL
- 28 **NLRP3-Deficient Mice Have an Enhanced Neutrophil Apoptosis and a Suppressed Inflammatory Response to Hyperoxia-Induced Acute Lung Injury**  
Jutaro Fukumoto, MD, PhD<sup>1</sup>, Itsuko Fukumoto, DMD<sup>1</sup>, Bao Huynh<sup>1</sup>, Ruan R. Cox Jr<sup>1</sup>, Prasanna Tamarapu Parthasarathy<sup>1</sup>, Gurukumar Kollongod Ramanathan<sup>1</sup>, Rajan Babu Venugopal<sup>1</sup>, Richard F. Lockey, MD<sup>1,2</sup> and Narasaiah Kolliputi, PhD<sup>3</sup>, <sup>1</sup>Morsani College of Medicine, University of South Florida, Tampa, FL, <sup>2</sup>James A. Haley Veterans' Hospital, Tampa, FL, <sup>3</sup>Internal Medicine, Morsani College of Medicine, University of South Florida, Tampa, FL
- 29 **Type I Interferon Regulates Acute IL-5 and IL-13 Expression in Human Memory CD4<sup>+</sup> T Cells**  
Sarah R. Gonzales, Jonathan Huber and J. David Farrar, PhD, UT Southwestern Medical Center, Dallas, TX
- 30 **Beta2-Adrenergic Receptor (ADRB2) Agonists Inhibit Human CD8+ T Cell Function**  
Leonardo D. Estrada, Fatema Chowdhury and J. David Farrar, PhD, UT Southwestern Medical Center, Dallas, TX
- 31 **Induction of Regulatory Dendritic Cells in Correlation with Clinical Efficacy During Grass Pollen Sublingual Immunotherapy**  
Philippe Moingeon, STALLERGENES

## Pattern Recognition Receptor, T Cells, B Cells and Dendritic Cells

2202

Saturday, February 23rd, 2013, 9:45 AM - 10:45 AM

- 21 **IL-1-Beta Maintains IL-2R-Alpha (CD25) Expression On the Surface of Th17 Cells and Partially Reverses IL-2 Mediated Inhibition of Th17 Differentiation**  
Michelle C. Crank, MD, Jane Hu-Li and William E. Paul, MD, NIAID, National Institutes of Health, Bethesda, MD
- 22 **Evidence for Expansion of Sinonasal B-Lineage Cells in Chronic Rhinosinusitis**  
Kathryn E. Hulse, PhD<sup>1</sup>, James Norton, MS<sup>2</sup>, Robert Kern, MD<sup>3</sup>, David Conley, MD<sup>1</sup>, Rakesh Chandra, MD<sup>1</sup>, Bruce Tan, MD<sup>1</sup>, Anju Peters, MD<sup>4</sup>, Leslie C. Grammer, MD, FAAAAI<sup>4</sup>, Kathleen E. Harris<sup>4</sup>, Sudarshan Seshadri, PhD<sup>4</sup>, Roderick Carter, BSc<sup>2</sup>, Lydia Suh, BSc<sup>4</sup>, Atsushi Kato, PhD<sup>2</sup> and Robert P. Schleimer, PhD, FAAAAI<sup>2</sup>, <sup>1</sup>Northwestern University Feinberg School Medicine, Chicago, IL, <sup>2</sup>Department of Medicine, Division of Allergy-Immunology, Northwestern University Feinberg School of Medicine, Chicago, IL, <sup>3</sup>Northwestern University Feinberg School of Medicine, Chicago, IL, <sup>4</sup>Northwestern University Feinberg School of Medicine, Chicago, IL

## Biologic Therapies, Vaccines, HIV

2203

Saturday, February 23rd, 2013, 9:45 AM - 10:45 AM

- 32 **Cytokine Profile and Clinical Correlates in Immune Deficient (HIV-infected) Infants with Severe (hypoxic) Pneumonia**  
Robin J. Green, MD PhD FAAAAI<sup>1</sup>, Refiloe Masekela, MD, Cert Pulm Paed<sup>1</sup>, Dankwart Wittenberg, MD, Cert Pulm Paed<sup>1</sup>, Alta Terblanche, Cert Gastro Paed<sup>1</sup>, Paul Rheeder, PhD<sup>2</sup>, Piet Becker, PhD<sup>3</sup> and Ronald Anderson, PhD<sup>4</sup>, <sup>1</sup>Department of Paediatrics and Child Health, University of Pretoria, South Africa, <sup>2</sup>Division of Clinical Epidemiology, School of Health Systems and Public Health, University of Pretoria, Pretoria, South Africa, <sup>3</sup>Medical Research



- Council, South Africa, <sup>4</sup>Medical Research Council Unit for Inflammation and Immunity, Department of Immunology, University of Pretoria and Tshwane Academic Division of National Health Laboratory Service, South Africa
- 33 **Atheroprotection Conferred by Immunization with 15-Mer Peptide Fragments From ApoB100**  
Kevin Tse, MD<sup>1</sup>, Harley Tse, PhD<sup>2</sup>, Michael Shaw<sup>2</sup>, Alessandro Sette, Biol. Sci.<sup>3</sup> and Klaus Ley, MD<sup>3</sup>, <sup>1</sup>UCSD, <sup>2</sup>Wayne State University, <sup>3</sup>La Jolla Institute for Allergy and Immunology, La Jolla, CA
- 34 **Removal of Coagulation Factors by the Gamunex®-C Purification Process**  
Melanie Williams, PhD, Jeff Willey, Katherine Tull, Glenn Stevenson, Mona Parks, LaToya McElrath, Luda Golovko, Catherine Russ, John Griffin and Pete Vandenberg, Grifols, Inc., Raleigh, NC
- 35 **Serum 25-Hydroxyvitamin D Is Associated with Positive Hepatitis B Vaccine Response**  
Ju-Suk Lee, MD PhD, Sungkyunkwan university, Changwon, South Korea, Jin-A Jung, MD, Dong-A University Hospital, Busan, Bong-Seong Kim, MD, Gangneung Asan Hospital, Gangneung-Si, Hyeon Jong Jong Yang, MD, Soonchunhyang University Hospital, Seoul; Pediatric Allergy Respiratory Center, Department of Pediatrics, Soonchunhyang University Hospital, Seoul, South Korea and Ja Hyeong Kim, MD, Ulsan University Hospital, Ulsan
- 36 **Functional Characterization of A Cis-Acting Temperature Sensitive Mutation From A Respiratory Syncytial Virus Vaccine Candidate**  
Michael Teng<sup>1,2</sup>, David J. Fitzhugh, MD<sup>1</sup>, Kim Tran<sup>1</sup>, Richard F. Lockey, MD<sup>1,3</sup> and Peter Collins<sup>2</sup>, <sup>1</sup>University of South Florida Morsani College of Medicine, Tampa, FL, <sup>2</sup>NIAID, Bethesda, MD, <sup>3</sup>James A. Haley Veterans' Hospital, Tampa, FL
- 37 **A Fusion Protein Designed with Segments of Different Allergens of Blomia Tropicalis**  
Dalgys Martinez<sup>1</sup>, Marlon Munera<sup>1</sup>, Jose Cantillo<sup>1</sup>, Leonardo Puerta<sup>1,2</sup> and Luis Caraballo<sup>1,2</sup>, <sup>1</sup>Institute for Immunological Research/University of Cartagena, Cartagena, Colombia, <sup>2</sup>Foundation for the development of medical and biological sciences, Cartagena, Colombia
- 38 **Inhibition of IL-1 $\beta$  Mediated Proinflammatory Cytokine Production by Epigallocatechin Gallate in Human Alveolar Epithelial Cells**  
Oluwakemi Phillips<sup>1</sup>, Ruan R. Cox Jr<sup>1</sup>, Jutaro Fukumoto, MD, PhD<sup>1</sup>, Itsuko Fukumoto, DMD<sup>1</sup>, Prasanna Tamarapu<sup>1</sup>, Tran Luong<sup>1</sup>, Richard F. Lockey, MD<sup>1,2</sup> and Narasaiah Kolliputi, PhD<sup>2</sup>, <sup>1</sup>Morsani College of Medicine, University of South Florida, Tampa, FL, <sup>2</sup>James A. Haley Veterans' Hospital, Tampa, FL, <sup>3</sup>Internal Medicine, Morsani College of Medicine, University of South Florida, Tampa, FL
- 39 **Safety and Immunogenicity of Flublok®, a Highly Purified Recombinant Recombinant Influenza Vaccine Made without Eggs or Live Influenza Viruses**  
Ruvim Izikson, MD, Elizabeth N. Ibbitson, RN and Daniel Adams, JD, Protein Sciences, Meriden, CT
- 40 **Immune Response Post-Administration of Polyvalent Pneumococcal Vaccine and Implications Regarding Clinical Efficacy**  
Javaid M. Khan, DO<sup>1,2</sup>, Hassan Nasir, DO<sup>1,2</sup> and Walter Ryan, DO<sup>1,2</sup>, <sup>1</sup>Larkin Community Hospital, Miami, FL, <sup>2</sup>Nova Southeastern University College of Osteopathic Medicine, Davie, FL
- 41 **Intravenous Immune Globulin Acts in an Fc-Gamma-Receptor-Independent Manner in an Antigen-Driven Murine Model of Allergic Asthma**  
Gabriel N. Kaufman, MSc<sup>1</sup>, Amir Hossein Massoud<sup>1</sup>, Ryan Fiter<sup>1</sup>, Ciriaco Piccirillo, PhD<sup>2</sup> and Bruce D. Mazer, MD FAAAAI<sup>1,3</sup>, <sup>1</sup>Meakins-Christie Laboratories, Montreal, QC, Canada, <sup>2</sup>McGill Centre for the Study of Host Resistance, Montreal, QC, Canada, <sup>3</sup>Montreal Children's Hospital, Montreal, QC, Canada
- ## Occupational and Environmental Exposures
- 2204  
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- 42 **Predictive Value of Normal Non-Specific Bronchial Responsiveness (NSBR) in the Investigation of Occupational Asthma (OA)**  
André Cartier, MD, FAAAAI, Jacques-André Pralong, Manon Labrecque, Jocelyne L'Archevêque and Catherine Lemièrre, Hopital du Sacre-Coeur de Montreal, Montreal, QC, Canada
- 43 **Relationship of Airway Hyperresponsiveness and RGS2 Expression in Smokers**  
Harold DelasAlas, MD, PharmD<sup>1</sup>, Ningxi Zhu, MD, PhD<sup>1</sup>, Yaping Tu, PhD<sup>2</sup> and Thomas B. Casale, MD FAAAAI<sup>1</sup>, <sup>1</sup>Creighton University School of Medicine, Omaha, NE, <sup>2</sup>Creighton University, Omaha, NE
- 44 **Muramic Acid in Indoor Air and Dust: Relationship with Home Characteristics**  
Atin Adhikari, PhD<sup>1</sup>, David Popham, PhD<sup>2</sup>, Christopher Schaffer<sup>1</sup>, Reshmi Indugula<sup>1</sup>, Sergey Grinshpun, PhD<sup>1</sup> and Tiina Reponen, PhD<sup>1</sup>, <sup>1</sup>University of Cincinnati, Cincinnati, OH, <sup>2</sup>Virginia Tech, Blacksburg, VA
- 45 **Endotoxin in House Dust Mite Extracts Stimulate Human Dermal Fibroblasts**  
Larry G. Arlian, PhD FAAAAI, Jananie Rockwood and Marjorie S. Morgan, PhD, Wright State University, Dayton, OH
- 46 **Specific Inhalation Challenge with Isocyanates Induces Nasal Congestion in Patients with Probable Occupational Asthma**  
Roberto Castano, MD, PhD, Hôpital du Sacré-Coeur de Montréal, Montreal, QC, Canada, Victor Johnson, PhD, BRT-Burleson Research Technologies and André Cartier, MD, FAAAAI, Hopital du Sacre-Coeur de Montreal, Montreal, QC, Canada
- 47 **Identifying Genetic Susceptibility to Sensitization to Cephalosporins in Hospital Workers**  
Young-Hee Nam, MD<sup>1</sup>, Jeong-Eun Kim, MD<sup>2</sup>, Seung-Hyun Kim, PhD<sup>3</sup>, Hyun Jung Jin, MD<sup>4</sup>, Yoo Seob Shin, MD, PhD<sup>3</sup>, Young Min Min Ye, MD<sup>3</sup> and Hae-Sim Park, MD, PhD<sup>3</sup>, <sup>1</sup>Dong-A University School of Medicine, Busan, South Korea, <sup>2</sup>Samsung Changwon Hospital, Changwon, South Korea, <sup>3</sup>Ajou University School of Medicine, Suwon, South Korea, <sup>4</sup>Yeungnam University College of Medicine, Daegu, South Korea
- 48 **House Dust Mite Group 2 Allergen Modulates LPS-Induced Responses in Airway Sensory Neurons**  
Mayur Patil, MS<sup>1</sup>, Edward G. Brooks, MD<sup>2</sup>, Michael Henry, D.D.S, PhD<sup>1</sup> and Armen Akopian, PhD<sup>3</sup>, <sup>1</sup>UTHSCSA, San Antonio, TX, <sup>2</sup>Univ. Texas Health Science Center San Antonio, San Antonio, TX, <sup>3</sup>UTHSCSA, San Antonio, TX
- 49 **Effect of Recent Acetaminophen Usage in the Development of Asthma and Bronchial Hyperresponsiveness Is Modified by Toll Like receptor4 (rs1927911) Polymorphism**  
Song I Yang, MD<sup>1,2</sup>, Seung-Hwa Lee, BS<sup>3</sup>, Mi-Jin Kang, MS<sup>3</sup>, Ho-Sung Yu, BS<sup>3</sup>, Young Ho Jung, MD<sup>1,2</sup>, Ju-Hee Seo, MD<sup>4</sup>, Ji-Won Kwon, MD<sup>5</sup>, Byoung-Ju Kim, MD, PhD<sup>6</sup>, Ha-Jung Kim, PhD, DVM<sup>3</sup>, Young-Joon Kim, MS<sup>3</sup>, Hee-Suk Kim<sup>3</sup>, Kyungmo Hong<sup>7</sup>, So-Yeon Lee, MD<sup>8</sup>, Kang Seo Park, MD<sup>9</sup>, Jinho Yu, MD, PhD<sup>1,2</sup> and Soo-Jong Hong, MD, PhD<sup>1,2</sup>, <sup>1</sup>Childhood Asthma Atopy Center, Department of Pediatrics, Asan Medical Center, University of Ulsan College of Medicine, Seoul, South Korea, <sup>2</sup>Research Center for Standardization of Allergic Disease, Seoul, South Korea, <sup>3</sup>Asan Institute for Life Sciences, University of Ulsan College of Medicine, Seoul, South Korea, <sup>4</sup>Department of Pediatrics, Korea Cancer Center Hospital, Seoul, South Korea, <sup>5</sup>Department of Pediatrics, Seoul National University Bundang Hospital, Seoul National University College of Medicine, Seongnam, South Korea, <sup>6</sup>Department of Pediatrics, Hae-undae Paik Hospital, Inje University College of Medicine, Busan, South Korea, <sup>7</sup>Goucher College, Baltimore, USA, <sup>8</sup>Department of Pediatrics, Hallym

University Secred Heart Hospital, Anyang, South Korea, <sup>9</sup>Department of Pediatrics, Presbyterian Medical Center, Jeonju, South Korea

- 50 Disposition of Toluene Diisocyanate (TDI) Following Dermal Exposure**  
**Donald H. Beezhold, PhD, FAAAAI**, Ajay Nayak, PhD, Stacey Anderson, PhD, Brett Green, PhD and Paul Siegel, PhD, CDC/NIOSH, Morgantown, WV
- 51 Production of a Methylenediphenyl Diisocyanate Hapten-Specific Monoclonal Antibody**  
**Brett Green, PhD**, Ajay Nayak, PhD, Brandon Law, MS, Paul Siegel, PhD and Donald H. Beezhold, PhD, FAAAAI, CDC/NIOSH, Morgantown, WV
- 52 Environmental Assay to Measure Mouse Urine Antigens**  
**Rosa Codina, PhD** and Robert Esch, PhD, Greer Laboratories, Inc., Lenoir, NC

## Allergens and Epitopes

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- 53 Novel Grass Pollen Antigens Contribute to the Stimulation of Th2 Cytokines in Allergic Individuals**  
**Veronique M. Schulten<sup>1</sup>**, Jason Greenbaum<sup>1</sup>, Ravi Kolla<sup>1</sup>, Cecilia Arlehamn-Lindestam<sup>1</sup>, Carla Oseroff<sup>1</sup>, Rafeul Alam, MD, PhD, FAAAAI<sup>2</sup>, David H. Broide, MB, ChB, FAAAAI<sup>3</sup>, Howard Grey<sup>1</sup>, Alessandro Sette, Biol. Sci.<sup>1</sup> and Bjoern Peters<sup>1</sup>, <sup>1</sup>La Jolla Institute for Allergy and Immunology, La Jolla, CA, <sup>2</sup>National Jewish Health, Denver, CO, <sup>3</sup>UC San Diego, La Jolla, CA
- 54 Structural Analysis Reveals Molecular Basis for Interactions of Group 1 Allergens with Species Specific and Cross-Reactive Antibodies**  
**Maksymilian Chruszcz, PhD<sup>1</sup>**, Anna Pomes, PhD, FAAAAI<sup>2</sup>, Tomasz Osinski<sup>3</sup>, Karolina A. Majorek<sup>3</sup>, Jill Glesner<sup>2</sup>, Wladek Minor, PhD<sup>3</sup>, Lisa D. Vailes<sup>2</sup> and Martin D. Chapman, PhD, FAAAAI<sup>2</sup>, <sup>1</sup>University of South Carolina, Columbia, SC, <sup>2</sup>Indoor Biotechnologies, Inc., Charlottesville, VA, <sup>3</sup>University of Virginia, Charlottesville, VA
- 55 The Anionic Surfactant Lipid, Palmitoyl-Oleoyl-Phosphatidylglycerol (POPG), Suppresses Der p 2-Stimulated Inflammatory Responses in Lung Epithelial Cells and Macrophages**  
**Sasipa Tanyaratrisakul, PhD<sup>1</sup>**, Surapon Piboonpocanun, PhD<sup>2</sup> and Dennis R. Voelker, PhD<sup>1</sup>, <sup>1</sup>National Jewish Health, Denver, <sup>2</sup>Institute of Molecular Biosciences, Mahidol University, Thailand
- 56 The Cockroach Allergen Bla g 1 Forms Alpha Helical Capsules with an Internal Lipid Binding Cavity: Implications for Allergenicity**  
**Geoffrey Mueller, PhD<sup>1</sup>**, Lars Pedersen<sup>1</sup>, Fred Lih<sup>1</sup>, Jill Glesner<sup>2</sup>, Martin D. Chapman, PhD FAAAAI<sup>2</sup>, Ken Tomer<sup>1</sup>, Robert London<sup>1</sup> and Anna Pomes, PhD FAAAAI<sup>2</sup>, <sup>1</sup>National Institute of Environmental Health Sciences, NIH, Research Triangle Park, NC, <sup>2</sup>Indoor Biotechnologies, Inc., Charlottesville, VA
- 57 De Novo Creation of an Antibody Binding Epitope On Group 1 Mite Allergens**  
**Jill Glesner<sup>1</sup>**, Maksymilian Chruszcz, PhD<sup>2</sup>, Wladek Minor, PhD<sup>3</sup>, Martin D. Chapman, PhD FAAAAI<sup>1</sup> and Anna Pomés, PhD FAAAAI<sup>1</sup>, <sup>1</sup>Indoor Biotechnologies, Inc., Charlottesville, VA, <sup>2</sup>University of South Carolina, Columbia, SC, <sup>3</sup>University of Virginia, Charlottesville, VA
- 58 Recombinant Major Ragweed Allergen Amb a 1: Physicochemical Characterization and Immunologic Comparison of Five Recombinant Ragweed Isoallergens Amb a 1.01 to Amb a 1.05**  
**Andreas Nandy, PhD<sup>1</sup>**, Steffen Augustin, PhD<sup>1</sup>, Martin Wald, PhD<sup>1</sup>, Linda Pump<sup>1</sup>, Alexis Hermann<sup>1</sup>, Sven Tredler<sup>1</sup>, Susan

Hagen<sup>1</sup>, Riccardo Asero, MD<sup>2</sup> and Steen Klysnér, PhD<sup>1</sup>, <sup>1</sup>Allergopharma Joachim Ganzer KG, Reinbek, Germany, <sup>2</sup>Clinica San Carlo, Paderno Dugnano, Italy

- 59 Characterization of Native and Recombinant Per a 10 Allergen, of Periplaneta Americana**  
**Dhanapal Govindaraj<sup>1</sup>**, Shailendra N. Gaur, MD, FAAAAI<sup>2</sup> and Naveen Arora<sup>1</sup>, <sup>1</sup>CSIR Institute of Genomics and Integrative Biology, New Delhi, India, <sup>2</sup>University Of Delhi, Delhi, India
- 60 Expression of Immunoreactive Recombinant Alt a 1 in Pichia Pastoris**  
**Audrey Koid, BA**, Meredith Lohmann, MS, Martin D. Chapman, PhD, FAAAAI and Sabina Wünschmann, PhD, INDOOR Biotechnologies, Inc.
- 61 Interactions Between Der p 7 Allergen and Human IgE/Mouse Monoclonal Antibody WH9**  
**Horngr-Der Shen, PhD<sup>1</sup>**, Sheh-Yi Sheu<sup>2</sup>, Hong Chou<sup>1</sup>, Hsiao-Yun Tai<sup>1</sup> and Yu-Sen Chen<sup>1</sup>, <sup>1</sup>Taipei Veterans General Hospital, Taipei, <sup>2</sup>National Yang-Ming University
- 62 Crystal Structure of Korean Pine (Pinus koraiensis) Vicilin**  
**Yuzhu Zhang, PhD<sup>1,2</sup>**, Tengchuan Jin, PhD<sup>2</sup> and Yang Wang<sup>2</sup>, <sup>1</sup>USDA, Albany, CA, <sup>2</sup>Illinois Institute of Technology, Chicago, IL
- 63 IgE, IgG1, IgG4 Reactivity Profile to Blo t 5 Recombinant Allergen From Blomia Tropicalis and Its Modified Form in Atopic and Non-Atopic Patients**  
**Ernesto Akio Taketomi, MD, PhD<sup>1</sup>**, Juliana Miranda<sup>2</sup>, Karine Almeida<sup>2</sup>, Isabella Siman<sup>2</sup>, Leandro Ynoue<sup>2</sup>, Helena Penha<sup>2</sup>, Deise Silva<sup>2</sup>, Bárbara Ávila<sup>2</sup>, Laura Tomaz<sup>2</sup> and Jair Cunha Júnior<sup>2</sup>, <sup>1</sup>Federal University of Uberlandia, Uberlandia, Brazil, <sup>2</sup>Federal University of Uberlândia

## Food Allergens/Food Disease Epi/Insect Hypersensitivity

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- 64 Research of the Potential Allergenicity of Recombinant Human Lactoferrin (rhLF)**  
**Cui Zhou<sup>1</sup>**, Huilian Che, MD<sup>1,2</sup>, Na Sun<sup>1</sup>, Jing Wang<sup>1</sup> and Kunlun Huang<sup>1,2</sup>, <sup>1</sup>College of Food Science and Nutritional Engineering, China Agricultural University, Beijing, China, <sup>2</sup>The Supervision, Inspection and Testing Center of Genetically Modified Organisms, Ministry of Agriculture, Beijing, China
- 65 Study of NEW Lettuce (Lactuca sativa) Allergens**  
**Elisa Haroun Diaz<sup>1</sup>**, Manuel De Las Heras<sup>1</sup>, Javier Cuesta Heranz<sup>2</sup>, Esther Muñoz<sup>3</sup>, Carlos Pastor<sup>3</sup> and Joaquin Sastre, MD, PhD, FAAAAI<sup>1</sup>, <sup>1</sup>Fundacion Jimenez Diaz, Madrid, Spain, <sup>2</sup>Clinica Nuestra Sra. De la Concepcion, Madrid, Spain, <sup>3</sup>Fundacion Jimenez Diaz
- 66 Determining the Most Potent Allergens of Walnut**  
**Pitud Rangsihienchai, MD<sup>1,2</sup>**, Yonghua Zhuang, MD, PhD<sup>1</sup>, Kirk Hansen, PhD<sup>1</sup> and Stephen C. Dreskin, MD, PhD, FAAAAI<sup>1</sup>, <sup>1</sup>University of Colorado Denver, Aurora, CO, <sup>2</sup>National Jewish Health, Denver, CO
- 67 A Method of Reducing Allergenicity of Legume Proteins**  
**Naveen Arora**, CSIR- IGIB, Delhi, India, Ramkrashan Kasera, CSIR-Institute of Genomics and Integrative Biology, India, Anand Singh, PhD, Institute of Genomics and Integrative Biology, DELHI, India, Shakuntala Lavasa, USLavasa Medical & Research Center, India and Komerla Nagendra, Bengaluru Allergy Centre, India
- 68 Comparative Analysis of IgE Binding Proteins in GM and Non-GM Rice Varieties Using Atopic Patients Sera**  
**Chandni Mathur**, INSTITUTE OF GENOMICS & INTEGRATIVE BIOLOGY, DELHI, India, P.C Kathuria, NATIONAL ALLERGY CENTRE, India, Shakuntala Lavasa, USLavasa Medical

- & Research Center, India, Pushpa Dahiya, MD University, India and Anand Singh, PhD, Institute of Genomics and Integrative Biology, DELHI, India
- 69 Analysis of the Association Between Food Allergy and Sensitization to Ltp and Profilin**  
**Felicia Berroa**<sup>1</sup>, M Jose Goikoetxea, PhD, MD<sup>2</sup>, Marta M. Ferrer, MD, PhD, FAAAAI<sup>2</sup>, Paula Cabrera-Freitag, MD, PhD<sup>3</sup>, Gracia Javaloyes, MD, PhD<sup>1</sup>, Maria L Sanz, MD PhD<sup>1</sup> and Gabriel Gastaminza, MD, PhD<sup>1</sup>, <sup>1</sup>Department of Allergy, Clinica Universidad de Navarra, Spain, <sup>2</sup>Department of Allergy, Clinica Universidad de Navarra, Pamplona, Spain, <sup>3</sup>Clinica Universidad de Navarra, Pamplona, Spain
- 70 Structure and Function of the Peanut Panallergen Ara h 8**  
**Barry K. Hurlburt, PhD**<sup>1</sup>, Lesa Celeste, PhD<sup>2</sup>, Karolina A. Majorek<sup>3</sup>, Jane McBride<sup>4</sup>, Soheila J. Maleki, PhD<sup>1</sup>, Wladek Minor, PhD<sup>3</sup> and Maksymilian Chruszcz, PhD<sup>5</sup>, <sup>1</sup>USDA-ARS-SRRC, New Orleans, LA, <sup>2</sup>university of south carolina, columbia, SC, <sup>3</sup>University of Virginia, Charlottesville, VA, <sup>4</sup>usda-ars-srrc, new orleans, LA, <sup>5</sup>University of South Carolina, Columbia, SC
- 71 Chemical and Structural Alterations to Ara h 2 Following Simulated Roasting**  
**Tysheena Charles, MS**<sup>1,2</sup>, Casey C. Grimm<sup>2</sup>, Samuel Landry, PhD<sup>3</sup> and Soheila J. Maleki, PhD<sup>2</sup>, <sup>1</sup>Tulane University, New Orleans, LA, <sup>2</sup>USDA-ARS-SRRC, New Orleans, LA, <sup>3</sup>Tulane University Health Sciences Center, New Orleans, LA
- 72 Effect of D-Amino Acids On IgE Binding to Peanut Allergens Si-Yin Chung and Shawndrika Reed, USDA-ARS-SRRC, New Orleans, LA**
- 73 Repeated Sequences with Similar Physicochemical Properties May Account for Cross-Reactions Between Peanuts and Tree Nuts**  
**Soheila J. Maleki, PhD**<sup>1</sup>, Tysheena Charles, MS<sup>1,2</sup>, Casey C. Grimm<sup>1</sup>, Barry K. Hurlburt, PhD<sup>1</sup>, Maksymilian Chruszcz, PhD<sup>3</sup>, Hsiaopo Cheng, MS<sup>1</sup> and Catherine Schein, PhD<sup>4</sup>, <sup>1</sup>USDA-ARS-SRRC, New Orleans, LA, <sup>2</sup>Tulane University, New Orleans, LA, <sup>3</sup>University of South Carolina, Columbia, SC, <sup>4</sup>University of Texas Medical Branch, Galveston, TX
- 74 Cross-Reactivity Among Almond, Peanut and Other Tree Nuts in Almond and Peanut Allergic Patients**  
**Brandi Hunley Dyer, MD**<sup>1</sup>, Anupama Kewalramani, MD FAAAAI<sup>2</sup>, Hsiaopo Cheng, MS<sup>3</sup>, Suzanne S. Teuber, MD FAAAAI<sup>4</sup> and Soheila J. Maleki, PhD<sup>3</sup>, <sup>1</sup>Tulane University, <sup>2</sup>University of Maryland School of Medicine, Laurel, MD, <sup>3</sup>USDA-ARS-SRRC, New Orleans, LA, <sup>4</sup>UC Davis
- 75 Antibodies to the Physicochemical-Consensus Sequence of Jug r 2 Containing Glutamine-Rich Repeats Bind Allergens in Peanuts and Other Tree Nuts**  
**Catherine Schein, PhD**<sup>1</sup>, Suzanne S. Teuber, MD FAAAAI<sup>2</sup>, Hsiaopo Cheng, MS<sup>3</sup>, Casey C. Grimm<sup>3</sup> and Soheila J. Maleki, PhD<sup>3</sup>, <sup>1</sup>University of Texas Medical Branch, Galveston, TX, <sup>2</sup>UC Davis, <sup>3</sup>USDA-ARS-SRRC, New Orleans, LA
- 76 Characterization of the Effects of Proteolysis and Reduction On Cashew Allergens**  
**Christopher P. Mattison**<sup>1</sup>, Wendy A. Desormeaux<sup>1</sup>, Casey C. Grimm<sup>1</sup> and Richard L. Wasserman, MD, PhD<sup>2</sup>, <sup>1</sup>USDA-ARS-SRRC, New Orleans, LA, <sup>2</sup>Allergy/Immunology Research Center of North Texas, Dallas, TX
- 77 New Allergens Involved in Shrimp-Mite Cross Reactivity**  
**Cristina Gamez Jr, IIS-Fundación Jiménez Díaz, Madrid, Spain, Joaquin Sastre, MD, PhD, FAAAAI, Fundacion Jimenez Diaz, Madrid, Spain, Manuel Boquete, MD, Hospital Generla de Calde, Lugo, Spain and Victoria Del Pozo, PhD, IIS-Fundacion Jiménez Díaz, Madrid, Spain**
- 78 IgE Cross-Reactivity of Shrimp and Cockroach Tropomyosins Among Patients with Positive Skin Tests to Shrimp**  
**Thalita Martins**<sup>1</sup>, Adriana S. Moreno, PhD<sup>2</sup>, Thaís Mendonça<sup>3</sup>, Luana Delcaro<sup>3</sup> and Luisa Karla P. Arruda, MD, PhD, FAAAAI<sup>4</sup>, <sup>1</sup>FMRP- University of Sao Paulo, <sup>2</sup>University of Sao Paulo, Ribeirao Preto, Brazil, <sup>3</sup>University of Sao Paulo, <sup>4</sup>School of Medicine of Ribeirao Preto, Ribeirao Preto, Brazil
- 79 Identification of Primary Sensitizers in Patients with Double Sensitization to House Dust Mite and Shrimp Using Component-Resolved Diagnosis**  
**Sasikarn Suesirisawad, MD**<sup>1</sup>, Narissara Suratannon, MD<sup>2</sup>, Piya-wadee Lertchanaruengrith, MD<sup>1</sup>, Jarungchit Ngamphai boon, MD<sup>2</sup> and Pantipa Chatchatee, MD<sup>2</sup>, <sup>1</sup>King Chulalongkorn Memorial Hospital, Bangkok, Thailand, <sup>2</sup>Department of Pediatrics King Chulalongkorn Memorial Hospital, Bangkok, Thailand
- 80 High Rate of Food Sensitization, but Not Food Allergy, in Latex Allergy**  
**Pedro Giavina-Bianchi, MD PhD**<sup>1</sup>, Laila Sabino Garro, MD<sup>2</sup>, Jorge Kalil, MD, PhD<sup>1</sup> and Antonio Abílio Motta, MD PhD<sup>3</sup>, <sup>1</sup>Clinical Immunology and Allergy Division, University of Sao Paulo, Sao Paulo, Brazil, <sup>2</sup>Division of Clinical Immunology and Allergy, University of São Paulo, Brazil, <sup>3</sup>Division of Clinical Immunology and Allergy, University of São Paulo
- 81 Types of Food Allergy and Season of Birth in Outpatient Children**  
**Benjamin Liss, BS, Penn State College of Medicine, Hershey, PA, Sue Boehmer, MS, Penn State University, Hershey, PA and Tracy B. Fausnight, MD, FAAAAI, Penn State Children's Hospital, Hershey, PA**
- 82 Delivery by Cesarean Section Increases Risk for Food Sensitization At Age 2 Years**  
**Mohammad Younus, MD**<sup>1</sup>, Ganesa Wegienka, PhD<sup>2</sup>, Suzanne Havstad, MA<sup>2</sup>, Christine Joseph, PhD<sup>2</sup>, Christine Cole Johnson, PhD, M.P.H., FAAAAI<sup>2</sup>, Dennis Ownby, MD FAAAAI<sup>3</sup> and Edward M. Zoratti, MD, FAAAAI<sup>1</sup>, <sup>1</sup>Division of Allergy and Clinical Immunology, Henry Ford Hospital, Detroit, MI, <sup>2</sup>Department of Public Health Sciences, Henry Ford Hospital, Detroit, MI, <sup>3</sup>Division of Allergy-Immunology and Rheumatology, Georgia Health Sciences University, Augusta, GA
- 83 Levels of TGFβ and IL10 in Mother's Breast Milk and Child's Risk of Sensitization to Egg, Milk, or Peanut in a Birth Cohort**  
**Christine L.M. Joseph, PhD**<sup>1</sup>, Suzanne Havstad, MA<sup>1</sup>, Kevin Bobbitt, PhD<sup>2</sup>, Kimberley J. Woodcroft, PhD<sup>2</sup>, Christian G. Nageotte, MD<sup>2</sup>, Rana T. Misiak, MD<sup>3</sup>, Jerel M. Ezell, M.P.H.<sup>1</sup>, Edward M. Zoratti, MD, FAAAAI<sup>4</sup>, Ganesa Wegienka, PhD<sup>1</sup>, Dennis Ownby, MD<sup>5</sup> and Christine Cole Johnson, PhD, M.P.H., FAAAAI<sup>1</sup>, <sup>1</sup>Department of Public Health Sciences, Henry Ford Hospital, Detroit, MI, <sup>2</sup>Henry Ford Health System, Detroit, MI, <sup>3</sup>Henry Ford Health System, Northville, MI, <sup>4</sup>Division of Allergy and Clinical Immunology, Henry Ford Hospital, Detroit, MI, <sup>5</sup>Georgia Health Sciences University, Augusta, GA
- 84 Characterization of Food Allergy in Urban Adults**  
**Shradha Agarwal, MD, Mount Sinai School of Medicine, New York, NY and Julie Wang, MD FAAAAI, Mt. Sinai School of Medicine, New York, NY**
- 85 Prevalence of Food Allergy in New York City (NYC) School Children**  
**Sarah A. Taylor-Black, MD**<sup>1</sup>, Elisabete Weiderpass Vainio, Msc, PhD<sup>2</sup>, Paolo Boffetta, MD, MPH<sup>3</sup>, Scott H. Sicherer, MD, FAAAAI<sup>1</sup> and Julie Wang, MD, FAAAAI<sup>1</sup>, <sup>1</sup>Mt. Sinai School of Medicine, New York, NY, <sup>2</sup>Department of Medical Epidemiology and Biostatistics, Karolinska Institutet Cancer Registry of Norway, Oslo, and Department of Community Medicine, Tromso, Norway, <sup>3</sup>Institute for Translational Epidemiology, Mount Sinai School of Medicine, New York, NY
- 86 Prevalence of Milk, Peanut and Egg Allergies in A Socioeconomically Diverse Cohort of Infants: Identifying Cases of Food Allergy for Field Studies Using an Expert Panel**  
**Jerel M. Ezell, M.P.H.**<sup>1</sup>, Suzanne Havstad, MA<sup>1</sup>, Haejin Kim, MD<sup>2</sup>, Ganesa Wegienka, PhD<sup>1</sup>, Dennis Ownby, MD FAAAAI<sup>3</sup>, Edward M. Zoratti, MD, FAAAAI<sup>2</sup>, Christine Cole Johnson, PhD,



- M.P.H., FAAAAI<sup>1</sup> and Christine L.M. Joseph, PhD<sup>1</sup>, <sup>1</sup>Department of Public Health Sciences, Henry Ford Hospital, Detroit, MI, <sup>2</sup>Division of Allergy and Clinical Immunology, Henry Ford Hospital, Detroit, MI, <sup>3</sup>Division of Allergy-Immunology and Rheumatology, Georgia Health Sciences University, Augusta, GA
- 87 African American Race Is a Robust Risk Factor for Food, but Not Aeroallergen Sensitization**  
**Haejin Kim, MD<sup>1</sup>**, Suzanne Havstad, MA<sup>2</sup>, Jerel M. Ezell, M.P.H.<sup>2</sup>, Ganesa Wegienka, PhD<sup>2</sup>, Edward M. Zoratti, MD, FAAAAI<sup>1</sup> and Christine Cole Johnson, PhD, M.P.H., FAAAAI<sup>2</sup>, <sup>1</sup>Division of Allergy and Clinical Immunology, Henry Ford Hospital, Detroit, MI, <sup>2</sup>Department of Public Health Sciences, Henry Ford Hospital, Detroit, MI
- 88 Comparison of Allergy to Multiple Versus Single Foods in a Pediatric Urban Population**  
**Jennifer M. Camacho, MD**, Sarah A. Taylor-Black, MD and Julie Wang, MD, FAAAAI, Mt. Sinai School of Medicine, New York, NY
- 89 The Anti-Inflammatory Pro-Resolution Lipoxin A4 Increases During Ultra-Rush Venom Immunotherapy**  
**Vincenzo Patella<sup>1,2</sup>**, Mario Romano<sup>3</sup>, Eleonora Cianci<sup>4</sup>, Salvatore Saitta<sup>5</sup>, Stefano Lattanzio<sup>4</sup>, Giovanni Florio<sup>2</sup> and Sebastiano Gangemi<sup>5,6</sup>, <sup>1</sup>School of Allergy and Clinical Immunology, University of Naples Federico II, Naples, Italy, <sup>2</sup>Division of Allergy and Clinical Immunology, Agropoli General Hospital, ASL Salerno, Salerno, Italy, <sup>3</sup>Department of Experimental and Clinical Sciences, Center of Excellence on Aging, G. D'Annunzio University Foundation, Chieti, Italy, <sup>4</sup>Department of Medicine and Aging Sciences, Center of Excellence on Aging, G. D'Annunzio University Foundation, Chieti, Italy, <sup>5</sup>School and Division of Allergy and Clinical Immunology, Department of Human Pathology, University of Messina, <sup>6</sup>IBIM (Istituto di Biomedicina e Immunologia Molecolare "Alberto Monroy"), CNR (Consiglio Nazionale delle Ricerche), Palermo, Italy
- 90 Measurement of Hymenoptera Venom Specific IgE by the Immulite 3gAllergy in Subjects with Negative or Positive Results by Immunocap**  
**Mineaki Watanabe<sup>1</sup>**, Hirokuni Hirata<sup>2</sup>, Naruo Yoshida<sup>1</sup>, Taichi Shiobara<sup>1</sup>, Tatsuya Yokoyama<sup>1</sup> and Takeshi Fukuda<sup>3</sup>, <sup>1</sup>Dokkyo medical university, Japan, <sup>2</sup>dokkyo, <sup>3</sup>Dokkyo Medical University School of Medicine, Mibu, Japan
- 91 Evaluation and Validation of A Bee Venom Sting Challenge Performed by A MICRO-Syringe**  
**Maurizio Giuseppe Severino<sup>1</sup>**, Gabriele Cortellini<sup>2</sup>, Elisabetta Francescato<sup>3</sup>, Stefano Turillazzi<sup>4</sup>, Igino Spadolini<sup>5</sup>, Anthi Rogkakou<sup>6</sup> and Giovanni Passalacqua, MD<sup>6</sup>, <sup>1</sup>Allergy Clinic, Ospedale San Giovanni di Dio, Florence, <sup>2</sup>Internal Medicine and Rheumatology, Rimini Hospital, <sup>3</sup>Entomology, Florence, <sup>4</sup>Dipartimento di Biologia Evoluzionistica, University of Florence, <sup>5</sup>Anallergo, Florence, <sup>6</sup>Allergy and Respiratory Diseases, IRCCS San Martino Hospital-IST-University of Genoa
- 92 Venom Immunotherapy in Patients with Clonal Mast CELL Disorders: Efficacy, Safety and Practical Considerations**  
**Patrizia Bonadonna, MD<sup>1</sup>**, David Gonzalez-De-Olano<sup>2</sup>, Roberta Zanotti<sup>3</sup>, Annamaria Riccio<sup>4</sup>, Laura De Ferrari<sup>4</sup>, Carla Lombardo<sup>1</sup>, Anthi Rogkakou<sup>4</sup>, Luis Escribano, MD PhD<sup>5</sup>, Ivan Alvarez-Twose<sup>6</sup>, Almudena Matito<sup>6</sup>, Arantza Vega, MD<sup>7</sup> and Giovanni Passalacqua, MD<sup>4</sup>, <sup>1</sup>Allergy Unit, Azienda ospedale Università di Verona, Italy, <sup>2</sup>Allergy Unit, Hospital Universitario de Fuenlabrada, Madrid, Spain, <sup>3</sup>Department of Clinical and Experimental Medicine, Haematology Section, University of Verona, Italy, <sup>4</sup>Allergy and Respiratory Diseases, IRCCS San Martino Hospital-IST-University of Genoa, <sup>5</sup>Instituto de Estudios de Mastocitosis, Hospital Virgen Del Valle, Toledo, Spain, <sup>6</sup>Instituto de Estudios de Mastocitosis, Hospital Virgen Del Valle, Toledo, Spain, <sup>7</sup>Allergy unit, HOSPITAL UNIVERSITARIO GUADALAJARA, Guadalajara, Spain
- 93 Per a 3 Homologue of German Cockroach; A Novel Allergen Identified Using Avian Scfv Antibodies**  
**Taruna Khurana, PhD**, FDA Center for Biologics Evaluation and Research, Maggie Collison, FDA Center for Biologics Evaluation and Research, Rockville, MD, Fook Tim Chew, PhD, National University Singapore, Singapore, Singapore and Jay E. Slater, MD, FDA/CBER/OVRR/DBPAP, Rockville, MD
- 94 Importance of Component Resolved Diagnosis of Vesputa/Polistes Allergic Patients**  
**Guillermo Salamanca, PhD<sup>1</sup>**, Ruth Gutiérrez<sup>2</sup>, Agustín Galán<sup>2</sup>, Fernando De La Torre<sup>3</sup>, Arantza Vega, MD<sup>4</sup>, Lluís Marqués, MD<sup>5</sup>, Domingo Barber, PhD<sup>2</sup> and Rafael Monsalve, PhD<sup>6</sup>, <sup>1</sup>ALK-Abello, Madrid, Spain, <sup>2</sup>ALK-Abelló, Madrid, Spain, <sup>3</sup>ALK Abello, Madrid, Spain, <sup>4</sup>Allergy unit, HOSPITAL UNIVERSITARIO GUADALAJARA, Guadalajara, Spain, <sup>5</sup>Hospital Santa Maria- Universitari Arnau, Vilanova (Lleida), Spain, <sup>6</sup>ALK-ABELLO, S. A., Madrid, Spain
- 95 Hymenoptera Venom Hypersensitivity Evaluation**  
**Wayne Wolverton, DO**, Walter Reed National Military Medical Center, Bethesda, MD, Douglas E. Beakes, MD, FAAAAI, Walter Reed Medical Center A/I Dept, Washington, DC and Silvia Huebner, MD, Evans Army Community Hospital, Fort Carson, CO

## Urticaria/Angioedema

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Saturday, February 23rd, 2013, 9:45 AM - 10:45 AM

- 96 A Phase I Assessment of the Safety and Tolerability Profile of Novel Treatments for Acute Allergic Reactions Administered by Intravenous and Intramuscular Injection Formulations**  
**Mira Francis<sup>1</sup>**, Mireille Noumeir<sup>1</sup>, Eric Sicard<sup>1</sup>, Marc Lefebvre<sup>1</sup> and Jie Du<sup>2</sup>, <sup>1</sup>Algorithme Pharma, Laval, QC, Canada, <sup>2</sup>JDP Therapeutics Inc., Lansdale, PA
- 97 Comparison of Laboratory Findings and Medication Levels to Control Urticaria According to Asst Reactivity in Chronic Idiopathic Urticaria**  
**Seong-Wook Sohn** and Soo-Kyeong Lee, Dongguk University Ilsan Hospital
- 98 Seasonal Variation in Angioedema and Urticaria in an Inner-City Minority Population**  
**Ashlei Mathew, MD<sup>1</sup>**, Rauno O. Joks, MD FAAAAI<sup>2</sup> and Gina Dapul-Hidalgo, MD<sup>2</sup>, <sup>1</sup>Center for Allergy and Asthma Research, State University of New York Downstate Medical Center, Brooklyn, NY, <sup>2</sup>State University of New York Downstate Medical Center, Brooklyn, NY
- 99 The Association Between Strongyloides Stercoralis Infection and Allergic Diseases**  
**Lahari Rampur, MD**, Albert Einstein/Jacobi medical centre, Bronx, NY, Sunit Jariwala, MD, Albert Einstein/Montefiore Medical Center, New York, NY, Gabriele De Vos, MD, Albert Einstein College of Medicine, Bronx, NY, Golda Hudes, MD PhD, Albert Einstein / Montefiore Medical Center, New York, NY and David L. Rosenstreich, MD FAAAAI, Albert Einstein / Montefiore Medical Center, NY
- 100 Clinical Characterization of Chronic Urticaria Phenotypes to Predict Treatment Outcomes**  
**Priyal Amin<sup>1</sup>**, Tecumseh Bryson<sup>1</sup>, Danny Krall<sup>1</sup>, Linda Levin<sup>2</sup>, John Eckman<sup>2</sup> and Jonathan A. Bernstein<sup>3,4</sup>, <sup>1</sup>University of Cincinnati, College of Medicine, <sup>2</sup>University of Cincinnati, <sup>3</sup>University of Cincinnati Medical Center, Cincinnati, OH, <sup>4</sup>Bernstein Allergy Group, Cincinnati, OH
- 101 Age-Dependent Increase in Oral Steroid Utilization in the Treatment of Chronic Urticaria**  
**Roxana I. Siles, MD**, Meng Xu and Fred H. Hsieh, MD, Cleveland Clinic Foundation, Cleveland, OH

- 102 "Choosing Wisely" Diagnostic Tests in Chronic Urticaria: Does Screening for *H. Pylori*, Vitamin D Deficiency and Anti-FcεRI Antibodies Have a Role?**  
Ashvini Varadhi, MD<sup>1</sup>, Andrew Nickels, MD<sup>1,2</sup>, Eileen Wang, MD<sup>2</sup>, Joseph Hageman, MD<sup>1</sup> and Vesselin Dimov, MD<sup>1,2</sup>, <sup>1</sup>Department of Pediatrics, University of Chicago, Chicago, IL, <sup>2</sup>Department of Medicine, University of Chicago, Chicago, IL
- 103 Prevalence of Helicobacter Pylori Infection and Chronic Urticaria**  
James A. Loh, MD, University of Alberta, Edmonton, AB, Canada, Amin S. Kanani, MD, University of British Columbia, Vancouver, BC, Canada and Donald F. Stark, MD, FAAAAI, The University of British Columbia, Vancouver, BC, Canada
- 104 Successful Treatment of Refractory Cholinergic Urticaria with Omalizumab in a Pediatric Patient**  
Selene K. Bantz, MD, Jose G. Calderon, MD and David H. Dreyfus, MD, PhD, FAAAAI, Yale University School of Medicine, New Haven, CT
- 105 Post-Treatment Levels of Matrix Metalloproteinase-9 and Vascular Endothelial Growth Factor in Patients with Chronic Urticaria**  
Denisa Ferastraoar, MD, Albert Einstein / Jacobi Medical Center, Bronx, NY, Purvi Parikh, MD, Albert Einstein / Montefiore Medical Center, Sunit Jariwala, MD, Albert Einstein/Montefiore Medical Center, New York, NY, Golda Hudes, MD, PhD, Albert Einstein / Montefiore Medical Center, New York, NY and David L. Rosenstreich, MD FAAAAI, Albert Einstein / Montefiore Medical Center, NY
- 106 Correlation of Cellular Measures and Disease Activity in Chronic Idiopathic Urticaria**  
Eric Oliver, MD, Patricia M. Sterba, MS and Sarbjit S. Saini, Department of Medicine, Division of Allergy and Clinical Immunology, Johns Hopkins University School of Medicine, Baltimore, MD
- 107 Baseline Characteristics of Patients with Refractory Chronic Idiopathic/Spontaneous Urticaria (CIU/CSU) Enrolled in a Phase III, Randomized, Placebo-Controlled Trial of Omalizumab**  
Karin Rosen, Genentech, Inc., South San Francisco, Hsin-Ju Hsieh, Genentech, Inc., South San Francisco, CA, Panayiotis Georgiou, Novartis Pharmaceuticals UK Limited, Horsham, West Sussex, United Kingdom, Thomas Casale, Creighton University Medical Center, Omaha and Marcus Maurer, Charité-Universitätsmedizin Berlin, Berlin, Germany
- 108 Autoimmune Phenotype in Refractory Chronic Urticaria Does Not Affect Response to Omalizumab**  
Ravi K. Viswanathan, MD<sup>1,2</sup> and Sameer K. Mathur, MD, PhD FAAAAI<sup>1,2</sup>, <sup>1</sup>University of Wisconsin School of Medicine and Public Health, Madison, WI, <sup>2</sup>William S. Middleton Veterans Hospital, Madison, WI
- 109 Decrease in Fc Epsilon R1 Antibodies with IVIG**  
Michael J. Radtke, MD, Dreyer Medical Clinic
- 110 Does Early Clinical Manifestation of Hereditary Angioedema (HAE) Influence the Clinical Course of the Disease?**  
Inmaculada Martinez-Saguer, MD<sup>1</sup>, Jochen Graff<sup>2</sup>, Eva Rusicke, MD<sup>1</sup>, Emel Aygören-Pürsün<sup>1</sup>, Thomas Klingebiel<sup>1</sup> and Wolfhart Kreuz, MD<sup>3</sup>, <sup>1</sup>J.-W. Goethe University Hospital, <sup>2</sup>Clinical Trial Center Rhine-Main (KSRM), <sup>3</sup>International Research Institute for Blood Coagulation Disorders and Immunodeficiencies
- 111 Presumed Type III Hereditary Angioedema Presenting with Recurrent Abdominal Distention After Estrogen Use**  
Jennifer E. Fergeson, DO<sup>1,2</sup>, Richard F. Lockey, MD<sup>1,2</sup> and Mark C. Glaum, MD, PhD, FAAAAI<sup>1,2</sup>, <sup>1</sup>James A. Haley Veterans' Hospital, Tampa, FL, <sup>2</sup>University of South Florida Morsani College of Medicine, Tampa, FL
- 112 Clinical Characteristics of Hereditary Angioedema (HAE) Type III Patients Compared with Those with HAE Type I/II**  
Isabelle Boccon-Gibod<sup>1</sup>, Laurence Bouillet, MD<sup>1</sup> and Clement Olivier<sup>2</sup>, <sup>1</sup>Grenoble University Hospital, Grenoble, France, <sup>2</sup>Shire HGT, Eysins, Switzerland
- 113 Angioedema in the ER Department: Predicting Outcomes**  
S. L. Felder<sup>1,2</sup>, R. M. Curtis<sup>1,2</sup>, I. Ball, MD, FRCP<sup>1,3</sup> and R. Borici-Mazi, MD, FRCP<sup>1,4</sup>, <sup>1</sup>Queens University, Kingston, ON, Canada, <sup>2</sup>School of Medicine, <sup>3</sup>Department of Emergency Medicine, <sup>4</sup>Division of Allergy and Immunology
- 114 Expanding the Paradigm of Idiopathic Angioedema: A Patient Who Responds to C1-Esterase Inhibitor (C1INH) Replacement Therapy**  
Michael G. Gates, MD and John T. Anderson, MD, University of Alabama at Birmingham, Birmingham, AL
- 115 Efficacy of C1-Inhibitor Concentrate (Berinert®) for the Treatment of Cutaneous Attacks of Acute Hereditary Angioedema Compared to Historical Untreated Controls**  
Konrad Bork, MD<sup>1</sup>, Petra Staubach<sup>1</sup>, Jonathan A. Bernstein<sup>2</sup>, Henrike Feuersenger<sup>3</sup>, Thomas Machnig<sup>3</sup> and Timothy J. Craig, DO, FAAAAI<sup>4</sup>, <sup>1</sup>University of Mainz, Mainz, Germany, <sup>2</sup>University of Cincinnati Medical Center, Cincinnati, OH, <sup>3</sup>CSL Behring GmbH, Marburg, Germany, <sup>4</sup>Penn State University College of Medicine, Hershey, PA
- 116 Discovery and Characterization of a Fully Human Monoclonal Antibody Inhibitor of Plasma Kallikrein for the Treatment of Plasma Kallikrein-Mediated Edema**  
Daniel Sexton, Ryan Faucette, Malini Viswanathan, Niksa Kastrapeli, Kris Kopacz, Greg Conley, Allison Lindberg, Janja Cosic, Stephen Comeau, Shauna Mason, Jon Kenniston, Mike DiLeo, Jie Chen, Robert Ladner, Andrew Nixon and Christopher TenHoor, Dyax Corp.
- 117 Treatment of Hereditary Angioedema Attacks with Icatibant: A Comparison of Observational Data with Clinical Trial Data**  
Marcus Maurer, MD, Charité - Universitätsmedizin Berlin, Berlin, Germany, Hilary Longhurst, MD, Bart's and The London Hospital, London, United Kingdom, Huamin Henry Li, MD, PhD, FAAAAI, Institute for Asthma and Allergy, Chevy Chase, MD, Vincent Fabien, PhD, Shire Human Genetic Therapies, Eysins, Switzerland and William R. Lumry, MD, FAAAAI, Allergy and Asthma Specialists, Dallas, TX
- 118 Safety and Convenience of Self-Administered Icatibant for the Treatment of Acute Hereditary Angioedema Attacks**  
Werner Aberer, MD, Medizinische Universität Graz, Graz, Austria, Anette Bygum, MD, Odense University Hospital, Odense, Denmark, Nitin Nair, PhD, Shire Human Genetic Therapies, Lexington and Shmuel Kivity, MD, The Tel Aviv Medical Center, Tel Aviv, Israel
- 119 Benefits of Early Administration with Icatibant for the Treatment of Hereditary Angioedema Attacks**  
Hilary Longhurst, MD, Bart's and The London Hospital, London, United Kingdom, Werner Aberer, MD, Medical University of Graz, Graz, Austria, Laurence Bouillet, MD, Grenoble University Hospital, Grenoble, France, Teresa Caballero, MD PhD, Hospital La Paz Research Center (IdiPaz), Madrid, Spain, Vincent Fabien, PhD, Shire Human Genetic Therapies, Eysins, Switzerland, Gisèle Kanny, MD, PhD, University of Lorraine, Vandoeuvre-les-Nancy, France, Andrea Zanichelli, MD, Luigi Sacco University of Milan, Milan, Italy and Marcus Maurer, Charité-Universitätsmedizin Berlin, Berlin, Germany
- 120 Clinical Response to Treatment of Hereditary Angioedema (HAE) Type III with Icatibant**  
Laurence Bouillet, MD<sup>1</sup>, Isabelle Boccon-Gibod<sup>1</sup> and Vincent Fabien, PhD<sup>2</sup>, <sup>1</sup>Grenoble University Hospital, Grenoble, France, <sup>2</sup>Shire Human Genetic Therapies, Eysins, Switzerland
- 121 Comparative Economics of On-Demand Treatment Options Approved in the United States for Hereditary Angioedema**  
Geetika Sabharwal<sup>1</sup>, Natalia Vernon, MD<sup>1</sup>, Art Zbrozek<sup>2</sup>, Thomas Machnig<sup>3</sup> and Timothy J. Craig, DO FAAAAI<sup>1</sup>, <sup>1</sup>Penn State University College of Medicine, Hershey, PA, <sup>2</sup>CSL Behring LLC, King of Prussia, PA, <sup>3</sup>CSL Behring GmbH, Marburg, Germany

- 122 Comparative Economics of On-Demand Treatment Options Approved in the United Kingdom for Hereditary Angioedema**  
**Zoya Panahloo**, CSL Behring UK Ltd, Haywards Heath, United Kingdom, Thomas Machnig, CSL Behring GmbH, Marburg, Germany and Art Zbrozek, CSL Behring LLC, King of Prussia, PA

### Provider Education, Knowledge and Specialty

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Saturday, February 23rd, 2013, 9:45 AM - 10:45 AM

- 123 Comparison of Characteristics of Asthma Patients Seeking Care From Specialists Versus Primary Care Physicians**  
**Kurtis S. Elward, MD<sup>1</sup>**, Thomas B. Casale, MD FAAAAI<sup>2</sup>, Wilson Pace<sup>3</sup>, Michael Schatz, MD MS FAAAAI<sup>4</sup>, Ryan Walters<sup>5</sup> and Paul Turner<sup>5</sup>, <sup>1</sup>American Academy of Family Physicians, Charlottesville, VA, <sup>2</sup>Creighton University School of Medicine, Omaha, NE, <sup>3</sup>U Colorado, Denver, <sup>4</sup>Kaiser Permanente, San Diego, CA, <sup>5</sup>Creighton University
- 124 Characteristics of Asthma Visits to Specialists Compared to Primary Care Physicians**  
**Michael Schatz, MD MS FAAAAI<sup>1</sup>**, Thomas B. Casale, MD FAAAAI<sup>2</sup>, Wilson Pace<sup>3</sup>, Ryan Walters<sup>4</sup>, Paul Turner<sup>4</sup> and Kurtis S. Elward, MD<sup>5</sup>, <sup>1</sup>Kaiser Permanente, San Diego, CA, <sup>2</sup>Creighton University School of Medicine, Omaha, NE, <sup>3</sup>U Colorado, Denver, <sup>4</sup>Creighton University, <sup>5</sup>American Academy of Family Physicians, Charlottesville, VA
- 125 Tweeting the Meeting: Investigating Twitter Activity At the 2012 AAAAI Conference**  
**Neha Mehrotra, MD**, University of Chicago, IL and Vesselin Dimov, MD, MC 0729, C-150B, Department of Pediatrics, University of Chicago, Chicago, IL
- 126 Change in Food Allergy Knowledge Among Urban Public School Nurses After a Standardized Educational Curriculum**  
**Sarah Twichell, MD, MPH<sup>1</sup>**, Humaira Robinson, RN, BSN<sup>1</sup>, Eleanor Garrow, BHA<sup>2</sup>, Maria L. Acebal, JD<sup>2</sup> and Hemant P. Sharma, MD MHS FAAAAI<sup>1</sup>, <sup>1</sup>Children's National Medical Center, Division of Allergy and Immunology, Washington, DC, <sup>2</sup>Food Allergy & Anaphylaxis Network, Fairfax, VA
- 127 Assessing Allergy Knowledge in Internal Medicine Residents**  
**Brynn Everist, PGY3 Pediatric Resident<sup>1</sup>**, Kim Baumann<sup>1</sup> and John B. Hagan, MD FAAAAI<sup>2</sup>, <sup>1</sup>Mayo Clinic, <sup>2</sup>Mayo Clinic, Rochester, MN
- 128 A Variable Compass: Practice Parameters and Strength of Recommendation Data**  
**Taylor A. Banks, MD**, Julia Savitz and Michael R. Nelson, MD PhD FAAAAI, Walter Reed National Military Medical Center, Bethesda, MD

### Treatment of Allergic and Immune Disorders

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Saturday, February 23rd, 2013, 9:45 AM - 10:45 AM

- 129 Severe Atopic Dermatitis (SAD) and Quality of Life (QOL) in Children During Background Therapy (BT)**  
**Vladislava Derkach, PhD<sup>1,2</sup>** and Tatiana Slavyanskaya, MD PhD<sup>1,3</sup>, <sup>1</sup>Institute of Immunophysiology, Moscow, Russia, <sup>2</sup>Vladivostok State Medical University, Vladivostok, Russia, <sup>3</sup>University of Russia, Moscow, Russia
- 130 A Qualitative Analysis of Health-Related Quality of Life and Treatment Satisfaction Associated with Rapid Push Scig Therapy**

**Joanne Moreau, MD<sup>1</sup>**, Vincent R. Bonagura, MD, FAAAAI<sup>2</sup> and Eugene Meyer, Psy. D.<sup>1</sup>, <sup>1</sup>Cohen Children's Medical Center, North Shore-LIJ Health System, Department of Pediatrics, Division of Allergy & Immunology, Great Neck, NY, <sup>2</sup>Hofstra, Northshore-LIJ School of Medicine, Great Neck, NY

- 131 The Hygiene Hypothesis : Aeroallergen Sensitization in Allergic Rhinitis Patients Living in Rural and Urban Areas of Lebanon**  
**Carla Irani, MD FAAAAI<sup>1,2</sup>** and Maya Mouzannar<sup>1</sup>, <sup>1</sup>Hotel Dieu de France hospital, Beirut, Lebanon, <sup>2</sup>University of Alberta, Edmonton, Canada
- 132 The Immunoglobulin Diagnosis, Evaluation, and Key Learnings (IDEaL) Patient Registry: An Initial Two-Year Data Survey From a Longitudinal Registry of Patients On Immunoglobulin Replacement Therapy in an Alternate Care Setting**  
**Sean Kearns, PhD<sup>1</sup>**, Keith Crawford<sup>1</sup>, Loretta Kristofek, RN<sup>1</sup>, Robbyn Kirylo<sup>1</sup> and Luqman Seidu, MD<sup>2</sup>, <sup>1</sup>Coram Clinical Trials, Denver, CO, <sup>2</sup>Allergy and Asthma of Atlanta, LLC, Atlanta, GA
- 133 Epinephrine Preparedness in a Food-Allergic Pediatric Patient Population**  
**Casey Curtis, MD<sup>1</sup>**, David R. Stukus, MD FAAAAI<sup>2</sup>, Rebecca Scherzer, MD FAAAAI<sup>3</sup> and Kara Simonson, MD<sup>1</sup>, <sup>1</sup>Nationwide Children's Hospital, <sup>2</sup>Nationwide Children's Hospital, New Albany, OH, <sup>3</sup>Nationwide Children's Hospital, Columbus, OH

### Immunotherapy I

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Saturday, February 23rd, 2013, 9:45 AM - 10:45 AM

- 134 Multi-Grass Pollen Immunotherapy Confers Quality Broad Spectrum Treatment**  
**Alan D. Bullimore** and Murray Skinner, Allergy Therapeutics
- 135 Safety and Tolerability of Escalating Doses of House Dust Mite-Peptide Antigen Desensitization (HDM-PAD)**  
**Mark Larche**, Division of Clinical Immunology & Allergy, Department of Medicine, McMaster University, Hamilton, ON, Canada, Pascal Hickey, Adiga Life Sciences, Hamilton, ON, Canada, Jacques Hebert, MD, Centre de Recherche Applique en Allergie de Quebec, Quebec City, QC, Canada and Rod Hafner, PhD, Circassia, Oxford, United Kingdom
- 136 Non-Detectable IgE Binding of an Amb a 1 Derived, Contiguous Overlapping Peptide Based, SIT Product Candidate Against Ragweed Allergy**  
**Christophe Reymond<sup>1</sup>**, Alexander Kettner, PhD<sup>1</sup>, Valerie Boand<sup>1</sup>, Adrien Manighetti<sup>1</sup>, Anne-Christine Thierry<sup>2</sup>, Regine Audran, PhD<sup>2</sup> and Francois Spertini, MD<sup>2</sup>, <sup>1</sup>ANERGIS SA, EPALINGES, Switzerland, <sup>2</sup>Division of Immunology and Allergy, CHUV, LAUSANNE, Switzerland
- 137 Efficacy of House Dust Mite Sublingual Immunotherapy in Adults with Allergic Rhinitis: Results of an Environmental Exposure Chamber Study**  
**Michel Roux<sup>1</sup>**, William H. Yang, MD, FRCPC, FAAAAI<sup>2</sup>, Agnès Viatte<sup>1</sup>, Véronique Cadic<sup>1</sup>, Kathy Abiteboul<sup>1</sup> and Robert K. Zeldin<sup>1</sup>, <sup>1</sup>Stallergenes, Antony, France, <sup>2</sup>Allergy and Asthma Research Corp., Ottawa, ON, Canada
- 138 Onset of Action of Sublingual Tablets of House Dust Mite Allergen Extracts in Adults**  
**Pascal M. Demoly, MD, PhD<sup>1</sup>**, Karl-Christian Bergmann<sup>2</sup>, Michel Melac<sup>3</sup>, Héléne Nguyen<sup>3</sup>, Marine Frereux<sup>3</sup> and Robert K. Zeldin<sup>3</sup>, <sup>1</sup>University Hospital of Montpellier, Montpellier, France, <sup>2</sup>Charité Campus Mitte, Berlin, Germany, <sup>3</sup>Stallergenes, Antony, France
- 139 Molecular Differences in Major and Minor Allergens From US Grass Species Support the Association of Several Pollens for Specific Immunotherapy**  
**Thierry Batard, PhD<sup>1</sup>**, Henri Chabre, PhD<sup>2</sup>, Véronique Baron-Bodo,



- PhD<sup>2</sup>, Emmanuel Nony<sup>2</sup>, Aurélie Lautrette<sup>2</sup>, Marie-Noëlle Couret<sup>2</sup>, Pierrick Lemoine<sup>2</sup>, Nathalie Berjont<sup>2</sup>, Maud Hrabina<sup>2</sup>, Karine Jain<sup>2</sup> and Philippe Moingeon, PhD<sup>3</sup>, <sup>1</sup>Stallergenes, Antony, France, <sup>2</sup>Stallergenes, <sup>3</sup>Stallergenes SA, Antony, France
- 140 Safety and Tolerability of Fel d 1-Derived Peptide Antigen Desensitization**  
**Brett Haumann, MD**, John Powell, MD and Rod Hafner, PhD, Circassia Ltd, Oxford UK
- 141 High-Dose IgG Completely Inhibited TNF- $\alpha$ -Induced, but Not IL-1 $\beta$ - or Poly (I:C)-Induced, G-CSF Expression by Human Coronary Artery Endothelial Cells**  
**Akio Matsuda, PhD**, Hideaki Morita, MD, PhD, Hirotohi Unno, MD, Hirohisa Saito, MD, PhD, Kenji Matsumoto, MD, PhD and Jun Abe, MD, PhD, Department of Allergy and Immunology, National Research Institute for Child Health and Development, Tokyo, Japan
- 142 Allergen Specific IgE Titers Are Suppressed by Increased IgG4 Levels When Analyzed by Multiplex Molecular Allergen Chip but Not by Fluoroenzyme Immunoassay**  
**Johannes M. Schmid, MD<sup>1</sup>**, Peter A. Wuertzen<sup>2</sup>, Ronald Dahl, MD<sup>3</sup> and Hans Jurgen Hoffmann, PhD<sup>1</sup>, <sup>1</sup>Aarhus University, Aarhus, Denmark, <sup>2</sup>Dept. of Experimental Immunology, ALK-Abelló, Hoersholm, Denmark, <sup>3</sup>Department of Respiratory Medicine, Aarhus University Hospital, Aarhus C, Denmark

## Rhinitis I

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Saturday, February 23rd, 2013, 9:45 AM - 10:45 AM

- 143 Focalin® Inhibits Allergen and Histamine Skin Testing**  
**Honorable Steve L. Kagen, MD, FAAAAI<sup>1</sup>**, Michael Kagen, MD<sup>2</sup>, Zainab Nayeri, MD<sup>2</sup> and Joe Zondlo, MD<sup>1</sup>, <sup>1</sup>Kagen Allergy Clinic, Appleton, WI, <sup>2</sup>University of Tennessee-Chattanooga, Chattanooga, TN
- 144 Qnasl® Non-Aqueous Nasal Aerosol Delivers Softer Sprays Than Aqueous Flonase®, Nasacort AQ®, and Nasonex®**  
**Jade Ly**, Armando Morales, Katherine Salas, Julio Cabrera, Mukul Dalvi and Zian-Ming Zeng, Teva Branded Pharmaceutical Products R&D, Inc.
- 145 Caregiver's Reported Prevalence of Symptom and Psychosocial Problem in Children with Allergic Rhinitis in South Korea**  
**Sun-Hee Choi, MD, PhD**, Gangdong Kyung Hee University Hospital, Hyun Hee Kim, MD, PhD, Dept. of Pediatrics Bucheon St. Mary's Hospital The Catholic University of Korea, Bucheon-si, South Korea, Young Yull Y. Koh, MD, PhD, Seoul National University Hospital, Seoul, South Korea, Yong-Mean Park, MD, PhD, Depart. of Pediatrics / Konkuk Univ. Hospital, Seoul, Man-Yong Han, MD, PhD, CHA University Hospital, Hye Young Yum, MD, PhD, Seoul Medical Center and Yeong-Ho Rha, MD, PhD, Kyung Hee University Hospital
- 146 RNA-Seq-Derived Whole Genome Transcriptomic Profiling Following Challenge to Mt. Cedar in a Pollen Challenge Chamber Uncover Novel Insights Into Allergic Rhinoconjunctivitis Pathogenesis**  
**Nathan Harper, BS<sup>1,2</sup>**, John Castiblanco, MS<sup>1,2</sup>, Cynthia Rather, CCRC<sup>3</sup>, Charles Andrews, MD<sup>3</sup>, Daniel Ramirez, MD<sup>3</sup>, Robert L. Jacobs, MD<sup>3</sup>, Weijing He, MD<sup>1,2</sup> and Sunil Ahuja, MD<sup>1,2</sup>, <sup>1</sup>Veterans Administration Center for Personalized Medicine, South Texas Veterans Health Care System, San Antonio, TX, <sup>2</sup>Department of Medicine, University of Texas Health Science Center, San Antonio, TX, <sup>3</sup>Biogenics Research Chamber, San Antonio, TX
- 147 Comparison of Efficacy At Steady State of Levocetirizine, Fexofenadine and Desloratadine On Aeroallergen-Induced Wheal and Flare Responses in Allergic Rhinitis Patients**  
**Krittapoom Akrawinthewong, MD<sup>1,2</sup>**, Pavarat Saengaram, MD<sup>2</sup>, Wisit Cheungpasitporn, MD<sup>3,4</sup> and Kiat Ruxrungham, MD<sup>2</sup>, <sup>1</sup>St.John Hospital & Medical Center, Detroit, MI, <sup>2</sup>Chulalongkorn University, Bangkok, Thailand, <sup>3</sup>Bassett Health Care Network, Cooperstown, NY, <sup>4</sup>Faculty of Medicine, Chulalongkorn University, Bangkok, Thailand
- 148 Natural Evolution of Local Allergic Rhinitis**  
**Carmen Rondon, MD PhD<sup>1</sup>**, Paloma Campo, MD, PhD<sup>1</sup>, Rocio Herrera, NR<sup>2</sup>, Inmaculada Doña, MD PhD<sup>3</sup>, Miriam Osorio<sup>3</sup>, Jaime García, MD<sup>1</sup>, Enrique Gómez, PhD<sup>4</sup> and Miguel Blanca, MD PhD<sup>5</sup>, <sup>1</sup>Allergy Service Carlos Haya Hospital, Malaga, Spain, <sup>2</sup>Alergy Service Carlos Haya Hospital, Malaga, Spain, <sup>3</sup>IMABIS Foundation, Malaga, Spain, <sup>4</sup>Research Laboratory, Carlos Haya Hospital-FIMABIS, Malaga, Spain, <sup>5</sup>Allergy Service, Carlos Haya Hospital, Málaga, Spain
- 149 Phenotypical Features of Obstructive Sleep Apnea (OSA) in Children with Chronic Rhinitis**  
**Maria J. Gutierrez, MD**, Division of Pulmonary, Allergy & Immunology and Critical Care Medicine, Pennsylvania State University College of Medicine, Hershey, PA; Division of Pediatric Rheumatology, Pennsylvania State University College of Medicine, Hershey, PA, Carlos Rodriguez-Martinez, MD, Division of Pediatric Pulmonology, National University of Colombia, Bogota, Colombia, Cesar Nino, PhD, Department of Electronics Engineering, Javeriana University, Bogota, Colombia, Anjani Ravindra, MD, Department of Pediatrics, Division of Pediatric Pulmonology, Hershey, PA and Gustavo Nino, MD, Penn State Sleep Research and Treatment Center, Pennsylvania State University College of Medicine, Hershey, PA; Department of Pediatrics, Division of Pediatric Pulmonology, Pennsylvania State University College of Medicine
- 150 Skin Prick Test and Serum Specific IgE May Not Be Sufficient for the Diagnosis of Perennial Allergic Rhinitis in Atopic Patients**  
**Miguel Blanca, MD, PhD<sup>1</sup>**, Carmen Rondon, MD, PhD<sup>2</sup>, Paloma Campo, MD, PhD<sup>2</sup>, Francisca Gomez, MD, PhD<sup>3</sup>, Rosa García Mendoza<sup>2</sup>, Maria Isabel Sánchez Rivas<sup>2</sup>, Lidia Melendez, Lab. Tech.<sup>4</sup>, Tahía Fernández, PhD<sup>3</sup> and María José Torres, MD, PhD<sup>1</sup>, <sup>1</sup>Allergy Service, Carlos Haya Hospital, Málaga, Spain, <sup>2</sup>Allergy Service Carlos Haya Hospital, Malaga, Spain, <sup>3</sup>IMABIS Foundation, Malaga, Spain, <sup>4</sup>Research Laboratory, Hospital Carlos Haya, Malaga, Spain
- 151 Underutilization of Rhinology in Allergy Practices: Results of National Survey of Allergists and Fellows in Training (FITs)**  
**Puneet Bajaj, MD<sup>1</sup>** and Timothy J. Craig, DO, FAAAAI<sup>1,2,3</sup>, <sup>1</sup>Hershey Medical Center, Hershey, PA, <sup>2</sup>Penn State University College of Medicine, Hershey, PA, <sup>3</sup>Penn State University
- 152 Eosinophils and CD8+ Lymphocytes in the Inflammation and Remodeling Process in Nasal Mucosa in Chinese CRS Patients**  
**Wei Zhang, MD<sup>1</sup>**, Leandra Mfunu Endam<sup>2</sup>, Sawsan Al-Mot<sup>2</sup>, Ying Li<sup>1</sup>, Erzhang Fan<sup>1</sup>, Luo Zhang, MD<sup>1</sup> and Martin Desrosiers, MD<sup>2</sup>, <sup>1</sup>Beijing Tongren Hospital, Capital Medical University, Beijing, China; Beijing Institute of Otolaryngology, Beijing, China; <sup>2</sup>Centre de Recherche du Centre Hospitalier de l'Université de Montréal (CRCHUM), Montreal, PQ, Canada; Division of Otolaryngology, Centre Hospitalier de l'Université de Montréal (CHUM), Montreal, PQ, Canada
- 153 Comparison of Allergic Rhinitis Responses During Grass Pollen Season to Those Induced by Controlled Grass Pollen Exposure in the Environmental Exposure Unit (EEU)**  
**Emily Kay, MD<sup>1</sup>**, Lisa Steacy, BSc<sup>2</sup>, Terry Walker, BA<sup>2</sup>, Barnaby Hobsbawn<sup>2</sup>, Wilma Hopman, BSc.<sup>3</sup> and Anne K. Ellis, MD, MSc FRCP FAAAAI<sup>2,4</sup>, <sup>1</sup>Department of Pediatrics, Queen's University, Kingston, ON, Canada, <sup>2</sup>Allergy Research Unit, Kingston General Hospital, Kingston, ON, Canada, <sup>3</sup>Clinical Research Unit, Kingston General Hospital, Kingston, ON, Canada, <sup>4</sup>Departments of Medicine and Biomedical & Molecular Science, Queen's University, Kingston, ON, Canada

## Allergic Inflammation

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Saturday, February 23rd, 2013, 9:45 AM - 10:45 AM

- 154 Allergen Challenge Induces Recruitment of CD49d+ Neutrophils to the Nasal Mucosa of Atopic Individuals**  
**Jerome Sigua, MD**, Becky Buelow, MD, Meribeth Klancnik, Desire Hunter, Erika Buell, Monica Vasudev, MD, Dorothy S. Cheung, MD, FAAAAI and Mitchell H. Grayson, MD, FAAAAI, Medical College of Wisconsin, Milwaukee, WI
- 155 CD49d+ Neutrophils Connect the Viral and Hygiene Hypotheses**  
**Sheila S. Bhat<sup>1</sup>**, Desire Hunter<sup>2</sup>, Erika Buell<sup>2</sup>, Dorothy S. Cheung, MD, FAAAAI<sup>2</sup> and Mitchell H. Grayson, MD, FAAAAI<sup>2</sup>, <sup>1</sup>Medical College of Wisconsin, <sup>2</sup>Medical College of Wisconsin, Milwaukee, WI
- 156 Different Roles of Interleukin-23 During the Epicutaneous Sensitization and the Antigen Exposure to the Airways On Airway Inflammation and Responsiveness in Mice**  
**Katsunori Masaki<sup>1</sup>**, Yusuke Suzuki<sup>1</sup>, Shizuko Kagawa<sup>1</sup>, Motohiro Kodama<sup>1</sup>, Hiroki Kabata<sup>1</sup>, Jun Miyata<sup>1</sup>, Kyuto Tanaka<sup>1</sup>, Koichi Fukunaga<sup>1</sup>, Tsuyoshi Oguma<sup>2</sup>, Tomoko Betsuyaku<sup>1</sup> and Koichiro Asano<sup>2</sup>, <sup>1</sup>Division of Pulmonary Medicine, Department of Medicine, Keio University School of Medicine, Tokyo, Japan, <sup>2</sup>Department of Pulmonary Medicine, Tokai University School of Medicine, Isehara, Japan
- 157 Autophagy Contributes to Release of IL-18 From Epithelial Cells in Alternaria Exposure**  
**Hiroki Murai, MD PhD<sup>1,2</sup>**, Motoko Yasutomi, MD, PhD<sup>1</sup>, Hisako Hayashi, MD<sup>1</sup>, Akiko Kawakita, MD<sup>1</sup>, Koji Suzuki, MD<sup>1</sup>, Istvan Boldogh, PhD<sup>2</sup>, Sanjiv Sur, MD<sup>2</sup> and Yusei Ohshima, MD, PhD<sup>1</sup>, <sup>1</sup>University of Fukui, Yoshida-gun, Japan, <sup>2</sup>University of Texas Medical Branch, Galveston, TX
- 158 Semaphorin4C: A Molecule May Aggravate Murine Allergic Airway Disease**  
**Di Xue**, McGill university and Bruce D. Mazer, MD, FAAAAI, Montreal Children's Hospital, Montreal, QC, Canada; Meakins-Christie Laboratories, Montreal, QC, Canada
- 159 Effect of Cholesterol Depletion On Interleukin-8 Production in Human Respiratory Epithelial Cells**  
**Min Jung Kim, MD<sup>1</sup>**, Jung Yeon Hong<sup>1</sup>, Kyung Eun Lee, PhD<sup>1</sup>, Hwan Soo Kim, MD<sup>2</sup>, Yoon Ki Han, MD<sup>1</sup>, Hye Mi Jee, MD<sup>3</sup>, Kyung Won Kim, MD, PhD<sup>1</sup>, Myung Hyun Sohn, MD, PhD<sup>1</sup> and Kyu-Earn Kim, MD, PhD<sup>1</sup>, <sup>1</sup>Yonsei University College of Medicine, Seoul, Korea, <sup>2</sup>Yonsei University School of Medicine, Seoul, Korea, <sup>3</sup>CHA University School of Medicine, Seongnam, Korea
- 160 TGase 2 Induces Allergic Asthma by up-Regulating IgE and Mediators in Cross-Talk of B and Mast Cells Via CD40/CD40L in Mice**  
**Jai Youl Ro<sup>1</sup>**, Gwan Ui Hong<sup>1</sup>, Bum Soo Park<sup>1</sup>, Nam Goo Kim<sup>1</sup> and Young Min Ahn<sup>2</sup>, <sup>1</sup>Sungkyunkwan University School of Medicine, <sup>2</sup>Eulji University School of Medicine
- 161 Hyaluronan and Nitric Oxide Collaborate As Inflammatory Mediators in Asthma**  
**Ahila Subramanian, MD<sup>1</sup>**, Alana Majors, PhD<sup>2</sup>, Suzy AA Comhair, PhD<sup>2</sup>, Serpil C. Erzurum, MD<sup>1,2</sup> and Mark A. Aronica, MD<sup>1,2</sup>, <sup>1</sup>Respiratory Institute, Cleveland Clinic, <sup>2</sup>Department of Pathobiology, Cleveland Clinic
- 162 Molecular Pattern in Olive Pollen Response**  
**Blanca Cardaba<sup>1,2</sup>**, Miriam Aguerri<sup>1</sup>, David Calzada<sup>1</sup>, David Montaner<sup>3</sup>, Manuel Mata<sup>2,4</sup>, Fernando Florido<sup>5</sup>, Joaquín Dopazo<sup>3</sup> and Carlos Lahoz<sup>1,2</sup>, <sup>1</sup>Immunology Department, IIS-Fundación Jiménez Díaz, Madrid, Spain, <sup>2</sup>CIBERES, Spain, <sup>3</sup>Functional Genomics, Unit Bioinformatic Department, Centro de Investigación Príncipe Felipe, Valencia, Spain, <sup>4</sup>Genomic Department, Fundación de Investigación, Hospital Universitario, Valencia, Spain, <sup>5</sup>Allergy Department, Hospital Universitario San Cecilio, Granada, Spain
- 163 Bronchial Epithelial Cells From Asthmatic Patients Express FcεRIγ At Higher Levels During Rhinovirus Infection**  
**Sandy R. Durrani, MD<sup>1</sup>**, Yury Bochkov, PhD<sup>1</sup>, Nizar N. Jarjour, MD<sup>1</sup> and Daniel J. Jackson, MD<sup>2</sup>, <sup>1</sup>University of Wisconsin School of Medicine and Public Health, Madison, WI, <sup>2</sup>Pediatrics, University of Wisconsin School of Medicine and Public Health, Madison, WI
- 164 Exposure to Juniperus Ashei (Mt. Cedar) Pollen in a Pollen Challenge Chamber Elicits Changes in White Blood Cell Counts and Cytokines in Mountain Cedar Positive and Negative Subjects**  
**Weijing He, MD<sup>1,2</sup>**, Andrew Carrillo, BS<sup>1,2</sup>, Nathan Harper, BS<sup>1,2</sup>, Fabio Jimenez, BS<sup>1,2</sup>, Hernan Martinez, MD<sup>1,2</sup>, Seema Ahuja, MD<sup>1,2</sup>, Cynthia Rather, CCRC<sup>3</sup>, Daniel Ramirez, MD<sup>3</sup>, Charles Andrews, MD<sup>3</sup>, Robert L. Jacobs, MD<sup>3</sup> and Sunil Ahuja, MD<sup>1,2</sup>, <sup>1</sup>Department of Medicine, University of Texas Health Science Center, San Antonio, TX, <sup>2</sup>Veterans Administration Center for Personalized Medicine, South Texas Veterans Health Care System, San Antonio, TX, <sup>3</sup>Biogenics Research Chamber, San Antonio, TX
- 165 Reduction of CD49d+ Neutrophil Accumulation and Post-Viral Airway Hyperreactivity with CysLTR1 Blockade**  
**Dorothy S. Cheung, MD FAAAAI**, Erika Buell, Desire Hunter and Mitchell H. Grayson, MD FAAAAI, Medical College of Wisconsin, Milwaukee, WI
- 166 Magnetic Stimulation of Left TPO Cerebral Cortex of Allergic Humans Increases Blood/Serum Substance P Levels, and CD4 and CD8+ T Cell Numbers, While Suppressing IgE Responses. Substance P Suppresses P38 MAP Kinase Expression by Their PBL**  
**Bryan McCarthy, BS**, Seto M Chice, MS, Rauno Joks, MD, Jonathan I Silverberg, MD, PhD, MPH, Mark Stewart, MD, PhD, Vahe Amassian, MD and Helen G Durkin, PhD, Center for Allergy and Asthma Research at SUNY Downstate, Brooklyn, NY
- 167 Early Aeroallergen Sensitization Is Associated with Higher Fractional Exhaled Nitric Oxide Levels in School Age Children Independent of Asthma Diagnosis**  
**Matthew C. Bell, MD<sup>1</sup>**, Michael D. Evans, MS<sup>1</sup>, Christopher J. Tisler, MT<sup>1</sup>, James Gern, MD FAAAAI<sup>1</sup>, Robert F. Lemanske Jr., MD FAAAAI<sup>1</sup> and Daniel J. Jackson, MD<sup>2</sup>, <sup>1</sup>University of Wisconsin School of Medicine and Public Health, Madison, WI, <sup>2</sup>Pediatrics, University of Wisconsin School of Medicine and Public Health, Madison, WI
- 168 Eosinophil and Neutrophil Derived Mediators in Nasal Washes From Children Treated for Asthma**  
**Patricia Jorge, MD<sup>1</sup>**, Holliday T. Carper, BS<sup>1</sup>, Manuel Soto-Quiros<sup>2</sup>, Lydiana Avila<sup>2</sup>, Deborah D. Murphy, RN<sup>1</sup>, Joshua L. Kennedy, MD<sup>1</sup>, Thomas Platts-Mills, MD PhD FAAAAI FRS<sup>1</sup> and Peter W. Heymann, MD<sup>1</sup>, <sup>1</sup>University of Virginia, Charlottesville, VA, <sup>2</sup>Hospital Nacional de Niños, San José, Costa Rica
- 169 Non-Canonical Activation and Phosphorylation of the Glucocorticoid Receptor [GR] Phosphorylation Reduces Pro-Inflammatory in Human Bronchial Smooth Muscle Cells [Hbmc]**  
**Lata Kaphalia, PhD<sup>1</sup>**, Bill T. Ameredes, PhD<sup>2</sup> and William J. Calhoun, MD FAAAAI<sup>2</sup>, <sup>1</sup>UTMB, <sup>2</sup>University of Texas Medical Branch, Galveston, TX
- 170 The Role of IL-33 in Allergic Disease and Atherosclerosis**  
**Tania Mucci, MD<sup>1</sup>**, Michael Littlefield, BA<sup>2</sup>, Allison Reiss, MD<sup>2</sup>, Luz S. Fonacier, MD FAAAAI<sup>3</sup>, Steven Carsons, MD<sup>1</sup> and Iryna Voloshyna, PhD<sup>2</sup>, <sup>1</sup>Winthrop University Hospital, Mineola, NY, <sup>2</sup>Winthrop Research Institute, Mineola, NY, <sup>3</sup>Winthrop University Hospital, Allergy & Immunology, Mineola, NY
- 171 STAT6-Dependent and -Independent Regulation of Lung Natural Helper Cell Responses During Alternaria-Induced Airway Inflammation**  
**Naseem Khorram<sup>1</sup>**, Jinny Chang, MD<sup>2</sup>, Hee-Kyoo Kim, MD<sup>3</sup>, Michael Croft, PhD<sup>4</sup>, David H. Broide, MB ChB FAAAAI<sup>1</sup> and Taylor Alan Doherty, MD<sup>5</sup>, <sup>1</sup>UC San Diego, La Jolla, CA, <sup>2</sup>Scripps Clinic,

- La Jolla, CA, <sup>3</sup>Kosin University College of Medicine, South Korea, <sup>4</sup>La Jolla Institute for Allergy and Immunology, La Jolla, CA, <sup>5</sup>Medicine, Univ of CA - San Diego, La Jolla, CA
- 172 Pro-Inflammatory Actions of the Exodomain Shed From Protease Activated Receptor 2 (PAR-2)**  
Mogib El-Rahman Khedr<sup>1,2</sup>, Ahmed Abdelmotelb, PhD<sup>1</sup>, Laurie Lau, PhD<sup>1</sup>, Matthew Arno, PhD<sup>3</sup>, Sylvia Pender, PhD<sup>1</sup>, Xiaoying Zhou, MD<sup>1</sup> and Andrew F. Walls, PhD, FAAAAI<sup>1</sup>, <sup>1</sup>University of Southampton, Southampton General Hospital, Southampton, United Kingdom, <sup>2</sup>Suez Canal University, Faculty of Medicine, Ismailia, Egypt, <sup>3</sup>King's College London, Genomics Centre, London, United Kingdom
- 173 Lung Resident Cells Are Independently Capable of Maintaining Chronic Asthma in Mice After Immune Ablation**  
Christina Christianson, PhD, Chaoyu Chen, MS, Magdalena Gorska, MD, PhD and Rafeul Alam, MD, PhD, FAAAAI, National Jewish Health, Denver, CO
- Kari L. Rossow, PA-C**, Kimberly Poe, RN and James T. Li, MD, PhD, FAAAAI, Mayo Clinic, Rochester, MN
- 181 The Role of Education in Achieving Bronchial Asthma Control – Differences Between Genders**  
Andrzej M. Fal, Beata Jankowska-Polanska, Izabella Uchmanowicz and Mariola Sen, Wroclaw Medical University
- 182 The Influence of Operators On the Obtaining of Successful Bronchial Biopsies in Asthma Research**  
Kheem Keem Jones, RN<sup>1</sup>, L.Q.C. Siew, MD<sup>1</sup>, P. Pillai, MD<sup>1</sup>, C. Reinholdt, RN<sup>1</sup>, H. Bull, RN<sup>2</sup>, M. Rabuya, RN<sup>2</sup>, E. Fuerst, PhD<sup>3</sup>, D.B. Wright, PhD student<sup>4</sup>, Y. Shaifta, PhD<sup>4</sup>, Ying. S, MD, PhD<sup>4</sup>, Q. Meng, Research Assistant<sup>4</sup> and C. J. Corrigan, MD, PhD, FAAAAI<sup>5</sup>, <sup>1</sup>King's College London, School of Medicine, London, United Kingdom, <sup>2</sup>Guy's & St. Thomas' Foundation Trust, London, United Kingdom, <sup>3</sup>King's College London, London, United Kingdom, <sup>4</sup>King's College London, London, United Kingdom, <sup>5</sup>King's College London School of Medicine, London, United Kingdom
- 183 Effects of Outliers From Indoor Pollutants On the Relationships to Respiratory Health Outcomes**  
Charles Aloe, MPH<sup>1</sup>, Elizabeth Matsui, MD<sup>1</sup>, Nadia Hansel, MD<sup>2</sup>, D'Ann Williams, DrPH<sup>2</sup> and Roger Peng, PhD<sup>2</sup>, <sup>1</sup>Johns Hopkins University School of Medicine, Baltimore, MD, <sup>2</sup>Johns Hopkins University, Baltimore, MD
- 184 First Person Narratives of Pediatric Allergy Nurse Coordinators Describing the Nursing Practice Embedded in the Role**  
Lisa P. Talarico, RN MS<sup>1</sup>, Sally A. Noone, RN MSN CCRC<sup>1,2</sup>, Beth D. Strong, RN CCRC<sup>3</sup>, Sarah D. Knorr, RN MPH CCRP<sup>4</sup>, Kim E. Mudd, RN MSN CCRP<sup>4</sup> and Eloise Cathcart, RN MSN<sup>5</sup>, <sup>1</sup>Mount Sinai School of Medicine, New York, NY, <sup>2</sup>Mount Sinai School of Medicine, <sup>3</sup>Mt. Sinai School of Medicine, New York, NY, <sup>4</sup>Johns Hopkins University, Baltimore, MD, <sup>5</sup>New York University School of Nursing
- 185 Profiling Attendees of a Food Allergy Cooking Class**  
April Clark, Registered Dietitian, Children's Medical Center, Dallas, TX, Nithya Swamy, MD, University of Texas Southwest Medical Center, Dallas, TX and J. Andrew Bird, MD, UT Southwestern Medical Center, Dallas, TX
- Allied Health Saturday Poster 1**  
2213  
Saturday, February 23rd, 2013, 9:45 AM - 10:45 AM
- 174 Infant Feeding Practices Changed Following Publication of 2000 American Academy of Pediatrics Guidelines**  
Shannon Seopaul, BS, Johns Hopkins University School of Medicine and Corinne Keet, MD, MS, Pediatrics, Johns Hopkins University School of Medicine, Baltimore, MD
- 175 Shift in Aeroallergen Indices, Allergy and Asthma Cases and an AHPCO Air Purifier to Reduce Indoor Airborne Pathogens and VOCs**  
Nabarun K. Ghosh, PhD<sup>1</sup>, Jeff Bennert, PhD, CTN<sup>2</sup>, Constantine K. Saadeh, MD, FAAAAI<sup>3</sup> and Griselda Estrada, BS<sup>1</sup>, <sup>1</sup>West Texas A&M University, Canyon, TX, <sup>2</sup>AIR OASIS, Amarillo, TX, <sup>3</sup>Allergy ARTS ACCR, Amarillo, TX
- 176 Epinephrine (E) for Self-Administration: Autoinjectors and Alternatives**  
Dona Shearer, RN, University of South Florida, Tampa, FL and Richard F. Lockey, MD, James A. Haley Veterans' Hospital, Tampa, FL; University of South Florida Morsani College of Medicine, Tampa, FL
- 177 Exposure to Juniperus Ashei (Mt. Cedar) and Virginia Live Oak Pollen in a Pollen Challenge Chamber Elicits Similar Symptomology When Compared to Natural Season**  
Daniel Ramirez, MD<sup>1</sup>, Cynthia Rather, CCRC<sup>1</sup>, Nathan Harper, BS<sup>2,3</sup>, Andrew Carrillo, BS<sup>2,3</sup>, Weijing He, MD<sup>2,3</sup>, Charles Andrews, MD<sup>1</sup>, Sunil Ahuja, MD<sup>2,3</sup> and Robert L. Jacobs, MD<sup>1</sup>, <sup>1</sup>Biogenics Research Chamber, San Antonio, TX, <sup>2</sup>Veterans Administration Center for Personalized Medicine, South Texas Veterans Health Care System, San Antonio, TX, <sup>3</sup>Department of Medicine, University of Texas Health Science Center, San Antonio, TX
- 178 A 10 Year Follow up of Food Allergy in Central Sydney Child-care Centres**  
Brooke L. McKinnon, BSc(Nutrition & Dietetics) Hons 1, Velenicia Soutter, MB BS, FRACP (Paed), Robert Loblay, MD PhD FRACP and Anne Swain, PhD, Royal Prince Alfred Hospital Allergy Unit, Sydney, Australia
- 179 Nurses' Perceptions of the Efficacy, Tolerability, and Quality of Life in Patients Treated with Subcutaneous Immunoglobulin**  
Annette R. Zampelli, NP<sup>1</sup>, Carla M. Duff, CPNP MSN<sup>2</sup> and Ann Bullinger, PharmD<sup>1</sup>, <sup>1</sup>CSL Behring, King of Prussia, PA, <sup>2</sup>University of South Florida, Tampa, FL
- 180 Using an Established Root Cause Analysis Framework to Evaluate an Unusual Allergen Immunotherapy Error**
- Asthma and the Environment**  
2601  
Saturday, February 23rd, 2013, 2:00 PM - 3:15 PM
- 186 Contributing and Protective Risk Factors for Asthma Exacerbation in Latinos (GALA-II Study)**  
Ulysses Burley<sup>1</sup>, Joy Hsu, MD<sup>2</sup>, Elizabeth Nguyen, BS<sup>3</sup>, Lindsey Roth, MA<sup>4</sup>, Joshua Galanter, MD<sup>4</sup>, Sam Oh, PhD, MPH<sup>4</sup>, Celeste Eng, BS<sup>4</sup>, Fred Lurmann, MS<sup>5</sup>, Rajesh Kumar, MD, MS, FAAAAI<sup>6,7</sup>, Harold J. Farber, MD, MSPH<sup>8</sup>, Denise Serebrisky, MD<sup>9,10</sup>, Luisa Borrell, DDS, PhD<sup>11</sup>, Saunak Sen, PhD<sup>12</sup>, William Rodriguez-Cintrón, MD<sup>13</sup>, Jose Rodriguez-Santana, MD<sup>14</sup>, Esteban Gonza Burchard, MD, MPH<sup>4,15</sup> and Pedro C. Avila, MD, FAAAAI<sup>2,16</sup>, <sup>1</sup>Feinberg School of Medicine, Northwestern University, Chicago, Illinois, <sup>2</sup>Feinberg School of Medicine, Northwestern University, Chicago, IL, <sup>3</sup>Department of Medicine, University of California, San Francisco, California, San Francisco, CA, <sup>4</sup>Department of Medicine, University of California, San Francisco, San Francisco, CA, <sup>5</sup>Sonoma Technology, Inc., Petaluma, CA, <sup>6</sup>Children's Memorial Hospital, Chicago, IL, <sup>7</sup>Pediatric allergy, Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, IL, <sup>8</sup>Texas Children's Hospital, Houston, TX, <sup>9</sup>Pediatric Pulmonary Division, Jacobi Medical Center, Bronx, NY, <sup>10</sup>Mount Sinai School of Medicine, New York, NY, <sup>11</sup>Department of Health Sciences, Graduate Program in Public Health, Lehman College, City University of New York, Bronx, NY, <sup>12</sup>Department of Epidemiology and



Biostatistics, University of California, San Francisco, San Francisco, CA, <sup>13</sup>Veterans Caribbean Health Care System, San Juan, PR, <sup>14</sup>Centro de Neumologia Pediátrica, San Juan, PR, <sup>15</sup>UCSF, San Francisco, CA, <sup>16</sup>Northwestern University Feinberg School of Medicine, Chicago, IL

**187 Aeroallergen Sensitization Is Associated with Asthma Severity in Latinos (GALA-II Study)**

**Joy Hsu, MD<sup>1</sup>**, Ulysses Burley, MPH<sup>1</sup>, Elizabeth Nguyen, BS<sup>2</sup>, Lindsey Roth, MA<sup>3</sup>, Joshua Galanter, MD<sup>3</sup>, Sam Oh, PhD, MPH<sup>3</sup>, Celeste Eng, BS<sup>3</sup>, Fred Lurmann, MS<sup>4</sup>, Rajesh Kumar, MD, MS, FAAAAI<sup>5</sup>, Harold J. Farber, MD, MSPH<sup>6</sup>, Denise Serebrisky, MD<sup>7</sup>, Luisa Borrell, DDS, PhD<sup>8</sup>, Saunak Sen, PhD<sup>9</sup>, William Rodriguez-Cintron, MD<sup>10</sup>, Jose Rodriguez-Santana, MD<sup>11</sup>, Esteban Gonza Burchard, MD, MPH<sup>3</sup> and Pedro C. Avila, MD, FAAAAI<sup>1</sup>, <sup>1</sup>Feinberg School of Medicine, Northwestern University, Chicago, IL, <sup>2</sup>Department of Medicine, University of California, San Francisco, California, San Francisco, CA, <sup>3</sup>Department of Medicine, University of California, San Francisco, San Francisco, CA, <sup>4</sup>Sonoma Technology, Inc., Petaluma, CA, <sup>5</sup>Pediatric allergy, Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, IL, <sup>6</sup>Texas Children's Hospital, Houston, TX, <sup>7</sup>Pediatric Pulmonary Division, Jacobi Medical Center, Bronx, NY, <sup>8</sup>Department of Health Sciences, Graduate Program in Public Health, Lehman College, City University of New York, Bronx, NY, <sup>9</sup>Department of Epidemiology and Biostatistics, University of California, San Francisco, San Francisco, CA, <sup>10</sup>Veterans Caribbean Health Care System, San Juan, PR, <sup>11</sup>Centro de Neumologia Pediátrica, San Juan, PR

**188 Influence of Cigarette Smoking On Airway Inflammation and Inhaled Corticosteroid Treatment in Asthmatic Patients**

**Terufumi Shimoda, MD<sup>1</sup>**, Yasushi Obase, MD<sup>2</sup>, Michiyoshi Im-aoka, MD<sup>3</sup>, Reiko T. Kishikawa, MD<sup>3</sup> and Tomoaki Iwanaga, MD<sup>4</sup>, <sup>1</sup>The National Hospital Organization Fukuoka Hospital, Fukuoka, Japan, <sup>2</sup>Kawasaki Medical School, Kurashiki, Japan, <sup>3</sup>Fukuoka National Hospital, Fukuoka, Japan, <sup>4</sup>The National Hospital Organization Fukuoka Hospital, Fukuoka, Japan

**189 Correlation Between Aeroallergen Sensitization and Pediatric Asthma Severity - Data From the Severe Asthma Research Program (SARP)**

**Marc D. Ikeda, MD<sup>1,2</sup>**, Merritt L. Fajt, MD<sup>1</sup>, Shean Aujla, MD<sup>2</sup>, Paul Rebovich, MS<sup>2</sup> and Sally E. Wenzel, MD, FAAAAI<sup>1</sup>, <sup>1</sup>The University of Pittsburgh Asthma Institute at UPMC and the University of Pittsburgh School of Medicine, Department of Pulmonary, Allergy and Critical Care Medicine, Pittsburgh, PA, <sup>2</sup>The Children's Hospital of Pittsburgh, Pittsburgh, PA

**190 House Dust Mite Sensitization Is the Main Risk Factor for the Increase in Prevalence of Wheeze in 13-14 Year Old Schoolchildren in Guangzhou City, China**

**Jing Li, MD, MSc<sup>1</sup>**, Yan Chen<sup>2</sup>, Jingping Zheng<sup>1</sup>, Gary W. K. Wong<sup>3</sup> and Nanshan Zhong<sup>1</sup>, <sup>1</sup>The First Affiliated Hospital of Guangzhou Medical College, State Key Laboratory of Respiratory Disease, Guangzhou Institute of Respiratory Disease, Guangzhou, China, <sup>2</sup>Guangdong Pharmaceutical University, Clinical Medical College, Guangzhou, China, <sup>3</sup>Department of Paediatrics, The Chinese University of Hong Kong, Hong Kong

PhD<sup>2</sup> and Rebecca H. Buckley, MD, FAAAAI<sup>1</sup>, <sup>1</sup>Department of Pediatrics, Duke University Medical Center, Durham, NC, <sup>2</sup>Center for Human Genome Variation, Duke University Medical Center, Durham, NC

**192 Interactions Between SLC22A5, IL13 and SMAD3 Modulate Spirometric Indices in Chinese Children**

**Ting Fan Leung, MD, FRCPCH, FAAAAI<sup>1</sup>**, Man Fung Tang<sup>1</sup>, Susan Shuxin Wang<sup>1</sup>, Alice P. S. Kong<sup>2</sup>, Hing Yee Sy<sup>1</sup> and Gary W. K. Wong<sup>1</sup>, <sup>1</sup>Department of Paediatrics, The Chinese University of Hong Kong, Hong Kong, <sup>2</sup>Department of Medicine and Therapeutics, The Chinese University of Hong Kong, Hong Kong

**193 Effects of Maternal Allergy On Umbilical Cord Blood Regulatory T Cell Forkhead Box Protein 3 (FOXP3) DNA Methylation**

**Michelle North, PhD<sup>1</sup>**, Sarah Mah, BSc<sup>2</sup>, Lisa Steacy, BSc<sup>3</sup>, Jeffrey Brook, PhD<sup>4,5</sup>, Michael Kobor, PhD<sup>2,6</sup> and Anne K. Ellis, MD, MSc, FRCPCH, FAAAAI<sup>1,3</sup>, <sup>1</sup>Departments of Medicine and Biomedical & Molecular Science, Queen's University, Kingston, ON, Canada, <sup>2</sup>Centre for Molecular Medicine & Therapeutics, Child & Family Research Institute, Vancouver, BC, Canada, <sup>3</sup>Allergy Research Unit, Kingston General Hospital, Kingston, ON, Canada, <sup>4</sup>Environment Canada, Toronto, ON, Canada, <sup>5</sup>University of Toronto, Toronto, ON, Canada, <sup>6</sup>University of British Columbia, Vancouver, BC, Canada

**194 Sequencing of the ST2 Gene Reveals a Haplotype That Determines Serum Total ST2 Levels in Individuals of African Ancestry**

**Lili Huang, MPH<sup>1</sup>**, Li Gao, MD, PhD<sup>1</sup>, Camila Figueiredo, PhD<sup>2</sup>, Nicholas M. Rafaels, MS<sup>1</sup>, Candelaria I. Vergara, MD, PhD<sup>1</sup>, Ingo Ruczinski, PhD<sup>3</sup>, Terri H Beaty, PhD<sup>3</sup>, Kathleen C. Barnes, PhD, FAAAAI<sup>1</sup> and Rasika A. Mathias, ScD<sup>1,3</sup>, <sup>1</sup>Division of Allergy and Clinical Immunology, Department of Medicine, Johns Hopkins University, Baltimore, MD, <sup>2</sup>Instituto de Ciências da Saúde, Universidade Federal da Bahia, Salvador, Bahia, Brazil, <sup>3</sup>Johns Hopkins Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD

**195 Whole Genome Sequence Reveals a Haplotype Conferring Protection From Asthma Common to Subjects of European and African Ancestry**

**Abdellah Hedjoudje<sup>1,2,3</sup>**, Lili Huang, MPH<sup>1,4</sup>, Nicholas M. Rafaels, MS<sup>1,4</sup>, Candelaria I. Vergara, MD PhD<sup>1,4</sup>, Margaret Taub, PhD<sup>5</sup>, Ingo Ruczinski, PhD<sup>6,7</sup>, Carole Ober, PhD<sup>8</sup>, Esteban Gonza Burchard, MD, MPH<sup>9,10</sup>, Terri H Beaty, PhD<sup>6,7</sup>, Donata Vercelli, MD<sup>11</sup>, Kathleen C. Barnes, PhD, FAAAAI<sup>1,4</sup>, Rasika A. Mathias, ScD<sup>1,7</sup>, EVE Consortium<sup>12</sup> and C.A.A.P.A. Consortium<sup>4</sup>, <sup>1</sup>Division of Allergy and Clinical Immunology, Department of Medicine, Johns Hopkins University, Baltimore, MD, <sup>2</sup>Université Paris Descartes, Paris, France, <sup>3</sup>INSERM, Unit 909, Cardiovascular Epidemiology and Sudden Death, Hopital Européen Georges Pompidou, Paris, France, <sup>4</sup>Johns Hopkins University, Baltimore, MD, <sup>5</sup>Johns Hopkins Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD, <sup>6</sup>Johns Hopkins University School of Public Health, Baltimore, MD, <sup>7</sup>Johns Hopkins Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD, <sup>8</sup>University of Chicago, Chicago, IL, <sup>9</sup>UCSF, San Francisco, CA, <sup>10</sup>Department of Medicine, University of California, San Francisco, San Francisco, CA, <sup>11</sup>The University of Arizona, Tucson, AZ, <sup>12</sup>University of Chicago

**Immunogenetics**

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**191 Next Generation Sequencing May Be More Efficient and Economical Than Targeted Gene Testing in Patients with Primary Immune Deficiency (PID)**

**Talal Mousallem, MD<sup>1,2</sup>**, Thomas J. Urban, PharmD, PhD<sup>2</sup>, Joseph L. Roberts, MD, PhD<sup>1</sup>, Roberta E. Parrott, BS<sup>1</sup>, David B. Goldstein,

**How Inner-City Exposures Lead to Disparities in Children's Asthma**

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**196 Classroom Fungal Spore Exposure and Asthma Morbidity in Inner-City School Children**

- Sachin N. Baxi, MD<sup>1</sup>**, Carter R. Petty, MA<sup>1</sup>, Chunxia Fu, MS<sup>2</sup>, William J. Sheehan, MD<sup>1</sup>, Perdita Permaul, MD<sup>3</sup>, Lianne Kopel, MD<sup>1</sup>, Watcharoot Kanchongkittiphon, PhD, MD<sup>1</sup>, Jonathan M. Gaffin, MD, MMSc<sup>1</sup>, Christine A. Rogers, PhD<sup>4</sup>, Michael L. Muilenberg, MS<sup>4</sup>, Diane R. Gold, MD<sup>5</sup> and Wanda Phipatanakul, MD, MS, FAAAAI<sup>1</sup>, <sup>1</sup>Boston Children's Hospital, Boston, MA, <sup>2</sup>Harvard School of Public Health, Boston, MA, <sup>3</sup>Division of Pediatric Allergy/Immunology, Massachusetts General Hospital, Boston, MA, <sup>4</sup>University of Massachusetts, Amherst, MA, <sup>5</sup>Channing Laboratory, Boston, MA
- 197 Exposure to Polycyclic Aromatic Hydrocarbons Is Associated with Higher Levels of Total IgE, Decreased Function of T Regulatory Cells and an Increase of Asthma Occurrence in Children**  
**Annett I. Walker, MD<sup>1</sup>**, Arunima Kohli<sup>1</sup>, Aleena Syed<sup>1</sup>, Ellen A. Eisen, ScD<sup>2</sup>, Elizabeth M. Noth, PhD<sup>2</sup>, Boriana Pratt, MA<sup>2</sup>, S. Katharine Hammond, PhD<sup>2</sup> and Kari Nadeau, MD, PhD, FAAAAI<sup>1</sup>, <sup>1</sup>Department of Pediatric Allergy and Immunology, Stanford University, California, USA, <sup>2</sup>Division of Environmental Health Sciences, University of California, Berkeley, California, USA
- 198 Association Between Asthma-Related Emergency Department Visits and Pollen Concentration in the Bronx, 2001-2008**  
**Sayantani B. Sindhler, MD**, Albert Einstein/Montefiore Medical Center, Sunit Jariwala, MD, Albert Einstein/Montefiore Medical Center, New York, NY, Gabriele De Vos, MD, Albert Einstein College of Medicine, Bronx, NY, Jennifer Toh, Montefiore Medical Center, New York, NY, Anna Tavdi, BA, Albert Einstein College of Medicine, Division of Allergy/Immunology and David L. Rosenstreich, MD, FAAAAI, Albert Einstein / Montefiore Medical Center, NY
- 199 Report of Exercise-Induced Wheeze Predicts Urgent Medical Visits for Asthma Among Inner-City Children**  
**Matthew S. Perzanowski, PhD**, Department of Environmental Health Sciences, Columbia University, New York, NY, Timothy Mainardi, MD, Division of Pulmonary, Allergy and Critical Care Medicine, Columbia University, Kathleen Donohue, MD, Division of General Medicine, Columbia University, Lori Hoepner, Data Coordinating Center, Columbia University, Inge Goldstein, Department of Epidemiology, Columbia University, Frederica P. Perera, PhD, Columbia's Center for Children's Environmental Health, Columbia University and Rachel L. Miller, MD, FAAAAI, Division of Pulmonary, Allergy and Critical Care Medicine, Columbia University, New York, NY
- 200 Allergen Exposure Influences the Relationship Between Community Violence and Asthma Morbidity: The Inner City Asthma Study**  
**Michelle L. Sever, PhD<sup>1,2</sup>**, James Thomas, PhD<sup>2</sup>, Agustin Calatroni<sup>3</sup>, Karin Yeatts, PhD<sup>2</sup>, Cynthia Visness, PhD<sup>3</sup>, Herman Mitchell, PhD<sup>3</sup> and Darryl C. Zeldin, MD<sup>1</sup>, <sup>1</sup>NIEHS, Research Triangle Park, NC, <sup>2</sup>Department of Epidemiology, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, Chapel Hill, NC, <sup>3</sup>Rho, Inc., Chapel Hill, NC
- San Diego, La Jolla, CA, <sup>3</sup>US Hereditary Angioedema Association, Honolulu, HI, <sup>4</sup>San Diego VA Healthcare, San Diego, CA
- 202 High Serum Levels of Mast Cell Chymase and Carboxypeptidase in Mastocytosis**  
**Xioaying Zhou, PhD<sup>1</sup>**, Laura B. Sanchez-Munoz, MD, PhD<sup>2,3</sup>, Alberto Orfao, MD, PhD<sup>3,4</sup>, Luis Escribano, MD, PhD<sup>2,3</sup> and Andrew F. Walls, PhD, FAAAAI<sup>5</sup>, <sup>1</sup>University of Southampton, Southampton, United Kingdom, <sup>2</sup>Instituto de Estudios de Mastocitosis, Hospital Virgen Del Valle, Toledo, Spain, <sup>3</sup>Spanish Network on Mastocytosis (REMA), <sup>4</sup>University of Salamanca, Salamanca, Spain, <sup>5</sup>University of Southampton, Southampton General Hospital, Southampton, United Kingdom
- 203 Overexpression of Epidermal Filaggrin in Patients with Chronic Idiopathic Urticaria Correlates with Urticaria Severity**  
**Young Min Ye, MD<sup>1,2</sup>**, Byung Eui Kim, MD<sup>2</sup>, Yoo Seob Shin, MD, PhD<sup>1</sup>, Hae-Sim Park, MD, PhD<sup>1</sup> and Donald Y.M. Leung, MD, PhD<sup>2</sup>, <sup>1</sup>Ajou University School of Medicine, Suwon, South Korea, <sup>2</sup>Department of Pediatrics, Division of Allergy-Immunology, National Jewish Health, Denver, CO
- 204 Genetic Analysis and Etiology of Angioedema**  
**Jonathan Levy<sup>1</sup>**, Georges-Etienne Rivard<sup>2</sup>, Eric Wagner<sup>3</sup>, Don Beezhold<sup>4</sup>, Noam Berlin, BSc<sup>5</sup>, Li Fan<sup>2</sup> and Gordon L. Sussman, MD, FAAAAI<sup>6</sup>, <sup>1</sup>University of Alberta, Edmonton, AB, Canada, <sup>2</sup>Service of Hematology and Oncology, Université de Montréal and Centre de Recherche, CHU-Saint-Justine, Montreal, QC, Canada, <sup>3</sup>Rheumatology-Immunology Research Center, Centre Hospitalier Universitaire de Québec and Department of Microbiology-Infectious Diseases and Immunology, Université Laval, Quebec City, QC, Canada, <sup>4</sup>NIOSH, Morgantown, WV, <sup>5</sup>Gordon Sussman Clinical Research, Toronto, ON, Canada, <sup>6</sup>University of Toronto, Toronto, ON, Canada
- 205 Hereditary Angioedema Type III: Mutation in Factor XII Gene in Brazilian Families**  
**Adriana S. Moreno, PhD**, University of Sao Paulo, Ribeirao Preto, Brazil, Solange Valle, Clementino Fraga Filho University Hospital-UFRJ, Rio de Janeiro, Brazil, Alfeu França, Clementino Fraga Filho University Hospital, UFRJ, Rio de Janeiro, Brazil, Soloni Levy, Clementino Fraga Filho University Hospital - UFRJ, Brazil, Wagner Campos, Department of Medicine, School of Medicine of Ribeirao Preto - FMRP, Ribeirão Preto, Brazil, Wilson da Silva Junior, Department of Genetics, School of Medicine of Ribeirao Preto - FMRP, Ribeirao Preto, Brazil and Luisa Karla P. Arruda, MD, PhD, FAAAAI, School of Medicine of Ribeirao Preto, Ribeirao Preto, Brazil

## New Insights in Food Allergy Treatment

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- 206 Oral Food Challenge and Food Allergy Quality of Life in Caregivers of Food Allergic Children**  
**Timothy J. Franxman, MD**, Laura E. Howe, MD and Matthew J. Greenhawt, MD, MBA, MSc, University of Michigan, Ann Arbor, MI
- 207 Racial and Ethnic Disparity in Food Allergy in the United States: A Systematic Review**  
**Matthew J. Greenhawt, MD, MBA, MSc**, Department of Internal Medicine, The University of Michigan Medical School, Division of Allergy and Clinical Immunology, Ann Arbor, MI, Christopher C. Weiss, PhD, Global Food Protection Institute, Battle Creek, MI, Marisa Conte, University of Michigan, Taubman Health Sciences Library, Ann Arbor, MI, Marlie Doucet, MPH, Oak Ridge Institute for Science and Education Fellow, Division of Adolescent and School Health, Centers for Disease Control and Prevention, Atlanta,
- 201 Pediatric Presentation of Hereditary Angioedema (HAE) Due to C1 Inhibitor Deficiency**  
**Sandra C. Christiansen, MD, FAAAAI<sup>1,2</sup>**, Donna Davis<sup>3</sup>, Anthony J. Castaldo<sup>3</sup> and Bruce L. Zuraw, MD<sup>2,4</sup>, <sup>1</sup>Southern CA Permanente Med Grp, San Diego, CA, <sup>2</sup>University of California

## Urticaria/Angioedema

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GA, Amy Engler, eHuman Biology Department, Stanford University, Palo Alto, CA and Carlos Camargo Jr., MD, DrPH, Department of Emergency Medicine, Massachusetts General Hospital, Harvard Medical School, Boston, MA

**208 Multi-Allergen Oral Immunotherapy Improves Quality of Life in Subjects with Food Allergies**

**Iris Otani, MD<sup>1</sup>**, Tina L.R. Dominguez, PA-C MMS<sup>2</sup>, Alicia Sciancalepore, RN<sup>2</sup>, Anjali Mehrotra, MD<sup>3</sup>, Daniela Pineda, MA<sup>2</sup> and Kari Nadeau, MD, PhD, FAAAAI<sup>4</sup>, <sup>1</sup>Santa Clara Valley Medical Center, San Jose, CA, <sup>2</sup>Stanford Alliance for Food Allergy Research, Palo Alto, CA, <sup>3</sup>Silicon Valley Allergy and Asthma Inc., Mountain View, CA, <sup>4</sup>Stanford Univ School Medicine, Stanford, CA

**209 Is Molecular Allergology Cost-Effective and Cost Saving in Children with Suspected Peanut Allergy Compared to Double Blind Placebo Controlled Food Challenge (DBPCFC) and Skin Prick Test in US, Europe and Asia?**

**Lisse-Lotte Hermansson<sup>1</sup>**, Barbara Mascialino<sup>1</sup>, Susanne Glaumann, MD<sup>2</sup>, Magnus Borres<sup>1</sup>, Gijs Hubben<sup>3</sup> and Caroline Nilsson<sup>2</sup>, <sup>1</sup>Thermo Fisher Scientific IDD, Uppsala, Sweden, <sup>2</sup>Södersjukhuset, Stockholm, Sweden, <sup>3</sup>BaseCase, Berlin, Germany

## Rhinosinusitis and Nasal Polyposis: Pathophysiology

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**210 Excessive Fibrin Deposition Caused by a Fibrinolytic Disorder Associated with Reduction of Tissue Plasminogen Activator Expression in Nasal Polyps**

**Tetsuji Takabayashi, MD<sup>1</sup>**, Atsushi Kato, PhD<sup>1</sup>, Anju Peters, MD<sup>2</sup>, Kathryn E. Hulse, PhD<sup>1</sup>, Lydia Suh, BSc<sup>2</sup>, Roderick Carter, BSc<sup>3</sup>, James Norton, MS<sup>1</sup>, Leslie C. Grammer, MD, FAAAAI<sup>2</sup>, Seong Ho Cho, MD<sup>1</sup>, Bruce Tan, MD<sup>1</sup>, Rakesh Chandra, MD<sup>1</sup>, David Conley, MD<sup>1</sup>, Robert Kern, MD<sup>4</sup>, Shigeharu Fujieda, MD<sup>5</sup> and Robert P. Schleimer, PhD, FAAAAI<sup>2</sup>, <sup>1</sup>Northwestern University Feinberg School Medicine, Chicago, IL, <sup>2</sup>Northwestern University Feinberg School of Medicine, Chicago, IL, <sup>3</sup>Department of Medicine, Division of Allergy-Immunology, Northwestern University Feinberg School of Medicine, Chicago, IL, <sup>4</sup>Northwestern University Feinberg School of Medicine, Chicago, IL, <sup>5</sup>University of Fukui, Fukui, Japan

**211 A Proposed Model to Study Immunologic Changes During Chronic Rhinosinusitis Exacerbations: Data From a Pilot Study**

**Shefali Samant, MD<sup>1</sup>**, Matthew A. Rank, MD, FAAAAI<sup>2</sup>, John B. Hagan, MD, FAAAAI<sup>1</sup> and Hirohito Kita, MD<sup>1</sup>, <sup>1</sup>Mayo Clinic, Rochester, MN, <sup>2</sup>Mayo Clinic, Scottsdale, AZ

**212 The Impact and Nature of Inflammation in the Olfactory Cleft On Olfaction in Patients with Chronic Rhinosinusitis**

**Jennifer Lavin, MD<sup>1</sup>**, Eric Meen, MD<sup>1</sup>, Kent Lam, MD<sup>1</sup>, Atsushi Kato, PhD<sup>2</sup>, He Huang, DDS<sup>1</sup>, James Norton, MS<sup>2</sup>, Lydia Suh, BSc<sup>1</sup>, Roderick Carter, BSc<sup>2</sup>, Mahboobeh Mahdavinia, MD, PhD<sup>3</sup>, Kathryn E. Hulse, PhD<sup>3</sup>, David Conley, MD<sup>3</sup>, Rakesh Chandra, MD<sup>3</sup>, Robert Kern, MD<sup>4</sup>, Robert P. Schleimer, PhD, FAAAAI<sup>2</sup> and Bruce Tan, MD<sup>3</sup>, <sup>1</sup>Northwestern University Feinberg School of Medicine, Chicago, IL, <sup>2</sup>Department of Medicine, Division of Allergy-Immunology, Northwestern University Feinberg School of Medicine, Chicago, IL, <sup>3</sup>Northwestern University Feinberg School of Medicine, Chicago, IL, <sup>4</sup>Northwestern University Feinberg School of Medicine, Chicago, IL

**213 Effect of Prostaglandin E2 On VEGF Production Through the E-Prostanoid 4 Receptor in Nasal Polyp-Derived Fibroblasts**

**Byoung Joon Baek**, Department of Otolaryngology-Head and

Neck Surgery, Cheonan Hospital, Soonchunhyang University, Cheonan, South Korea and Dong Yeol Han, Department of Otolaryngology-Head and Neck Surgery, Cheonan Hospital, Soonchunhyang University

**214 Elevated Presence of Dendritic Cell Subsets in Chronic Rhinosinusitis**

**Sarah Peterson, MD<sup>1</sup>**, Kate Welch, MD<sup>1</sup>, Julie Poposki, MS<sup>1</sup>, Lydia Suh, BSc<sup>2</sup>, Roderick Carter, BSc<sup>1</sup>, James Norton, MS<sup>3</sup>, Kathryn E. Hulse, PhD<sup>1</sup>, Anju Peters, MD<sup>2</sup>, Leslie C. Grammer, MD, FAAAAI<sup>2</sup>, Bruce Tan, MD<sup>3</sup>, Rakesh Chandra, MD<sup>3</sup>, David Conley, MD<sup>3</sup>, Robert Kern, MD<sup>3</sup>, Robert P. Schleimer, PhD, FAAAAI<sup>3</sup> and Atsushi Kato, PhD<sup>1</sup>, <sup>1</sup>Northwestern University Feinberg School of Medicine, <sup>2</sup>Department of Medicine, Division of Allergy-Immunology, Northwestern University Feinberg School of Medicine, Chicago, IL, <sup>3</sup>Northwestern University Feinberg School of Medicine, Chicago, IL

## Mechanisms in the Control of Asthma

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**215 Elevation of Plasminogen Activator Inhibitor-1 Levels in Sputum and Nasal Lavage Fluids of Asthmatics with Common Colds**

**Seong Ho Cho, MD<sup>1,2</sup>**, Seung Hong, MD/PhD<sup>2</sup>, Haimei Chen, PhD<sup>1</sup>, Ali Habib<sup>1</sup>, David Cho<sup>1</sup>, Il Kim, MD/PhD<sup>1</sup>, Sun Hye Lee, PhD<sup>1</sup>, Homer A. Boushey Jr., MD, FAAAAI<sup>3</sup>, Theresa Ward<sup>3</sup>, Robert P. Schleimer, PhD, FAAAAI<sup>1</sup> and Pedro C. Avila, MD, FAAAAI<sup>1</sup>, <sup>1</sup>Northwestern University Feinberg School of Medicine, Chicago, IL, <sup>2</sup>Kyung Hee University, Seoul, South Korea, <sup>3</sup>University of California at San Francisco, San Francisco, CA

**216 Human Mast Cells and Nuocytes Activate Gene Expression and Mucus Secretion in Primary Mucociliary Differentiated Human Bronchial Epithelial Cells Via IL-13**

**Deepthi Nagarkar**, Vladimir Corrozzini, David Choy, Alex Abbas, Rajita Pappu and Joseph R. Arron, Genentech, Inc., South San Francisco, CA

**217 Effects of Cigarette Smoke Exposure On RGS2 Expression and Airway Hyperresponsiveness**

**Ningxi Zhu**, Abdo Berra, Zhihao Zhu, Carl Stokes, Yaping Tu, PhD and Thomas B. Casale, MD FAAAAI, Creighton University School of Medicine

**218 Exposure to Cigarette Smoke Impacts Myeloid-Derived Regulatory Cell Function and Exacerbates Airway Hyper-Responsiveness**

**Jessy Deshane, PhD<sup>1</sup>**, Toni Jin<sup>2</sup>, Aisha Farhana<sup>2</sup>, Jason Freeman<sup>2</sup>, Kim Estell<sup>2</sup>, Jaroslaw Zmijewski<sup>2</sup>, Victor Thannickal<sup>2</sup>, Lisa M. Schwiebert, PhD<sup>3</sup> and Andries Steyn<sup>2</sup>, <sup>1</sup>University of Alabama at Birmingham, AL, <sup>2</sup>University of Alabama at Birmingham, Birmingham, AL, <sup>3</sup>University of Alabama at Birmingham, Birmingham, AL

**219 Antagonistic Roles of Thymic Stromal Lymphopoietin (TSLP) and Surfactant Protein-D (SP-D) in Dendritic Cell Regulation During Ozone-Induced Exacerbation of Allergic Airway Inflammation in Mice**

**Angela Haczku, MD, PhD, FAAAAI<sup>1</sup>**, Blerina Kokalari<sup>1</sup>, Moyer Q. Ge<sup>1,2</sup>, Cynthia Koziol-White<sup>1</sup>, Imre Redai<sup>1</sup>, Martine Loubbeau<sup>3</sup>, Carla Bauer<sup>3</sup>, Christopher Stevenson<sup>3</sup> and Lisa R. Forbes, MD<sup>4,5</sup>, <sup>1</sup>University of Pennsylvania, Philadelphia, PA, <sup>2</sup>National University of Singapore, Singapore, Singapore, <sup>3</sup>Inflammation Discovery, pRED Pharma Research and Early Development, Hoffmann-La Roche, Nutley NJ, <sup>4</sup>Baylor College of Medicine, Texas Children's Hospital, Houston, TX, <sup>5</sup>University of Pennsylvania



## Diagnostic Methods in Asthma

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Sunday, February 24th, 2013, 9:45 AM - 10:45 AM

- 220 Does Monitoring of the Spirometric Values by Office Reflect Asthma Control After Discontinuing Controller Medication in Children with Controlled Asthma?**  
Dong In Suh, MD, Ju Kyung Lee, Jun-Hyuk Song and Young Yull Y. Koh, MD, PhD, Seoul National University Hospital, Seoul, South Korea
- 221 Should Allergists Be Caring for Alpha-1 Antitrypsin Deficiency?**  
Yoon M. Kim, DO<sup>1,2</sup>, Yuqing Gao<sup>1</sup>, Puneet Bajaj, MD<sup>1</sup> and Timothy J. Craig, DO, FAAAAI<sup>1,3</sup>, <sup>1</sup>Hershey Medical Center, Hershey, PA, <sup>2</sup>Pinnacle Health, Harrisburg, PA, <sup>3</sup>Penn State University College of Medicine, Hershey, PA
- 222 Relationships Between Exhaled Nitric Oxide and Atopy Profiles (Mono-sensitization/Poly-sensitization) in Children with Asthma**  
Young Yoo, MD, PhD, Department of Pediatrics, Korea University Anam Hospital, Seoul, South Korea, Siegfried Bauer, MD, Korea University Hospital, Seoul, Samuel Harmin, Department of Pediatrics, Korea University Anam Hospital, South Korea, South Korea, Sungchul Seo, Korea University, Seoul, Wonsuck Yoon, Department of Life Science and Biotechnology, Seoul, South Korea and Ji Tae Choung, MD, Korea Univ. Medical Center, Seoul
- 223 The Role of the FACT Score in Predicting Antibody Responses to Pneumococcal Antigens in Asthmatics and Non-Asthmatics**  
Jenna Podjasek, MD, Ji A Jung, MD, Hirohito Kita, MD, Miguel A. Park, MD and Young J. Juhn, MD, MPH, Mayo Clinic, Rochester, MN
- 224 Spirometry Flow Volume Tracings Predict Vocal Cord Dysfunction Diagnosis in Children and Adults**  
Monica Vasudev, MD, Jonathan Tam, MD, Jerome Sigua, MD, Kathleen Divine, MS, Mahua Dasgupta, MS and Raymond Hoffmann, PhD, Medical College of Wisconsin, Milwaukee, WI
- 225 Characterization of Asthmatic Patients with Vocal Cord Dysfunction**  
Rosana C. Agondi, MD, PhD, Violeta Galvão, Marcelo Aun, MD, Carla Bisaccioni, MD, Jorge Kalil, MD, PhD and Pedro Giavina-Bianchi, MD, PhD, Clinical Immunology and Allergy Division, University of Sao Paulo, Sao Paulo, Brazil
- 226 The Simplified Method for Eucapnic Voluntary Hyperventilation (EVH) Challenge May Be Useful to Discriminate Exercise Induced Asthma (EIA) From Deconditioning**  
Richard R. Rosenthal, MD<sup>1,2</sup>, Lorie Shora, MSN, FNP<sup>3</sup>, Harvey Howe, BS<sup>3</sup> and Paul Knause, BS<sup>3</sup>, <sup>1</sup>Allergy and Clinical Immunology, Johns Hopkins School of Medicine, Baltimore, MD, <sup>2</sup>INOVA Fairfax Hospital, Fairfax, VA, <sup>3</sup>Self
- 227 A Retrospective Analysis Comparing Subjects with Isolated and Co-Existent Vocal Cord Dysfunction and Asthma**  
Russell Traister, MD, PhD<sup>1</sup>, Merritt L. Fajt, MD<sup>2</sup>, Emily Whitman-Purves<sup>1</sup>, William C. Anderson III, MD<sup>3</sup> and Andrej Petrov, MD<sup>4</sup>, <sup>1</sup>University of Pittsburgh Medical Center, <sup>2</sup>UPMC Montefiore, Pittsburgh, PA, <sup>3</sup>University of Colorado, Denver/National Jewish Health, Denver, CO, <sup>4</sup>University of Pittsburgh Medical Center, Pittsburgh, PA
- 228 Clinical Outcomes of Subjects with Non-Specific Respiratory Symptoms and High Feno Who Were Not Diagnosed with Asthma – A Retrospective Review of Outcomes 6 Months Following the Initial Evaluation**  
Barbara Yawn, MD, MSc, FAAAAI<sup>1</sup>, Kathy Rickard, MD<sup>2</sup>, Nancy Herje, BSN, RN, MBA<sup>2</sup> and Paul M. Dorinsky, MD<sup>2</sup>, <sup>1</sup>Olmsted Medical Center, Rochester, MN, <sup>2</sup>Aerocrine, Inc., Morrisville, NC
- 229 Plasma Complement Levels and Peripheral Blood Complement Receptor Levels of Adults with Asthma Requiring Emergency**

## Department Treatment Correlate with IgE Responses and QOL Scores

David Erstein, MD<sup>1</sup>, Jane Yee, BS<sup>1</sup>, Richard Sinert, DO<sup>2</sup>, Seto Chice, MS<sup>1</sup>, Helen G Durkin, PhD<sup>1</sup> and Rauno Joks, MD<sup>1</sup>, <sup>1</sup>Center for Allergy and Asthma Research at SUNY Downstate, Brooklyn, NY, <sup>2</sup>Kings County Hospital Center, Brooklyn, NY

- 230 Exhaled Nitric Oxide Level and School Absenteeism in Rural High School Students with Current Asthma**  
Jeremiah Bivins, MD<sup>1</sup>, Dennis Ownby, MD, FAAAAI<sup>1</sup>, Jennifer Waller, PhD<sup>2</sup> and Martha Tingen, PhD<sup>2</sup>, <sup>1</sup>Division of Allergy-Immunology and Rheumatology, Georgia Health Sciences University, Augusta, GA, <sup>2</sup>Georgia Health Sciences University, Augusta, GA
- 231 Mannitol Challenge Test, Sputum Eosinophils and Exhaled Nitric Oxide (FENO) for Diagnosis of Asthma**  
Gyu-Young Hur, MD<sup>1</sup>, Jee Youn Oh<sup>2</sup>, Jong-Hyun Choi<sup>2</sup>, Jae-Kyeom Sim<sup>2</sup>, Kyung Hoon Min<sup>2</sup>, Sung-Yong Lee<sup>2</sup>, Jae-Jeong Shim<sup>2</sup> and Kyung-Ho Kang<sup>2</sup>, <sup>1</sup>Korea University College of Medicine, Seoul, South Korea, <sup>2</sup>Korea University College of Medicine, South Korea
- 232 Feasibility of Spirometry Testing in Preschool Children**  
Jordan Kampschmidt<sup>1</sup>, Edward G. Brooks, MD<sup>1</sup>, Debra Cherry, MD<sup>2</sup> and Pamela R. Wood, MD<sup>1</sup>, <sup>1</sup>Univ. Texas Health Science Center San Antonio, <sup>2</sup>Univ. Texas Health Science Center Tyler
- 233 Clinical Implication of Exhaled Breath Temperature in Pediatric Asthma**  
Yoon Ki Han, MD<sup>1</sup>, Yoon Hee Kim, MD<sup>1</sup>, Hyun Bin Park, MD<sup>1</sup>, Min Jung Kim, MD<sup>1</sup>, Hwan Soo Kim, MD<sup>1</sup>, Hee Seon Lee, MD<sup>1</sup>, Hyun Hee Lee, MD, PhD<sup>2</sup>, Kyung Won Kim, MD, PhD<sup>1</sup>, Myung Hyun Sohn, MD, PhD<sup>1</sup> and Kyu-Earn Kim, MD, PhD<sup>1</sup>, <sup>1</sup>Yonsei University College of Medicine, Seoul, Korea, <sup>2</sup>Kwangdong University College of Medicine, Seoul

## Autoimmunity, Immunodiagnostics

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Sunday, February 24th, 2013, 9:45 AM - 10:45 AM

- 234 Elevated Interleukin-6 Levels in Irritable Bowel Syndrome and Non-Ulcerative Dyspepsia**  
Mahta Mortezaei, MD<sup>1</sup>, P.W.N. Keeling, MD<sup>2</sup>, Eamonn M.M. Quigley, MD<sup>3</sup> and Timothy G. Dinan, MD<sup>3</sup>, <sup>1</sup>University at Buffalo, Buffalo, NY, <sup>2</sup>Trinity College, Dublin, Ireland, <sup>3</sup>Alimentary Pharmabiotic Centre, University College Cork, Ireland
- 235 Serum IgE and Skin Test Using Partially Purified Specific Gna-thostoma Spinigerum Antigen by Immunoblot Test Detecting 24kD Protein Among Patients with Angioedema or Eosinophilia**  
Wirach Maek-a-nantawat, MD, DTM H, Benjaluck Phonrat, Valai Bussaratid, Supaporn Nuamtanong, Wallop Pakdee and Paron Dekumyoy, Faculty of Tropical Medicine, Mahidol University, Bangkok, Thailand
- 236 Intravenous Methylprednisolone Pulse Therapy Target CD8+ Regulatory T Cell in Lupus Nephritis with Refractory Proteinuria**  
Ching-Yuang Lin, MD, PhD, Clinical Immunology Center, China Medical University Hospital
- 237 Factors Associated with Methotrexate Dosing and Therapeutic Decisions in Veterans with Rheumatoid Arthritis**  
Bernard Soo-Kian. Ng, MD, FAAAAI, Michael E. DeBakey Veteran Affairs Medical Center and Adeline Chu, University of Houston - Victoria
- 238 Use of Component Assays, ISAC, and Serial Dilution to Identify Sera with IgE Antibodies Specific for a Minor Component**  
Lisa J. Workman, BA<sup>1</sup>, Anubha Tripathi, MD<sup>1</sup>, Alicia Clark, BA<sup>1</sup>, Scott P. Commins, MD, PhD<sup>1</sup>, Elizabeth Erwin, MD<sup>2</sup>, Robert G. Hamilton, PhD, D.ABMLI, FAAAAI<sup>3</sup> and Thomas Platts-Mills,

- MD, PhD, FAAAAI FRS<sup>1</sup>, <sup>1</sup>University of Virginia, Charlottesville, VA, <sup>2</sup>Nationwide Children's Hospital, Columbus, OH, <sup>3</sup>Johns Hopkins University School of Medicine, Baltimore, MD
- 239 NY-ESO-1 Expression Is Associated with Melanoma Thickness, but Not Mortality**  
**Mara Giavina-Bianchi, MD<sup>1</sup>**, Miriam Nacagamo Sotto, MD, PhD<sup>1</sup>, Luciane Kanashiro<sup>2</sup>, Andrew J. Simpson<sup>3</sup>, Pedro Giavina-Bianchi, MD, PhD<sup>4</sup>, Jorge Kalil, MD, PhD<sup>4</sup> and Cyro Festa, MD, PhD<sup>1</sup>, <sup>1</sup>Division of Dermatology, University of São Paulo, <sup>2</sup>University of São Paulo, <sup>3</sup>Ludwig Institute for Cancer Research, <sup>4</sup>Clinical Immunology and Allergy Division, University of Sao Paulo, Sao Paulo, Brazil
- 240 Immune Abnormalities in Pediatric Acute-Onset Neuropsychiatric Syndrome (PANS)**  
**Katie Miro, MD**, RAZAN Alghanmi, MD, James Rankin, MBS, Lee Geng, PhD and Harumi Jyonouchi, MD, UMDNJ-New Jersey Medical School, Newark, NJ
- 241 Plasma IL-16 Concentration and Recurrent Wheeze At Age 3 in Inner-City Children in the Ureca Birth Cohort**  
**William W. Cruikshank, PhD<sup>1</sup>**, Marina Tuzova, MD, PhD<sup>1</sup>, Katy Jaffee<sup>2</sup>, George T. O'Connor, MD<sup>1</sup>, Gordon R. Bloomberg, MD, FAAAAI<sup>3</sup>, Meyer Kattan, MD<sup>4</sup>, Robert A. Wood, MD, FAAAAI<sup>5</sup> and James Gern, MD, FAAAAI<sup>6</sup>, <sup>1</sup>Boston University School of Medicine, Boston, MA, <sup>2</sup>Rho, Inc., Chapel Hill, NC, <sup>3</sup>Campus Box 8116, St. Louis Children's Hospital, Saint Louis, MO, <sup>4</sup>New-York-Presbyterian/Columbia, New York, NY, <sup>5</sup>Johns Hopkins University School of Medicine, Baltimore, MD, <sup>6</sup>University of Wisconsin School of Medicine and Public Health, Madison, WI
- 242 Normal B Cell Subpopulations in the Pediatric Age Groups and Adults**  
**Matthew Plassmeyer, PhD**, Mark Ryherd, Margaret Brown, B.S., Raavi Gupta, MD, Ley Lacbawan and Oral Alpan, MD, Amerimmune, LLC, VA
- 243 Utility of Double-Negative T-Cells As a Marker for Autoimmunity in 22q11 Deletion Syndrome Patients**  
**Bradley A. Locke, DO**, Mary Hintermeyer, APNP, Trivikram Dasu, PhD, John M. Routes, MD, FAAAAI and James W. Verbsky, MD, PhD, Medical College of Wisconsin, Milwaukee, WI
- 244 Immune Complex-Mediated Damage Is Under Complement Pathway Control**  
**Eveline Y. Wu, MD**, Garren Hester, BS, Haixiang Jiang, MD, PhD and Michael Frank, MD, FAAAAI, Duke University Medical Center
- 245 Simultaneous Detection of Total and Allergen-Specific IgE in Human Plasma Using Multiplex Array Technology**  
**Meredith Lohman, MS**, Martin D. Chapman, PhD FAAAAI and Eva King, MSc, PhD, Indoor Biotechnologies, Inc., Charlottesville, VA

## Immunodeficiency

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Sunday, February 24th, 2013, 9:45 AM - 10:45 AM

- 246 Primary Immunodeficiencies in Patients with Recurrent Ear and Sinus Infections**  
**Chadi Makary, MD<sup>1</sup>**, Rafka Chaiban, MD<sup>2</sup>, Benjamin Addicks<sup>2</sup> and Yesim Yilmaz Demirdag, MD<sup>2</sup>, <sup>1</sup>West Virginia University School of Medicine, Morgantown, WV, <sup>2</sup>West Virginia University School of Medicine, Morgantown, WV
- 247 Late Onset Invasive Pneumococcal Disease in a Patient with IRAK4 Deficiency**  
**Michael David O'Sullivan<sup>1</sup>**, Catherine Stroud<sup>2</sup>, Mario Abinun<sup>3,4</sup>, Rainer Doffinger<sup>5</sup>, Steven O'Reilly<sup>3</sup>, Marzena Ciechomska<sup>3</sup>, Dawn Barge<sup>2</sup>, Rebecca Treacy<sup>6</sup>, Stephen Owens<sup>4</sup>, Terry Flood<sup>4</sup>, Andrew Gennery<sup>3,4</sup> and Sophie Hambleton<sup>3,4</sup>, <sup>1</sup>Immunology

Department, PathWest Laboratory Medicine, Perth, Australia, <sup>2</sup>Department of Immunology, Royal Victoria Infirmary, Newcastle upon Tyne, United Kingdom, <sup>3</sup>Institute of Cellular Medicine, Newcastle University, Newcastle upon Tyne, United Kingdom, <sup>4</sup>Paediatric Immunology & Infectious Diseases Department, Great North Children's Hospital, Newcastle upon Tyne, United Kingdom, <sup>5</sup>Department of Clinical Biochemistry and Immunology, Addenbrooke's Hospital, Cambridge, United Kingdom, <sup>6</sup>East Anglian Medical Genetics Service, Addenbrooke's Hospital, Cambridge, United Kingdom

- 248 Nurses' Perceptions of Wear-off Effects Following Immunoglobulin Replacement Therapy**  
**Carla M. Duff, CPNP, MSN<sup>1</sup>**, Annette R. Zampelli, NP<sup>2</sup> and Ann Bullinger, PharmD<sup>2</sup>, <sup>1</sup>University of South Florida, Tampa, FL, <sup>2</sup>CSL Behring, King of Prussia, PA
- 249 Chronic Non-Iatrogenic Chylous Loss Syndromes in Children: Are They Primary Immune Deficiencies?**  
**Niti Y. Chokshi, MD<sup>1</sup>**, Neha Seth<sup>1</sup>, Maria Afanador, MD<sup>2</sup>, Filiz Seeborg, MD, MPH<sup>3</sup>, Barbara Reid, MD<sup>4</sup>, Timothy Vece, MD<sup>5</sup>, Jordan Orange, MD, PhD, FAAAAI<sup>3</sup> and I. Celine Hanson, MD, FAAAAI<sup>6</sup>, <sup>1</sup>Baylor College of Medicine and Texas Children's Hospital, Section of Immunology, Allergy and Rheumatology, Houston, TX, <sup>2</sup>Baylor College of Medicine and Texas Children's Hospital, Section of Neonatology, Houston, TX, <sup>3</sup>Baylor College of Medicine and Texas Children's Hospital, Section of Immunology, Allergy and Rheumatology, <sup>4</sup>Baylor College of Medicine and Texas Children's Hospital, Section of Pediatric Gastroenterology, Hepatology, and Nutrition, Houston, TX, <sup>5</sup>Baylor College of Medicine and Texas Children's Hospital, Section of Pediatric Pulmonology, Houston, TX, <sup>6</sup>Baylor College of Medicine-Texas Children's Hospital, Section of Immunology, Allergy and Rheumatology, Houston, TX
- 250 Report of Eight Patients with Immunodeficiency After Receiving Rituximab Therapy**  
**Jennifer Welch, MD**, Washington University School of Medicine, Saint Louis, MO and H. James Wedner, MD, FAAAAI, Washington University School of Medicine, Saint Louis, MO
- 251 Idiopathic CD4 Lymphocytopenia: Clinical and Immunological Aspects**  
**Norma de Paula Motta Rubini**, Albertina Varandas Capelo, Eliane Miranda da Silva, Mary Jane Lisboa Valory, Rafael Figueredo Poleshuck, Fernando Samuel Sion, João Negreiros Tebyriçá and Carlos Alberto Morais-de-Sá, Federal University of the State of Rio de Janeiro, Rio de Janeiro, Brazil
- 252 Impaired in Vitro Capacity to Undergo IgG Isotype Class-Switching (ICS) in Response to Interleukin-21 (IL21) Stimulation in Common Variable Immunodeficiency (CVID)**  
**Marylin Desjardins, MD**, McGill University Health Centre, Montreal, QC, Canada; Meakins Christie Laboratories, Montreal, QC, Canada and Bruce D. Mazer, MD, FAAAAI, Montreal Children's Hospital, Montreal, QC, Canada; Meakins-Christie Laboratories, Montreal, QC, Canada
- 253 IVIG Trademark Head to Head Analysis of Adverse Events in 1394 Intravenous Immunoglobulin Replacement Treatments**  
**Blas Javier Larrauri<sup>1</sup>**, Diego Fernandez Romero<sup>1</sup>, Maria Cecilia Juri, MD<sup>2</sup> and Alejandro Malbran, MD<sup>1</sup>, <sup>1</sup>British Hospital of Buenos Aires, Buenos Aires, Argentina, <sup>2</sup>Hospital Britanico de Buenos Aires, Buenos Aires, Argentina
- 254 A Case of Bare Lymphocyte Syndrome: A Combined Immunodeficiency Missed by Newborn Screening?**  
**Caroline Kuo, MD**, E. Richard Stiehm, MD, FAAAAI and Maria Garcia-Lloret, MD, FAAAAI, Division of Allergy and Immunology, Department of Pediatrics, David Geffen School of Medicine at UCLA, Los Angeles, CA
- 255 Indications of Autoimmunity and Auto-Inflammation in X-Linked Agammaglobulinemia**  
**Vivian P. Hernandez-Trujillo, MD**, FAAAAI, Miami Children's Hospital, Pembroke Pines, FL, Christopher Scalchunes, MPA,

- Immune Deficiency Foundation, Charlotte Cunningham-Rundles, MD, PhD, FAAAAI, Mt. Sinai Medical Center, New York, NY; Hans D. Ochs, MD, M/S C9S-7, Seattle Children's Institute/University of Washington, Seattle, WA; Seattle Children's Research Institute and University of Washington, Seattle, WA; University of Washington, Seattle, WA and Kathleen E. Sullivan, MD, PhD, FAAAAI, Children's Hospital of Philadelphia, Philadelphia, PA
- 256 Cost-Effectiveness of Screening for Complement Deficiency After Initial Meningococcal Infection**  
**Gina D. Kubicz, MD,** Gil G. Magpantay, MD and Paul B. Keiser, MD, Walter Reed National Military Medical Center, Bethesda
- 257 The Duke University Medical Center (DUMC) Experience with Common Variable Immune Deficiency (CVID)**  
**Michele R. Henson, MD,** Duke University, Durham, NC and Patricia L. Lugar, MD, MS, Duke University Medical Center, Durham, NC
- 258 Poliovirus Antibodies in Patients with Antibody Deficiency Having Regular Intravenous Immunoglobulin Therapy**  
**Patricia M. Fontes,** Beatriz Tavares Costa-Carvalho, MD, Maria Isabel de Moraes Pinto, Celso Granato and Elaine dos Santos Lima, Federal University of Sao Paulo, Brazil
- 259 Polyomavirus Excretion in Immune Compromised Patients**  
**Margaret Hollister, MD,** Gloria McClure, John Vanchiere, MD, PhD and Adrian Casillas, MD, FAAAAI, Louisiana State University Health Shreveport, Shreveport, LA
- 260 Outcomes of Newborn Screening (NBS) for Severe Combined Immunodeficiency (SCID) in Delaware**  
**Archana Mehta, MD<sup>1,2</sup>,** Stephen J. McGeady, MD, FAAAAI<sup>1,2</sup> and Christopher Chang, MD, PhD, FAAAAI<sup>1,2</sup>, <sup>1</sup>Thomas Jefferson University Hospital, Philadelphia, PA, <sup>2</sup>Alfred I duPont Hospital for Children, Wilmington, DE
- 261 Novel RAB27A Mutation Distinguishes Hypopigmentation From Cytotoxic Dysfunction in Griscelli Syndrome Type 2**  
**Sanny K. Chan, MD, PhD<sup>1</sup>,** Pinaki Banerjee, PhD<sup>1</sup>, Lenora Mendoza Noroski, MD, MPH<sup>2</sup>, Linda Monaco-Shawver<sup>3</sup>, Javier Chinen, MD, PhD, FAAAAI<sup>4</sup>, I. Celine Hanson, MD, FAAAAI<sup>2</sup> and Jordan Orange, MD, PhD, FAAAAI<sup>1</sup>, <sup>1</sup>Baylor College of Medicine and Texas Children's Hospital, Section of Immunology, Allergy and Rheumatology, Houston, TX, <sup>2</sup>Baylor College of Medicine-Texas Children's Hospital, Section of Immunology, Allergy and Rheumatology, Houston, TX, <sup>3</sup>Children's Hospital of Philadelphia, <sup>4</sup>Lake Houston Asthma Allergy Immunology, Humble, TX
- 262 Impaired Naïve B Cell Differentiation in a Kabuki Syndrome Patient with an MLL-2 Nonsense Mutation**  
**Andrew W. Lindsley, MD-PhD,** Cincinnati Children's Hospital Medical Center, Marsha A. Wills-Karp, PhD, Johns Hopkins University, Bloomberg School of Public Health, Baltimore, MD and Jonathan A. Bernstein, MD, University of Cincinnati Medical Center, Cincinnati, OH
- 263 TREC <30 in Infants without SCID As A Marker for High Mortality**  
**Millard L. Tierce IV, DO<sup>1</sup>,** Mary Ruehle, RN, MS, CPN<sup>1</sup>, Karen Andruszewski, BS<sup>2</sup>, Kevin Cavanagh, PhD<sup>2</sup>, Karen Dahl, MD<sup>3</sup>, Mary Kleyn, MS<sup>2</sup>, Patrick Michael Long, PhD<sup>1</sup>, Kelly Walkovich, MD<sup>4</sup>, Heather Wood, MS<sup>2</sup>, William Young, PhD<sup>2</sup> and Elizabeth A. Secord, MD, FAAAAI<sup>1</sup>, <sup>1</sup>Wayne State University, <sup>2</sup>Michigan Department of Community Health, <sup>3</sup>Helen DeVos Children's Hospital, <sup>4</sup>University of Michigan
- 264 Atopic Dermatitis in Patients with Agammaglobulinemia Is Associated with Cutaneous Staphylococcal Infections**  
**Rongras Damrongwatanasuk, MD<sup>1,2</sup>,** Panida Sriaroon, MD<sup>2</sup> and John Sleasman, MD<sup>3</sup>, <sup>1</sup>Children's Research Institute, Saint Petersburg, FL, <sup>2</sup>University of South Florida, Saint Petersburg, FL, <sup>3</sup>USF/All Children's Hospital, St Petersburg, FL
- 265 B-Cell Phenotypes in Solid Organ Transplant Pediatric Patients with Hypogammaglobulinemia**  
**Jennifer A. Shih, MD,** Emory University, Atlanta, GA and Lisa J.

Kobrynski, MD, MPH, FAAAAI, Emory Children's Center, Atlanta, GA; Emory University School of Medicine, Atlanta, GA

## How Viral and Bacterial Infections Drive Asthma

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Sunday, February 24th, 2013, 9:45 AM - 10:45 AM

- 266 Respiratory Syncytial Virus (RSV) Infection and Replication in Mesenchymal Stem Cells (MSCs)**  
**Michael B. Cheung, MS<sup>1,2</sup>,** Subhra Mohapatra, MS, PhD<sup>1,2</sup> and Shyam S. Mohapatra, PhD, FAAAAI<sup>1,2</sup>, <sup>1</sup>The University of South Florida Morsani College of Medicine, Tampa, FL, <sup>2</sup>James A Haley VA Hospital, Tampa, FL
- 267 Interactive Effect of Sodium Sulfite and Rhinovirus Infection in Chemokines Production by Airway Epithelial Cells**  
**Hyun Hee Kim, MD, PhD<sup>1</sup>,** Yoon Hong Chun<sup>2</sup>, Jong-seo Yoon<sup>2</sup> and Joon Sung Lee, MD, PhD<sup>2</sup>, <sup>1</sup>Dept. of Pediatrics Bucheon St. Mary's Hospital The Catholic University of Korea, Bucheon-si, South Korea, <sup>2</sup>Dept. of Pediatrics The Catholic University of Korea
- 268 Assessment of Bacterial Colonization in Airways of Children with Asthma and Chronic Cough by Culture and 16S rRNA Gene Sequencing**  
**Pia J. Hauk, MD<sup>1</sup>,** Elena Goleva, PhD<sup>2</sup>, Leisa P. Jackson, BS<sup>2</sup>, J. Kirk Harris, PhD<sup>3</sup>, J. Tod Olin, MD MScS<sup>4</sup>, Susan M. Brugman, MD<sup>4</sup>, Dave P. Nichols, MD<sup>4</sup>, Marzena Krawiec, MD<sup>5</sup> and Donald Y. Leung, MD, PhD<sup>1</sup>, <sup>1</sup>National Jewish Health, Department of Pediatrics, Division Pediatric Allergy/Immunology, Denver, CO, <sup>2</sup>National Jewish Health, Department of Pediatrics, Denver, CO, <sup>3</sup>University of Colorado Anschutz Medical Campus, Department of Pediatrics, Aurora, CO, <sup>4</sup>National Jewish Health, Department of Pediatrics, Division Pediatric Pulmonology, Denver, CO, <sup>5</sup>Eastern Carolina University, Pediatric Pulmonology, Greenville, NC
- 269 Inhibition of Pim1 Kinase Attenuates Respiratory Syncytial Virus (RSV) Re-Infection-Induced Enhanced Airway Hyperresponsiveness (AHR) and Inflammation**  
**Junyang Han, PhD,** Wanjiang Zeng, MD, Meiqin Wang, MD, PhD, Katsuyuki Takeda, MD, Shigeru Ashino, PhD, Yi Jia, PhD, Yoo Seob Shin, MD, PhD and Erwin W. Gelfand, MD, National Jewish Health, Denver, CO
- 270 Allergic Airway Inflammation (AAI) Decreased Lung Klebsiella Pneumoniae Burden in a Mouse Model of Acute Pneumonia**  
**Daniel E. Dulek, MD<sup>1</sup>,** Sara Reiss, MS<sup>2</sup>, Kasia Goleniewska, MS<sup>2</sup>, Dawn C. Newcomb, PhD<sup>2</sup>, Shinji Toki, PhD<sup>2</sup> and R. Stokes Peebles Jr., MD, FAAAAI<sup>2</sup>, <sup>1</sup>Pediatric Infectious Diseases; Department of Pediatrics; Vanderbilt University School of Medicine, Nashville, TN, <sup>2</sup>Allergy, Pulmonary, and Critical Care Medicine; Department of Medicine; Vanderbilt University School of Medicine, Nashville, TN
- 271 RSV Infection Causes Lung Epithelial Cells Secretion of the Proinflammatory Cytokine HMGB1**  
**Yashoda M. Hosakote, PhD<sup>1</sup>,** Roberto P. Garofalo, MD<sup>1</sup> and Alexander Kurosky, PhD<sup>2</sup>, <sup>1</sup>University of Texas Medical Branch, Galveston, TX, <sup>2</sup>University of Texas Medical Branch, League City, TX
- 272 Correlation of Development of Asthma to Previous Infections in Chinese and Hispanic Immigrant Populations Residing in Brooklyn**  
**Maria-Anna Vastardi, MD<sup>1</sup>,** Irina Katayeva, MD<sup>1</sup>, Haijun Yao, MD<sup>2</sup>, Daniel Puebla-Neira, MD<sup>2</sup>, Kobkul Chotikanatis, MD<sup>1</sup>, Jeremy Weedon, PhD<sup>3</sup>, Helen G. Durkin, PhD<sup>1</sup>, Stephan A. Kohlhoff, MD<sup>1</sup> and Rauno O. Joks, MD, FAAAAI<sup>1</sup>, <sup>1</sup>SUNY Downstate Medical Center, Center for Allergy and Asthma Research, Brooklyn, NY, <sup>2</sup>Lutheran Medical Center, Brooklyn, NY, <sup>3</sup>Scientific Computing Center, SUNY Downstate Medical Center, Brooklyn, NY



## Measuring Pollen Exposures

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Sunday, February 24th, 2013, 9:45 AM - 10:45 AM

- 273 Evaluation of a Compact Ionic Capture Device for Airborne Allergens with the Use of a Controlled Environmental Chamber**  
**Julian Gordon, PhD<sup>1</sup>**, Prasanthi Gandhi, MBA, MPH<sup>1</sup>, David Alburty, President<sup>2</sup> and Pam Murowchick, Director of Lab Operations<sup>2</sup>, <sup>1</sup>Inspirotec LLC, Chicago, IL, <sup>2</sup>AlburtyLab Inc, Drexel, MO
- 274 Climate Variability and Pollen: More Hay Fever or Less?**  
**Estelle Levetin, PhD, FAAAAI**, University of Tulsa and Claudia Owens, MS, University of Tulsa, Tulsa
- 275 Heightened Responses to *Quercus Virginiana* (Virginia Live Oak) Pollen During Natural Seasonal Exposure Versus Pollen Challenge Chamber Exposure: Role of Co-Factors**  
**Robert L. Jacobs, MD<sup>1</sup>**, Weijing He, MD<sup>2</sup>, Nathan Harper, BS<sup>2</sup>, Charles P. Andrews, MD<sup>3</sup>, Cynthia Rather, CCRC<sup>1</sup>, Daniel Ramirez, MD<sup>1</sup> and Sunil Ahuja, MD<sup>2</sup>, <sup>1</sup>Biogenics Research Chamber, San Antonio, TX, <sup>2</sup>Department of Medicine, University of Texas Health Science Center, San Antonio, TX, <sup>3</sup>Diagnostices Research Group, San Antonio, TX
- 276 Is There Such a Thing As a Hypoallergenic Dog?**  
**Betty Ann Petrak-Ron, MD, FAAAAI**, Boulder Community Hospital, Boulder, CO, Eric Ron, Colorado State University, Ft. Collins, CO and Judy St. Clair, CSU
- 277 Comparison of Airborne Allergen Levels Collected On Filters with Dust Borne Allergen Levels Collected by Vacuum**  
**Freddy Pacheco, MS**, Children's Mercy Hospital, Kansas City, MO, Ryan Allenbrand, Children's Mercy Hospital, Jay M. Portnoy, MD, FAAAAI, Children's Mercy Hospital & Clinics, Kansas City, MO, Charles S. Barnes, PhD, Children's Mercy Hospitals and Clinics, Kansas City, MO and Children's Mercy Center for Environmental Health, Children's Mercy Hospitals and Clinics
- 278 Reduction of Domestic Allergen Levels in Carpets and Soft Furnishings in US Homes Using a Proprietary Hot Water Extraction Cleaning Process**  
**Bruce Mitchell, Máire Fox, Claire Mernagh, John Fallon and Vivienne Mahon**, airimid healthgroup ltd, Dublin, Ireland
- 279 Digital Pathology Techniques in Pollen Assessment**  
**Marissa B. Lewis**, University of Delaware, East Brunswick, NJ and Leonard Bielory, MD, FAAAAI, Rutgers University, New Brunswick, NJ
- 280 A Side-by-Side Comparison of Rotorod and Burkard Pollen and Spore Collections**  
**Howard C. Crisp, MD<sup>1</sup>**, Robert Anthony Gomez<sup>2</sup>, James M. Quinn, MD, FAAAAI<sup>1</sup> and Kevin M. White, MD<sup>1</sup>, <sup>1</sup>Wilford Hall Ambulatory Surgical Center, San Antonio, TX, <sup>2</sup>Wilford Hall Ambulatory Surgical Center, Lackland AFB, TX
- 281 Personalized Forecasting of Pollen-Induced Symptoms for Hay-Fever Sufferers**  
**Uwe E. Berger, MBA<sup>1</sup>**, Siegfried Jaeger<sup>1</sup>, Matt Smith<sup>1</sup> and Karl-Christian Bergmann<sup>2</sup>, <sup>1</sup>Medical University Vienna, Vienna, Austria, <sup>2</sup>Charite Campus Mitte, Berlin, Germany
- 282 Comparison of the Allergenic Potency of Old (1997) and Fresh (2008) Grass Pollens**  
**Renato Ariano<sup>1</sup>**, Gianni Mistrello<sup>2</sup>, Giuseppe Frenguelli<sup>3</sup>, Emma Tedeschini<sup>3</sup>, Raphael C. Panzani<sup>4</sup> and Giovanni Passalacqua, MD<sup>5</sup>, <sup>1</sup>Department of Internal Medicine, Bordighera, Imperia, Italy, <sup>2</sup>Research Dept. Lofarma SpA, Milan, Italy, <sup>3</sup>Department of Vegetable Biology of Perugia, University of Perugia, Perugia, Italy, <sup>4</sup>Centre de Recherche en Allergologie, Marseille, France, Marseille, France, <sup>5</sup>Allergy and Respiratory Diseases, IRCCS San Martino Hospital-IST-University of Genoa
- 283 Increase in Midwestern Airborne Elm Pollen Over 14 Years**  
**Manika Girdhar, DO<sup>1,2</sup>**, Charles Barnes, PhD<sup>1</sup>, Minati Dhar, PhD<sup>1</sup> and Jay M. Portnoy, MD, FAAAAI<sup>1</sup>, <sup>1</sup>Children's Mercy Hospital & Clinics, Kansas City, MO, <sup>2</sup>University of Missouri - Kansas City
- 284 Measuring Individual Pollen Exposure**  
**Torsten Sehlinger<sup>1</sup>**, Klaus Boehm<sup>1</sup>, Frank Goergen<sup>1</sup> and Karl-Christian Bergmann<sup>3</sup>, <sup>1</sup>Bluestone Technology GmbH, Woerrstadt, Germany, <sup>2</sup>Univeristy of Applied Science Mainz, Mainz, Germany, <sup>3</sup>Charite Campus Mitte, Berlin, Germany
- 285 Myxomycete Spores: Unrecognized Aeroallergens?**  
**Michelle B. Lierl, MD, FAAAAI**, Cincinnati Children's Hospital, Cincinnati, OH
- 286 Shifting Trends of Ragweed (*Ambrosia*) Measurements During a 22 Year Period in Northern and Southern New Jersey (NJ)**  
**Jonathan Maik**, Yeshiva University and Leonard Bielory, MD, FAAAAI, STARx Allergy and Asthma Center, Springfield, NJ
- 287 The Effect of Local Temperature, Wind Velocity and Rain On Aerobiology Sampling; Ten Year Study (2001-2011), Sarasota, FL**  
**Gregory Michael Cowan, MD<sup>1</sup>**, Neetu Talreja, MD<sup>2</sup>, Jennifer E. Ferguson, DO<sup>3</sup>, Mary Jelks, MD<sup>1</sup>, Dennis K. Ledford, MD, FAAAAI<sup>2</sup> and Richard F. Lockey, MD<sup>2</sup>, <sup>1</sup>University of South Florida Morsani College of Medicine, <sup>2</sup>Morsani College of Medicine University of South Florida and James A. Haley Veteran Hospital, <sup>3</sup>University of South Florida Morsani College of Medicine, Tampa, FL
- 288 Distribution of Indoor Fungal Spore Levels**  
**Minati Dhar, PhD<sup>1</sup>**, Freddy Pacheco, MS<sup>2</sup>, Jay M. Portnoy, MD, FAAAAI<sup>1</sup>, Charles S. Barnes, PhD<sup>3</sup> and . Children's Mercy Center for Environmental Health<sup>4</sup>, <sup>1</sup>Children's Mercy Hospital & Clinics, Kansas City, MO, <sup>2</sup>Children's Mercy Hospital, Kansas City, MO, <sup>3</sup>Children's Mercy Hospitals and Clinics, Kansas City, MO, <sup>4</sup>Children's Mercy Hospitals and Clinics
- 289 The Effect of Increasing Ragweed Pollen Counts On Skin Prick Reactions**  
**Sunena C. Argo, MD<sup>1</sup>**, Nikita Raje, MD, MBBS<sup>1</sup>, Ravneet Donegan, MD<sup>1</sup>, Charles S. Barnes, PhD<sup>2</sup> and Paul J. Dowling, MD, FAAAAI<sup>2</sup>, <sup>1</sup>Children's Mercy Hospitals and Clinics/University of Missouri-Kansas City, Kansas City, MO, <sup>2</sup>Children's Mercy Hospitals and Clinics, Kansas City, MO
- 290 House Dust Mite – Crustacean-Mollusk-Insect Syndrome (HCMIS) in A Patient Resident of A Tropical ZONE**  
**Kaddy Juliana Beltran<sup>1</sup>**, Kaddy Juliana Beltran<sup>2</sup>, Ruth Helena Ramirez<sup>1</sup> and Ricardo Cardona-Villa, MD<sup>3</sup>, <sup>1</sup>Universidad de Antioquia, <sup>2</sup>Universidad de Antioquia, Medellin, Colombia, <sup>3</sup>Universidad de Antioquia, Colombia
- 291 Correlation of Yearly Poaceae Pollen and January to July Rain-fall**  
**Charles S. Barnes, PhD<sup>1</sup>**, Minati Dhar, PhD<sup>2</sup> and Jay M. Portnoy, MD, FAAAAI<sup>2</sup>, <sup>1</sup>Children's Mercy Hospitals and Clinics, Kansas City, MO, <sup>2</sup>Children's Mercy Hospital & Clinics, Kansas City, MO
- 292 Juniper Pollen Hotspots in the Southwest**  
**Landon Bunderson**, University of Tulsa, Tulsa, OK, Jeffrey Luvall, NASA Marshall Space Flight Center, Huntsville, AL, Peter Van De Water, PhD, California State University, Fresno, Fresno, CA and Estelle Levetin, PhD, FAAAAI, University of Tulsa
- 293 Correlation Between Mold Sensitization and Proximity to Mushroom Farms**  
**Mary K. Paul, MD<sup>1,2</sup>**, Christopher Chang, MD, PhD, FAAAAI<sup>2,3</sup> and Gang Ye, PhD<sup>4</sup>, <sup>1</sup>A.I. DuPont Hospital, Wilmington, DE, <sup>2</sup>Thomas Jefferson University Hospital, Philadelphia, PA, <sup>3</sup>Alfred I duPont Hospital for Children, Wilmington, DE, <sup>4</sup>Nemours
- 294 Monitoring Japanese Allergenic Pollen Using Durham's and Burkard Sampler for Asia Pollen Allergy Network**  
**Reiko Kishikawa, MD<sup>1</sup>**, Akemi Saito, PhD<sup>2</sup>, Hiroyuki Nanba, PhD<sup>3</sup>, Norio Sahashi, PhD<sup>4</sup>, Yoshinori Higaki<sup>5</sup>, Eiko Koto<sup>1</sup>, Terufumi Shimoda, MD<sup>6</sup>, Kazuo Akiyama, MD<sup>2</sup> and Tomoaki Iwanaga, MD<sup>1</sup>, <sup>1</sup>The National Hospital Organization Fukuoka Hospital, Fukuoka, Japan, <sup>2</sup>The National Hospital Organization Sagami

Hospital, Sagamihara, Japan, <sup>3</sup>Matsuyama University, Matsuyama, Japan, <sup>4</sup>Toho University, Funabashi, Japan, <sup>5</sup>Saijo Agriculture High School, Saijo, Japan, <sup>6</sup>The National Hospital Organization Fukuoka Hospital, Fukuoka, Japan

## Food Allergy I

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Sunday, February 24th, 2013, 9:45 AM - 10:45 AM

- 295 Outcomes and Safety of Oral Food Challenges in a University-Based Clinic**  
**Timothy P. Moran, MD, PhD<sup>1</sup>**, Ginger S. LaBelle, CPNP<sup>1</sup>, Debra A. Sedlak, MSN, CPNP<sup>1</sup>, P. Brian Smith, MD MHS MPS<sup>1</sup>, Brian P. Vickery, MD, FAAAAI<sup>2</sup> and Joseph L. Roberts, MD, PhD<sup>1</sup>, <sup>1</sup>Duke University Medical Center, Durham, NC, <sup>2</sup>University of North Carolina at Chapel Hill, Chapel Hill, NC
- 296 Exercise Should Be Added to Food Challenge Tests to Predict Anaphylaxis During Oral Tolerance Induction for Severe Milk Allergy Patients**  
**Kazuyo Kuzume**, Ehime Prefectural Niihama Hospital, Niihama, Ehime, Japan, Yu Kuwabara, Ehime Prefectural Niihama Hospital, Munemitsu Koizumi, Ehime Prefectural Central Hospital, Koji Nishimura, Uwajima City Hospital and Yoshitaka Murakami, Ehime Prefectural Imabari Hospital
- 297 Utility of Ovomucoind and Egg White Specific IgE and Skin Prick Testing in Predicting Baked Egg Challenge Outcomes**  
**Lisa Bartnikas, MD<sup>1,2</sup>**, William J. Sheehan, MD<sup>1,2</sup>, Katherine Larabee, BA<sup>3</sup>, Lynda C. Schneider, MD, FAAAAI<sup>1,2</sup> and Wanda Phipatanakul, MD, MS, FAAAAI<sup>1,2</sup>, <sup>1</sup>Boston Children's Hospital, Boston, MA, <sup>2</sup>Harvard Medical School, Boston, MA, <sup>3</sup>Boston University School of Medicine, Boston, MA
- 298 CoAle Multicenter Study: Diagnostic Tests As Predictors of Clinical Reactivity in the Follow-up of the Milk-Allergic Infants Mariangelica Bermudez Martinez<sup>1</sup>**, Cristina Vlaicu<sup>1</sup>, Melissa Olano Rocha<sup>1</sup>, Ibon Eguiluz Gracia<sup>2</sup>, Soledad Terrados Cepeda<sup>1</sup>, Inmaculada Cerecedo Carballo<sup>3</sup>, Maria Del Carmen Dieguez<sup>3</sup>, Belen De La Hoz, MD, PhD<sup>1</sup> and Montserrat Fernandez-Rivas<sup>2</sup>, <sup>1</sup>Hospital Universitario Ramon y Cajal, Madrid, Spain, <sup>2</sup>Hospital Clinico San Carlos, Madrid, Spain, <sup>3</sup>Hospital del Sureste, Arganda del Rey, Spain
- 299 Basophil Allergen Threshold Sensitivity, CD-Sens, and IgE Antibodies to Wheat, Hydrolysed Wheat, ω-5 Gliadin and Timothy Grass in Relation to Wheat Challenge Outcome**  
**Nora Nilsson**, Astrid Lindgrens Childrens Hospital, Stockholm, Sweden
- 300 Oral Food Challenge: Experience in a Brazilian Food Allergy Outpatient Tertiary Service**  
**Camila Pereira<sup>1</sup>**, Leila Borges<sup>2</sup>, Renata R. Cocco<sup>1</sup>, Lucila Camargo<sup>1</sup>, Marcia Mallozi<sup>1</sup> and Dirceu Sole, MD PhD<sup>3</sup>, <sup>1</sup>Federal University of São Paulo, <sup>2</sup>Federal University of Sao Paulo, <sup>3</sup>Federal University of Sao Paulo, Sao Paulo, Brazil
- 301 Tolerance to Extensively Heated (Baked) Milk-Clinical and Immunologic Phenotype**  
**Hugh A. Sampson, MD, FAAAAI<sup>1</sup>**, George N. Constantinou, MD, PhD, MSc<sup>1</sup>, Jacob Daniel Kattan, MD<sup>1</sup>, Madhan Masilamani, PhD<sup>1</sup>, Beth D. Strong, RN, CCRC<sup>2</sup>, Elizabeth Paynter, MA<sup>3</sup>, Tee Bahnsen, BS, MPH<sup>3</sup> and Anna H. Nowak-Wegrzyn, MD, FAAAAI<sup>2</sup>, <sup>1</sup>Mount Sinai School of Medicine, New York, NY, <sup>2</sup>Mt. Sinai School of Medicine, New York, NY, <sup>3</sup>Rho Federal Systems Division, Inc., Chapel Hill, NC
- 302 Efficacy & Safety of Abbreviated Oral Food Challenges in Ruling Out Food Allergy in a Pediatric Allergy Clinic**  
**Kelly M. Maples, MD<sup>1,2</sup>**, Tyler Thompson<sup>1,3</sup>, Amy Perkins, MS<sup>1,2</sup> and Madison Smart, MA<sup>1</sup>, <sup>1</sup>Children's Hospital of The King's

Daughters, Norfolk, VA, <sup>2</sup>Eastern Virginia Medical School, Norfolk, VA, <sup>3</sup>Campbell University, Buies Creek, NC

- 303 Basophil Reactivity and Allergen Specific-IgE Levels but Not Total IgE, Skin Prick Test Size, or Specific IgG4 Are Correlated with Severity of Double-Blind, Placebo-Controlled Food Challenge Reactions**  
**Nicole Leung<sup>1</sup>**, Ying Song, MD<sup>1</sup>, Julie Wang<sup>1</sup>, Li Xin Wang<sup>1</sup>, Jaime Ross<sup>1</sup>, Scott H. Sicherer, MD, FAAAAI<sup>1</sup>, June Straw<sup>2</sup>, Stacie M. Jones, MD<sup>2</sup>, Hugh A. Sampson, MD, FAAAAI<sup>1</sup> and Xiu-Min Li, MD<sup>1</sup>, <sup>1</sup>Mount Sinai School of Medicine, New York, NY, <sup>2</sup>University of Arkansas for Medical Sciences, Little Rock, AR
- 304 Oral Immunotherapy At Fixed Low Dose for Mild to Moderate Hen's Egg Allergy**  
**Noriyuki Yanagida<sup>1,2</sup>**, Takanori Minoura<sup>1</sup> and Motohiro Ebisawa, MD, PhD, FAAAAI<sup>2</sup>, <sup>1</sup>Sendai Medical Center, <sup>2</sup>Sagamihara National Hospital
- 305 The Absence of Oil Body Proteins in Allergenic Extract Might Be Involved in False-Negative Diagnosis of Some Peanut Allergic Patients**  
**Marta M. Ferrer, MD, PhD, FAAAAI<sup>1</sup>**, Fernando Pineda, PhD<sup>2</sup>, Gracia Javaloyes, MD, PhD<sup>3</sup>, Miguel Blanca, MD, PhD<sup>4</sup>, Ana Aranda, PhD<sup>5</sup>, Francisca Gomez, MD, PhD<sup>6</sup>, Gabriel Gastaminza, MD, PhD<sup>3</sup>, Juliana de Souza, PhD<sup>7</sup>, Maria L. Sanz, MD, PhD<sup>3</sup> and M Jose Goikoetxea, PhD, MD<sup>1</sup>, <sup>1</sup>Department of Allergy, Clinica Universidad de Navarra, Pamplona, Spain, <sup>2</sup>Diater Laboratorios, Madrid, Spain, <sup>3</sup>Department of Allergy, Clinica Universidad de Navarra, Spain, <sup>4</sup>Carlos Haya Hospital, Malaga, Spain, <sup>5</sup>Research Laboratory, Carlos Haya Hospital-FIMABIS, Malaga, Spain, <sup>6</sup>IM-ABIS Foundation, Malaga, Spain, <sup>7</sup>Department of Microbiology, Universidad de Navarra, Spain
- 306 Patterns of Serum Peanut-Specific IgE in Peanut Allergic Children Over Time**  
**Lisanne P. Newton, MD**, Cleveland Clinic Foundation, Cleveland, OH and Alton Lee Melton Jr., MD, Cleveland Clinic
- 307 Basophil Response to Peanut Allergens in Mediterranean Peanut-Allergic Patients**  
**Cristobalina Mayorga, PhD<sup>1,2</sup>**, María José Torres, MD, PhD<sup>3</sup>, Ana Belen Blazquez, PhD<sup>1</sup>, Francisca Gómez, MD, PhD<sup>3</sup>, Ignacio Garcia, MD, PhD<sup>3</sup>, Ana Aranda Guerrero, PhD<sup>1</sup>, Stef Koppelman, PhD<sup>4</sup>, Araceli Diaz-Perales, PhD<sup>5</sup>, Stefan Vieths, PhD<sup>6</sup> and Miguel Blanca, MD, PhD<sup>3</sup>, <sup>1</sup>Research Laboratory, Carlos Haya Hospital, Malaga, Spain, <sup>2</sup>Pediatric Service, Carlos Haya Hospital, Málaga, Spain, <sup>3</sup>Allergy Service, Carlos Haya Hospital, Málaga, Spain, <sup>4</sup>TNO Quality of Life, Zeist, Netherlands, <sup>5</sup>Biotechnology Department, Center for Plant Biotechnology and Genomics, Madrid, Spain, <sup>6</sup>Paul-Ehrlich-Institut, Langen, Germany
- 308 The Use of the ISAC Microarray Platform in Food Allergic Patients**  
**Jacob Daniel Kattan, MD**, Gustavo Gimenez, BA, Jay Lieberman, MD and Hugh A. Sampson, MD, FAAAAI, Mount Sinai School of Medicine, New York, NY
- 309 Diagnosis of Peanut Allergy Using Component-Resolved Diagnosis in Asian Population From A Country with Low Prevalence**  
**Sadudee Boonmee, MD<sup>1</sup>**, Narissara Suratannon, MD<sup>1</sup>, Jarungchit Ngamphaiboon, MD<sup>1</sup>, Jongkonnee Wongpiyabovorn, MD<sup>2</sup> and Pantipa Chatchatee, MD<sup>1</sup>, <sup>1</sup>Department of Pediatrics King Chulalongkorn Memorial Hospital, Bangkok, Thailand, <sup>2</sup>Faculty of Medicine Chulalongkorn University, Bangkok, Thailand
- 310 Ara h1 T-Cell Epitope Identification in Peanut Allergic Patients**  
**Manish Ramesh, MD, PhD<sup>1</sup>**, Araya Yuenyongviwat, MD<sup>1,2</sup>, George N. Constantinou, MD, PhD MSc<sup>1,3</sup>, Jay Lieberman, MD<sup>1,4</sup>, Madhura Sivakumar<sup>1</sup>, Mariona Pascal, PhD<sup>1,5,6</sup>, Madhan Masilamani, PhD<sup>1</sup> and Hugh A. Sampson, MD, FAAAAI<sup>1</sup>, <sup>1</sup>Mount Sinai School of Medicine, New York, NY, <sup>2</sup>Price of Songkla University, Songkhla, Thailand, <sup>3</sup>424 General Military Training Hospital, <sup>4</sup>University of Tennessee, <sup>5</sup>Centre de Diagnostic Biomédic, <sup>6</sup>Institut d'Investigacions Biomèdiques August Pi i Sunyer

- 311 Induction of Antigen-Specific B Cells During Peanut Oral Immunotherapy Using Novel Tetramer-Based Approach**  
**Sarita U. Patil, MD<sup>1</sup>**, Stephanie Kubala, B.S.<sup>2</sup>, Alisa K. Brennan, B.S.<sup>3</sup>, Alex Ma, B.S.<sup>3</sup>, James Moon, PhD<sup>3</sup> and Wayne G. Shreffler, MD, PhD, FAAAAI<sup>3,4</sup>, <sup>1</sup>Allergy and Immunology, Massachusetts General Hospital, Boston, MA, <sup>2</sup>Temple University School of Medicine, Philadelphia, PA, <sup>3</sup>Massachusetts General Hospital, Boston, MA, <sup>4</sup>Harvard Medical School, Boston, MA
- 312 Outcomes Using a Graded Protocol for Open Food Challenges**  
**Alisa K. Brennan, B.S.<sup>1</sup>**, Sarita U. Patil, MD<sup>2</sup>, Jude Fleming, BS<sup>3</sup>, Joshua A. Boyce, MD, FAAAAI<sup>4</sup>, Elisabeth S. Stieb, RN, BSN, AE-C<sup>5</sup>, Margaux Nichols, BSN<sup>1</sup>, Rajashri Shuba Iyengar, MD<sup>1</sup>, Perdita Permaul, MD<sup>6</sup>, Jolan E. Walter, MD, PhD<sup>1</sup>, Paul Hesterberg, MD<sup>1</sup> and Wayne G. Shreffler, MD, PhD, FAAAAI<sup>1,7</sup>, <sup>1</sup>Massachusetts General Hospital, Boston, MA, <sup>2</sup>Allergy and Immunology, Massachusetts General Hospital, Boston, MA, <sup>3</sup>Division of Asthma and Allergy, Department of Pediatrics, Rhode Island Hospital, Alpert School of Medicine at Brown University, Providence, RI, <sup>4</sup>Brigham and Women's Hospital, Division of Rheumatology, Immunology and Allergy, Boston, MA, <sup>5</sup>Massachusetts General Hospital, South Weymouth, MA, <sup>6</sup>Division of Pediatric Allergy/Immunology, Massachusetts General Hospital, Boston, MA, <sup>7</sup>Harvard Medical School, Boston, MA
- 313 Baked Milk Oral Food Challenges: A Single-Center Pediatric Hospital Experience**  
**Rushani W. Saltzman, MD<sup>1</sup>**, Mary E. Kelleher, RN, CPN, AE-C<sup>2</sup> and Jonathan M. Spergel, MD, PhD, FAAAAI<sup>2,3</sup>, <sup>1</sup>The Children's Hospital of Philadelphia, Voorhees, NJ, <sup>2</sup>Children's Hospital of Philadelphia, Philadelphia, PA, <sup>3</sup>Perelman School of Medicine at Univ of Pennsylvania
- 314 Subjects Sensitized to Sunflower Seed (*Helianthus annuus*) Are Tolerant in a High Proportion of Cases**  
**Ana Aranda Guerrero, PhD<sup>1</sup>**, Maria Luisa Macias<sup>2</sup>, Francisca Gomez, MD, PhD<sup>3</sup>, Natalia Blanca-López, MD, PhD<sup>4</sup>, Elena Seoane, MD, PhD<sup>2</sup>, Gabriela Canto, MD, PhD<sup>5</sup>, Miriam Osorio<sup>3</sup>, Cristina Gomez-Casado<sup>6</sup>, Araceli Diaz-Perales, PhD<sup>7</sup> and Miguel Blanca, MD, PhD<sup>8</sup>, <sup>1</sup>Research Laboratory, Carlos Haya Hospital, Malaga, Spain, <sup>2</sup>Foundation IMABIS, <sup>3</sup>IMABIS Foundation, Malaga, Spain, <sup>4</sup>Allergy Service, Infanta Leonor Hospital, Madrid, Spain, <sup>5</sup>Allergy Service, Infanta Leonor Hospital, <sup>6</sup>Biotechnology Department, Center for Plant Biotechnology and Genomics, <sup>7</sup>Biotechnology Department, Center for Plant Biotechnology and Genomics, Madrid, Spain, <sup>8</sup>Allergy Service, Carlos Haya Hospital, Málaga, Spain
- 315 Profile of Sensitization to Sunflower Seed in a Large Population Highly Exposed**  
**María Luisa Macias Ramirez<sup>1</sup>**, Ana Aranda, PhD<sup>2</sup>, Francisca Gomez, MD, PhD<sup>3</sup>, Natalia Blanca-López, MD, PhD<sup>4</sup>, Elena Seoane, MD, PhD<sup>4,5</sup>, Gabriela Canto, MD, PhD<sup>6</sup>, Jose Luis Rodriguez-Bada, Lab. Tech.<sup>7</sup>, Leticia Tordesillas<sup>8</sup>, Araceli Diaz Perales<sup>9</sup> and Miguel Blanca, MD, PhD<sup>10</sup>, <sup>1</sup>FIMABIS, Málaga, Spain, <sup>2</sup>Research Laboratory, Carlos Haya Hospital-FIMABIS, Malaga, Spain, <sup>3</sup>IMABIS Foundation, Malaga, Spain, <sup>4</sup>Allergy Service, Infanta Leonor Hospital, Madrid, Spain, <sup>5</sup>Foundation IMABIS, <sup>6</sup>Allergy Service, Infanta Leonor Hospital, <sup>7</sup>Research Laboratory, Carlos Haya Hospital-Fundación IMABIS, Spain, <sup>8</sup>Biotechnology Department, center for plant biotechnology and genomics, Madrid, Spain, <sup>9</sup>Plant Biotechnology Institute (UPM-INIA), Madrid, Spain, <sup>10</sup>Allergy Service, Carlos Haya Hospital, Málaga, Spain
- 316 Characterization of Apple Allergy in A Mediterranean Population**  
**María José Torres, MD, PhD<sup>1</sup>**, Francisca Gómez, MD, PhD<sup>1</sup>, Ana Aranda, PhD<sup>2</sup>, Cristobalina Mayorga, PhD<sup>3,4</sup>, Ignacio Garcia, MD, PhD<sup>1</sup>, Araceli Diaz-Perales, PhD<sup>5</sup>, Natalia Blanca-López, MD, PhD<sup>6</sup>, Elena Seoane, MD, PhD<sup>6</sup>, Arantxa Palacin, PhD<sup>5</sup>, Maria Garrido, PhD<sup>5</sup>, Stefan Vieths, PhD<sup>7</sup> and Miguel Blanca, MD, PhD<sup>1</sup>, <sup>1</sup>Allergy Service, Carlos Haya Hospital, Málaga, Spain, <sup>2</sup>Research Laboratory, Carlos Haya Hospital-FIMABIS, Malaga, Spain, <sup>3</sup>Research Laboratory, Carlos Haya Hospital, Malaga, Spain, <sup>4</sup>Pediatric Service, Carlos Haya Hospital, Malaga, Spain, <sup>5</sup>Biotechnology Department, Center for Plant Biotechnology and Genomics, Madrid, Spain, <sup>6</sup>Allergy Service, Infanta Leonor Hospital, Madrid, Spain, <sup>7</sup>Paul-Ehrlich-Institut, Langen, Germany
- 317 Food Specific IgE Levels in Children Should Be Interpreted in Context of Total IgE**  
**Tara J. Federly, MD<sup>1,2</sup>**, Bridgette L. Jones, MD, FAAAAI<sup>1</sup>, Hongying Dai, PhD<sup>1</sup> and Chitra Dinakar, MD, FAAAAI<sup>1,2</sup>, <sup>1</sup>Children's Mercy Hospital & Clinics, Kansas City, MO, <sup>2</sup>University of Missouri-Kansas City
- 318 Threshold Dose for Shrimp: A Risk Characterization Based On Objective Reactions in Clinical Studies**  
**Julie A. Nordlee, MS<sup>1</sup>**, Benjamin C. Remington, BS<sup>1</sup>, Barbara K. Ballmer-Weber, MD<sup>2</sup>, Samuel B. Lehrer, PhD, FAAAAI<sup>3</sup>, Joe L. Baumert, PhD<sup>1</sup> and Steve L. Taylor, PhD<sup>1</sup>, <sup>1</sup>Food Allergy Research and Resource Program, University of Nebraska-Lincoln, Lincoln, NE, <sup>2</sup>University Hospital of Zurich, Zurich, Switzerland, <sup>3</sup>Tulane University Medical Center, New Orleans, LA
- 319 Desensitization by Sublingual Immunotherapy for Crustacean Allergy**  
**Maged Refaat, MD<sup>1</sup>**, Khalid El-Damhougy, MD<sup>2</sup>, Adham Sadiq, MD<sup>2</sup>, Mohamed Attia, PhD<sup>1</sup> and Mabrouk Mabrouk<sup>2</sup>, <sup>1</sup>Department of Allergy and Clinical immunology, Ain Shams university, Cairo, Egypt, <sup>2</sup>Department of Zoology and Entomology, Faculty of Science, Al-Azhar university, Egypt
- 320 Clinical and Laboratory Predictors of the Outcome of Oral Food Challenges**  
**Farah Khan, DO<sup>1,2</sup>**, Stephen J. McGeady, MD, FAAAAI<sup>1,2</sup> and Christopher Chang, MD, PhD, FAAAAI<sup>1,2</sup>, <sup>1</sup>Alfred I duPont Hospital for Children, Wilmington, DE, <sup>2</sup>Thomas Jefferson University Hospital, Philadelphia, PA
- 321 The Difference of Positive Predictive Value of Ovm-Specific IgE for Heated Hen's Egg Oral Food Challenge by Transition of Ovm-Specific IgE**  
**Osamu Natsume, MD**, Fukuie Tatsuki, Matsunaga Mayumi, Tajima Iwao, Suzuki Tsukasa, Taguchi Tomohide and Ogata Tsutomu, Hamamatsu university school of medicine, Hamamatsu, Japan
- 322 Egg White Skin Prick Tests: A Reliable Predictor of Heated Egg Tolerance in Egg-Allergic Children**  
**Nithya Swamy, MD**, University of Texas Southwest Medical Center, Dallas, TX, Maria G. Crain, RN, Children's Medical Center, Dallas, TX and J. Andrew Bird, MD, Childrens Medical Center
- 323 Slow Stepwise Resolution Protocol for Children with Food Allergies**  
**Kumiko Mukaida, MD, PhD**, Takashi Kusunoki, MD, PhD, Ikuko Hiejima, MD, Fumihito Nozaki, MD, Anri Hayashi, MD, Tomohiro Kumada, MD, PhD, Tomoko Miyajima, MD and Tatsuya Fujii, MD, PhD, Department of Pediatrics, Shiga Medical Center for Children, Shiga, Japan
- 324 Ovo-Des Nm®, a Future Treatment for Egg Allergy**  
**Maria Eulalia Landivar Encalada<sup>1</sup>**, Maria Eulalia Landivar Encalada<sup>1</sup>, Monica Ruiz-Garcia<sup>2</sup>, Elisa Haroun Diaz<sup>2</sup>, Jose A. Torres Hernandez, MD<sup>2</sup> and Joaquin Sastre, MD, PhD, FAAAAI<sup>2</sup>, <sup>1</sup>FUNDACION JIMENEZ DIAZ, MADRID, Spain, <sup>2</sup>Fundacion Jimenez Diaz, Madrid, Spain
- 325 Early Treatment of Food-Induced Allergic Reactions with Epinephrine Is Associated with Lower Risk of Hospital Admission**  
**Jude Fleming, BS<sup>1</sup>**, Sunday Clark, MPH, ScD<sup>2</sup>, Carlos Camargo Jr., MD, DrPH<sup>3</sup> and Susan A. Rudders, MD<sup>1</sup>, <sup>1</sup>Division of Asthma and Allergy, Department of Pediatrics, Rhode Island Hospital, Alpert School of Medicine at Brown University, Providence, RI, <sup>2</sup>Department of Emergency Medicine, Weill Cornell Medical College, New York, NY, <sup>3</sup>Department of Emergency Medicine, Massachusetts General Hospital, Harvard Medical School, Boston, MA



- 326 Multiple Epinephrine Doses in Food-Induced Anaphylaxis in Children**  
Angela Tsuang, MD<sup>1</sup>, Nikhil Menon, Medical student<sup>1</sup>, Natasha Setia, Medical student<sup>1</sup>, Larry Geyman, Medical student<sup>1</sup> and Anna H. Nowak-Wegrzyn, MD, FAAAAI<sup>2</sup>, <sup>1</sup>Mount Sinai School of Medicine, <sup>2</sup>Mt. Sinai School of Medicine, New York, NY
- 327 Peanut Oral Immunotherapy Induces Desensitization At 2g Maintenance Dosing**  
Matthew Feldman, MD<sup>1</sup>, Amy Arneson, RN<sup>2</sup>, Caitlin Burk<sup>3</sup>, Michael D. Kulis Jr, PhD<sup>3</sup>, A. Wesley Burks, MD, FAAAAI<sup>3</sup> and J. Andrew Bird, MD<sup>1</sup>, <sup>1</sup>UT Southwestern Medical Center, Dallas, TX, <sup>2</sup>Children's Medical Center, Dallas, TX, <sup>3</sup>University of North Carolina at Chapel Hill, Chapel Hill, NC
- 328 Predictors of Clinical Tolerance After Peanut Oral Immunotherapy**  
Yamini Virkud, MD, MA<sup>1</sup>, Stacy Chin, MD<sup>2</sup>, Nik Kamilaris<sup>3</sup>, Michael D. Kulis Jr, PhD<sup>4</sup>, Janet S. Kamilaris, RN<sup>4</sup>, Pamela H. Steele, MSN, CPNP, AE-C<sup>4</sup>, P. Brian Smith, MD, MHS, MPS<sup>5</sup>, Brian P. Vickery, MD, FAAAAI<sup>4</sup> and A. Wesley Burks, MD, FAAAAI<sup>4</sup>, <sup>1</sup>Duke University, Durham, NC, <sup>2</sup>FDA/CDER, Washington, DC, <sup>3</sup>University of North Carolina, Chapel Hill, NC, <sup>4</sup>University of North Carolina at Chapel Hill, Chapel Hill, NC, <sup>5</sup>Duke University Medical Center, Durham, NC
- 329 Epicutaneous Immunotherapy (EPIT) Is Safe for the Treatment of Peanut Allergy in Allergic Patients**  
Wence Agbotounou, PhD<sup>1</sup>, Laurent Martin, PharmD<sup>1</sup>, Bertrand Dupont<sup>1</sup>, Isabelle Pascal<sup>1</sup>, Cécile Vauléon<sup>1</sup> and Pierre Henri Benhamou, MD<sup>2</sup>, <sup>1</sup>DBV Technologies, Bagneux, France, <sup>2</sup>DBV Technologies, Paris, France
- 330 Safety of Peanut Oral Immunotherapy (OIT) Using a Modified Dosing Protocol**  
Amy Arneson, RN<sup>1</sup>, Matthew Feldman, MD<sup>2</sup> and J. Andrew Bird, MD<sup>2</sup>, <sup>1</sup>Children's Medical Center, Dallas, TX, <sup>2</sup>UT Southwestern Medical Center, Dallas, TX
- 331 Life with Peanut: Follow up of Tolerant Versus Desensitized Subjects After Peanut OIT**  
Saira Zafar Sheikh, MD<sup>1</sup>, Brian P. Vickery, MD, FAAAAI<sup>1</sup>, Pamela H. Steele, MSN, CPNP, AE-C<sup>1</sup>, Janet S. Kamilaris, RN<sup>1</sup>, Michael D. Kulis Jr, PhD<sup>1</sup>, Suzanne K. Carlisle, RN, BSN, CCRP<sup>2</sup>, G. Lynn Christie, MS, RD<sup>2</sup>, Stacie M. Jones, MD<sup>2</sup> and A. Wesley Burks, MD, FAAAAI<sup>1</sup>, <sup>1</sup>University of North Carolina at Chapel Hill, Chapel Hill, NC, <sup>2</sup>University of Arkansas for Medical Sciences, Little Rock, AR
- 332 Comparison Between Two Maintenance Feeding Regimens After Successful Cow's Milk Oral Desensitization**  
Giovanni B. Pajno, MD, FAAAAI<sup>1</sup>, Lucia Caminiti<sup>1</sup>, Giuseppina Salzano<sup>1</sup>, Giuseppe Crisafulli<sup>1</sup>, Tommaso Aversa<sup>1</sup>, Francesca Maria Messina<sup>1</sup>, Malgorzata Wasniewska<sup>1</sup> and Giovanni Passalacqua, MD<sup>2,3</sup>, <sup>1</sup>Dept of Pediatrics, Allergy Unit, University of Messina, <sup>2</sup>University of Genoa, Genoa, Italy, <sup>3</sup>Allergy and Respiratory Diseases, IRCCS San Martino Hospital-IST-University of Genoa
- 333 Predictors for the Successful Outcome of Oral Immunotherapy to Milk**  
Michael B. Levy, MD, FAAAAI, Arnon Elizur, MD, Michael Goldberg, MD, PhD, Liat Nachshon, MD and Yitzhak Katz, MD, FAAAAI, Assaf Harofeh
- 334 Perinatal Environmental Influences Contributing to Goat's and Sheep's Milk Allergy without Cow's Milk Allergy**  
Rani Maskatia, MD, Baylor College of Medicine, Houston, TX and Carla M. Davis, MD, Baylor College of Medicine/Texas Children's Hospital, Department of Pediatrics, Houston, TX; Texas Children's Hospital, Houston, TX
- 335 Bystander Suppression in Food Allergy**  
Megan S. Motosue, MD<sup>1</sup>, Tina Dominguez, PA-C<sup>2</sup>, Alicia Sciancalepore, RN<sup>2</sup>, Daniela Pineda, MA<sup>2</sup>, Anjali Mehrotra, MD<sup>3</sup>, Lisa Hoyte, NP<sup>2</sup> and Kari Nadeau, MD, PhD, FAAAAI<sup>4</sup>, <sup>1</sup>Santa Clara Valley Medical Center, San Jose, <sup>2</sup>Stanford Alliance for Food Allergy Research, Palo Alto, CA, <sup>3</sup>Silicon Valley Allergy and Asthma Inc., Mountain View, CA, <sup>4</sup>Stanford Univ School Medicine, Stanford, CA
- 336 Efficacy of Oral Immunotherapy in Patients with Multiple Food Allergies**  
Shruti P. Wilson, MD, Tina L.R. Dominguez, PA-C MMS, Alicia Sciancalepore, RN, Daniela Pineda, MA, Anjali Mehrotra, MD, Steven W. Rubinstein, MD, Alan B. Goldsobel, MD, FAAAAI, Michael J. Mulligan, MD, Robert C. Bocian, MD, PhD, FAAAAI, Nancy Cummings, MD, FAAAAI and Kari Nadeau, MD, PhD, FAAAAI, Stanford University School of Medicine
- 337 Role of Omalizumab in Rush Cow's Milk Desensitization in the Outpatients Office**  
Paloma Poza-Guedes<sup>1</sup>, Ruperto González Pérez<sup>1</sup>, Inmaculada Sánchez Machín<sup>1</sup> and Victor Matheu, MD<sup>2</sup>, <sup>1</sup>Hospital del Tórax-Ofra, Sta Cruz de Tenerife, Spain, <sup>2</sup>Hospital Ofra, Tenerife, Spain
- 338 Efficacy of Oral Immunotherapy and Anti-IgE Antibody-Adjuvanted Treatment in Patients with Multiple Food Allergies**  
Tina L.R. Dominguez, PA-C MMS, Shruti P. Wilson, MD, Alicia Sciancalepore, RN, Daniela Pineda, MA, Anjali Mehrotra, MD, Steven W. Rubinstein, MD, Alan B. Goldsobel, MD, FAAAAI, Michael J. Mulligan, MD, Robert C. Bocian, MD, PhD, FAAAAI, Nancy Cummings, MD, FAAAAI and Kari Nadeau, MD, PhD, FAAAAI, Stanford University School of Medicine
- 339 Rapid Oral Desensitization for Severe Peanut Allergy Enabled with Omalizumab**  
Lynda C. Schneider, MD FAAAAI, Rima A. Rachid, MD, FAAAAI, Jennifer S. LeBovidge, PhD, Dionne Graham, PhD, Timothy Harrington, BA, Mudita Mittal, MD and Dale T. Umetsu, MD, PhD, FAAAAI, Boston Children's Hospital, Boston, MA
- 340 Increased IL-17A Responses in Food Allergic Children**  
Nashmia Qamar, DO<sup>1</sup>, Anna B. Fishbein<sup>2</sup>, Kristin A. Erickson<sup>2</sup>, Mary J. Kwasny<sup>3</sup>, Miao Cai<sup>2</sup>, Ramsay L. Fuleihan<sup>2</sup> and Anne Marie Singh<sup>2</sup>, <sup>1</sup>Division of Allergy & Immunology, Department of Pediatrics, Northwestern University Feinberg School of Medicine, Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, IL, <sup>2</sup>Division of Allergy & Immunology, Department of Pediatrics, Northwestern University Feinberg School of Medicine, Chicago, IL, <sup>3</sup>Department of Preventive Medicine, Northwestern University Feinberg School of Medicine, Chicago, IL
- 341 Preliminary Results Comparing the Sensitizing Potential of Purified B-Lactoglobulin (BLG) Versus Whey Protein in Germfree (GF) and Conventional C3H/Hen Mice**  
Nathan L. Marsteller<sup>1,2</sup>, Kwame Andoh-Kumi<sup>1</sup>, Daniel A. Peterson<sup>3</sup>, Joe L. Baumert, PhD<sup>1</sup> and Richard E. Goodman<sup>1</sup>, <sup>1</sup>Food Allergy Research and Resource Program, University of Nebraska-Lincoln, Lincoln, NE, <sup>2</sup>School of Biological Sciences, University of Nebraska-Lincoln, <sup>3</sup>Johns Hopkins School of Medicine, Baltimore, MD
- 342 Peanut Tolerance in Offspring of Female Mice Fed Peanut and Cholera Toxin B Subunit Is Associated with Epigenetic Regulation of Foxp3 Promoter and Induction of Mucosal Foxp3 and IL-10 Gene Expression**  
Yiqun Hui, MD, PhD<sup>1</sup>, Ying Song, MD<sup>2</sup>, Hugh A. Sampson, MD, FAAAAI<sup>2</sup> and Xiu-Min Li, MD<sup>2</sup>, <sup>1</sup>The Mount Sinai Hospital, <sup>2</sup>Mount Sinai School of Medicine, New York, NY
- 343 Negative Association of FoxP3 Regulatory T Cells with Anaphylaxis Upon Food Challenge in Murine Models of Peanut Allergy**  
Laurie M. McWilliams, MD<sup>1</sup>, Michael D. Kulis Jr., PhD<sup>2</sup>, Rishu Guo, PhD<sup>2</sup>, A. Wesley Burks, MD, FAAAAI<sup>2</sup> and Patrick Seed<sup>1</sup>, <sup>1</sup>Duke University, Durham, NC, <sup>2</sup>University of North Carolina at Chapel Hill, Chapel Hill, NC
- 344 In Vitro Immunomodulatory Effects of FAHF-2 (Food Allergy Herbal Formula-2) On PBMCs From Food Allergy Patients**  
Xiu-Min Li, MD<sup>1</sup>, Ying Song, MD<sup>1</sup>, Julie Wang<sup>1</sup>, Paul Faybusovich<sup>1</sup>, Min-Li Hong<sup>1</sup>, Jaime Ross<sup>1</sup>, Scott Sicherer<sup>1</sup>, June Straw<sup>2</sup>, Stacie M. Jones, MD<sup>2</sup> and Hugh A. Sampson, MD, FAAAAI<sup>1</sup>,

- <sup>1</sup>Mount Sinai School of Medicine, New York, NY, <sup>2</sup>University of Arkansas for Medical Sciences, Little Rock, AR
- 345 Prevention and Treatment of Poly-Lysine Modified Arah2 DNA Vaccine On Arah2 Protein Induced Allergy**  
Wei Li<sup>1,2</sup>, Yuan Niu<sup>1</sup>, Zhuo Zhang<sup>3</sup>, Andrew Saxon, MD, FAAAAI<sup>2</sup> and Ke Zhang<sup>2</sup>, <sup>1</sup>Xijing Hospital, Fourth Military Medical University, Xi'an, China, <sup>2</sup>UCLA Medical School, Los Angeles, CA, <sup>3</sup>Tangdu Hospital, Fourth Military Medical University, Xi'an, China
- 346 The Deadly Dessert: Transfer of Food Allergy Following Lung Transplantation From the Donor to the Recipient**  
Priyanka Lall, MD, Emory University, Atlanta
- 347 Food Allergy in Pediatrics Liver Transplant Recipients**  
Ratchaneewan Sinitkul, PhD, Suporn Treepongkaruna, Sumate Teeraratkul, Wasu Kamchaisatian, MD, Wiparat Manuyakorn, MD, Soamarat Vilaiyuk, MD, Cherapat Sasisakulporn, BSc, Wanlapa Teawsomboonkit, RN and Suwat Benjaponpitak, MD, Ramathibodi Hospital, Bangkok, Thailand

## Food Allergy Related Issues/Immune Mediated Skin Disease

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Sunday, February 24th, 2013, 9:45 AM - 10:45 AM

- 348 Risk Factors of Extrinsic and Intrinsic Atopic Dermatitis in Korean Adolescents**  
Kyung-Suk Lee, MD, PhD<sup>1</sup>, Sun-Hee Choi, MD, PhD<sup>2</sup> and Yeong-Ho Rha, MD, PhD<sup>1</sup>, <sup>1</sup>Kyung Hee University Hospital, <sup>2</sup>Gangdong Kyung Hee University Hospital
- 349 Relationship Between Socioeconomic and Sociodemographic Risk Factors and Atopic Dermatitis in Korean Adolescents**  
Yeong-Ho Rha, MD, PhD<sup>1</sup>, Kyung Suk Lee, MD, PhD<sup>1</sup> and Sun-Hee Choi, MD, PhD<sup>2</sup>, <sup>1</sup>Kyung Hee University Hospital, <sup>2</sup>Gangdong Kyung Hee University Hospital
- 350 Delayed Introduction of Food and Effect On Incidence of Food Allergy in a Population At High Risk for Atopy: The Canadian Asthma Primary Prevention Study (CAPPS)**  
Tiffany Wong, MD<sup>1</sup>, Moira Chan-Yeung, MB<sup>2</sup>, Roxanne Rousseau, BSc<sup>2</sup>, Anne Dybuncio, BS<sup>2</sup>, Anita L. Kozyrskyj, PhD<sup>3</sup>, Clare Ramsey, MD, MSc, FRCPC<sup>4</sup>, Allan Becker, MD, FAAAAI<sup>5</sup> and Edmond S. Chan, MD, FAAAAI<sup>1</sup>, <sup>1</sup>Department of Pediatrics, Faculty of Medicine, University of British Columbia, <sup>2</sup>Department of Medicine, Faculty of Medicine, University of British Columbia, <sup>3</sup>University of Manitoba, Edmonton, AB, Canada, <sup>4</sup>Department of Medicine, Faculty of Medicine, University of Manitoba, <sup>5</sup>University Of Manitoba, Winnipeg, MB, Canada
- 351 Differentiating Cause and Severity of Allergic Reaction to Soy Based On Component Testing to PR-10 and Storage Proteins**  
Rabia Q. Chaudhry, MD, Stephen Bigelsen, MD, Alan H. Wolff, MD and Danyoul Yamin, UMDNJ, Newark, NJ
- 352 Severe Reactions to a Soy Containing Beverage in Peanut Allergic Individuals Not Avoiding Soy**  
Benjamin Remington, BS<sup>1</sup>, Julie A. Nordlee, MS<sup>1</sup>, John R. Bacon, MD, FAAAAI<sup>2</sup>, Marc E. Dyer, MD<sup>3</sup>, Steve L Taylor, PhD<sup>1</sup> and Joe L. Baumert, PhD<sup>1</sup>, <sup>1</sup>Food Allergy Research and Resource Program, University of Nebraska-Lincoln, Lincoln, NE, <sup>2</sup>Private Practice, Towson, MD, <sup>3</sup>Private Practice, Laguna Niguel, CA
- 353 Clinical Features of Sulfite Hypersensitivity**  
Ga Young Ban, Ajou University School of Medicine
- 354 The Development of A Diet-Focused Allergy History Tool**  
Isabel J. Skypala, PhD, RD, Royal Brompton and Harefield NHS Foundation Trust, London, United Kingdom, Carina Venter, PhD, RD, The David Hide Asthma and Allergy Research Center, Isle of Wight, United Kingdom, Louiza Damianidi, RD, University of

- Athens, Athens, Greece, Nicolette De Jong, PhD, Erasmus MC, Dept of Internal Medicine, Rotterdam, Netherlands, Adam T. Fox, MD, Guy's and St Thomas' Hospitals NHS Foundation Trust and Kings College, London, United Kingdom, Marion E. Groetch, MS, RD, Mount Sinai School of Medicine, Rosan Meyer, PhD, RD, Great Ormond Street NHS Foundation Trust, London, United Kingdom, Hanneke Oude Elberink, MD, University Medical Center of Groningen, Groningen, Netherlands, Aline Sprikkelman, MD, Emma Children's Hospital Academic Medical Centre, Amsterdam, Netherlands and Berber Vlieg-Boerstra, PhD, RD, Emma Children's Hospital, Academic Medical Center, Amsterdam, Brummen, Netherlands
- 355 Long Term Nutritional Outcome of Children Fed by an Amino-Acid Formula**  
Diana Colson, Nutricia Nutrition Clinique, Saint Ouen, France, Benedicte Michaud, MD, Laboratoire d'immunologie Biologie, Hôpital Necker-enfants Malades, Paris, France, Paris, France; Université Paris Descartes, Hôpital Necker-Enfants Malades, INSERM U1013, Paris, France, Pascale Soulaïnes, Hôpital Cochin-Saint Vincent de Paul, Université Paris V René Descartes (Paris, France), Paris, France; Hôpital Necker, Enfants Malades, Université Paris V René Descartes (Paris, France), Paris, France and Christophe Dupont, MD, PhD, Université Paris V René Descartes, Paris, France; Hopital Necker Enfants Malades, Paris, France; DBV Technologies, Paris, France
- 356 Reduction of Bone Mineral Density (BMD) in IgE-Mediated Cow's Milk Protein (CMP) Allergy and Normalization After Tolerance Acquisition by Oral Immunotherapy**  
Liat Nachshon, MD, Michael Goldberg, MD, PhD, Arnon Elizur, MD, Michael B. Levy, MD, FAAAAI and Yitzhak Katz, MD, FAAAAI, Assaf Harofeh
- 357 Family Management of Children's Food Allergies: Patterns of Food Avoidance and Reaction Response Preparation in Relation to Anxiety**  
Mary D. Klinnert, PhD<sup>1</sup>, Elizabeth McQuaid, PhD<sup>2</sup>, Anna Forssen<sup>1</sup>, Sophia Cohen<sup>1</sup>, David Fedele<sup>2</sup>, Jane Robinson<sup>1</sup>, David Mark Fleischer, MD, FAAAAI<sup>1,3</sup>, Jonathan O. Hourihane<sup>4</sup> and Fred (Dan) McDaniel Atkins, MD, FAAAAI<sup>1,3</sup>, <sup>1</sup>National Jewish Health, Denver, CO, <sup>2</sup>Brown School of Medicine, Rhode Island Hospital, Providence, RI, <sup>3</sup>University of Colorado School of Medicine, <sup>4</sup>University College Cork, Cork, Ireland
- 358 Parental Reporting of Allergenic Food Introduction: A Study of Urban and Suburban Populations**  
Heather N. Hartman, MD<sup>1</sup>, Caitlin Dodd, MS<sup>1</sup> and Amal H. Asaad, MD, FAAAAI<sup>2</sup>, <sup>1</sup>Cincinnati Children's Hospital Medical Center, Cincinnati, OH, <sup>2</sup>Cincinnati Childrens, Cincinnati, OH
- 359 Nutritional Features of Children with Multiple Food Allergies Who Require Elemental Formula Supplementation**  
Karen Robbins, MD<sup>1</sup>, Anthony Guerrero, MD, PhD<sup>1</sup>, Elizabeth Matsui, MD<sup>1</sup>, Pamela A. Frischmeyer-Guerrero, MD, PhD<sup>2</sup>, Susan Oh, MS, MPH, RD<sup>1</sup>, Sara Hauck, RD, LDN<sup>1</sup> and Robert A. Wood, MD, FAAAAI<sup>1</sup>, <sup>1</sup>Johns Hopkins University School of Medicine, Baltimore, MD, <sup>2</sup>Pediatrics, Johns Hopkins University School of Medicine, Baltimore, MD
- 360 Comparison of Growth Parameters Between Children with and without Food Allergies in 2 Different Demographic Populations**  
Harshna Mehta, MD, Mount Sinai School of Medicine, New York, NY, Elizabeth Feuille, MD, Mount Sinai School of Medicine and Julie Wang, MD, FAAAAI, Mt. Sinai School of Medicine, New York, NY
- 361 Impact of Food Allergy On Growth in the Pediatric Population**  
Caroline B. Hobbs, MD<sup>1</sup>, Asheley C. Skinner, PhD<sup>2</sup>, A. Wesley Burks, MD, FAAAAI<sup>1</sup> and Brian P. Vickery, MD<sup>1</sup>, <sup>1</sup>Division of Pediatric Allergy, Immunology, Rheumatology, and Infectious Disease, University of North Carolina, Chapel Hill, NC, <sup>2</sup>Division of General Pediatrics and Adolescent Medicine, University of North Carolina, Chapel Hill, NC

- 362 Differences in Dietary Management of Infant Atopic Dermatitis Among Pediatricians, Allergists, and Dermatologists in the United States**  
Laura Czerkies, MS, RD<sup>1</sup>, Erica Horodniceanu<sup>2</sup>, Vardhaman Patel<sup>2,3</sup>, Marc Botteman, MSc<sup>2</sup> and Jose Saavedra, MD<sup>1</sup>, <sup>1</sup>Nestle Nutrition, Florham Park, NJ, <sup>2</sup>Pharmerit International, Bethesda, MD, <sup>3</sup>College of Pharmacy, University of Illinois, Chicago, IL
- 363 The Multiple Open Food Allergen Challenge Test in Children with Moderate to Severe Atopic Dermatitis**  
Jae Ho Lee, MD, PhD<sup>1</sup>, Eun Kyung Lim<sup>2</sup> and Eun Ae Yang<sup>1</sup>, <sup>1</sup>Department of Pediatrics, Chungnam National University, Taejeon, South Korea, <sup>2</sup>Department of Pediatrics, Cungnam National University, Taejeon, South Korea
- 364 Parental Survey Concerning Pediatric Atopic Dermatitis and Bathing Frequency Recommendations by Providers: An Area of Uncertainty and Frustration**  
Erin Kempe<sup>1</sup>, Ivan D. Cardona, MD<sup>1,2</sup> and Neal Jain, MD, FAAAAI<sup>3</sup>, <sup>1</sup>Maine Medical Center, Portland, ME, <sup>2</sup>Allergy and Asthma Associates of Maine, Portland, ME, <sup>3</sup>San Tan Allergy, Gilbert, AZ
- 365 Allergen-Specific Immunotherapy (ASIT) Effect On Quality of Life (QOL) in Children with Moderate (MAD) and Severe (SAD) Atopic Dermatitis**  
Tatiana Slavyanskaya, MD, PhD<sup>1,2</sup> and Vladislava Derkach, PhD<sup>2,3</sup>, <sup>1</sup>University of Russia, Moscow, Russia, <sup>2</sup>Institute of Immunophysiology, Moscow, Russia, <sup>3</sup>Vladivostok State Medical University, Vladivostok, Russia
- 366 Allergen Specific Immunotherapy in Cases of Severe Atopic Dermatitis**  
Inmaculada Sánchez-Machín, MD, Hospital Ofra-Tórax, Tenerife, Spain, Paloma Poza, Hospital Ofra-Tórax, santa cruz de tenerife, Spain, Ruperto González, Hospital Ofra-Tórax, S/C de Tenerife, Spain and Victor Matheu, MD, Hospital Ofra, Tenerife, Spain
- 367 A Randomized, Open-Label, Parallel Group Study to Evaluate the Efficacy and Safety of Proactive Management in Pediatric Subjects with Moderate to Severe Atopic Dermatitis**  
Tatsuki Fukuie, MD, PhD<sup>1,2</sup>, Ichiro Nomura, MD, PhD<sup>3</sup>, Masami Narita, MD, PhD<sup>2</sup>, Tsukasa Suzuki, MD<sup>1</sup>, Iwao Tajima, MD<sup>1</sup>, Osamu Natsume, MD<sup>1</sup>, Tomohide Taguchi, MD<sup>1</sup>, Tsutomu Ogata, MD, PhD<sup>1</sup>, Yoshiki Tokura, MD, PhD<sup>4</sup>, Kenji Matsumoto, MD, PhD<sup>3</sup> and Yukihiro Ohya, MD, PhD<sup>2</sup>, <sup>1</sup>Department of Pediatrics, Hamamatsu University School of Medicine, Shizuoka, Japan, <sup>2</sup>Division of Allergy, Department of Medical Subspecialties, National Center for Child Health and Development, Tokyo, Japan, <sup>3</sup>Department of Allergy and Immunology, National Research Institute for Child Health and Development, Tokyo, Japan, <sup>4</sup>Department of Dermatology, Hamamatsu University School of Medicine, Shizuoka, Japan
- 368 Evaluation of People with Atopic Dermatitis Applying Patch Test with Mites, Cockroach and Mouse**  
Lihua Yang, MD<sup>1</sup>, Rauno O. Joks, MD, FAAAAI<sup>2</sup> and Hamid Moallem, MD<sup>1</sup>, <sup>1</sup>SUNY Downstate Medical Center, Brooklyn, NY, <sup>2</sup>SUNY Downstate Medical Center, Center for Allergy and Asthma Research, Brooklyn, NY
- 369 The Effect of Outdoor Air Pollutants On the Severity of Atopic Dermatitis**  
Mi-ran Park<sup>1</sup>, Jihyun Kim, MD<sup>1</sup>, Youngshin Han, PhD<sup>1</sup>, Hae-Kwan Cheong<sup>2</sup>, Eun-Hye Kim<sup>2</sup>, Kwon Jung<sup>3</sup> and Kangmo Ahn, MD, PhD<sup>1</sup>, <sup>1</sup>Samsung Medical Center, Seoul, <sup>2</sup>Department of Social and Preventive Medicine, and Samsung Biomedical Research Institute, Suwon, South Korea, <sup>3</sup>Seoul Research Institute of Public Health and Environment, Gwacheon, South Korea
- 370 Association of Stress, Pruritis and Illness Severity in Children with Atopic Dermatitis**  
Kimberly Kelsay, MD<sup>1</sup>, Eleni Weisnicht<sup>2,3</sup>, Bruce G. Bender, PhD, FAAAAI<sup>4</sup>, Donald Y.M. Leung, MD, PhD, FAAAAI<sup>4</sup> and Mary D. Klinnert, PhD<sup>4,5</sup>, <sup>1</sup>University of Colorado, School of Medicine,
- Aurora, <sup>2</sup>National Jewish Health, <sup>3</sup>Univeristy of Colorado, Boulder, <sup>4</sup>National Jewish Health, Denver, CO, <sup>5</sup>University of Colorado School of Medicine
- 371 Human Basophil Express Novel TSLPR Variants Including a Putative Secreted Form**  
Martin J. Romeo, PhD<sup>1</sup>, Rachana Agrawal, PhD<sup>1</sup>, Anna Pomés, PhD, FAAAAI<sup>2</sup> and Judith A. Woodfolk, MChB, PhD, FAAAAI<sup>1</sup>, <sup>1</sup>University of Virginia, Charlottesville, VA, <sup>2</sup>Indoor Biotechnologies, Inc., Charlottesville, VA
- 372 Early Life Transepidermal Water Loss (TEWL) Values Can Predate Atopic Dermatitis At Six and Twelve Months in Asymptomatic Infants: Results From the Baseline Study**  
Maeve M. Kelleher<sup>1</sup>, Audrey Dunn Galvin<sup>1</sup>, Deirdre Murray<sup>1</sup>, Alan David Irvine<sup>2</sup>, Jonathan O. Hourihane<sup>1</sup> and Baseline Team<sup>1</sup>, <sup>1</sup>University College Cork, Ireland, <sup>2</sup>Trinity College Dublin, Dublin, Ireland
- 373 Leukotriene B<sub>4</sub> Driven Neutrophil Recruitment to the Skin Is Essential for Allergic Skin Inflammation**  
Michiko K. Oyoshi, PhD<sup>1</sup>, Rui He<sup>1</sup>, Yitang Li<sup>1</sup>, Subhanjan Mondal<sup>1</sup>, Juhan Yoon<sup>1</sup>, Rosh Afshar<sup>2</sup>, Mei Chen<sup>3</sup>, David M. Lee, MD, PhD<sup>3</sup>, Hongbo Luo<sup>1</sup>, Andrew D. Luster, MD, PhD<sup>2</sup>, John Cho<sup>4</sup>, Lloyd Miller<sup>4</sup>, Allison Larson<sup>2</sup>, George Murphy<sup>2</sup> and Raif Geha, MD<sup>1</sup>, <sup>1</sup>Boston Children's Hospital, Boston, MA, <sup>2</sup>Massachusetts General Hospital, Charlestown, MA, <sup>3</sup>Brigham and Women's Hospital, <sup>4</sup>University of California Los Angeles, <sup>5</sup>Brigham and Women's Hospital/Harvard Medical School, Boston, MA
- 374 Initial Presentation of Severe Neutropenia Mimicking Atopic Dermatitis**  
Laura E. Noonan, MSN, FNP-C<sup>1</sup>, Oral Alpan, MD<sup>2,3</sup>, Denise Loizou, RN<sup>1</sup>, Margaret Brown, B.S.<sup>2</sup>, Mark Ryherd<sup>2</sup> and Matthew Plassmeyer, PhD<sup>2</sup>, <sup>1</sup>O&O Alpan, Fairfax, VA, <sup>2</sup>Amerimmune, LLC, VA, <sup>3</sup>O&O ALPAN, LLC
- 375 T Helper Cytokines (Th1, Th2 and Th17) Differentially Regulate the Epidermal Tight Junction Barrier**  
I-Hsin Kuo, MS<sup>1</sup>, Anna De Benedetto, MD<sup>1</sup>, Takeshi Yoshida, PhD<sup>1</sup>, Donald Y. Leung, MD PhD<sup>2</sup> and Lisa A. Beck, MD, FAAAAI<sup>1</sup>, <sup>1</sup>Department of Dermatology, University of Rochester Medical Center, Rochester, NY, <sup>2</sup>National Jewish Health, Department of Pediatrics, Division Pediatric Allergy/Immunology, Denver, CO
- 376 The Role of Transient Receptor Potential Ankyrin-1 (TRPA1) in Chronic Itch in Atopic Dermatitis (AD)**  
Min-Hee OH, PhD Student<sup>1</sup>, Hongfei Lou, MD<sup>1</sup>, Allen Myers, PhD<sup>1</sup>, Zhou Zhu, MD, PhD<sup>2</sup> and Tao Zheng, MD<sup>1</sup>, <sup>1</sup>Johns Hopkins University, Baltimore, MD, <sup>2</sup>The Johns Hopkins University School of Medicine, Baltimore, MD
- 377 Correlation Between Serum 25-Hydroxyvitamin D Concentration and Methicillin - Resistant Staphylococcus Aureus Skin Infection in Atopic Dermatitis**  
Taek Ki Min, MD<sup>1</sup>, You Hoon Jeon, MD<sup>1</sup>, Hyeon Jong Yang, MD<sup>1</sup>, Hae Won Lee, RN<sup>2</sup> and Bok Yang Pyun, MD, PhD<sup>1</sup>, <sup>1</sup>Pediatric Allergy Respiratory Center, Department of Pediatrics, Soonchunhyang University Hospital, Seoul, South Korea, <sup>2</sup>Pediatric Allergy Respiratory Center, Department of Pediatrics, Soonchunhyang University Hospital, South Korea
- 378 Biomarkers of Disease Severity and Th2 Polarity Are Predictors of Atopic Dermatitis Subjects Who Are Colonized with S. Aureus**  
Lisa A. Beck, MD, FAAAAI<sup>1</sup>, Takeshi Yoshida, PhD<sup>1</sup>, Anna De Benedetto, MD, FAAAAI<sup>2</sup>, Seungshin Rhee, MS<sup>3</sup>, I-Hsin Kuo, MS<sup>1</sup>, Jamie Reese<sup>4</sup>, Gloria David, PhD<sup>3</sup>, Lynda C. Schneider, MD, FAAAAI<sup>5,6</sup>, Amy Paller, MD<sup>7</sup>, Jon M. Hanifin, MD, FAAAAI<sup>8</sup>, Mark Boguniewicz, MD FAAAAI<sup>9</sup>, Kathleen C. Barnes, PhD, FAAAAI<sup>10</sup> and Donald Y.M. Leung, MD, PhD, FAAAAI<sup>11</sup>, <sup>1</sup>Department of Dermatology, University of Rochester Medical Center, Rochester, NY, <sup>2</sup>University of Rochester Medical Center, <sup>3</sup>Rho, Inc., Chapel Hill, NC, <sup>4</sup>Rho, Inc., <sup>5</sup>Boston Children's



Hospital, Boston, MA, <sup>6</sup>Division of Allergy/Immunology, Boston Children's Hospital, Harvard Medical School, Boston, MA, <sup>7</sup>Northwestern University Feinberg School of Medicine, Chicago, IL, <sup>8</sup>Oregon Health & Science University, Portland, OR, <sup>9</sup>National Jewish Health, Denver, CO, <sup>10</sup>Division of Allergy and Clinical Immunology, Department of Medicine, Johns Hopkins University, Baltimore, MD, <sup>11</sup>National Jewish Health, Department of Pediatrics, Denver, CO

**379 Differences of Serum Cytokine Levels and Sensitization Rates to Allergen**

**Jin-A Jung, MD<sup>1</sup>**, Hyun-jin Yun, MD<sup>2</sup>, Eun-jung Choi<sup>3</sup>, Hye-sung Ahn<sup>4</sup>, Ja Hyeong Kim, MD<sup>5</sup> and Ju-Suk Lee, MD, PhD<sup>6</sup>, <sup>1</sup>Dong-A University Hospital, Busan, <sup>2</sup>Ilsin Christian Hospital, Busan, South Korea, <sup>3</sup>Ilsin Christian Hospital, <sup>4</sup>Good Moonhwa Hospital, <sup>5</sup>Ulsan University Hospital, Ulsan, <sup>6</sup>Sungkyunkwan university, Changwon, South Korea

**382 Interactions Between CD14/IL-13 Genes and Cesarean Section Delivery May Affect the Development of Atopic Dermatitis in a Cocoa Study**

**Eun Lee<sup>1</sup>**, So-Yeon Lee<sup>2</sup>, Kangmo Ahn, MD, PhD<sup>3</sup>, Kyung Won Kim, MD, PhD<sup>4</sup>, Youn Ho Shin, MD, PhD<sup>5</sup>, Gyeong-shin Lee<sup>6</sup>, Young Ho Jung, MD<sup>1</sup>, Jinho Yu, MD, PhD<sup>1</sup>, Ju-Hee Seo, MD<sup>7</sup>, Hyo-Bin Kim, MD, PhD<sup>8</sup>, Ji-Won Kwon, MD<sup>9</sup>, Byoung-Ju Kim, MD, PhD<sup>10</sup>, Woo Kyung Kim, MD, PhD<sup>8</sup>, Dae Jin Song, MD, PhD<sup>11</sup>, Gwang Cheon Jang, MD, PhD<sup>12</sup>, Jung Yeon Shim, MD, PhD<sup>13</sup>, Soo-Young Lee, MD, PhD<sup>14</sup> and Soo-Jong Hong, MD, PhD<sup>1</sup>, <sup>1</sup>Department of Pediatrics, Childhood Asthma Atopy Center, Asan Medical Center, University of Ulsan College of Medicine, Seoul, South Korea, <sup>2</sup>Department of Pediatrics, Hallym University College of Medicine, <sup>3</sup>Samsung Medical Center, Seoul, <sup>4</sup>Yong-Dong Severance Hospital, Seoul, <sup>5</sup>Yong Dong Severance Hospital, Seoul, <sup>6</sup>Childhood Asthma Atopy Center, Asan Medical Center, University of Ulsan College of Medicine, <sup>7</sup>Department of Pediatrics, Korea Cancer Center Hospital, <sup>8</sup>Inje University Sanggye Paik Hospital, Seoul, <sup>9</sup>Department of Pediatrics, Seoul National University Bundang Hospital, Seoul National University College of Medicine, Seongnam, South Korea, <sup>10</sup>Department of Pediatrics, Hae-undae Paik Hospital, Inje University College of Medicine, Busan, South Korea, <sup>11</sup>Department of Pediatrics, Korea University Guro Hospital, <sup>12</sup>Department of Pediatrics, National Health Insurance Corporation Ilsan Hospital, <sup>13</sup>Sungkyunkwan University School of Medicine, K, Seoul, <sup>14</sup>Ajou University School of Medicine, Suwon

**383 Targeted Resequencing Identified Novel Variants in Candidate Genes Associated with Increased Risk of Atopic Dermatitis Complicated by Eczema Herpeticum**

**Li Gao, MD, PhD<sup>1</sup>**, Lili Huang, MS<sup>1</sup>, Nicholas M. Rafaels, MS<sup>1</sup>, Rachel Lewis, MS<sup>1</sup>, Rasika A. Mathias, ScD<sup>1</sup>, Lisa A. Beck, MD, FAAAAI<sup>2</sup>, Donald Y. Leung, MD, PhD<sup>3</sup> and Kathleen C. Barnes, PhD, FAAAAI<sup>1</sup>, <sup>1</sup>Johns Hopkins University, Baltimore, MD, <sup>2</sup>University of Rochester, Rochester, NY, <sup>3</sup>Department of Pediatrics, Division of Allergy-Immunology, National Jewish Health, Denver, CO

**384 Methylation Patterns in Whole Blood From Healthy Controls and Patients with Atopic Dermatitis with and without a History of Eczema Herpeticum**

**Chris Cheadle, JHU**

**385 Severe Protein-Loss in Atopic Dermatitis in Infancy: Summary of 10 Patients**

**Iwao Tajima, MD<sup>1,2</sup>**, Tatsuki Fukuie, MD, PhD<sup>1</sup>, Osamu Natsume, MD<sup>1</sup>, Tsukasa Suzuki, MD<sup>1</sup>, Tomohide Taguchi, MD<sup>1</sup> and Tsutomu Ogata, MD, PhD<sup>1</sup>, <sup>1</sup>Department of Pediatrics, Hamamatsu University School of Medicine, Shizuoka, Japan, <sup>2</sup>Department of Pediatrics, Iwata city hospital, Shizuoka, Japan

**386 A Study of 77 Infants with Atopic Dermatitis Investigated the Risk Factors for Hypoproteinemia**

**Geunhwa Park, Busan St. Mary's Medical Center**

**New Developments in the Treatment of Asthma and Allergic Diseases**

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Sunday, February 24th, 2013, 9:45 AM - 10:45 AM

**387 Identifying Physicians Who Care for Hereditary Angioedema (HAE) for Targeted Awareness & Education**

**Gregory H. Bennett, DO**, Penn State Hershey Children's Hospital, Hershey, PA, Nimish Mehta, PhD, MBA, Medscape Education, NJ and Timothy J. Craig, DO, FAAAAI, Penn State University College of Medicine, Hershey, PA

**388 Physical Activity, BMI, and Asthma Control Among Adolescents: A Cross-Sectional Analysis**

**Aimee L. Speck, MD**, University of Michigan, Division of Allergy and Clinical Immunology, Ann Arbor, MI and Alan P. Baptist, MD, MPH, University of Michigan, Division of Allergy, Ann Arbor, MI

**389 Characteristics of Asthma Patients Seeking Specialist Care**

**Thomas B. Casale, MD FAAAAI<sup>1</sup>**, Kurt Elward<sup>2</sup>, Wilson Pace<sup>3</sup>, Paul Turner<sup>4</sup>, Ryan Walters<sup>4</sup> and Michael Schatz, MD, MS, FAAAAI<sup>5</sup>, <sup>1</sup>Creighton University School of Medicine, Omaha, NE, <sup>2</sup>U Virginia, <sup>3</sup>U Colorado, Denver, <sup>4</sup>Creighton University, <sup>5</sup>Kaiser Permanente, San Diego, CA

**390 Associations Between Patient Perceived Health Status, Disease Severity, and Specific Demographic or Individual Factors in Primary Immunodeficiency**

**Filiz Seeborg, MD, MPH<sup>1</sup>**, Marcia Boyle<sup>2</sup>, Christopher Scalchunes, MPA<sup>2</sup>, Linzhi Xu, MS<sup>3</sup> and Jordan Orange, MD, PhD, FAAAAI<sup>1</sup>, <sup>1</sup>Baylor College of Medicine and Texas Children's Hospital, Section of Immunology, Allergy and Rheumatology, <sup>2</sup>Immune Deficiency Foundation, <sup>3</sup>Baylor College of Medicine/Texas Children's Hospital, Department of Pediatrics, TX

**391 Asthma Knowledge Level of Teachers in Child Daycare Center**

**Ahmet Akcay, MD**, Associate Professor of Pediatrics, Istanbul University, Istanbul School of Medicine, Department of Pediatrics, Division of Pediatric Allergy, Istanbul, Turkey., Zeynep Tamay, MD, Associate Professor of Pediatrics, Istanbul University, Istanbul School of Medicine, Department of Pediatrics, Division of Pediatric Allergy, Istanbul, Turkey, Saime Ulker Ones, MD, FAAAAI, Istanbul Medical Faculty, Istanbul, Turkey and Nermin Guler, MD, Professor of Pediatrics, Istanbul University, Istanbul School of Medicine, Department of Pediatrics, Division of Pediatric Allergy, Turkey

**392 Status of the Allergy and Immunology Clinical Trials Portfolio: Data From Clinicaltrials.Gov**

**Ankoor Shah, MD<sup>1</sup>**, Samuel Broderick, PhD<sup>1</sup>, Karen Chiswell, PhD<sup>2</sup>, Asba Tasneem, PhD<sup>2</sup> and John S. Sundy, MD, PhD, FAAAAI<sup>1</sup>, <sup>1</sup>Duke University Medical Center, Durham, NC, <sup>2</sup>Duke University Medical Center

**393 Preferred Learning Methods for Parents of Asthmatic Children**

**Nabeel Farooqui, MD**, Nationwide Children's Hospital; The Ohio State University and David R. Stukus, MD, FAAAAI, Nationwide Children's Hospital, New Albany, OH

**394 The Annual Subspecialty Retreat in Allergy and Immunology - an Innovative Model for Reflection and Program Excellence**

**Lenora Mendoza Noroski, MD, MPH**, Baylor College of Medicine-Texas Children's Hospital, Section of Immunology, Allergy and Rheumatology, Houston, TX

**395 Evaluating the Differences in Characteristics of Asthma Patients Initiating Budesonide/Formoterol Combination (BFC) and Fluticasone/Salmeterol Combination (FSC)**

**Frank Trudo<sup>1</sup>**, Ozgur Tunceli<sup>2</sup>, David Kern<sup>2</sup>, Ned Pethick<sup>1</sup>, Hanaa Elhefni<sup>1</sup>, Catrin Wessman<sup>1</sup>, Siting Zhou<sup>2</sup> and Setareh Williams<sup>1</sup>, <sup>1</sup>AstraZeneca, <sup>2</sup>HealthCore

**396 Parental Education On Asthmatic Severity in the Emergency Department and Primary Care Follow-up Rates**

**Kelli W. Williams, MD, MPH**, Carolyn Word, MD, Maria R.

SUNDAY

Streck, MD and M. Olivia Titus, MD, Medical University of South Carolina, Charleston, SC

## Immunotherapy II

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Sunday, February 24th, 2013, 9:45 AM - 10:45 AM

- 397 JTF-Recommended Allergen Dosing Used in Multi-Allergen Immunotherapy Induces Loss of Skin Test Reactivity**  
Michael Vaughn, MD, PhD, Alamo Asthma & Allergy, San Antonio, TX and Adrienne Vaughn, MD, Alamo Allergy & Asthma, San Antonio, TX
- 398 Switching From Monthly Intravenous to Biweekly Subcutaneous Immunoglobulin: A Pharmacokinetic Modeling and Simulation Approach**  
Mikhail Rojavin, PhD, Clinical Research and Development, CSL Behring LLC, King of Prussia, PA, Cornelia Landersdorfer, Centre for Medicine Use and Safety, Monash University, Parkville, Australia, Martin Bexon, MD, CSL Behring AG, Bern 22, Switzerland, Marc Pfister, Quantitative Solutions, Inc., Bridgewater, NJ and Jagdev S. Sidhu, Clinical Pharmacology & Early Development, CSL Ltd, Parkville, Australia
- 399 The Role of Murine Myeloid Cells On Stimulation with Amino Acid Copolymers**  
Norio Kawamoto, MD, PhD<sup>1,2</sup>, Hidenori Ohnishi, MD, PhD<sup>1</sup>, Naomi Kondo, MD, PhD<sup>1</sup> and Jack Strominger, MD<sup>2</sup>, <sup>1</sup>Gifu University, Gifu, Japan, <sup>2</sup>Harvard University, Cambridge, MA
- 400 Berinert® (C1-Esterase Inhibitor Concentrate) Treatment Is Not Related to Prothrombotic Risk Based On Preclinical Efficacy and Safety Investigations**  
Eva Herzog, Daniel Schuermann, Elmar Raquet, Sabine Zollner and Ingo Pragst, CSL Behring GmbH, Marburg, Germany
- 401 Depigmented-Polymerized and Native Extracts of Birch Pollen Exhibit Different IgG Epitopes Specific to Bet v 1 and Bet v 2**  
Jerónimo Carnés, M<sup>a</sup> Angeles López Matas, M<sup>a</sup> Teresa Gallego, Tamara Aranda, María Morales, José Ramón Leonor and Victor Miguel Iraola, Laboratorios LETI, S.L., Tres Cantos, Spain
- 402 Enzymatic Activity of Grass Native Allergenic Extracts Is Eliminated in Depigmented Allergoids**  
Victor Miguel Iraola, José Ramón Leonor, María Morales, M<sup>a</sup> Angeles López Matas, M<sup>a</sup> Teresa Gallego and Jerónimo Carnés, Laboratorios LETI, S.L., Tres Cantos, Spain
- 403 Characterizing the 12 Amb a 1-U Ragweed Allergy Immunotherapy Tablet Adverse Event Profile in Adults with Ragweed-Induced Allergic Rhinoconjunctivitis**  
Jennifer Maloney, MD<sup>1</sup>, Gary D. Berman, MD, FAAAAI<sup>2</sup>, David I. Bernstein, MD, FAAAAI<sup>3,4</sup>, Bobby Q. Lanier, MD, FAAAAI<sup>5</sup>, Amarjot Kaur, PhD<sup>1</sup>, Nancy Liu, PhD<sup>6</sup> and Hendrik Nolte, MD, PhD<sup>1</sup>, <sup>1</sup>Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc, Whitehouse Station, NJ, <sup>2</sup>Allergy and Asthma Specialists, Minneapolis, MN, <sup>3</sup>University of Cincinnati, Cincinnati, OH, <sup>4</sup>Bernstein Clinical Research Center, LLC, Cincinnati, OH, <sup>5</sup>North TX Institute for Clinical Trials, Fort Worth, TX, <sup>6</sup>Merck, Whitehouse Station, NJ
- 404 Prevalence of IgE Specific to Profilin in a Texas and California Population**  
Greg A. Plunkett, PhD<sup>1</sup>, Domingo Barber, PhD<sup>2</sup>, Eliseo M. Villalobos, MD, FAAAAI<sup>3</sup>, Joshua S. Jacobs, MD<sup>4</sup>, Jeffrey S. Hallett, MD, FAAAAI<sup>5</sup>, Tara Mostofin<sup>4</sup>, Agustin Galan Nieto<sup>2</sup> and Tricia Moore<sup>1</sup>, <sup>1</sup>ALK-Abelló, Inc, Round Rock, TX, <sup>2</sup>ALK-Abelló, Madrid, Spain, <sup>3</sup>Allergy Institute of San Antonio, PA, San Antonio, TX, <sup>4</sup>Allergy and Asthma Medical Group of the Bay Area, Walnut Creek, CA, <sup>5</sup>Jeffery Hallett, Round Rock, TX

## 405 Safety of Ragweed Allergy Immunotherapy Tablet: Results From Four Placebo-Controlled Trials

Hendrik Nolte, MD, PhD<sup>1</sup>, Peter Creticos, MD, FAAAAI<sup>2</sup>, Gary D. Berman, MD, FAAAAI<sup>3</sup>, Amarjot Kaur, PhD<sup>1</sup>, Nancy Liu, PhD<sup>4</sup>, Jacques Hebert, MD<sup>5</sup>, David I. Bernstein, MD, FAAAAI<sup>6,7</sup> and Jennifer Maloney, MD<sup>1</sup>, <sup>1</sup>Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc, Whitehouse Station, NJ, <sup>2</sup>Johns Hopkins University School of Medicine, Baltimore, MD, <sup>3</sup>Allergy and Asthma Specialists, Minneapolis, MN, <sup>4</sup>Merck, Whitehouse Station, NJ, <sup>5</sup>Centre de Recherche Applique en Allergie de Quebec, Quebec City, QC, Canada, <sup>6</sup>University of Cincinnati, Cincinnati, OH, <sup>7</sup>Bernstein Clinical Research Center, LLC, Cincinnati, OH

## 406 Immunological Characterization of Patients with Systemic and Localized Seminal Plasma Hypersensitivity

Debajyoti Ghosh, PhD, University of Cincinnati College of Medicine, Cincinnati, OH and Jonathan A. Bernstein, MD, University of Cincinnati Medical Center, Cincinnati, OH

## Rhinitis/Conjunctivitis I

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Sunday, February 24th, 2013, 9:45 AM - 10:45 AM

## 407 Lifestyle Risk Factors for Allergic Rhinitis in Schoolchildren: Are Sports Activities a Negative Factor?

Jiro Takeuchi, MD<sup>1,2,3</sup>, Takashi Kusunoki, MD, PhD<sup>1,4</sup>, Takeshi Morimoto, MD, PhD<sup>1,5</sup>, Mio Sakuma, MD, PhD<sup>1,5</sup>, Kumiko Mukaida, MD, PhD<sup>1,4,6</sup>, Takahiro Yasumi, MD, PhD<sup>1,7</sup>, Ryuta Nishikomori, MD, PhD<sup>1,7</sup> and Toshio Heike, MD, PhD<sup>1,7</sup>, <sup>1</sup>Shiga LAKE Study Group, Japan, <sup>2</sup>Osaka Saiseikai Nakatsu Hospital, Osaka, Japan, <sup>3</sup>Kyoto University Health Service, Kyoto, <sup>4</sup>Department of Pediatrics, Shiga Medical Center for Children, Shiga, Japan, <sup>5</sup>Center for General Internal Medicine and Emergency Care, Kinki University School of Medicine, Osaka, Japan, <sup>6</sup>Kumiko Allergy Clinic, Kyoto, Kyoto, Japan, <sup>7</sup>Department of Pediatrics, Graduate School of Medicine, Kyoto University, Kyoto, Japan

## 408 Fluticasone Furoate Decreases Nasal Eosinophilic Inflammation by Inhibiting Both Cytokine Secretion From Nasal Mucosal Epithelial Cells Cytokine Secretion and Eosinophil Survival

Jordi Roca-Ferrer, PhD<sup>1</sup>, Laura Pujols, PhD<sup>1</sup>, Maria Perez, MS<sup>1</sup>, Mireya Fuentes, MS<sup>1</sup>, Francisco de Borja Callejas, MS<sup>1</sup>, Isam Alobid, MD, PhD<sup>1,2</sup>, Antonio Valero, MD, PhD<sup>1,3</sup>, Cesar Picado, MD, PhD<sup>1,3</sup> and Joaquim Mullol, MD, PhD, FAAAAI<sup>1,2</sup>, <sup>1</sup>IDIBAPS, Barcelona, Spain, <sup>2</sup>HOSPITAL CLINIC. Unitat de Rinologia i Clínica de l'Olfacte, Servei d'Otorrinolaringologia, Barcelona, Spain, <sup>3</sup>HOSPITAL CLINIC. Servei de Pneumologia i Alergia Respiratoria, Barcelona, Spain

## 409 Improvement of Nasal Congestion and Sleep Quality Following Once-Daily Treatment with Beclomethasone Dipropionate Nasal Aerosol in Patients with Seasonal Allergic Rhinitis

Eli O. Meltzer, MD, FAAAAI<sup>1</sup>, Julius H. Van Bavel, MD<sup>2</sup>, Gordon Raphael, MD<sup>3</sup>, Paul H. Ratner, MD, FAAAAI<sup>4</sup>, Yu Ding<sup>5</sup> and Sudeesh Tantry, PhD<sup>5</sup>, <sup>1</sup>Allergy and Asthma Medical Group & Research Center, San Diego, CA, <sup>2</sup>Isis Clinical Research, Austin, TX, <sup>3</sup>Gordon D. Raphael, Bethesda, MD, <sup>4</sup>Sylvania Research, San Antonio, TX, <sup>5</sup>Teva Branded Pharmaceutical Products R&D, Inc.

## 410 Tear Meniscus Height by Optical Coherence Tomography (OCT) and Ocular Itch

Milton M. Hom, OD FFAO, Private Practice, Azusa, CA, Andrew Nguyen, PhD, California State University, Fullerton, Fullerton, CA and Leonard Bielory, MD, FAAAAI, Robert Wood Johnson University Hospital, New Brunswick, NJ; Rutgers University, New Brunswick, NJ; STARx Allergy and Asthma Center, Springfield, NJ

## 411 Relationship Between ARIA and ISAAC Questionnaires Regarding to the Classification and Severity of Rhinitis in School Children

- Yuichi Adachi, MD, PhD<sup>1</sup>**, Koichi Yoshida, MD<sup>2</sup>, Toshiko Itazawa, MD, PhD<sup>1</sup>, Yukihiro Ohya, MD, PhD<sup>3</sup>, Hiroshi Odajima, MD, PhD<sup>4</sup>, Akira Akasawa, MD, PhD<sup>2</sup> and Toshio Miyawaki, MD, PhD<sup>1</sup>, <sup>1</sup>Department of Pediatrics, University of Toyama, Toyama, Japan, <sup>2</sup>Division of Allergy, Tokyo Metropolitan Children's Medical Center, Tokyo, Japan, <sup>3</sup>Division of Allergy, National Center for Child Health and Development, Tokyo, Japan, <sup>4</sup>Department of Pediatrics, Fukuoka National Hospital, Japan
- 412 Baseline Challenge Responses During Repeated, Daily Controlled Exposures to Grass Pollen in the Environmental Exposure Unit (EEU)**  
**Lisa Steacy, BSc<sup>1</sup>**, Terry Walker, BA<sup>1</sup>, Barnaby Hobsbawn<sup>1</sup> and Anne K. Ellis, MD, MSc, FRCPC, FAAAAI<sup>1,2</sup>, <sup>1</sup>Allergy Research Unit, Kingston General Hospital, Kingston, ON, Canada, <sup>2</sup>Departments of Medicine and Biomedical & Molecular Science, Queen's University, Kingston, ON, Canada
- 413 Once-Daily Treatment with Beclomethasone Dipropionate Nasal Aerosol Provides Long-Term and Sustained 24-Hour Nasal Symptom Relief in Patients with Perennial Allergic Rhinitis**  
**Eric R. Schenkel, MD<sup>1</sup>**, William R. Lumry, MD, FAAAAI<sup>2</sup>, Harold B. Kaiser, MD, FAAAAI<sup>3</sup>, Gary D. Berman, MD, FAAAAI<sup>4</sup>, Yu Ding<sup>5</sup> and Sudeesh Tantry, PhD<sup>5</sup>, <sup>1</sup>Valley Clinical Research Center, Bethlehem, PA, <sup>2</sup>AARA Research Center, Dallas, TX, <sup>3</sup>Clinical Research Institute, Inc, Minneapolis, MN, <sup>4</sup>Clinical Research Institute, Inc., Plymouth, MN, <sup>5</sup>Teva Branded Pharmaceutical Products R&D, Inc.
- 414 Once-Daily Treatment with Beclomethasone Dipropionate Nasal Aerosol Effectively Improves the Symptom of Itchy Ear or Palate Associated with Seasonal Allergic Rhinitis**  
**Niran J. Amar, MD, FAAAAI**, Allergy Asthma Research Institute, Waco, TX, Frank Hampel, MD, Central Texas Allergy and Asthma, New Braunfels, TX, Paul H. Ratner, MD, FAAAAI, Sylvana Research, San Antonio, TX, Julius Van Bavel, MD, Isis Clinical Research, LLC, Austin, TX, Amy Melchior, MS, MT, Teva Branded Pharmaceutical Products R&D, Inc, Frazer, PA and Sudeesh Tantry, PhD, Teva Branded Pharmaceutical Products R&D, Inc.
- 415 Once-Daily Treatment with Beclomethasone Dipropionate Nasal Aerosol 320 µg Provides 24-Hour Nasal Symptom Relief in Patients with Seasonal Allergic Rhinitis**  
**Albert F. Finn Jr., MD, FAAAAI**, National Allergy, Asthma and Urticaria Center, Charleston, SC, Bruce Prenner, Allergy Associates Medical Group Inc., San Diego, CA, Robert A. Nathan, MD, FAAAAI, Asthma and Allergy Associates, Colorado Springs, CO, Michael Ruff, Dallas Allergy and Asthma Center, Dallas, TX, Leith Kelley, Teva Branded Pharmaceutical Products R&D, Inc., Frazer, PA and Sudeesh Tantry, PhD, Teva Branded Pharmaceutical Products R&D, Inc.
- 416 MP29-02 Provides Rapid and More Complete Nasal Symptom Relief Than Two First-Line Therapies: A Retrospective Analysis of a Randomized, Double-Blind, Placebo-Controlled Trial**  
**Warner E. Carr, MD**, Allergy and Asthma Associates of SC, Mission Viejo, CA, Julius Van Bavel, MD, Allergy and Asthma Research Associates, Austin, TX, Phillip Lieberman, MD, University of Tennessee College of Medicine, Frank Hampel, MD, Central Texas Health Research, Eli O. Meltzer, MD, FAAAAI, Allergy and Asthma Medical Group & Research Center, San Diego, CA and Paul H. Ratner, MD, FAAAAI, Sylvana Research, San Antonio, TX

## Mast Cells, Basophils and IGE

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Sunday, February 24th, 2013, 9:45 AM - 10:45 AM

- 417 Diagnostic Agreement of Different IgE Assay Methods, Immunocap and 'Extended Range' Immulite 2000 3gAllergy in**

## Japanese School Age Children

**Mari Kondo<sup>1</sup>**, Mayumi Sugimoto, MD<sup>2</sup>, Keigo Kainuma, MD<sup>3</sup>, Reiko Tokuda<sup>2</sup>, Mizuho Nagao, MD<sup>2</sup> and Takao Fujisawa, MD, FAAAAI<sup>3</sup>, <sup>1</sup>Mie National Hospital, Tsu, Japan, <sup>2</sup>Mie National Hospital, <sup>3</sup>Mie National Hospital, Mie, Japan

- 418 Establishment of the Hermansky Pudlak Mastocyte (HPM) Cell Line Which Has the HPSI 16-Bp Duplication (c.1470\_1486dup16)**  
**Arnold Kirshenbaum, MD, FAAAAI<sup>1</sup>**, Avanti Desai, MS<sup>2</sup>, Geethani Bandara, PhD<sup>2</sup>, Glenn Cruse, PhD<sup>2</sup>, Elizabeth Fischer, PhD<sup>2</sup>, Alasdair M. Gilfillan, PhD<sup>2</sup>, William Gahl, MD, PhD<sup>3</sup> and Dean D. Metcalfe, MD, FAAAAI<sup>2</sup>, <sup>1</sup>Laboratory of Allergic Diseases, NIAID, NIH, Bethesda, MD, <sup>2</sup>Laboratory of Allergic Diseases, NIAID, NIH, <sup>3</sup>NHGRI, NIH
- 419 Elevated Presence of Basophils in Chronic Rhinosinusitis with Nasal Polyposis**  
**Mahboobeh Mahdavinia, MD, PhD<sup>1</sup>**, Kathryn E. Hulse, PhD<sup>1</sup>, Roderick Carter, BSc<sup>2</sup>, James Norton, MS<sup>2</sup>, Lydia Suh, BSc<sup>3</sup>, Atsushi Kato, PhD<sup>1</sup>, Anju Peters, MD<sup>3</sup>, Rakesh Chandra, MD<sup>1</sup>, David Conley, MD<sup>1</sup>, Robert Kern, MD<sup>4</sup>, Bruce Tan, MD<sup>1</sup>, Leslie C. Grammer, MD, FAAAAI<sup>3</sup>, Lawrence B. Schwartz, MD, PhD, FAAAAI<sup>5</sup> and Robert P. Schleimer, PhD, FAAAAI<sup>2</sup>, <sup>1</sup>Northwestern University Feinberg School of Medicine, Chicago, IL, <sup>2</sup>Department of Medicine, Division of Allergy-Immunology, Northwestern University Feinberg School of Medicine, Chicago, IL, <sup>3</sup>Northwestern University Feinberg School of Medicine, Chicago, IL, <sup>4</sup>Northwestern University Feinberg School of Medicine, Chicago, IL, <sup>5</sup>Virginia Commonwealth University, Richmond, VA
- 420 Aspirin Augments IgE-Mediated Histamine Release From Human Peripheral Basophils Via Syk Kinase Activation**  
**Hiroaki Matsuo<sup>1</sup>**, Tomoharu Yokooji<sup>1</sup>, Hironobu Morita<sup>1</sup>, Mina Ooi<sup>1</sup>, Kana Urata<sup>1</sup>, Shunsuke Takahagi<sup>2</sup>, Kaori Ishii<sup>2</sup>, Yuhki Yanase<sup>2</sup>, Takaaki Hiragun<sup>2</sup>, Shoji Mihara<sup>2</sup> and Michihiro Hide<sup>2</sup>, <sup>1</sup>Department of Pathophysiology and Therapeutics, Graduate School of Biomedical and Health Sciences, Hiroshima University, Hiroshima, Japan, <sup>2</sup>Department of Dermatology, Graduate School of Biomedical and Health Sciences, Hiroshima University, Hiroshima, Japan
- 422 Genetic Variation of the Histamine Pathway in Subjects with Asthma**  
**Nikita Raje, MD, MBBS<sup>1,2</sup>**, Carrie A. Vyhldal, PhD<sup>1</sup>, Amanda K. Riffel<sup>1</sup>, Hongying Dai, PhD<sup>1</sup> and Bridgette L. Jones, MD, FAAAAI<sup>1</sup>, <sup>1</sup>Children's Mercy Hospital & Clinics, Kansas City, MO, <sup>2</sup>University of Missouri- Kansas City
- 423 The Mastocytosis Society Survey On Mast Cell Disorders: Patient Experiences and Perceptions**  
**Susan Jennings<sup>1</sup>**, Nancy C. Russell<sup>1</sup>, Blair Jennings<sup>1</sup>, Valerie Slee<sup>1</sup>, Lisa Sterling<sup>1</sup>, Mariana C. Castells, MD, PhD, FAAAAI<sup>2</sup>, Peter Valent<sup>3</sup> and Cem Akin, MD, PhD, FAAAAI<sup>2</sup>, <sup>1</sup>The Mastocytosis Society, Hastings, NE, <sup>2</sup>Brigham and Women's Hospital, Harvard Medical School, Boston, MA, <sup>3</sup>Medical University of Vienna, Vienna, Austria
- 424 Mast Cell Activation Syndrome Associated with Elevation in Serum Tryptase or 24-Hour Urine 11β-Prostaglandin- F<sub>2α</sub>**  
**Anupama Ravi, MD**, Joseph H. Butterfield, MD, FAAAAI and Catherine R. Weiler, MD, PhD, FAAAAI, Mayo Clinic, Rochester, MN
- 425 Exploring an Inhibitory Role for Basophils in Atopic Dermatitis**  
**Rachana Agrawal, PhD**, Julia Wisniewski, MD and Judith A. Woodfolk, MBChB, PhD, FAAAAI, University of Virginia, Charlottesville, VA
- 426 Loss of Cell Surface Siglec-8 Expression Following Its Engagement On Human Mast Cells**  
**Adriano N. Salicru, MD, PhD<sup>1</sup>**, Sherry Hudson, MS<sup>1</sup>, John W. Steinke, PhD, FAAAAI<sup>2</sup>, Larry Borish, MD, FAAAAI<sup>2</sup> and Bruce S. Bochner, MD, FAAAAI<sup>1</sup>, <sup>1</sup>Department of Medicine, Division of Allergy and Clinical Immunology, Johns Hopkins University

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School of Medicine, Baltimore, MD, <sup>2</sup>Asthma and Allergic Disease Center, Carter Center for Immunology Research, University of Virginia, Charlottesville, VA

- 427 **Rhinovirus Specific IgE Can Be Detected in Human Sera**  
**Jonathan Tam, MD<sup>1</sup>**, William Jackson, PhD<sup>1</sup>, David Proud, PhD<sup>2</sup> and Mitchell H. Grayson, MD, FAAAAI<sup>1</sup>, <sup>1</sup>Medical College of Wisconsin, Milwaukee, WI, <sup>2</sup>University Of Calgary, Calgary, AB, Canada
- 428 **Comparative Studies On the Allergenicity of Native Ovalbumin and Ovomuroid in Biological and Serologic Assays**  
**Na Sun<sup>1</sup>**, Huilian Che, MD<sup>1,2</sup>, Cui Zhou<sup>1</sup>, Jing Wang<sup>1</sup> and Kunlun Huang<sup>1,2</sup>, <sup>1</sup>College of Food Science and Nutritional Engineering, China Agricultural University, Beijing, China, <sup>2</sup>The Supervision, Inspection and Testing Center of Genetically Modified Organisms, Ministry of Agriculture, Beijing, China
- 429 **Evidence for a Role of IgE in Altered Basophil Phenotypes in Peanut Allergic Adults**  
**Emily C. McGowan, MD<sup>1</sup>**, Patricia M. Sterba, MS<sup>2</sup>, John-Paul Courneya, MS<sup>3</sup>, Jessica Rabe Savage, MD, MHS<sup>4</sup>, Robert A. Wood, MD, FAAAAI<sup>4</sup> and Sarbjit S. Saini<sup>5</sup>, <sup>1</sup>Johns Hopkins University, Baltimore, MD, <sup>2</sup>Johns Hopkins University, Mount Airy, MD, <sup>3</sup>Johns Hopkins Hospital, Baltimore, MD, <sup>4</sup>Johns Hopkins University School of Medicine, Baltimore, MD, <sup>5</sup>Johns Hopkins, Baltimore, MD
- 430 **IgE Anti-Hepatitis B Surface Antigen Antibodies Detected in Serum From Inner City Serum IgE Positive Asthmatic and Serum IgE Negative Nonasthmatic Children**  
**Elizabeth Tam, BS<sup>1</sup>**, Kevin Norowitz, MD<sup>2</sup>, Kobbkul Chotikanatis, MD<sup>1</sup>, Helen G. Durkin, PhD<sup>1</sup>, Martin H. Bluth, MD, PhD<sup>3</sup>, Stephan A. Kohlhoff, MD<sup>1</sup> and Tamar A. Smith-Norowitz, PhD<sup>1</sup>, <sup>1</sup>SUNY Downstate Medical Center, Center for Allergy and Asthma Research, Brooklyn, NY, <sup>2</sup>SUNY Downstate Medical Center, Center for Allergy and Asthma Research, <sup>3</sup>Wayne State University Medicine, Detroit, MI
- 431 **Soybean Isoflavones Suppress Basophil Degranulation in Vitro in Subjects with Food Allergy**  
**Mohanapriya Kamalakannan, MS<sup>1</sup>**, Matthew Stadler<sup>1</sup>, Hugh A. Sampson, MD, FAAAAI<sup>2</sup> and Madhan Masilamani, PhD<sup>2</sup>, <sup>1</sup>Mt. Sinai School of Medicine, New York, NY, <sup>2</sup>Mount Sinai School of Medicine, New York, NY
- 432 **Basophil Activation Following Cold Challenge in Patients with Cold-Induced Urticaria**  
**Hirsh D. Komarow, MD<sup>1</sup>**, Cameron Waites, BS<sup>1</sup>, Michael L. Young, RN, MPH<sup>2</sup>, Celeste Nelson, NP<sup>1</sup>, Sarah Arceo, RN<sup>1</sup> and Dean D. Metcalfe, MD, FAAAAI<sup>1</sup>, <sup>1</sup>NIH/NIAID/Laboratory of Allergic Diseases, Bethesda, MD, <sup>2</sup>SAICI-Frederick, Inc., Bethesda, MD
- 433 **Nanomaterials for Mast Cell and Basophil Stabilization Through Non-FcεRI Stimuli**  
**Anthony Dellinger<sup>1</sup>**, Brad Brooks<sup>2</sup>, Beverly Plunkett<sup>3</sup>, Becky M. Vonakis, PhD, FAAAAI<sup>3</sup>, Zhiguo Zhou<sup>2</sup> and Christopher L. Kepley, PhD, MBA, FAAAAI<sup>4</sup>, <sup>1</sup>Joint School of Nanoscience and Nanoengineering, <sup>2</sup>Luna Innovations, Danville, VA, <sup>3</sup>Johns Hopkins University School of Medicine, Baltimore, MD, <sup>4</sup>Joint School of Nanoscience and Nanoengineering, Greensboro, NC
- 434 **Mouse Mast Cell Protease 4 Mediates Epidermal Injury Through Targeted Disruption of Tight Junctions**  
**Lora Georgieva Bankova**, Maria Cecilia Lezcano, George F. Murphy, K. Frank Austen and Michael Gurish, Brigham and Women's Hospital/Harvard Medical School, Boston, MA
- 435 **Primary Human Mast Cells Possess the Ability to Endocytose Both Particulate and Fluid-Phase Antigens *In Vitro***  
**Brant Ward, MD, PhD**, Sahar Lotfi-Emran and Lawrence B. Schwartz, MD, PhD, FAAAAI, Virginia Commonwealth University, Richmond, VA
- 436 **Study the Effect of Methernal Factor On Cord Blood IgE**  
**Mohammad Fereidouni, MD, PhD**, Shaghayeghsadat Nourani

hasan kiade and Arefe Nami, Asthma, Allergy & Immunology Research Center, Birjand University of Medical Sciences, Iran

- 437 **Systemic Mastocytosis in the Elderly**  
**Joseph H. Butterfield, MD, FAAAAI** and Catherine R. Weiler, MD, PhD, FAAAAI, Mayo Clinic, Rochester, MN

## Eosinophils

3212

Sunday, February 24th, 2013, 9:45 AM - 10:45 AM

- 438 **The Development of Scleroderma in a Young Child Following Resolution of Hypereosinophilic Syndrome (HES)**  
**Ilisten Jones, MD<sup>1</sup>**, Bob Geng, MD<sup>1</sup> and Robert L. Roberts, MD, PhD<sup>2</sup>, <sup>1</sup>UCLA, Los Angeles, CA, <sup>2</sup>UCLA Medical Center, Los Angeles, CA
- 439 **Hypereosinophilic Syndrome Presenting As Acute Pancreatitis**  
**Manar Mohammad Abdalgani, MD** and Anne-Marie A. Irani, MD, FAAAAI, Virginia Commonwealth University Health Systems, Richmond, VA
- 440 **IL-5, GM-CSF, and FMLP-Stimulated Eosinophil Degranulation Is Inhibited by Olopatadine, but Not Other Drugs in the Same Class**  
**Ellen B. Cook, PhD<sup>1</sup>**, James Stahl, PhD<sup>1</sup>, Elizabeth Schwantes, BS<sup>1</sup>, Sameer K. Mathur, MD, PhD, FAAAAI<sup>1,2</sup> and Neal P. Barney, MD<sup>1</sup>, <sup>1</sup>University of Wisconsin School of Medicine and Public Health, Madison, WI, <sup>2</sup>William S. Middleton Veterans Hospital, Madison, WI
- 441 **Hypereosinophilic Syndrome and Thrombosis: A Retrospective Review**  
**Kara L. Wallace, PAC<sup>1</sup>**, Martha K. Elias, MD<sup>2</sup>, Joseph H. Butterfield, MD, FAAAAI<sup>1</sup> and Catherine R. Weiler, MD, PhD, FAAAAI<sup>1</sup>, <sup>1</sup>Mayo Clinic, Rochester, MN, <sup>2</sup>Dartmouth-Hitchcock Medical Center, Lebanon, NH
- 442 **Negative Regulation of Eosinophil Production by Toll-Like Receptors**  
**Patricia C. Fulkerson, MD, PhD<sup>1</sup>**, Kaila L. Schollaert, MS<sup>2</sup> and Marc E. Rothenberg, MD, PhD, FAAAAI<sup>2</sup>, <sup>1</sup>Allergy and Immunology, Cincinnati Children's Hospital Medical Center, Cincinnati, OH, <sup>2</sup>Cincinnati Children's Hospital Medical Center, Cincinnati, OH
- 443 **Cytokine Expression in Eosinophilic Sinusitis: Prominent Role for Interferon- $\gamma$  in Aspirin-Exacerbated Respiratory Disease**  
**Larry Borish, MD, FAAAAI<sup>1</sup>**, Lixia Liu, MD<sup>2</sup>, Phillip Huyett, MD<sup>2</sup>, Julie Negri, B.S.<sup>2</sup>, Spencer Payne, MD<sup>2</sup> and John W. Steinke, PhD, FAAAAI<sup>1</sup>, <sup>1</sup>Asthma and Allergic Disease Center, Carter Center for Immunology Research, University of Virginia, Charlottesville, VA, <sup>2</sup>University of Virginia, Charlottesville, VA
- 444 **CLC3 Transcript Variants in the Activation and Migration of Eosinophils in Allergic Asthmatics**  
**Rohit Gaurav<sup>1</sup>**, Min-Jung Kim<sup>1</sup>, Agairndra Bewtra<sup>2</sup> and Devendra K. Agrawal<sup>1</sup>, <sup>1</sup>Center for Clinical and Translational Science and Department of Biomedical Sciences, Creighton University School of Medicine, Omaha, NE, <sup>2</sup>Department of Medicine, Division of Allergy and Immunology, Creighton University Medical Center, Omaha, NE
- 445 **Eosinophils Through the CXCR4 Chemokine Receptor**  
**Christof Straub**, University of Texas Medical Branch, Galveston, TX, Konrad Pazdrak, MD, PhD, Univ. of TX Medical Branch, Galveston, TX and Alexander Kurosky, PhD, University of Texas Medical Branch, League City, TX
- 446 **Correlations Between Eosinophil Markers in Allergic Disorders**  
**Mahsheed Taeb, DO<sup>1</sup>**, Katrina Elio, DO<sup>1</sup> and Oral Alpan, MD<sup>2,3</sup>, <sup>1</sup>Inova Fairfax Hospital, <sup>2</sup>Amerimmune, LLC, VA, <sup>3</sup>O&O ALPAN, LLC

## AH Sunday Oral Abstract Luncheon

3520

Sunday, February 24th, 2013, 12:15 PM - 1:30 PM

- 447 Effect of Sensitization and Exposure to Mold On Asthma Morbidity in Inner-City Children**  
**Jean Curtin-Brosnan, MA<sup>1</sup>**, Patrick J. Lenehan<sup>2</sup>, Patrick Breyse, PhD<sup>3</sup>, Gregory B. Diette, MD, MHS<sup>1</sup> and Elizabeth Matsui, MD<sup>1,4</sup>, <sup>1</sup>Johns Hopkins University, Baltimore, MD, <sup>2</sup>Johns Hopkins University, <sup>3</sup>Johns Hopkins School of Public Health, <sup>4</sup>Johns Hopkins University School of Medicine, Baltimore, MD
- 448 Evaluation of the Animated Cartoon-Aided Teaching of Intranasal Corticosteroid Administration Technique Among Thai Children with Allergic Rhinitis**  
**Somying Indradat, MD**, Siriraj hospital, Mahidol University, Thailand
- 449 Change in Food Allergy Attitudes Among Urban Public School Nurses After a Standardized Educational Curriculum**  
**Humaira Robinson, RN, BSN<sup>1</sup>**, Sarah Twichell, MD, MPH<sup>1</sup>, Eleanor Garrow, BHA<sup>2</sup>, Maria L. Acebal, JD<sup>2</sup> and Hemant P. Sharma, MD, MHS, FAAAAI<sup>1</sup>, <sup>1</sup>Children's National Medical Center, Division of Allergy and Immunology, Washington, DC, <sup>2</sup>Food Allergy & Anaphylaxis Network, Fairfax, VA
- 450 Both Bronchodilator Reversibility and FEV1/FVC, but Neither FEV1 Nor FEF25-75, Are Predictors of Future Acute Visits Among Urban Children and Adolescents with Persistent Asthma**  
**Mary Jane C. Ong**, Johns Hopkins University, Meredith C. McCormack, MD, Johns Hopkins Pulmonary, Baltimore, MD, Gregory B. Diette, MD, MHS, Johns Hopkins University, Baltimore, MD, Patrick Breyse, PhD, Johns Hopkins School of Public Health and Elizabeth Matsui, MD, Johns Hopkins University School of Medicine, Baltimore, MD
- 451 Circumstances of Medically Unadvised Purposeful Exposure to Food Allergens in an Observational Study (Consortium of Food Allergy Research, COFAR)**  
**Kim E. Mudd, RN MSN CCRP**, Johns Hopkins University, Baltimore, MD, Jill Ellingson, Department of Pediatrics, National Jewish Health, Denver, CO, Phyllis Mayfield, University of Arkansas for Medical Sciences, Pediatric Allergy and Immunology Arkansas, Children's Hospital, Little Rock, AR, Lisa P. Talarico, RN MS, Mount Sinai School of Medicine, New York, NY, Janet S. Kamilaris, RN, Division of Pediatric Allergy and Immunology University of North Carolina, Chapel Hill, NC and Scott H. Sicherer, MD, FAAAAI, Mt. Sinai School of Medicine, New York, NY

## Asthma Epidemiology

3601

Sunday, February 24th, 2013, 3:00 PM - 4:15 PM

- 452 United States Asthma Hospitalization Rates in the 21st Century Show a Peak Female Predominance in the 5th and 6th Decades of Life**  
**Robert Yao-Wen Lin, FAAAAI<sup>1,2,3</sup>**, William Liao<sup>1</sup> and Rong Ji, MD<sup>1</sup>, <sup>1</sup>New York Downtown Hospital, New York, NY, <sup>2</sup>New York Medical College, Valhalla, NY, <sup>3</sup>Weill Cornell Medical College, New York, NY
- 453 Comparison of Prepubertal Gender Differences in Pulmonary Physiologic Outcome Measures**  
**Amy Lynn O'Brian, MD<sup>1</sup>**, Daniel J. Jackson, MD<sup>2</sup>, Michael D. Evans, MS<sup>1</sup>, Sean Fain<sup>3</sup>, Ronald Sorkness, PhD<sup>3</sup>, James Gern, MD, FAAAAI<sup>1</sup> and Robert F. Lemanske Jr., MD, FAAAAI<sup>1</sup>, <sup>1</sup>University of Wisconsin School of Medicine and Public Health, Madison, WI, <sup>2</sup>Pediatrics, University of Wisconsin School of Medicine

and Public Health, Madison, WI, <sup>3</sup>University of Wisconsin, Madison, WI

- 454 Estimated Prevalence and Economic Burden of Severe, Uncontrolled Asthma in the United States**  
**Cheryl S. Hankin, PhD<sup>1</sup>**, Amy Bronstone, PhD<sup>1</sup>, Zhaohui Wang, MS<sup>1</sup>, Mary Buatti Small<sup>2</sup> and Philip Buck, PhD, MPH<sup>2</sup>, <sup>1</sup>BioMedE-con, LLC, Moss Beach, CA, <sup>2</sup>Teva Pharmaceuticals, Inc., Frazer, PA
- 455 Factors Associated with Asthma Readmissions in Children in Rural Wisconsin**  
**Ejaz Yousef, MD, FAAAAI<sup>1,2</sup>**, Diane Kessler, MS<sup>1</sup> and Gerald A. Bucholtz, MD<sup>1</sup>, <sup>1</sup>Marshfield Clinic, Marshfield, WI, <sup>2</sup>St Joseph Hospital
- 456 Older Adults with Asthma: Comparisons of Those with Long-Standing Asthma to Those with Late Onset Asthma**  
**Alan P. Baptist, MD, MPH**, University of Michigan, Division of Allergy, Ann Arbor, MI, Jacqueline A. Ross, MD, University of Michigan, Ann Arbor, MI and Noreen Clark, PhD, Center for Managing Chronic Disease, University of Michigan, Ann Arbor, MI

## Dendritic Cells

3602

Sunday, February 24th, 2013, 3:00 PM - 4:15 PM

- 457 Dendritic Cells From X-Linked Hyper-IgM Patients Present Impaired Responses to Candida Albicans and Paracoccidioides Brasiliensis That Can Be Reversed by Exogenous Soluble CD40L**  
**Otavio C. Marques<sup>1</sup>**, Christina Arslanian<sup>2</sup>, Rodrigo N. Ramos<sup>2</sup>, Mariana M. Marques<sup>2</sup>, Lena F. Schimke<sup>3</sup>, Paulo V.S. Pereira<sup>2</sup>, Sonia Jancar<sup>2</sup>, Janaira F. S. Ferreira<sup>4</sup>, Cristina W. Weber<sup>5</sup>, Gisele Kunze<sup>6</sup>, Nelson Augusto Rosario-Filho<sup>7</sup>, Beatriz C. Carvalho<sup>8</sup>, Patricia C. Bergami-Santos<sup>2</sup>, Mary J. Hackett<sup>9</sup>, Hans D. Ochs<sup>9</sup>, Troy R. Torgerson<sup>9</sup>, José Alexandre M. Barbuto<sup>2,10</sup> and Antonio Condino-Neto<sup>2,10</sup>, <sup>1</sup>Institute of Biomedical Sciences, Department of Immunology, University of São Paulo, Sao Paulo, Brazil, São Paulo, Brazil, <sup>2</sup>University of São Paulo, <sup>3</sup>Institute of Biomedical Sciences, Department of Immunology, University of São Paulo, Sao Paulo, Brazil, <sup>4</sup>Albert Sabin Hospital, <sup>5</sup>Pediatric and Immunology Clinic, RS, <sup>6</sup>Pequeno Principe Hospital, <sup>7</sup>Federal University of Paraná, <sup>8</sup>Federal University of São Paulo, <sup>9</sup>University of Washington, <sup>10</sup>\*Contributed Equally
- 458 Molecular Mechanisms Involved in Dendritic Cell-Dependent Regulatory T Cell Generation During Immunotherapy**  
**Marco A. Garcia**, Stanford University, Mountain View, CA and Kari Nadeau, MD, PhD, FAAAAI, Stanford University School of Medicine
- 459 Human Dendritic Cells Stimulated with a Novel Peanut Protein Express High Levels of RALDH2 and Induce RA-Sensitive Genes in Naive T Cells**  
**Bert Ruiter, PhD<sup>1</sup>**, Galina Grishina, MSc<sup>2</sup>, Stans den Hartog Jager, BSc<sup>3</sup>, Edward F. Knol, PhD<sup>3</sup>, Peggy Ozias-Akins, PhD<sup>4</sup>, Hugh A. Sampson, MD, FAAAAI<sup>2</sup> and Wayne G. Shreffler, MD, PhD, FAAAAI<sup>1</sup>, <sup>1</sup>Massachusetts General Hospital, Boston, MA, <sup>2</sup>Mount Sinai School of Medicine, New York, NY, <sup>3</sup>University Medical Center, Utrecht, Netherlands, <sup>4</sup>University of Georgia, Tifton, GA
- 460 The C-Lectin Receptor Dendritic Cell Immunoreceptor (DCIR) Mediates the Tolerogenic Effects of Intravenous Immunoglobulin in Pulmonary Inflammation**  
**Amir Hossein Massoud<sup>1,2</sup>**, Aidan Ablona<sup>2,3</sup>, Gabriel N. Kaufman, MSc<sup>4</sup>, Ciro Piccirillo, PhD<sup>5</sup> and Bruce D. Mazer, MD, FAAAAI<sup>2,6</sup>, <sup>1</sup>McGill University Health Center, <sup>2</sup>Meakins-Christie Laboratories, Montreal, QC, Canada, <sup>3</sup>McGill University, <sup>4</sup>McGill University,

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Montreal, QC, Canada, <sup>5</sup>McGill University Health Centre, Canada, <sup>6</sup>Montreal Children's Hospital, Montreal, QC, Canada

**461 Aspergillus Fumigatus (Af) Induced Airway Epithelial Accumulation and Decreased Lymph Node Homing of Myeloid Dendritic Cells (DC) in the Lung of Mice with Chronic Granulomatous Disease (CGD)**

**Lisa R. Forbes, MD<sup>1</sup>**, Akshit Gupta<sup>2</sup>, Blerian Kolkalari<sup>2</sup>, Imre Redai<sup>3</sup> and Angela Haczku, MD, PhD, FAAAAI<sup>3</sup>, <sup>1</sup>Baylor College of Medicine, Texas Children's Hospital, Houston, TX, <sup>2</sup>University of Pennsylvania, <sup>3</sup>University of Pennsylvania, Philadelphia, PA

**Corinne Keet, MD, MS<sup>1</sup>**, Shannon Seopaul, BS<sup>2</sup>, Sarah D. Knorr, RN, MPH, CCRP<sup>2</sup>, Satya Narisety, MD<sup>2</sup>, Justin M. Skripak, MD<sup>3</sup> and Robert A. Wood, MD, FAAAAI<sup>4</sup>, <sup>1</sup>Pediatrics, Johns Hopkins University School of Medicine, Baltimore, MD, <sup>2</sup>Johns Hopkins University School of Medicine, <sup>3</sup>ENT & Allergy Associates, Hoboken, NJ, <sup>4</sup>Johns Hopkins University School of Medicine, Baltimore, MD

**468 Tolerance Induction in an Interim Analysis of Peanut Sublingual Immunotherapy**

**Edwin Kim, MD, MS<sup>1</sup>**, Stacy Chin, MD<sup>2</sup>, Pamela H. Steele, MSN, CPNP, AE-C<sup>1</sup>, Janet S. Kamilaris, RN<sup>1</sup>, Nikolas Kamilaris<sup>1</sup>, Caitlin Burk<sup>1</sup>, Brian P. Vickery, MD<sup>1</sup>, Michael D. Kulis Jr., PhD<sup>1</sup> and A. Wesley Burks, MD, FAAAAI<sup>1</sup>, <sup>1</sup>University of North Carolina at Chapel Hill, Chapel Hill, NC, <sup>2</sup>FDA/CDER, Washington, DC

**469 Basophil Activation Test Discriminates Between Allergy and Tolerance Among Peanut Sensitized Children**

**Alexandra F. Santos, MD, MSc<sup>1,2</sup>**, Natalia Bécares, BSc<sup>1</sup>, Shih-Ying Wu, MSc<sup>1</sup>, Suzana Radulovic, MD<sup>2</sup>, Alick Stephens, PhD<sup>1</sup>, Victor Turcanu, PhD<sup>1</sup>, George Du Toit, MD, FAAAAI<sup>2</sup> and Gideon Lack, MD, FRCPC<sup>1,2</sup>, <sup>1</sup>King's College London, London, United Kingdom, <sup>2</sup>St Thomas' Hospital, London, United Kingdom

**470 Low-Dose Oral Immunotherapy As an Early Intervention Strategy for Peanut Allergy**

**Brian P. Vickery, MD**, Pamela H. Steele, MSN, CPNP, AE-C, Janet S. Kamilaris, RN, Caitlin Burk, Nikolas Kamilaris, Michael D. Kulis Jr., PhD and A. Wesley Burks, MD, FAAAAI, University of North Carolina at Chapel Hill, Chapel Hill, NC

**471 Development of Tolerance Following Peanut Immunotherapy Is Associated with Basophil Hyporesponsiveness and Low Peanut-IgE:IgG4 Ratio**

**Michael D. Kulis Jr., PhD**, Rishu Guo, PhD, Edwin Kim, MD, MS, Brian P. Vickery, MD and A. Wesley Burks, MD, FAAAAI, University of North Carolina at Chapel Hill, Chapel Hill, NC

## Mother and Child: Prevention and Disease

3603

Sunday, February 24th, 2013, 3:00 PM - 4:15 PM

**462 Maternal Vitamin D Status During Pregnancy and Asthma in the Offspring Among Participants in the Norwegian Mother and Child Cohort Study**

**Maria C. Magnus, MPH<sup>1</sup>**, Per Nafstad, MD, PhD<sup>1,2</sup>, Lars Christian Stene, PhD<sup>1</sup>, Siri Eldevik Häberg, MD, PhD<sup>1</sup>, Stephanie J. London, MD, DrPH<sup>3</sup>, Hein Stigum, PhD<sup>4</sup> and Wenche Nystad, PhD<sup>1</sup>, <sup>1</sup>Norwegian Institute of Public Health, Oslo, Norway, <sup>2</sup>University of Oslo, Oslo, Norway, <sup>3</sup>NIEHS, Research Triangle Park, NC, <sup>4</sup>Norwegian Institute of Public Health, Oslo, Norway

**463 Maternal Probiotic Intake and Respiratory and Allergy Outcomes in Early Childhood**

**Randi J. Bertelsen<sup>1,2</sup>**, Anne Lise Brantsaeter<sup>3</sup>, Margaretha Hauge<sup>1</sup>, Helle Margrethe Meltzer<sup>1</sup> and Stephanie J. London, MD, DrPH<sup>4</sup>, <sup>1</sup>Norwegian Institute of Public Health, Oslo, Norway, <sup>2</sup>National Institute of Environmental Health Sciences (NIEHS/NIH), Research Triangle Park, NC, <sup>3</sup>Norwegian Institute of Public Health, Oslo, Norway, <sup>4</sup>NIEHS, Research Triangle Park, NC

**464 Potential Role for IFN $\gamma$  in Promoting Asthma After Prenatal Exposure to BPA**

**Terumi Midoro-Horiuti, MD, PhD, FAAAAI<sup>1</sup>**, Xiang Zhang, PhD<sup>2</sup>, Yoichi Nakajima, MD, PhD<sup>1</sup>, Yueqing Zhang, BS<sup>1</sup>, Deepthi Kolli, PhD<sup>1</sup>, Shuk-Mei Ho, PhD<sup>2</sup> and Randall M. Goldblum, MD<sup>1</sup>, <sup>1</sup>University of Texas Medical Branch, Galveston, TX, <sup>2</sup>University of Cincinnati, Cincinnati, OH

**465 The Impact of Caesarian Section On the Relationship Between Inhaled Allergen Exposure and Allergen-Specific IgE At Age 2 Years**

**Christine Cole Johnson, PhD, MPH, FAAAAI<sup>1</sup>**, Suzanne Havstad, MA<sup>2</sup>, Dennis Ownby, MD<sup>3</sup>, Ganesa Wegienka, PhD<sup>2</sup> and Edward M. Zoratti, MD, FAAAAI<sup>4</sup>, <sup>1</sup>Henry Ford Hospital & Health System, Detroit, MI, <sup>2</sup>Department of Public Health Sciences, Henry Ford Hospital, Detroit, MI, <sup>3</sup>Georgia Health Sciences University, Augusta, GA, <sup>4</sup>Division of Allergy and Clinical Immunology, Henry Ford Hospital, Detroit, MI

**466 Does Presence of Animals in the Home Increase the Risk of Sensitization to the Same Animals?**

**Anusha Raj, K, Under grad Med student<sup>1</sup>**, Padukudru Mahesh, Prof of Medicine<sup>2</sup>, Amrutha D Holla, MBBS, DAA<sup>3</sup>, B.S Jayaraj, Prof of Medicine<sup>2</sup> and Pudupakkam Vedanthan, Clinical Professor Medicine<sup>4</sup>, <sup>1</sup>Mysore Medical College & Research Institute, Mysore, India, <sup>2</sup>JSS Medical college, Mysore, India, <sup>3</sup>Allergy, Asthma & Chest Centre, Mysore, India, <sup>4</sup>University of Colorado, Lakewood, CO

## Food Allergy

3604

Sunday, February 24th, 2013, 3:00 PM - 4:15 PM

**467 Long-Term Outcomes of Milk Oral Immunotherapy in Children**

## EGID

3605

Sunday, February 24th, 2013, 3:00 PM - 4:15 PM

**472 Antigen-Specific IL-13 Secretion in Children with Eosinophilic Esophagitis**

**Benedicte Michaud, MD<sup>1</sup>**, Diana Colson<sup>2</sup>, Pascale Soulaines<sup>2</sup>, Sophie Candon, MD, PhD<sup>1</sup>, Marie-Alexandra Alyanakian, MD, PhD<sup>3</sup>, Jocelyne Just, MD, PhD<sup>4</sup>, Lucienne Chatenoud, MD, PhD<sup>1</sup> and Christophe Dupont, MD, PhD<sup>5</sup>, <sup>1</sup>Universite Paris Descartes, Hôpital Necker-Enfants Malades, INSERM U1013, Paris, France, <sup>2</sup>Hôpital Necker, Enfants Malades, Université Paris V René Descartes (Paris, France), Paris, France, <sup>3</sup>Hopital Necker Enfants Malades, Laboratoire d'immunologie biologique, Paris, France, <sup>4</sup>Universite Pierre et Marie Curie, Hôpital Armand Trousseau, Centre de l'Asthme et des Allergies, Paris, France, <sup>5</sup>Université Paris V René Descartes, Paris, France

**473 Misregulation of Suppressors of Cytokine Signaling in Eosinophilic Esophagitis**

**Maria Paz Zafra<sup>1</sup>**, Nataly Cancelliere, MD<sup>2</sup>, Pablo Rodriguez Del Rio<sup>3</sup>, Monica Ruiz Garcia<sup>4</sup>, Laura Estevez<sup>1</sup>, Maria Victoria Andregnette<sup>5</sup>, Silvia Sanchez-Garcia<sup>3</sup>, Ana Fiandor<sup>6</sup>, Joaquin Sastre, MD, PhD, FAAAAI<sup>4</sup>, Santiago Quirce, MD, PhD<sup>7</sup>, Maria Dolores Ibañez<sup>3</sup> and Victoria Del Pozo, PhD<sup>5</sup>, <sup>1</sup>IIS-Fundación Jiménez Díaz, <sup>2</sup>University Hospital La Paz, Madrid, Spain, <sup>3</sup>Hospital Niño Jesus, <sup>4</sup>Fundacion Jimenez Diaz, Madrid, Spain, <sup>5</sup>IIS-Fundacion Jiménez Díaz, Madrid, Spain, <sup>6</sup>Hospital La Paz, <sup>7</sup>Hospital La Paz Institute for Health Research, Dept. of Allergy, Madrid, Spain

**474 Key Function of Cadherin-Like 26 in Eosinophilic Gastrointestinal Disorders**



**Julie M. Caldwell, PhD<sup>1</sup>**, Margaret Collins, MD<sup>2</sup>, Carine Blanchard, PhD<sup>3</sup>, Emily Stucke, BA<sup>1</sup>, Katherine Kemme, BS<sup>1</sup>, Lissa Amin, BA<sup>1</sup>, Philip Putnam, MD<sup>1</sup>, James Franciosi, MD<sup>4</sup>, Juan Pablo Pablo Abonia, MD<sup>1</sup> and Marc E. Rothenberg, MD, PhD, FAAAAI<sup>1</sup>, <sup>1</sup>Cincinnati Children's Hospital Medical Center, Cincinnati, OH, <sup>2</sup>Cincinnati Children's Hospital Medical Center, Cincinnati, OH, <sup>3</sup>Cincinnati Children Hospital, Cincinnati, OH, <sup>4</sup>Nemours Children's Hospital, Orlando, FL

**475 A Transforming Growth Factor Beta-1 Gene Single Nucleotide Polymorphism May Influence Phenotype in Pediatric Eosinophilic Esophagitis**

**Arjun Andrew Anilkumar, BS<sup>1,2</sup>**, Robert Newbury, MD<sup>3,4</sup>, Ranjan Dohil, MD<sup>4,5</sup>, James Mueller, BS<sup>1,4</sup>, Hal M. Hoffman, MD, FAAAAI<sup>1,4</sup>, David H. Broide, MB, ChB, FAAAAI<sup>1,2</sup> and Seema Sharma Aceves, MD, PhD, FAAAAI<sup>2,6,7</sup>, <sup>1</sup>Division of Allergy, Immunology, <sup>2</sup>Department of Medicine, <sup>3</sup>Division of Pathology, <sup>4</sup>Department of Pediatrics, <sup>5</sup>Division of Gastroenterology, UCSD, Rady Children's Hospital, San Diego, <sup>6</sup>Pediatrics, UCSD, La Jolla, CA, <sup>7</sup>UCSD, Department of Pediatrics, La Jolla, CA

**476 MMP-14 Is Elevated in Pediatric Subjects with Eosinophilic Esophagitis**

**Lisa Beppu, BS<sup>1,2</sup>**, Arjun Andrew Anilkumar, BS<sup>2,3</sup>, Ranjan Dohil, MD<sup>1,4</sup>, David H. Broide, MB, ChB, FAAAAI<sup>2,3</sup> and Seema Sharma Aceves, MD, PhD, FAAAAI<sup>3,5,6</sup>, <sup>1</sup>Department of Pediatrics, <sup>2</sup>Division of Allergy, Immunology, <sup>3</sup>Medicine, <sup>4</sup>Division of Gastroenterology, UCSD, Rady Children's Hospital, San Diego, <sup>5</sup>Pediatrics, UCSD, La Jolla, CA, <sup>6</sup>UCSD, Department of Pediatrics, La Jolla, CA

## Adherence and Asthma Treatment

3606

Sunday, February 24th, 2013, 3:00 PM - 4:15 PM

**477 Texting for Adherence to Asthma Medication in Adolescents**  
**Waqas Jehangir, MD**, Childrens Hospital of Michigan, Detroit, MI, Wafa Alame, RN, Childrens Hospital of Michigan, Detroit, MI, Elizabeth A. Secord, MD, FAAAAI, Wayne State University, Jenny M. Montejo, MD, Childrens Hospital of MI, Detroit, MI and Milind V. Pansare, MD, FAAAAI, Children's Hospital Of Michigan, Grosse Pointe Woods, MI

**478 The Use of Coping Peer Support and MP3 Technology to Improve Adherence to Inhaled Corticosteroids Among Low-Income Minority Adolescents**

**Giselle Mosnaim, MD, MS, FAAAAI<sup>1</sup>**, Hong Li, PhD<sup>2</sup>, Molly Martin, MD, MAPP<sup>2</sup>, Paula Jo Belice, MS<sup>2</sup>, Elizabeth Avery, MS<sup>2</sup>, Norman Ryan, MD<sup>2</sup>, Bruce G. Bender, PhD, FAAAAI<sup>3</sup> and Lynda Powell, PhD<sup>2</sup>, <sup>1</sup>Rush University Medical Center, Chicago, <sup>2</sup>Rush University Medical Center, Chicago, IL, <sup>3</sup>National Jewish Health, Denver, CO

**479 Adherence Risk Patterns in Adult Patients with Asthma in an Inner City Cohort Over a 25 Month Period**

**Edan Sarid, MD** and Rauno O. Joks, MD, FAAAAI, SUNY Downstate Medical Center, Center for Allergy and Asthma Research, Brooklyn, NY

**480 Association Between Medication Adherence Report Scale (MARS-5) and Asthma Outcomes in Inner City Children with Asthma**

**Seojin Yang<sup>1</sup>**, Mona G. Tsoukleris, PharmD<sup>1</sup>, Cassie Lewis-Land, MA<sup>2</sup>, Jennifer Walker, MS<sup>2</sup>, Mary E. Bollinger, DO<sup>3</sup> and Arlene Butz, RN, ScD<sup>2</sup>, <sup>1</sup>University of Maryland School of Pharmacy, Baltimore, MD, <sup>2</sup>Johns Hopkins University School of Medicine, Baltimore, MD, <sup>3</sup>University MD School of Medicine, Baltimore, MD

## Rhinitis Pathophysiology

3607

Sunday, February 24th, 2013, 3:00 PM - 4:15 PM

**481 Anti-Histaminergic Responses On TRPV1 Channels**

**Umesh Singh<sup>1</sup>**, Jonathan A. Bernstein, MD<sup>2,3</sup>, Kristin Luther<sup>1</sup>, Lauren Haar<sup>1</sup> and W. Keith Jones<sup>1</sup>, <sup>1</sup>University of Cincinnati, Cincinnati, OH, <sup>2</sup>Bernstein Allergy Group, Cincinnati, OH, <sup>3</sup>University of Cincinnati Medical Center, Cincinnati, OH

**482 Allergen Exposure Affects Sinonasal Microbiota**

**Chris Choi<sup>1</sup>**, Valeriy Poroyko<sup>1</sup>, So Watanabe<sup>2</sup>, Duo Jiang<sup>1</sup>, James Lane<sup>3</sup>, Marcella DeTineo<sup>4</sup>, Fuad M. Baroody, MD, FAAAAI<sup>5</sup>, Robert M. Naclerio, MD, FAAAAI<sup>5</sup> and Jayant M. Pinto, MD<sup>5</sup>, <sup>1</sup>Univ of Chicago, <sup>2</sup>Showa University, Toyko, Japan, <sup>3</sup>University of Chicago, Chicago, IL, <sup>4</sup>Univ. of Chicago, <sup>5</sup>The University of Chicago, Chicago, IL

**483 Invariant Natural Killer T Cells Populations in Peripheral Blood From Allergic Rhinitis Patients: Regulatory or Pathologic Role?**

**Soledad Lopez, PhD<sup>1,2</sup>**, David Pozo, PhD<sup>1,2</sup>, Jose Luis Rodriguez-Bada, Lab. Tech.<sup>3</sup>, Lidia Melendez, Lab. Tech.<sup>4</sup>, Cristobalina Mayorga, PhD<sup>4</sup> and Miguel Blanca, MD, PhD<sup>5</sup>, <sup>1</sup>NIR Lab, Department of Cell Signalling CABIMER-Andalusian Center for Molecular Biology and Regenerative Medicine, Spain, <sup>2</sup>Department of Medical Biochemistry, Molecular Biology and Immunology, University of Seville Medical School, <sup>3</sup>Research Laboratory, Carlos Haya Hospital-Fundación IMABIS, Spain, <sup>4</sup>Research Laboratory, Carlos Haya Hospital-FIMABIS, Malaga, Spain, <sup>5</sup>Allergy Service, Carlos Haya Hospital, Málaga, Spain

**484 TRPV1 Ion Channel Activation Is Enhanced by Bradykinin in Sensory Neuronal Cells**

**Jonathan A. Bernstein, MD<sup>1,2,3</sup>**, Umesh Singh<sup>4</sup>, Lauren Haar<sup>4</sup>, Kristin Luther<sup>4</sup> and W. Keith Jones<sup>4</sup>, <sup>1</sup>Bernstein Allergy Group, Cincinnati, OH, <sup>2</sup>University of Cincinnati Medical Center, Cincinnati, OH, <sup>3</sup>University of Cincinnati, <sup>4</sup>University of Cincinnati, Cincinnati, OH

**485 The Allergic Rhinitis Clinical Investigator Collaborative (AR-CIC) – a Multicentre Pilot Study to Optimize a Standard Nasal Allergen Challenge Protocol**

**Anne K. Ellis, MD, MSc, FRCPC, FAAAAI<sup>1,2</sup>**, Louis-Philippe Boulet, MD<sup>3</sup>, Harissios Vliagoftis, MD<sup>4</sup>, Paul Keith, MD, FAAAAI<sup>2</sup>, Susan Wasserman, MD, FAAAAI<sup>2</sup>, Marie-Eve Boulay<sup>3</sup>, Lisa Steacy, BSc<sup>1</sup> and Helen Neighbour<sup>6</sup>, <sup>1</sup>Allergy Research Unit, Kingston General Hospital, Kingston, ON, Canada, <sup>2</sup>Departments of Medicine and Biomedical & Molecular Science, Queen's University, Kingston, ON, Canada, <sup>3</sup>Institut Universitaire de Cardiologie et de Pneumologie de Québec, Quebec City, QC, Canada, <sup>4</sup>Pulmonary Research Group, University of Alberta, <sup>5</sup>Department of Medicine, McMaster University, Hamilton, ON, Canada, <sup>6</sup>Firestone Institute for Respiratory Health, McMaster University, Hamilton, ON, Canada

## Advances in Controlling Allergic Inflammation

3608

Sunday, February 24th, 2013, 3:00 PM - 4:15 PM

**486 Role of Mannose Receptor (MR) in Cockroach Allergen-Induced Allergic Inflammation**

**Peisong Gao, MD, PhD<sup>1</sup>**, Ying-Ming Tsai, MD<sup>1,2</sup>, Shih-Chang Hsu<sup>3</sup>, Yufeng Zhou, MD, PhD<sup>1</sup>, Beverly Plunkett<sup>1</sup> and Shau-Ku Huang, PhD<sup>1,3</sup>, <sup>1</sup>Johns Hopkins University School of Medicine, Baltimore, MD, <sup>2</sup>Kaohsiung Medical University, Taiwan, <sup>3</sup>National Health Research Institutes, Taiwan

SUNDAY

- 487 DNA Methylation Profiling in Asthmatic and Non Asthmatic Nasal Epithelial Cells During Respiratory Virus Infection**  
**Peter McErlean, PhD<sup>1</sup>**, Silvio Favoreto Jr., PhD<sup>1</sup>, Fabricio Costa, PhD<sup>2</sup>, Junqing Shen, PhD<sup>1</sup>, Assel Biyasheva, PhD<sup>1</sup>, Maria de Fatima Bonaldo, PhD<sup>2</sup>, Denise Scholtens, PhD<sup>1</sup>, Hehuang Xie, PhD<sup>2</sup>, Marcelo B. Soares, PhD<sup>2</sup> and Pedro C. Avila, MD, FAAAAI<sup>3</sup>,  
<sup>1</sup>Northwestern University, Chicago, IL, <sup>2</sup>Childrens Memorial Hospital Research Center, Chicago, IL, <sup>3</sup>Northwestern University Feinberg School of Medicine, Chicago, IL
- 488 Vitamin D Supplementation Reduces Airway Hyperresponsiveness and Allergic Airway Inflammation in a Murine Model**  
**Tanupriya Agrawal, Gaurav Gupta and Devendra K. Agrawal,** Center for Clinical and Translational Science and Department of Biomedical Sciences, Creighton University School of Medicine, Omaha, NE
- 489 IL-4R $\alpha$  Expression by Airway Epithelial Cells Promotes Allergen-Induced Airway Hyperresponsiveness**  
**Christopher G. McKnight, MD<sup>1,2,3</sup>**, Charles Perkins<sup>2</sup>, Crystal Potter<sup>1</sup> and Fred D. Finkelman, MD<sup>1,2,3</sup>, <sup>1</sup>University of Cincinnati, <sup>2</sup>Cincinnati Children's Hosp. Med. Center, <sup>3</sup>Veterans Administration Med. Center Cincinnati
- 490 Novel Phosphodiesterase-4 Inhibitors Decrease Allergic Sinus Congestion and Inflammation**  
**Bill T. Ameredes, PhD,** Walter C. Spear, MS, Anita Reno, BS, Jesse Parks, IV and Spotswood Miller, University of Texas Medical Branch, Galveston, TX

*Featured Poster Sessions***Asthma Mechanisms**

3801

Sunday, February 24th, 2013, 4:30 PM - 6:30 PM

- 491 The Effect of LTD4 On Glucocorticoid Receptor [GR] Translocation**  
**Jennifer McCracken, MD<sup>1</sup>**, Ashwini Reddy, MD<sup>1</sup>, Lata Kaphalia, PhD<sup>2</sup> and William J. Calhoun, MD, FAAAAI<sup>3</sup>, <sup>1</sup>UTMB, Galveston, TX, <sup>2</sup>UTMB, <sup>3</sup>University of Texas Medical Branch, Galveston, TX
- 492 Salivary Alpha-Amylase As a Measure of  $\beta$ -Adrenergic Receptor Activity in Physically Active Individuals with and without Exercise-Induced Bronchoconstriction**  
**Sindhura Bandi, MD<sup>1,2</sup>**, Jay Estrada<sup>1</sup>, Ben Xu<sup>1</sup>, Kainat Khalid<sup>1</sup> and James Moy<sup>1,2</sup>, <sup>1</sup>Rush University Medical Center, Chicago, IL, <sup>2</sup>John H. Stroger Hospital of Cook County, Chicago, IL
- 493 Microbiome of the Lower Airways Alters Corticosteroid Responsiveness in Asthma**  
**Elena Goleva, PhD<sup>1</sup>**, Leisa P. Jackson, BS<sup>1</sup>, J. Kirk Harris, PhD<sup>2</sup>, Richard J. Martin, MD<sup>3</sup> and Donald Y.M. Leung, MD, PhD, FAAAAI<sup>1</sup>, <sup>1</sup>National Jewish Health, Department of Pediatrics, Denver, CO, <sup>2</sup>University of Colorado Anschutz Medical Campus, Department of Pediatrics, Aurora, CO, <sup>3</sup>National Jewish Health, Department of Medicine, Denver, CO
- 494 The Importance of Hyaluronan As a Contributor to Asthma Progression**  
**S.P. Evanko<sup>1</sup>**, S.D. Potter-Perigo<sup>1</sup>, L. C. Altman<sup>2</sup> and T.N. Wight<sup>1</sup>, <sup>1</sup>Benaroya Research Institute, <sup>2</sup>Northwest Asthma & Allergy Center
- 495 Novel IL33 Gene Polymorphisms Associated with Asthma Are Associated with Resistance to Schistosoma Mansoni**  
**Hironori Masuko, MD, PhD<sup>1</sup>**, Li Gao, MD, PhD<sup>1</sup>, Nicholas M. Rafaels, MS<sup>1</sup>, Candelaria I. Vergara, MD, PhD<sup>1</sup>, Lili Huang, MS<sup>1</sup>, Monica Campbell<sup>1</sup>, Ingo Ruczinski, PhD<sup>2</sup>, Terri H Beaty, PhD<sup>2</sup>, Ricardo Oliveira<sup>3</sup>, Alvaro A. Cruz, MD<sup>3</sup>, Edgar M. Carvalho, MD, PhD<sup>4</sup>, Rasika A. Mathias, ScD<sup>1</sup>, Maria Ilma Araujo, MD<sup>4</sup> and Kathleen C. Barnes, PhD FAAAAI<sup>1</sup>, <sup>1</sup>Johns Hopkins University,

Baltimore, MD, <sup>2</sup>Johns Hopkins University School of Public Health, Baltimore, MD, <sup>3</sup>Hospital Universitário Professor Edgard Santos, Brazil, <sup>4</sup>Federal University of Bahia, Salvador, Brazil

**BCI Featured Posters**

3802

Sunday, February 24th, 2013, 4:30 PM - 6:30 PM

- 496 A Novel Method for Newborn Screening for 22q11.2 Deletion Syndrome Using Dried Blood Spots**  
**Lisa J. Kobrynski, MD, MPH, FAAAAI,** Emory University School of Medicine, Atlanta, GA
- 497 The Oxidant-Modified Lipid Lysophosphatidylserine (lysoPS) Made by Exudate Neutrophils Limits Neutrophil Accumulation in Vivo**  
**Donna Bratton, MD<sup>1</sup>**, Ruby Fernandez-Boyanapalli, PhD<sup>1</sup>, Karin Zemski-Berry, PhD<sup>2</sup>, Robert Murphy, PhD<sup>3</sup> and S. Courtney Frasch, PhD<sup>4</sup>, <sup>1</sup>National Jewish Health, Denver, CO, <sup>2</sup>University of Colorado Denver, Aurora, CO, <sup>3</sup>University of Colorado Denver, <sup>4</sup>National Jewish Health
- 498 Application of Anti-Viral Adoptive T-Cell Therapy to Primary Immunodeficiency Patients**  
**Sarah K. Nicholas, MD<sup>1</sup>**, Caridad Martinez, MD<sup>1</sup>, Ann Leen, PhD<sup>1</sup>, Cliona Rooney, PhD<sup>1</sup>, Catherine Bollard, MD<sup>1</sup>, Stephen Gottschalk, MD<sup>1</sup>, Helen Heslop, MD<sup>1</sup>, I. Celine Hanson, MD, FAAAAI<sup>1</sup>, Malcolm Brenner, MD<sup>1</sup> and Jordan Orange, MD, PhD, FAAAAI<sup>2</sup>, <sup>1</sup>Baylor College of Medicine/Texas Children's Hospital, Houston, TX, <sup>2</sup>Baylor College of Medicine and Texas Children's Hospital, Section of Immunology, Allergy and Rheumatology
- 499 IFR2BP2 Mutations Identified As a Novel Genetic Cause of Familial Common Variable Immunodeficiency Identified Via Support Vector Algorithm and Whole Exome Sequencing**  
**Michael Keller, MD<sup>1</sup>**, Joseph Glessner<sup>2</sup>, Hakon Hakonarson, MD, PhD<sup>3</sup> and Jordan Orange, MD, PhD, FAAAAI<sup>1</sup>, <sup>1</sup>Children's Hospital of Philadelphia, Philadelphia, PA, <sup>2</sup>Children's Hospital of Philadelphia, <sup>3</sup>3615 Civic Center Blvd., Children's Hospital of Philadelphia, Philadelphia, PA
- 500 Exome Sequencing Reveals Novel Genetic Underpinnings of Common Variable Immune Deficiency (CVID)**  
**Patricia L. Lugar, MD MS<sup>1</sup>**, Michele R. Henson, MD<sup>2</sup>, Cassandra Love<sup>3</sup>, Heather Rivera Gutekunst, MD<sup>4</sup>, Zhen Sun<sup>3</sup> and Sandeep Dave<sup>3</sup>, <sup>1</sup>Duke University Medical Center, Durham, NC, <sup>2</sup>Duke University, Durham, NC, <sup>3</sup>Duke University, <sup>4</sup>Duke Medicine, Raleigh, NC

**Allergen Exposures at Home, School and Work**

3803

Sunday, February 24th, 2013, 4:30 PM - 6:30 PM

- 501 Allergen Exposure of Table and Desk Surfaces in Preschools and Elementary Schools of Urban Children with Asthma**  
**Watcharoot Kanchongkittiphon, PhD, MD,** Boston Children's Hospital, Boston, MA; Ramathibodi Hospital, Mahidol University, Bangkok, Thailand
- 502 Most House Dust Mite Aeroallergen Exposure Occurs During the Day, Not in Bed**  
**Euan Tovey, PhD<sup>1,2</sup>**, Christiana Willenborg, BSc<sup>3</sup>, Daniel Crisafulli, MSc<sup>1</sup>, Janet Rimmer, MD<sup>1</sup>, Jason Sercombe, MSc<sup>2</sup> and Guy Marks, PhD, MD<sup>1</sup>, <sup>1</sup>Woolcock Institute of Medical Research, Sydney, Australia, <sup>2</sup>University of Sydney, Australia, <sup>3</sup>Prince of Wales Hospital, Sydney, Australia

**503 Mouse Allergen Exposure in Urban Schools and Its Effect On Childhood Asthma Morbidity**

**Perdita Permaul, MD<sup>1</sup>**, Carter R. Petty, MA<sup>2</sup>, William J. Sheehan, MD<sup>2</sup>, Sachin N. Baxi, MD<sup>2</sup>, Jonathan M. Gaffin, MD, MMSc<sup>2</sup>, Lianne S. Kopel, MD<sup>2</sup>, Watcharoot Kanchongkittiphan, MD, PhD<sup>2</sup>, Ann Bailey, BA<sup>3</sup>, Chunxia Fu, MS<sup>3</sup>, Diane R. Gold, MD<sup>3</sup> and Wanda Phipatanakul, MD MS FAAAAI<sup>2</sup>, <sup>1</sup>Division of Pediatric Allergy/Immunology, Massachusetts General Hospital, Boston, MA, <sup>2</sup>Boston Children's Hospital, Boston, MA, <sup>3</sup>Channing Laboratory, Boston, MA

**504 Endotoxin Exposure May Modify the Relationship Between Mouse Allergen Exposure and Incident Sensitization to Mouse**

**Sharon K. Ahluwalia, MD<sup>1</sup>**, Roger Peng, PhD<sup>2</sup>, Charles Aloe, MPH<sup>1</sup>, Wayne G. Shreffler, MD PhD FAAAAI<sup>3,4</sup>, Mary Krevans, RN<sup>5</sup>, Karol A. Hagberg, BSN FNP<sup>5</sup>, Peter S. Thorne, PhD<sup>6</sup> and Elizabeth Matsui, MD<sup>1</sup>, <sup>1</sup>Johns Hopkins University School of Medicine, Baltimore, MD, <sup>2</sup>Johns Hopkins University, Baltimore, MD, <sup>3</sup>Massachusetts General Hospital, Boston, MA, <sup>4</sup>Harvard Medical School, Boston, MA, <sup>5</sup>The Jackson Laboratory, Bar Harbor, ME, <sup>6</sup>University of Iowa, Iowa City, IA

**505 Effect of Dermatophagoides Pteronyssinus Allergens On Expression of Genes Involved in Inflammation and Tissue Remodeling by Peripheral Blood Mononuclear Cells of Allergic Asthma Patients**

**Krzysztof Kowal, MD PhD<sup>1</sup>**, Pawel Bernatowicz, MD<sup>2</sup>, Lech Chyczewski, MD, PhD<sup>2</sup> and Anna Bodzenta Lukaszyk, PhD<sup>2</sup>, <sup>1</sup>Medical University of Bialystok, Bialystok, Poland, <sup>2</sup>Medical University of Bialystok

**Best of FADDA**

3804

Sunday, February 24th, 2013, 4:30 PM - 6:30 PM

**506 Increased Prevalence of Compound Heterozygous Filaggrin Mutations in Severe Atopic Dermatitis in the United States**

**Maaz Mohiuddin, MD<sup>1</sup>**, Preveen Ramamoorthy, PhD<sup>2</sup>, Paul R. Reynolds, PhD<sup>2</sup>, Douglas Curran-Everett, PhD<sup>3</sup> and Donald Y.M. Leung, MD, PhD<sup>1</sup>, <sup>1</sup>Department of Pediatrics, Division of Allergy-Immunology, National Jewish Health, Denver, CO, <sup>2</sup>Department of Medicine, Division of Pathology, National Jewish Health, Denver, CO, <sup>3</sup>National Jewish Health, Division of Biostatistics and Bioinformatics, Denver, CO

**507 Smad-3 Deficient Mice Have Reduced Esophageal Fibrosis in a Model of Eosinophilic Esophagitis**

**Ashmi Doshi, MD<sup>1</sup>**, JaeYoun Cho, MD, PhD<sup>1</sup>, Peter Rosenthal<sup>1</sup>, Seema Sharma Aceves, MD PhD FAAAAI<sup>2</sup> and David H. Broide, MB ChB FAAAAI<sup>3</sup>, <sup>1</sup>University of California, San Diego, <sup>2</sup>UCSD, Department of Pediatrics, La Jolla, CA, <sup>3</sup>Division of Allergy, Immunology

**508 Double-Blind Placebo Controlled (DBPC) Trial of Dapsone in Antihistamine Refractory Chronic Idiopathic Urticaria (CIU)**

**Andrew J. Cooke, MD**, University of Texas Southwestern, Dallas, TX, Matt Morgan, MD, FAAAAI, Allergy, Asthma and Immunology of North TX, Allen, TX, Laura Rogers, MD, University of Texas Southwestern, Chicago, IL, Beverley Huet-Adams, MS, University of Texas Southwestern Medical Center, Dallas, TX and David A. Khan, MD FAAAAI, University Texas SW Medical Center, Dallas, TX

**509 Clinical Factors and Laboratory Correlates of Egg Allergy Resolution in a Cohort of Infants with Egg Allergy (COFAR)**

**Scott H. Sicherer, MD, FAAAAI<sup>1</sup>**, Robert A. Wood, MD, FAAAAI<sup>2</sup>, Brian P. Vickery, MD, FAAAAI<sup>3</sup>, David Mark Fleischer, MD, FAAAAI<sup>4</sup>, Stacie M. Jones, MD<sup>5</sup>, Alice Henning<sup>6</sup>, A. Wesley Burks, MD, FAAAAI<sup>7</sup>, Andrew H. Liu, MD, FAAAAI<sup>8</sup>, Alexander

V. Grishin, PhD<sup>1</sup>, Lloyd F. Mayer, MD<sup>9</sup>, Donald Stablein<sup>6</sup> and Hugh A. Sampson, MD, FAAAAI<sup>10</sup>, <sup>1</sup>Mt. Sinai School of Medicine, New York, NY, <sup>2</sup>Johns Hopkins University School of Medicine, Baltimore, MD, <sup>3</sup>University of North Carolina at Chapel Hill, Chapel Hill, NC, <sup>4</sup>National Jewish Health, Denver, CO, <sup>5</sup>Slot 512-13, University of Arkansas for Medical Sciences, Little Rock, AR, <sup>6</sup>EMMES Corporation, Rockville, MD, <sup>7</sup>Division of Pediatric Allergy, Immunology, Rheumatology, and Infectious Disease, University of North Carolina, Chapel Hill, NC, <sup>8</sup>National Jewish Medical Research Center, Denver, CO, <sup>9</sup>Mt. Sinai Medical Center, New York, NY, <sup>10</sup>Mount Sinai School of Medicine, New York, NY

**510 Activation of the Steroidogenic Enzyme Cyp11a1 Is Essential for Development of Peanut-Induced Intestinal Anaphylaxis**

**Meiqin Wang, MD, PhD**, Julita Ramirez, PhD, Junyan Han, PhD, Yi Jia, PhD, Joanne Domenico, BS, Max Seibold, PhD, James Haggman, PhD and Erwin W. Gelfand, MD, National Jewish Health, Denver, CO

**Best of HEDQ**

3805

Sunday, February 24th, 2013, 4:30 PM - 6:30 PM

**511 Anaphylaxis Deaths in Ontario: A Retrospective Review of Cases From 1986 to 2011**

**Ya Sophia Xu, FRCPC**, McMaster University, Hamilton, ON, Canada, Susan Wasserman, MD, FAAAAI, Department of Medicine, McMaster University, Hamilton, ON, Canada and Monika Kastner, PhD, University of Toronto, Toronto, ON, Canada

**512 Reduced Prevalence of Allergic Disease in Foreign Born American Children Is Reversed After US Residence**

**Jonathan I. Silverberg, MD, PhD, MPH**, St. Luke's-Roosevelt Hospital Center, New York, NY, Eric Simpson, MD, MCR, OHSU, Helen G. Durkin, PhD, SUNY Downstate Medical Center, Center for Allergy and Asthma Research, Brooklyn, NY and Rauno O. Joks, MD, FAAAAI, SUNY-HSC, Brooklyn, NY

**513 Poor Asthma Control Results in Decreased Productivity and More Exacerbations**

**Patrick W. Sullivan, PhD<sup>1</sup>**, David Magid, MD, MPH<sup>2</sup>, Jon Campbell, PhD<sup>3</sup>, Gary Globe, PhD<sup>4</sup>, Vahram Ghushchyan, PhD<sup>3</sup>, Karen Smith, B.S. Pharm, PhD<sup>1</sup>, Bruce G. Bender, PhD, FAAAAI<sup>5</sup> and Shao-Lee Lin, MD, FAAAAI<sup>4</sup>, <sup>1</sup>Regis University, <sup>2</sup>Kaiser Permanente Colorado, <sup>3</sup>University of Colorado Denver, <sup>4</sup>Amgen, Inc., Thousand Oaks, CA, <sup>5</sup>National Jewish Health, Denver, CO

**514 Evidence-Based Standardized Order Set (EBSOS) Improves Adherence to National Asthma Guidelines (NAG) for Treatment of Children Presenting to the Pediatric Emergency Department (PED) in Status Asthmaticus (SA)**

**Moir E. Breslin, MD<sup>1</sup>**, Andrew Miller<sup>2</sup>, Leslie Claracay, MD<sup>3</sup> and James Fox, MD<sup>3</sup>, <sup>1</sup>Duke University Medical Center, Durham, <sup>2</sup>Duke University Medical Center, Department of Respiratory Care Services, Durham, NC, <sup>3</sup>Duke University Medical Center, Durham, NC

**515 Long Term Mortality in Young Adults with Asthma and Allergic Disease: Results From the Nhanes I Epidemiologic Follow up Study**

**Jessica Savage, MD, MHS<sup>1</sup>**, Elizabeth Matsui, MD<sup>2</sup>, Meredith C. McCormack, MD<sup>3</sup>, Robert A. Wood, MD, FAAAAI<sup>2</sup> and Corinne Keet, MD, MS<sup>4</sup>, <sup>1</sup>Brigham and Women's Hospital, Division of Rheumatology, Immunology and Allergy, Boston, MA, <sup>2</sup>Johns Hopkins University School of Medicine, Baltimore, MD, <sup>3</sup>Johns Hopkins Pulmonary, Baltimore, MD, <sup>4</sup>Pediatrics, Johns Hopkins University School of Medicine, Baltimore, MD

**MONDAY**



## Immunotherapy: Pathophysiology and Clinical Efficacy

3806

Sunday, February 24th, 2013, 4:30 PM - 6:30 PM

- 516** **Epicutaneous Immunotherapy Prevents Further Sensitization to Peanut in a Model of Mice Sensitized to Milk**  
Lucie Mondoulet<sup>1</sup>, Vincent Dioszeghy, PhD<sup>2</sup>, Emilie Puteaux<sup>2</sup>, Mélanie Ligouis<sup>2</sup>, Véronique Dhelft<sup>2</sup>, Christophe Dupont, MD, PhD<sup>3</sup> and Pierre Henri Benhamou, MD<sup>4</sup>, <sup>1</sup>DBV Technologies, Bagneux, France, <sup>2</sup>DBV Technologies, France, <sup>3</sup>Université Paris V René Descartes, Paris, France, <sup>4</sup>DBV Technologies, Paris, France
- 517** **Immunotherapy-Induced Regulatory T Cells in Mice Sensitized to Peanut: Epicutaneous Vs Sublingual**  
Vincent Dioszeghy, PhD<sup>1</sup>, Lucie Mondoulet<sup>2</sup>, Véronique Dhelft<sup>1</sup>, Mélanie Ligouis<sup>1</sup>, Emilie Puteaux<sup>1</sup>, Christophe Dupont, MD, PhD<sup>3</sup> and Pierre Henri Benhamou, MD<sup>4</sup>, <sup>1</sup>DBV Technologies, France, <sup>2</sup>DBV Technologies, Bagneux, France, <sup>3</sup>Université Paris V René Descartes, Paris, France, <sup>4</sup>DBV Technologies, Paris, France
- 518** **IL-35+ Regulatory T Cells Suppress Grass Pollen-Driven Th2 Responses and Are Induced Following Grass Pollen-Specific Sublingual Immunotherapy**  
Mohamed Shamji, PhD<sup>CS1,2</sup>, Janice Layhadi, BSc( Hons)<sup>1,2</sup>, Alan Perera-web, BSc( Hons)<sup>1,2</sup>, Guy Scadding, MRCP<sup>1,2</sup> and Stephen R. Durham, MA, MD, FRCP<sup>2</sup>, <sup>1</sup>Imperial College London, <sup>2</sup>Medical Research Council and Asthma UK Centre for Allergic Mechanisms of Asthma, UK
- 519** **A Randomized, Double-Blind, Placebo-Controlled, Parallel Trial of Standardized Short Ragweed (RW) Sublingual Allergy Immunotherapy Liquid Extract (RW-SAIL) in Adult Subjects with Ragweed-Induced Allergic Rhinconjunctivitis**  
Peter Creticos, MD<sup>1,2</sup>, Robert E. Esch, PhD, FAAAAI<sup>3</sup>, Peter Couroux, MD<sup>4</sup>, Deborah A. Gentile, MD<sup>5</sup>, Pina D'Angelo, PhD<sup>6</sup>, Brad Whitlow, BS<sup>3</sup>, Michael Alexander, MD<sup>7</sup> and Terrance Coyne, MD<sup>3</sup>, <sup>1</sup>Creticos Research Group, Crownsville, MD, <sup>2</sup>Allergy & Asthma Specialists Greater Washington, Warrenton, VA, <sup>3</sup>Greer Laboratories, Inc, Lenoir, NC, <sup>4</sup>Topstone Research, Toronto, ON, Canada, <sup>5</sup>Temple University School of medicine, Allegheny General Hospital, <sup>6</sup>PRACS Institute, Mississauga, ON, Canada, <sup>7</sup>Niagara Clinical Research Inc, Niagara Falls, ON, Canada
- 520** **Two Year Persistent Treatment Effect Achieved After 4 Doses of Cat-Peptide Antigen Desensitization (Cat-PAD) in an Environmental Exposure Chamber (EEC) Model of Cat Allergy**  
Rod Hafner, PhD, Circassia, Oxford, United Kingdom, Peter Couroux, MD, Cetero Research, Mississauga, ON, Canada, Kristen Armstrong, Adiga Life Sciences Inc., Hamilton, ON, Canada, Deepen Patel, Cetero Research, Mississauga, ON, Canada and Mark Larche, PhD, McMaster University/St. Joseph's Healthcare, Hamilton, ON, Canada

- MS<sup>3</sup>, Loretha Meyers<sup>3</sup>, Marc Halushka, MD<sup>3</sup>, Maria Oliva-Hemker, MD<sup>3</sup>, Robert A. Wood, MD, FAAAAI<sup>2</sup> and Harry Dietz, MD<sup>3</sup>, <sup>1</sup>Pediatrics, Johns Hopkins University School of Medicine, Baltimore, MD, <sup>2</sup>Johns Hopkins University School of Medicine, Baltimore, MD, <sup>3</sup>Johns Hopkins University School of Medicine**
- 523** **The Notch Mediator RBP-J in CD4 T Cells Plays a Crucial Role in the Induction of Allergic Asthma in Mice**  
Alex KleinJan<sup>1</sup>, Marjolein de Bruijn<sup>1</sup>, Menno van Nimwegen<sup>1</sup>, Ingrid Bergen<sup>1</sup>, Henk C. Hoogsteden<sup>1</sup>, Derk Amsen<sup>2</sup> and Rudi W. Hendriks<sup>1</sup>, <sup>1</sup>Erasmus MC, Rotterdam, Netherlands, <sup>2</sup>AMC, Amsterdam, Netherlands
- 524** **Relationships Among FcεRI Expression, IgE, Allergic Sensitization and Recurrent Wheezing in Preschool Inner City Children**  
Daniel J. Jackson, MD<sup>1</sup>, Mark DeVries<sup>2</sup>, Katy Jaffee<sup>3</sup>, Gordon R. Bloomberg, MD, FAAAAI<sup>4</sup>, Meyer Kattan, MD<sup>5</sup>, George T. O'Connor, MD<sup>6</sup>, Robert A. Wood, MD, FAAAAI<sup>7</sup> and James Gern, MD, FAAAAI<sup>2</sup>, <sup>1</sup>Pediatrics, University of Wisconsin School of Medicine and Public Health, Madison, WI, <sup>2</sup>University of Wisconsin School of Medicine and Public Health, Madison, WI, <sup>3</sup>Rho, Inc., Chapel Hill, NC, <sup>4</sup>Campus Box 8116, St. Louis Children's Hospital, Saint Louis, MO, <sup>5</sup>NewYork-Presbyterian/Columbia, New York, NY, <sup>6</sup>Boston University School of Medicine, Boston, MA, <sup>7</sup>Johns Hopkins University School of Medicine, Baltimore, MD
- 525** **Vitamin D Decreases the Protein Expression of Suppressors of Cytokine Signaling in the Lungs of Murine Model of Allergic Airway Inflammation**  
Ankita Aggarwal<sup>1</sup>, Vikash Kansal<sup>2</sup>, Christian Andreen<sup>2</sup> and Deendra K. Agrawal<sup>2</sup>, <sup>1</sup>Center for Clinical and Translational Science and Department of Medical Microbiology and Immunology, Creighton University School of Medicine, Omaha, NE, <sup>2</sup>Center for Clinical and Translational Science and Department of Biomedical Sciences, Creighton University School of Medicine, Omaha, NE

## Allied Health Featured Poster

3811

Sunday, February 24th, 2013, 4:30 PM - 6:30 PM

- 526** **Evaluation of a Food Allergy Education Module Delivered Live for Illinois Schoolteachers**  
Christine Szychlinski, MS, APN, CPNP<sup>1</sup>, Katherine A. Schmeissing, MS, R.N.<sup>2</sup>, Ruchi Gupta, MD<sup>2</sup>, Claudia Lau<sup>1</sup> and Jacqueline Pongracic, MD, FAAAAI<sup>1</sup>, <sup>1</sup>Ann & Robert H Lurie Children's Hospital of Chicago, Chicago, IL, <sup>2</sup>Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, IL

## Nature Vs. Nurture in Asthma

4201

Monday, February 25th, 2013, 9:45 AM - 10:45 AM

## Mechanisms of Allergy: Best of the Best

3807

Sunday, February 24th, 2013, 4:30 PM - 6:30 PM

- 521** **Skin Mast Cells Acquire IgE by Directly Sampling the Blood**  
Laurence E. Cheng, MD, PhD, UCSF Medical Center, San Francisco, CA, Axel Roers, University of Technology Dresden, Dresden, Germany, Max Krummel, PhD, University of California San Francisco, San Francisco, CA and Richard M. Locksley, MD, University of California - San Francisco, HHMI, San Francisco, CA
- 522** **A Mendelian Presentation of Multiple TH2-Mediated Allergic Diseases**  
Pamela A. Frischmeyer-Guerrerio, MD, PhD<sup>1</sup>, Anthony Guerrierio, MD, PhD<sup>2</sup>, Gretchen Oswald, MS<sup>3</sup>, Kristin Chichester,

- 527** **Maternal Supplementary Vitamin Intake During Lactation Is Positively Associated with the Cumulative Incidence of Bronchial Asthma in Their Infants in Japan**  
Miwa Shinohara, MD, PhD<sup>1,2</sup>, Hirohisa Saito, MD, PhD<sup>3</sup> and Kenji Matsumoto, MD, PhD<sup>3</sup>, <sup>1</sup>Department of Pediatric Allergy and Clinical Research, Shimoshizu National Hospital, Yotsukaido, Japan, <sup>2</sup>Department of Pediatrics, Kochi Medical University, Nangoku, <sup>3</sup>Department of Allergy and Immunology, National Research Institute for Child Health and Development, Tokyo, Japan
- 528** **Association Between Weight Gain and the Prevalence and Severity of Wheezing and Asthma in the First Year of Life**  
Gustavo Wandalsen, MD<sup>1</sup>, Leila Borges<sup>2</sup>, Nathalia Barroso<sup>2</sup>, Fabiola Suano<sup>2</sup>, Elaine Prestes<sup>3</sup>, Herberto J. Chong Neto, MD, PhD,

- FAAAAI<sup>4</sup>, Nelson A. Rosario, MD, PhD, FAAAAI<sup>5</sup>, Ana Carolina Dela Bianca<sup>6</sup>, Carolina Aranda<sup>1</sup>, Decio Medeiros<sup>6</sup>, Emanuel Sarinho<sup>6</sup>, Lillian SANCHEZ LACERDA Moraes, MD, MSc<sup>7</sup>, Javier Mallof<sup>8</sup> and Dirceu Sole, MD, PhD<sup>1</sup>, <sup>1</sup>Federal University of Sao Paulo, Sao Paulo, Brazil, <sup>2</sup>Federal University of Sao Paulo, <sup>3</sup>State University of Para, <sup>4</sup>Federal University of Parana, Brazil, <sup>5</sup>Federal University of Parana, Curitiba, Brazil, <sup>6</sup>Federal University of Pernambuco, <sup>7</sup>Federal University of Mato Grosso, <sup>8</sup>University of Santiago de Chile
- 529 High Asthma Prevalence Among Inner-City Schoolchildren in Antananarivo (Madagascar)**  
**Peter Th. Wolff, MD<sup>1</sup>**, Lala Arison, MD<sup>2</sup>, Abel Rahajamiakatra, MD<sup>2</sup>, Francis Raserijaona, MD<sup>2</sup> and Bodo Niggemann, MD, FAAAAI<sup>3</sup>, <sup>1</sup>Pediatric Practice am Stadtsee, Pfullendorf, Germany, <sup>2</sup>Clinique MM 24/24 Mpitsabo Mikambana, Antananarivo, Madagascar, <sup>3</sup>Hedwig-Von-Rittberg-Zentrum, Berlin, Germany
- 530 The Association of Obesity and Severity of Acute Asthma Exacerbations in Children**  
**Michelle J. De Vera, MD, FAAAAI** and Maria Celeste Gomez, MD, The Medical City Hospital, Pasig City, Philippines
- 531 The Role of Chitinase-Like Protein YKL-40 in Childhood Asthma**  
**Carah Santos, MD**, Joshua Davidson, MD, Ronina Covar, MD, Eleanor Brown, BS and Joseph D. Spahn, MD, National Jewish Health, Denver, CO
- 532 Vitamin D Levels and FoxP3 Treg Cells Expression in North Indian Children with Atopic Diseases**  
**Anil Chauhan<sup>1</sup>**, Meenu Singh, MD<sup>2</sup>, Savita Attri<sup>1</sup> and Amit Agarwal<sup>1</sup>, <sup>1</sup>Post Graduate Institute of Medical Education and Research, Chandigarh, India, <sup>2</sup>Advanced Pediatrics Centre, Chandigarh, India
- 533 Environment-Environment Interactions Between Bronchiolitis and PM10 Exposure Could Be Modified by the TLR4 Polymorphism in the Development of Asthma**  
**Young Ho Jung, MD<sup>1,2</sup>**, Byoung-Ju Kim, MD, PhD<sup>3</sup>, Ju-Hee Seo, MD<sup>4</sup>, Ji-Won Kwon, MD<sup>5</sup>, Hyo-Bin Kim, MD, PhD<sup>6</sup>, So Yeon Lee, MD, PhD<sup>7</sup>, Gwang Cheon Jang, MD, PhD<sup>8</sup>, Dae Jin Song, MD, PhD<sup>9</sup>, Woo-Kyung Kim, MD, PhD<sup>6</sup>, Jung Yeon Shim, MD, PhD<sup>10</sup>, Hwan-Cheol Kim, MD<sup>11</sup>, Jong-Han Leem, MD<sup>11</sup>, Hyung Young Kim, MD<sup>12,13</sup> and Soo-Jong Hong, MD, PhD<sup>1,2</sup>, <sup>1</sup>Childhood Asthma Atopy Center, Department of Pediatrics, Asan Medical Center, University of Ulsan College of Medicine, Seoul, South Korea, <sup>2</sup>Research Center for Standardization of Allergic Disease, Seoul, South Korea, <sup>3</sup>Department of Pediatrics, Hae-undae Paik Hospital, Inje University College of Medicine, Busan, South Korea, <sup>4</sup>Department of Pediatrics, Korea Cancer Center Hospital, Seoul, South Korea, <sup>5</sup>Department of Pediatrics, Seoul National University Bundang Hospital, Seoul National University College of Medicine, Seongnam, South Korea, <sup>6</sup>Inje University Sanggye Paik Hospital, Seoul, <sup>7</sup>Department of Pediatrics, Hallym University College of Medicine, <sup>8</sup>Department of Pediatrics, National Health Insurance Corporation Ilsan Hospital, <sup>9</sup>Department of Pediatrics, Korea University Guro Hospital, <sup>10</sup>Department of Pediatrics, Kangbuk Samsung Hospital, Sungkyunkwan University College of Medicine, <sup>11</sup>Department of Occupational and Environmental Medicine, Inha University Hospital, <sup>12</sup>Childhood Asthma Atopy Center, Department of Pediatrics, Asan Medical Center, University of Ulsan College of Medicine, <sup>13</sup>Research Center for Standardization of Allergic Diseases
- 534 Changes of Sensitization to Pollen Allergens in Children with Allergic Disease of Seoul Area Over the Last 10 Years**  
**Keum Hee Hwang<sup>1</sup>**, Young Ho Jung, MD<sup>2</sup>, kyung Hee Kim<sup>1</sup>, Min Ju Kim<sup>1</sup>, Geun Mi Park<sup>3</sup>, Hyung Young Kim, MD<sup>1,4</sup>, Ju-Hee Seo, MD<sup>5</sup>, Jinho Yu, MD, PhD<sup>6</sup> and Soo-Jong Hong, MD, PhD<sup>6</sup>, <sup>1</sup>Childhood Asthma Atopy Center, Department of Pediatrics, Asan Medical Center, University of Ulsan College of Medicine, <sup>2</sup>Department of Pediatrics, Childhood Asthma Atopy Center, Asan Medical Center, University of Ulsan College of Medicine, Seoul, South Korea, <sup>3</sup>Childhood Asthma Atopy Center, Department of Pediatrics, Asan Medical Center, University of Ulsan College of Medicine, Seoul, <sup>4</sup>Research Center for Standardization of Allergic Diseases, Seoul, South Korea, <sup>5</sup>Department of Pediatrics, Korea Cancer Center Hospital, Seoul, South Korea, <sup>6</sup>Department of Pediatrics, Hae-undae Paik Hospital, Inje University College of Medicine, Busan, South Korea, <sup>7</sup>Department of Pediatrics, Hallym University College of Medicine, Seoul, South Korea, <sup>8</sup>Dankook University, Cheonan
- Seoul, <sup>4</sup>Research Center for Standardization of Allergic Diseases, <sup>5</sup>Department of Pediatrics, Korea Cancer Center Hospital, Seoul, South Korea, <sup>6</sup>Childhood Asthma Atopy Center, Department of Pediatrics, Asan Medical Center, University of Ulsan College of Medicine, Seoul, South Korea
- 535 The Impact of Ethnicity On Incidence Rates for Development of Allergic Disease in Immigrants to Brooklyn**  
**Edward Kleiman, MD**, Maria-Anna Vastradi, MD, Irina Katayeva, MD and Rauno O. Joks, MD, FAAAAI, SUNY Downstate Medical Center, Center for Allergy and Asthma Research, Brooklyn, NY
- 536 The Identification of Associations Between the Expression of TGF Beta 1 and the Level of Asthma Control in the Polish Asthma Population - Pilot Study**  
**Michal Gabriel Panek, MD, PhD<sup>1</sup>**, Tadeusz Pietras, MD, PhD<sup>2</sup>, Artur Fabijan<sup>3</sup>, Lukasz Wieteska, MA<sup>4</sup>, Michal Chojnacki, MA<sup>4</sup>, Pawel Górski, MD, PhD<sup>2</sup>, Janusz Szemraj, MD, PhD<sup>4</sup> and Piotr Kuna, MD, PhD<sup>1</sup>, <sup>1</sup>Department of Internal Medicine, Asthma and Allergy, Medical University of Lodz, Poland, <sup>2</sup>Department of Pneumology and Allergology, Medical University of Lodz, Poland, <sup>3</sup>Students Research Group at the Department of Pneumology and Allergology, Medical University of Lodz, Poland, <sup>4</sup>Department of Medical Biochemistry, Medical University of Lodz, Poland
- 537 Asthma and Risk of Community-Acquired Blood Stream Infection Caused by Escherichia Coli: A Population-Based Case-Control Study**  
**Hyeon Jong Yang, MD<sup>1</sup>**, Duk Won Bang<sup>2</sup>, Eell Ryoo<sup>3</sup>, Larry Baddour<sup>2</sup>, Majdi Al-Hasan<sup>4</sup>, Barbara Yawn, MD, MSc, FAAAAI<sup>5</sup> and Young J. Juhn, MD, MPH<sup>6</sup>, <sup>1</sup>Soonchunhyang University Hospital, Seoul, <sup>2</sup>Mayo Clinic, <sup>3</sup>Gil Hospital, South Korea, <sup>4</sup>University of Kentucky Medical Center, <sup>5</sup>Olmsted Medical Center, Rochester, MN, <sup>6</sup>Mayo Clinic, Rochester, MN
- 538 Effect of Breastfeeding On Lung Function of Asthmatic Children**  
**Hwan Soo Kim, MD<sup>1</sup>**, Yoon Ki Han, MD<sup>2</sup>, Min Jung Kim, MD<sup>2</sup>, Hyun Bin Park, MD<sup>1</sup>, Yoon Hee Kim, MD<sup>3</sup>, Hee Seon Lee, MD<sup>3</sup>, Hyun Hee Lee, MD, PhD<sup>4</sup>, Kyung Won Kim, MD, PhD<sup>2</sup>, Myung Hyun Sohn, MD, PhD<sup>2</sup> and Kyu-Earn Kim, MD, PhD<sup>2</sup>, <sup>1</sup>Yonsei University College of Medicine, <sup>2</sup>Yonsei University College of Medicine, Seoul, Korea, <sup>3</sup>Yonsei University College of Medicine, Seoul, <sup>4</sup>Kwangdong University College of Medicine, Seoul
- 539 Characteristics and Prognosis of Phenotypic Clusters in Childhood Asthma: A Population Based School-Aged Cohort**  
**Ji-Won Kwon, MD<sup>1</sup>**, Young Ho Jung, MD<sup>2,3</sup>, Eun Lee<sup>2</sup>, Hyung-Young Kim<sup>2</sup>, Ju-Hee Seo, MD<sup>4</sup>, Byoung-Ju Kim, MD, PhD<sup>5</sup>, Hyo-Bin Kim, MD, PhD<sup>6</sup>, So-Yeon Lee<sup>7</sup>, Jinho Yu, MD, PhD<sup>2,3</sup>, Ho-Jang Kwon, MD, PhD<sup>8</sup> and Soo-Jong Hong, MD, PhD<sup>2,3</sup>, <sup>1</sup>Department of Pediatrics, Seoul National University Bundang Hospital, Seoul National University College of Medicine, Seongnam, South Korea, <sup>2</sup>Childhood Asthma Atopy Center, Department of Pediatrics, Asan Medical Center, University of Ulsan College of Medicine, Seoul, South Korea, <sup>3</sup>Research Center for Standardization of Allergic Disease, Seoul, South Korea, <sup>4</sup>Department of Pediatrics, Korea Cancer Center Hospital, Seoul, South Korea, <sup>5</sup>Department of Pediatrics, Hae-undae Paik Hospital, Inje University College of Medicine, Busan, South Korea, <sup>6</sup>Inje University Sanggye Paik Hospital, Seoul, <sup>7</sup>Department of Pediatrics, Hallym University College of Medicine, <sup>8</sup>Dankook University, Cheonan

## Immunodeficiency

4202

Monday, February 25th, 2013, 9:45 AM - 10:45 AM

- 540 Identification of TLR3 and PTPN22 Mutations in One Cohort with Chronic Mucocutaneous Candidiasis (CMC)**

- Samantha Gendelman, MD, Yingchun Han and Fred H. Hsieh, MD, Cleveland Clinic Foundation, Cleveland, OH**
- 541 Pneumococcal Meningitis in a Patient with Irak-4 Deficiency: A Case of Failed Prophylactic Therapy**  
**Meredith A. Dilley<sup>1,2</sup>, Stacie M. Jones, MD<sup>1,2</sup>, Amy M. Scurlock, MD<sup>1,2</sup>, Tamara T. Perry, MD<sup>1,2</sup> and Robbie D. Pesek<sup>1,2</sup>, <sup>1</sup>University of Arkansas for Medical Sciences, Little Rock, AR, <sup>2</sup>Arkansas Children's Hospital**
- 542 Hypogammaglobulinemia with Adequate Pneumococcal Antibody Response Progressing to Common Variable Immunodeficiency (CVID)**  
**Tania Aung, MD, University of Iowa Hospitals and Clinics, Iowa City, IA, Antoine Azar, MD, FAAAAI, University of Iowa Hospitals and Clinics and Zuhair K. Ballas, MD, FAAAAI, University of Iowa Health Care, Iowa City, IA**
- 543 Successful Lung Transplantation in a CVID Patient with Recalcitrant Bronchiectasis**  
**Heena Shah, MD and Prem Kumar, MD, FAAAAI, Louisiana State University, New Orleans, LA**
- 544 Disseminated Aspergillosis in Adult-Onset Severe Combined Immunodeficiency: A Case of Xcind Syndrome**  
**Kellie J. Lim, MD, UCLA, Department of Pediatrics, Division of Allergy and Immunology, Los Angeles, CA, E. Richard Stiehm, MD, FAAAAI, Division of Allergy and Immunology, Department of Pediatrics, David Geffen School of Medicine at UCLA, Los Angeles, CA, Richard Gatti, MD, UCLA, Department of Pathology & Laboratory Medicine and Otto Yang, MD, UCLA, Department of Medicine, Division of Infectious Disease**
- 545 Abnormalities in CD4 and CD8 Lymphocyte Subpopulations in Patients with Common Variable Immunodeficiency**  
**Amanda J. Seba, Norma de Paula Motta Rubini, Albertina Varandas Capelo, Eliane Miranda da Silva, Fernando Samuel Sion, Clety Larissa Angulo Llerena and Carlos Alberto Morais-de-Sá, Federal University of the State of Rio de Janeiro, Rio de Janeiro, Brazil**
- 546 Experience with a 20% Subcutaneous Immunoglobulin (Hizentra®) in Children with Primary Immunodeficiency Diseases - A Single-Center Review**  
**Rebecca Gregory<sup>1</sup>, Clare Malcolmson<sup>1</sup>, Chetan Patel<sup>1</sup>, Terry Woolley<sup>2</sup> and Alison Jones<sup>1</sup>, <sup>1</sup>Great Ormond Street Hospital, London, United Kingdom, <sup>2</sup>CSL Behring, West Sussex, United Kingdom**
- 547 Correction of Signal Transduction and Activator of Transcription 3 (STAT3) Function in an Adolescent with Autosomal Dominant Hyper-IgE Syndrome (AD-HIES) Following Hematopoietic Stem Cell Transplantation (HSCT)**  
**Joel L. Gallagher<sup>1</sup>, Andrew Gilman<sup>1</sup>, Troy R. Torgerson, MD, PhD<sup>2</sup> and Niraj C. Patel, MD<sup>1</sup>, <sup>1</sup>Levine Children's Hospital at Carolinas Medical Center, Charlotte, NC, <sup>2</sup>University of Washington School of Medicine and Seattle Children's Hospital, Seattle, WA**
- 548 Patient Satisfaction with 20% Subcutaneous Immunoglobulin (Hizentra®) Treatment: Results From a Single-Center Study in Children with Immunodeficiencies**  
**Clare Malcolmson<sup>1</sup>, Rebecca Gregory<sup>1</sup>, Chetan Patel<sup>1</sup>, Zoya Panahloo<sup>2</sup> and Alison Jones<sup>1</sup>, <sup>1</sup>Great Ormond Street Hospital, London, United Kingdom, <sup>2</sup>CSL Behring UK Ltd, Haywards Heath, United Kingdom**
- 549 Adverse Reactions Related to Endovenous Human Immunoglobulin Infusion for the Treatment of Patients with Primary Immunodeficiency**  
**Flavio Sano, MD<sup>1</sup>, Danielli Christinni Bichuete-Silva, MD<sup>1</sup>, Fernanda Furlan, MD<sup>1</sup>, Anna Tereza Negrini Fagundes, MD<sup>1</sup>, Fernanda Aimee Nobre, MD<sup>1</sup>, Camila Teles Machado Pereira, MD<sup>1</sup>, Tessa Rachel Tranquilini Gonçalves, MD<sup>1</sup>, Mariana Gouveia-Pereira, MD<sup>1</sup>, Rafael Rota, MD<sup>1</sup> and Beatriz Tavares Costa-Carvalho, MD<sup>2</sup>, <sup>1</sup>Federal University of Sao Paulo, Sao Paulo, Brazil, <sup>2</sup>Federal University of Sao Paulo, Brazil**
- 550 The Spectrum of Primary Immunodeficiency Diseases in A Saudi Tertiary Care Hospital Over Two Years**  
**Bandar Al-Saud, MD<sup>1,2</sup>, S Al-Muhsen, MD<sup>3,4</sup>, A Al-Ghonaum, MD<sup>1</sup>, S Al Gazlan, MD<sup>5</sup>, H Al-Dhekri, MD<sup>3</sup>, R Arnaout, MD<sup>3</sup>, A Al-Seraihy, MD<sup>6</sup>, N Elsayed<sup>7</sup>, M Shoukri, PhD<sup>8</sup>, J Afzal, MD<sup>9</sup> and H Al-Mousa, MD<sup>2,3</sup>, <sup>1</sup>King Faisal Specialist Hospital & Research Center, <sup>2</sup>Alfaisal University, College of Medicine, <sup>3</sup>Pediatric, King Faisal Specialist Hospital & Research Center, <sup>4</sup>King Saud University, College of Medicine, Riyadh, Saudi Arabia, <sup>5</sup>Medicine, King Faisal Specialist Hospital & Research Center, <sup>6</sup>Pediatric Hematology/Oncology King Faisal Specialist Hospital & Research Center, <sup>7</sup>Nursing Affairs, King Faisal Specialist Hospital & Research Center, <sup>8</sup>Biostatistics, Epidemiology & Scientific Computing King Faisal Specialist Hospital & Research Center, <sup>9</sup>Biostatistics, Epidemiology & Scientific Computing, King Faisal Specialist Hospital & Research Center, Riyadh, Saudi Arabia**
- 551 Shift in Patterns in Previous Immunoglobulin Therapy Use in Patients Prescribed 20% Subcutaneous Immunoglobulin**  
**Marc Botteman, MSc, Pharmerit International, Bethesda, MD, Art Zbrozek, CSL Behring LLC, King of Prussia, PA, Ann Bullinger, PharmD, CSL Behring, King of Prussia, PA and Alan P. Baptist, MD, MPH, University of Michigan, Division of Allergy, Ann Arbor, MI**
- 552 Immunologists' Attitudes On "Wear-off" Effects of IgG Replacement Therapy for Primary Immunodeficiency Disease (PIDD) Patients**  
**Mark Ballow, MD, FAAAAI, SUNY Buffalo, Sarasota, FL, Ann Bullinger, PharmD, CSL Behring, King of Prussia, PA, Elyse A. Murphy, RN, CSL Behring, Vienna, VA and Melvin Berger, MD, PhD, FAAAAI, CSL Behring, LLC, King of Prussia, PA**
- 553 Long-Term Efficacy and Tolerability of 20% Scig in the Treatment of Patients with Primary Immunodeficiency Disease**  
**Michael Borte, Academic Teaching Hospital of the University of Leipzig, Germany, Richard L. Wasserman, MD, PhD, FAAAAI, Allergy/Immunology Research Center of North Texas, Dallas, TX, Mikhail Rojavin, PhD, Clinical Research and Development, CSL Behring LLC, King of Prussia, PA, Martin Bexon, MD, CSL Behring AG, Bern 22, Switzerland and Stephen Jolles, University Hospital of Wales, Cardiff, United Kingdom**
- 554 Sickle Cell Disease and Poor Response to Pneumococcal Vaccination**  
**Elizabeth Bertucci, MD, Tulane School of Medicine and Ochsner Medical Center, New Orleans, LA, Jane M. El-Dahr, MD, FAAAAI, Tulane University Health Sciences Center, New Orleans, LA and Julie Kanter-Washko, Tulane University School of Medicine**
- 555 A Pediatric Case of Hypogammaglobulinemia in a Patient with Fanconi Anemia: A Case Report and Review of the Literature**  
**Julia A. Savitz, MD, Walter Reed, Potomac, MD and Barbara Martinez, MD, Walter Reed**
- 556 MBL Polymorphisms in a US Cohort of Children with Recurrent Infection**  
**Catherine Kubiak, MD, John Sleasman, MD and Morna J. Dorsey, MD, MMSc, FAAAAI, USF/All Children's Hospital, St Petersburg, FL**
- 557 Clinical and Immunological Features of Four Patients with X-Linked Lymphoproliferative Disease (XLP) Presenting Over a One-Year Period, Including a Novel Mutation in the SH2D1A Gene**  
**Luke Wall, MD and Kenneth Paris, MD, MPH, LSUHSC, New Orleans, LA**

## Immunogenetics, Immunodeficiency

4203

Monday, February 25th, 2013, 9:45 AM - 10:45 AM

- 558 First-in-Human Study of REGN668/SAR231893 (IL-4R $\alpha$  mAb): Safety, Tolerability and Biomarker Results of a**



- Randomized, Double-Blind, Placebo-Controlled, Single Ascending Dose Study in Healthy Volunteers**  
**Allan Radin, MD<sup>1</sup>**, Haobo Ren, PhD<sup>2</sup>, Pamela Papino-Wood<sup>1</sup>, Usman Chaudhry, PhD<sup>1</sup> and Jennifer D. Hamilton, PhD<sup>1</sup>, <sup>1</sup>Regeneron Pharmaceuticals, Inc., Tarrytown, NY, <sup>2</sup>Regeneron Pharmaceuticals, Inc., Basking Ridge, NJ
- 559 Variation in the Management of C2 Deficiency in the USA: A Need for Consensus?**  
**Jordan K. Abbott, MD** and Erwin W. Gelfand, MD, National Jewish Health, Denver, CO
- 560 Low Levels of Serum B-Cell Activating Factor (BAFF) Among Humans with High IgE Reactivity to the Nematode Ascaris**  
**Adriana P. Bornacelly<sup>1,2</sup>**, Nathalie Acevedo<sup>1,2</sup> and Luis Caraballo<sup>1,2</sup>, <sup>1</sup>Institute for Immunological Research/University of Cartagena, Cartagena, Colombia, <sup>2</sup>Foundation for the development of medical and biological sciences, Cartagena, Colombia
- 561 Genetics of Periodic Fever, Aphthous Stomatitis, Pharyngitis, Adenitis (PFAPA) Syndrome**  
**Lori Broderick, MD, PhD<sup>1</sup>**, Daniela Carvalho<sup>2</sup>, Anthony Magit<sup>2</sup>, Wen Jiang<sup>2</sup>, Shelby Leuin<sup>2</sup>, Marcella Bothwell<sup>2</sup>, Donald Kearns<sup>2</sup>, Seth Pransky<sup>2</sup> and Hal M. Hoffman, MD, FAAAAI<sup>1,2</sup>, <sup>1</sup>University of California, San Diego, <sup>2</sup>Rady Children's Hospital-San Diego
- 562 Targeted Deep Resequencing of Thirteen Candidate Genes Reveals Novel Variants Determining Asthma Risk in Individuals of African Ancestry**  
**Rasika A. Mathias, ScD<sup>1</sup>**, Lili Huang, MPH<sup>1</sup>, Li Gao, MD, PhD<sup>1</sup>, Nicholas M. Rafaels, MS<sup>1</sup>, Candelaria I. Vergara, MD, PhD<sup>1</sup>, Ingo Ruczinski, PhD<sup>2</sup>, Terri H. Beaty, PhD<sup>2</sup> and Kathleen C. Barnes, PhD, FAAAAI<sup>1</sup>, <sup>1</sup>Division of Allergy and Clinical Immunology, Department of Medicine, Johns Hopkins University, Baltimore, MD, <sup>2</sup>Johns Hopkins Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD
- 563 Novel Interleukin-7R $\alpha$  (IL-7R $\alpha$ ) Mutations Causing Delayed Onset Isolated T Cell Immunodeficiency Disease**  
**Jean Brown, MD<sup>1</sup>**, John Sleasman, MD<sup>2</sup>, Morna J. Dorsey, MD, MMSc, FAAAAI<sup>2</sup> and Panida Sriaroon, MD<sup>3</sup>, <sup>1</sup>University of South Florida, Tampa, FL, <sup>2</sup>USF/All Children's Hospital, St Petersburg, FL, <sup>3</sup>University of South Florida, Saint Petersburg, FL
- 564 Genetic Variations On IL10 Gene and Helicobacter Pylori Infection**  
**Shirleide Assis, MsC<sup>1</sup>**, Cintia R Marques, MsC<sup>1</sup>, Ryan S Costa, MsC<sup>1</sup>, Neuza M Alcantara-Neves, PhD<sup>1</sup>, Mauricio L Barreto, PhD<sup>2</sup>, Kathleen C. Barnes, PhD, FAAAAI<sup>3</sup> and Camila A Figueiredo, PhD<sup>1</sup>, <sup>1</sup>Instituto de Ciências da Saúde, Universidade Federal da Bahia, Salvador, BA, Brazil, <sup>2</sup>Instituto de Saúde Coletiva, UFBA, Salvador, BA, Brazil, <sup>3</sup>Division of Allergy and Clinical Immunology, Department of Medicine, Johns Hopkins University, Baltimore, MD
- 565 IBD Presenting Decades Prior to the Diagnosis of CVID**  
**Anna Kochin, MD**, Montefiore Medical Center, Bronx, NY and Arye Rubinstein, MD, FAAAAI, Albert Einstein College of Medicine, Bronx, NY

## Asthma and Epidemiology I

4204

Monday, February 25th, 2013, 9:45 AM - 10:45 AM

- 566 Characteristics of Allergic Sensitization Among Adult Asthmatics Older Than 55 Years: Results From the National Health and Nutrition Examination Survey 2005-2006**  
**Paula Busse, MD, FAAAAI<sup>1</sup>**, Richard Cohn, PhD<sup>2</sup>, Paivi M. Salo, PhD<sup>3</sup> and Darryl C. Zeldin, MD<sup>3</sup>, <sup>1</sup>Mount Sinai School of

Medicine, New York, NY, <sup>2</sup>SRA International, Inc, Durham, NC, <sup>3</sup>NIEHS, Research Triangle Park, NC

## Asthma and Allergy Epidemiology II

4205

Monday, February 25th, 2013, 9:45 AM - 10:45 AM

MONDAY

- 574 Differences in Allergen Exposures Between American Asthmatic and Nonasthmatic Homes**  
**Jianfeng JM Meng, MD**, Children's Mercy Hospitals and Clinics, Kansas City, MO; UMKC School of Medicine, Charles Barnes, PhD, Children's Mercy Hospital & Clinics, Kansas City, MO and Lanny Rosenwasser, MD, FAAAAI, Children's Mercy Hospital, Kansas City, Kansas City, MO
- 575 Bronchial Asthma Correlates with Vitamin D Status of Adult Women in North Jordan**  
**Shaher M. Samrah, MBBS, FCCP**, Ibrahim Khatib, Basheer Khassawneh, MBBS, FCCP, Suleiman Momany, MBBS, FCCP and Ammar K. Daoud, MD, FAAAAI, Faculty of Medicine, Jordan University of Science and Technology (J.U.S.T), Irbid, Jordan
- 576 Prevalence of Sensitization to the Storage Mite *Acarus Siro* in Middle-East of Brazil**  
**Natasha R. Ferraroni, MD, PhD**, Hospital de Base, Brasilia-DF, Brazil; Clinim Alergoclinica, Brasilia-DF Brazil., Brasilia-DF, Brazil, Sabrina Oliveira, Biomedichal, Centro Universitario de Brasilia - UniCEUB, Brasilia-DF, Brazil and Jose Joao Ferraroni, MD PhD, Clinim Alergoclinica, Brasilia-DF, Brazil., Brasilia-DF, Brazil
- 577 Prevalence and Related Factors of Multiple Chemical Sensitivity in Patients Having Allergic Diseases**  
**Jae-Hyun Lee, MD, PhD<sup>1</sup>**, Inchul Jeong<sup>2</sup> and Inah Kim<sup>2</sup>, <sup>1</sup>Department of Internal Medicine, Yonsei University College of Medicine, <sup>2</sup>Graduate School of Public Health, Yonsei University
- 578 The Frequency of Pollen Hypersensitivity Among Children with Bronchial Asthma and Allergic Rhinoconjunctivitis in Alexandria, Egypt**  
**Dalia El-Ghoneimy, MD, PhD<sup>1</sup>**, Zeinab El-Sayed<sup>1</sup> and Ahmed Aborahma<sup>2</sup>, <sup>1</sup>Ain Shams University, <sup>2</sup>Alexandria University
- 579 Indoor Environmental and Demographic Factors of Malaysian Allergic Children**  
**Aravind Yadav, MD<sup>1,2</sup>** and Rakesh Naidu<sup>1,3</sup>, <sup>1</sup>University of Malaya, Malaysia, <sup>2</sup>Pediatric Pulmonary, University of Texas Health Science (Houston), Houston, TX, <sup>3</sup>School of Medicine and Health Sciences, Monash University Sunway Campus, Malaysia
- 580 Determining the Prevalence of Mites in Kindergartens and Children's Room in Bogota**  
**Gustavo Cuadros, MSc<sup>1</sup>**, Maria M. Olivares, MD<sup>2</sup>, Libardo Renteria, MD<sup>3</sup>, Javier Peñuela, MD<sup>3</sup>, Nidia Garzon, technician<sup>4</sup>, David Rodriguez, MD<sup>1</sup>, Enrique Fernandez-Caldas, PhD<sup>5</sup> and Camila Marquez, MD<sup>1</sup>, <sup>1</sup>District Department of Health of Bogota, Bogota, Colombia, <sup>2</sup>group of Clinical and Experimental Allergy University of Antioquia, MEDELLIN, Colombia, <sup>3</sup>District Department of Health of Bogota, BOGOTA, Colombia, <sup>4</sup>District Department of Health of Bogota, bogota, Colombia, <sup>5</sup>Inmunotek, Madrid, Spain
- Rodríguez, MD and Emilio Alvarez-Cuesta, MD, PhD, Ramon y Cajal University Hospital, Madrid, Spain
- 583 Allergy to Heparins and Their Cross-Reactivity**  
**Patricia Martinez-Lezcano, MD<sup>1</sup>**, Blanca Noguerado, MD<sup>2</sup>, Rafael Pineda, MD<sup>3</sup>, Manuel De Barrio, MD<sup>3</sup> and Pilar Tornero, MD<sup>2</sup>, <sup>1</sup>Hospital General Universitario Gregorio Marañón, Madrid, Spain, <sup>2</sup>Hospital General Universitario Gregorio Marañón, <sup>3</sup>Hospital General Universitario Gregorio Marañón, Madrid, Spain
- 584 Allergy Suspicion to Proton Pump Inhibitors - Taking Advantage of Cross-Reactivity**  
**Diana Silva**, Eunice Castro, MD and Josefina Cernadas, Serviço de Imunoalergologia, Centro Hospitalar São João E.P.E., Porto, Portugal
- 585 Hypersensitivity Reactions to Taxanes and Platins**  
**A. Gomez Infante, MD**, J.M. Escobar Montalvo, MD, E. Alejo Almanzar, MD, MA Jimenez Blanco, MD, A. Enriquez Matas, MD, R. Vives Conesa, MD and R. Mielgo Ballesteros, MD, Hospital Universitario 12 de Octubre, Madrid, Spain
- 586 Oxaliplatin Hypersensitivity: Management and Comparison with Carbo/Cisplatin**  
**Morris Ling, MD<sup>1,2</sup>**, Sarita U. Patil, MD<sup>2,3</sup> and Johnson T. Wong, MD, FAAAAI<sup>1,2</sup>, <sup>1</sup>Massachusetts General Hospital, Boston, MA, <sup>2</sup>Harvard Medical School, Boston, MA, <sup>3</sup>Allergy and Immunology, Massachusetts General Hospital, Boston, MA
- 587 Hypersensitivity Reactions to Oxaliplatin: Outcomes of Pre-medication and Desensitization**  
**Suh-Young Lee<sup>1,2</sup>**, Mi-Yeong Kim<sup>1,2</sup>, Min-Hye Kim<sup>1,2,3</sup>, Woo-Jung Song<sup>1,2</sup>, Hye-Ryun Kang<sup>1,2,3</sup>, Kyung-Up Min<sup>1,2</sup> and Sang Heon Cho, MD PhD<sup>2,3,4</sup>, <sup>1</sup>Department of Internal Medicine, Seoul National University College of Medicine, Seoul, Korea, <sup>2</sup>Institute of Allergy and Clinical Immunology, Seoul National University Medical Research Center, Seoul, Korea, <sup>3</sup>Seoul National University Hospital Regional Pharmacovigilance Center, <sup>4</sup>Department of Internal Medicine, Seoul National University College of Medicine, Seoul, South Korea
- 588 Successful Desensitization to Voriconazole**  
**Ricardo D. Zwiener, MD<sup>1</sup>**, Gustavo Marino<sup>2</sup>, Milagros Moreno Danna<sup>2</sup>, Brodsky Tamara<sup>2</sup> and Tisi Baña Matías<sup>2</sup>, <sup>1</sup>Hospital Universitario Austral, Pilar, Argentina, <sup>2</sup>Hospital Universitario Austral
- 589 Novel Echinocandin Desensitization in a Pediatric Patient with Hypersensitivity to Micafungin**  
**Stephanie L. Logsdon, MD**, Children's Hospital Boston, Boston, MA and John Jhe-Yun Lee, MD, Children's Hospital of Boston, Needham, MA
- 590 Clinical Manifestations and Diagnostic Methods of Immediate Hypersensitivity Reaction to Oral Cefaclor**  
**Park Chan Sun<sup>1</sup>**, Choi Gil soon<sup>2</sup>, Park Seung hyun<sup>1</sup> and Lee Joo Won<sup>1</sup>, <sup>1</sup>Inje University, Haeundae Paik hospital, <sup>2</sup>Kosin University gospel hospital
- 591 DAP: New Products for Skin Tests Diagnosis of Penicillin Allergy**  
**F. Javier Fernandez, MD, PhD<sup>1</sup>**, María José Torres, MD, PhD<sup>2</sup>, Julián Campos, Biologist<sup>3</sup>, Francisca Arribas-Poves, Pharmacist<sup>3</sup>, Miguel Blanca, MD, PhD<sup>2</sup> and Angel Vallverdu, MD<sup>3</sup>, <sup>1</sup>UMH Alicante G.University Hospital - Allergy Sect., Alicante, Spain, <sup>2</sup>Allergy Service, Carlos Haya Hospital, Málaga, Spain, <sup>3</sup>Diater Laboratory, Madrid, Spain
- 592 Aspirin Allergy in a VA Population: Is There Potential Benefit for Evaluation in the Allergy Clinic?**  
**Bhavisha Patel, MD<sup>1,2</sup>**, Peter Mason, MD, MPH<sup>1,2</sup>, Sujani Kakumanu, MD<sup>1,2</sup> and Sameer K. Mathur, MD, PhD, FAAAAI<sup>1,2</sup>, <sup>1</sup>University of Wisconsin School of Medicine and Public Health, Madison, WI, <sup>2</sup>William S. Middleton Veterans Hospital, Madison, WI
- 593 Rapid Outpatient Aspirin Desensitization/Challenge for Urticaria/Angioedema and AERD**  
**Johnson T. Wong, MD, FAAAAI**, Massachusetts General

## Drug Allergy I

4206

Monday, February 25th, 2013, 9:45 AM - 10:45 AM

- 581 Delayed Reaction to Paclitaxel**  
**Maria Alicia Urena Tavera, MD<sup>1</sup>**, Denisse Angel<sup>2</sup>, Ricardo Madrigal-Burgaleta, MD<sup>1</sup>, Pilar Berges, MD, PhD<sup>1</sup>, Emilio Alvarez-Cuesta, MD, PhD<sup>3</sup> and Rafael Perez Arango<sup>4</sup>, <sup>1</sup>Ramon y Cajal University Hospital, Madrid, Spain, <sup>2</sup>Hospital Universitario Ramon y Cajal, <sup>3</sup>Ramon y Cajal University Hospital, Madrid, Spain, <sup>4</sup>Ramon y Cajal Hospital
- 582 Desensitization to Methylprednisolone Succinate in a Patient with Multiple Sclerosis**  
**Denisse Angel Pereira, MD**, Ricardo Madrigal-Burgaleta, MD, Pilar Berges, MD, PhD., Maria Alicia Urena Tavera, MD, Ximena

- Hospital, Boston, MA; Harvard Medical School, Boston, MA; Newton-Wellesley Hospital, Newton, MA
- 594 Food Allergy Is Not A Risk Factor in Cross-Intolerance to Nsaids for Induction of Symptoms**  
**Francisca Gomez, MD, PhD<sup>1</sup>**, Inmaculada Doña, MD, PhD<sup>2</sup>, Natalia Blanca-López, MD, PhD<sup>3</sup>, María J Torres, MD, PhD<sup>2</sup>, María Salas, MD, PhD<sup>4</sup>, Carmen Rondon, MD, PhD<sup>5</sup>, Paloma Campo, MD, PhD<sup>5</sup>, Teresa Posadas<sup>2</sup>, María Auxiliadora Guerrero<sup>4</sup>, Gabriela Canto, MD, PhD<sup>6</sup> and Miguel Blanca, MD, PhD<sup>2</sup>, <sup>1</sup>IMABIS Foundation, Malaga, Spain, <sup>2</sup>Allergy Service, Carlos Haya Hospital, Málaga, Spain, <sup>3</sup>Allergy Service, Infanta Leonor Hospital, Madrid, Spain, <sup>4</sup>Allergy Service, Carlos Haya Hospital, Spain, <sup>5</sup>Allergy Service, Carlos Haya Hospital, Malaga, Spain, <sup>6</sup>Allergy Service, Infanta Leonor Hospital
- 595 Patients with Acute Urticaria/Angioedema to Nsaids Do Not Evolve to Chronic Urticaria**  
**Inmaculada Doña, MD, PhD<sup>1</sup>**, Carmen Rondon, MD, PhD<sup>2</sup>, Paloma Campo, MD, PhD<sup>2</sup>, María J Torres, MD, PhD<sup>1</sup>, Natalia Blanca-López, MD, PhD<sup>3</sup>, Francisca Gomez, MD PhD<sup>4</sup>, María Salas, MD, PhD<sup>5</sup>, María Dolores Ruiz<sup>5</sup>, Gabriela Canto, MD, PhD<sup>6</sup> and Miguel Blanca, MD, PhD<sup>1</sup>, <sup>1</sup>Allergy Service, Carlos Haya Hospital, Málaga, Spain, <sup>2</sup>Allergy Service, Carlos Haya Hospital, Malaga, Spain, <sup>3</sup>Allergy Service, Infanta Leonor Hospital, Madrid, Spain, <sup>4</sup>IMABIS Foundation, Malaga, Spain, <sup>5</sup>Allergy Service, Carlos Haya Hospital, Spain, <sup>6</sup>Allergy Service, Infanta Leonor Hospital
- 596 Influence of the Basophil Selection Strategy and Death Cells Exclusion in BAT for Nsaids Patients**  
**Tahía Fernández, PhD<sup>1</sup>**, Ana Aranda, PhD<sup>1</sup>, Inmaculada Doña, MD, PhD<sup>2</sup>, María J Torres, MD, PhD<sup>2</sup>, Lidia Melendez, Lab. Tech.<sup>1</sup>, María I Montañez, PhD<sup>1</sup>, Enrique Gómez, PhD<sup>1</sup>, Miguel Blanca, MD, PhD<sup>2</sup> and Cristobalina Mayorga, PhD<sup>1,3</sup>, <sup>1</sup>Research Laboratory, Carlos Haya Hospital-FIMABIS, Malaga, Spain, <sup>2</sup>Allergy Service, Carlos Haya Hospital, Málaga, Spain, <sup>3</sup>Pediatric Service, Carlos Haya Hospital, Málaga, Spain
- 597 Non-Immediate Hypersensitivity Reactions to Non-Steroideal Anti-Inflammatory Drugs (NSAIDs)**  
**Rafael Pineda, MD**, Patricia Martínez Lezcano, Tamara Fernandez, Gabriela Zambrano, Roberto Pelta and Manuel De Barrio, MD, Hospital General Universitario Gregorio Marañón, Madrid, Spain
- 598 Drug Provocation Tests in the Diagnosis of Hypersensitivity Reactions to Non-Steroidal Anti-Inflammatory Drugs in Children**  
**María Angeles Zambonino<sup>1</sup>**, María José Torres, MD, PhD<sup>2</sup>, Candelaria Muñoz<sup>1</sup>, Gloria Requena<sup>1</sup>, Cristobalina Mayorga, PhD<sup>1</sup>, Teresa Posadas<sup>2</sup>, Antonio Urda<sup>1</sup>, Miguel Blanca, MD, PhD<sup>2</sup> and Jose Luis Corzo Higuera, MD<sup>1</sup>, <sup>1</sup>Pediatric Service, Carlos Haya Hospital, Málaga, Spain, <sup>2</sup>Allergy Service, Carlos Haya Hospital, Málaga, Spain
- 599 Association of Thymic Stromal Lymphopoietin Genetic Variants in Urticaria/Angioedema Induced by Multiple Nsaids**  
**María del Carmen Plaza-Serón, Bsc<sup>1</sup>**, Pedro Ayuso Parejo, PhD<sup>2</sup>, Natalia Blanca-López, MD, PhD<sup>2</sup>, Inmaculada Doña, MD, PhD<sup>3</sup>, María José Torres, MD, PhD<sup>4</sup>, Javier Fernández<sup>5</sup>, Jose Julio Laguna<sup>6</sup>, Veronique Goidenau<sup>4</sup>, Luisa Galindo, RN<sup>7</sup>, Rocio Herrera, NR<sup>8</sup>, Gabriela Canto, MD, PhD<sup>9</sup>, Miguel Blanca, MD, PhD<sup>10</sup> and Jose Antonio Cornejo-García<sup>4</sup>, <sup>1</sup>Allergy Service, Infanta Leonor Hospital, Malaga, Spain, <sup>2</sup>Allergy Service, Infanta Leonor Hospital, Madrid, Spain, <sup>3</sup>IMABIS Foundation, Malaga, Spain, <sup>4</sup>Imabis Foundation, <sup>5</sup>Alicante Hospital, <sup>6</sup>Hospital De La Cruz Roja, Madrid, Spain, <sup>7</sup>Carlos Haya Hospital, Malaga, Spain, <sup>8</sup>Allergy Service Carlos Haya Hospital, Malaga, Spain, <sup>9</sup>Allergy Service, Infanta Leonor Hospital, <sup>10</sup>Allergy Service, Carlos Haya Hospital, Málaga, Spain
- 600 Association Study of Functional Polymorphisms in Genes Involved in Histamine Homeostasis and Multiple NSAID-Triggered Urticaria and/or Angioedema and Anaphylaxis in Patients without Pre-Existing Chronic Urticaria (MNSAID-UA)**  
**Pedro Ayuso Parejo, PhD<sup>1,2</sup>**, Jose Augusto García-Agúndez, MD, PhD<sup>3</sup>, Jose A Cornejo-Garcia, PhD<sup>4</sup>, Miguel Blanca, MD, PhD<sup>5</sup>, María José Torres, MD, PhD<sup>5</sup>, Inmaculada Doña, MD, PhD<sup>5</sup>, María Salas, MD, PhD<sup>6</sup>, Natalia Blanca-López, MD, PhD<sup>2</sup>, Gabriela Canto, MD, PhD<sup>7</sup>, Carmen Rondon, MD, PhD<sup>8</sup>, Paloma Campo, MD, PhD<sup>9</sup>, Jose Julio Laguna, MD, PhD<sup>10</sup>, F. Javier Fernandez, MD, PhD<sup>11</sup>, Carmen Martínez, MD, PhD<sup>3</sup> and Elena García-Martín, MD, PhD<sup>1</sup>, <sup>1</sup>Dept. Bioquímica Biología Molecular y Genética.Universidad de Extremadura., Cáceres, Spain, <sup>2</sup>Allergy Service, Infanta Leonor Hospital, Madrid, Spain, <sup>3</sup>Dept. Farmacología, Universidad de Extremadura, Cáceres, Spain, <sup>4</sup>Laboratorio de Investigacion, FIMABIS, Malaga, Spain, <sup>5</sup>Allergy Service, Carlos Haya Hospital, Málaga, Spain, <sup>6</sup>Allergy Service, Carlos Haya Hospital, Spain, <sup>7</sup>Allergy Service, Infanta Leonor Hospital, <sup>8</sup>Allergy Service Carlos Haya Hospital, Malaga, Spain, <sup>9</sup>Allergy Service, Carlos Haya Hospital, Malaga, Spain, <sup>10</sup>De La Cruz Roja Hospital, Madrid, Spain, <sup>11</sup>UMH Alicante G.University Hospital - Allergy Sect., Alicante, Spain
- 601 A Genome-Wide Association Study of Non-Steroidal Antiinflammatory Drugs (NSAIDs)-Induced Acute Urticaria in the Spanish Population**  
**Mike TM Lee<sup>1,2</sup>**, Jose A Cornejo-Garcia, PhD<sup>3</sup>, Yuan-Tsong Chen<sup>1</sup>, Chien-Hsiun Chen<sup>1</sup>, Natalia Blanca-López, MD, PhD<sup>4</sup>, Inmaculada Doña, MD, PhD<sup>5</sup>, María J Torres, MD, PhD<sup>5</sup>, Carmen Rondon, MD, PhD<sup>6</sup>, Paloma Campo, MD, PhD<sup>6</sup>, Jose Julio Laguna, MD, PhD<sup>7</sup>, F. Javier Fernandez, MD, PhD<sup>8</sup>, Pedro Ayuso Parejo, PhD<sup>4</sup>, Maria del Carmen Plaza-Serón, Bsc<sup>9</sup>, Maria Del Mar Gandofo Cano, MD, PhD<sup>10</sup>, Ana Rosado Ingelmo, MD, PhD<sup>11</sup>, Gabriela Canto, MD, PhD<sup>12</sup> and Miguel Blanca, MD, PhD<sup>5</sup>, <sup>1</sup>Institute of Biomedical Sciences, Academia Sinica, Taipei, Taiwan, <sup>2</sup>Center for Genomic Medicine, RIKEN, Yokohama, Japan, <sup>3</sup>Laboratorio de Investigacion, FIMABIS, Malaga, Spain, <sup>4</sup>Allergy Service, Infanta Leonor Hospital, Madrid, Spain, <sup>5</sup>Allergy Service, Carlos Haya Hospital, Málaga, Spain, <sup>6</sup>Allergy Service, Carlos Haya Hospital, Malaga, Spain, <sup>7</sup>De La Cruz Roja Hospital, Madrid, Spain, <sup>8</sup>UMH Alicante G.University Hospital - Allergy Sect., Alicante, Spain, <sup>9</sup>Allergy Service, Infanta Leonor Hospital, Malaga, Spain, <sup>10</sup>Allergy Service, Fuenlabrada Hospital, Madrid, Spain, <sup>11</sup>Allergy Service, Alcorcón Hospital, Madrid, Spain, <sup>12</sup>Allergy Service, Infanta Leonor Hospital
- 602 Profiling Gene Expression Changes in Cytokines and MicroRNAs As a Novel Assay in the Diagnosis of Drug Hypersensitivity**  
**Neeti Bhardwaj, MD, MS**, Penn State Milton S. Hershey Medical Center, Hershey, PA, Heather Rouse, PharmD., Penn State Milton S. Hershey Medical Center and Faoud T. Ishmael, MD, PhD, The Pennsylvania State University College of Medicine, Hershey, PA
- 603 Drug Resistant Infections with Methicillin-Resistant Staphylococcus Aureus, Clostridium Difficile, and Vancomycin Resistant Enterococcus Are Associated with a Higher Prevalence of Penicillin Allergy**  
**Vinitha Reddy, MD<sup>1</sup>**, Neil S. Baman, MD<sup>1</sup>, Cynthia Whitener<sup>1</sup> and Faoud T. Ishmael, MD, PhD<sup>2</sup>, <sup>1</sup>Penn State Hershey Medical Center, Hershey, PA, <sup>2</sup>Penn State University College of Medicine, Hershey, PA
- 604 Acetaminophen Hypersensitivity: Myth or Reality**  
**Renata P. Bittar, Marcelo Aun, MD, Laila Sabino Garro, MD, Marisa Rosimeire Ribeiro, MD, Jorge Kalil, MD, PhD, Pedro Giavina-Bianchi, MD, PhD and Antonio Abílio Motta, MD, PhD**, Division of Clinical Immunology and Allergy, University of São Paulo, Brazil
- 605 Sulfonamide Hypersensitivity in Patients with Systemic Erythematosis**  
**Masato Okada, MD, FAAAAI<sup>1</sup>**, Yasuhiro Suyama, MD<sup>2</sup>, Ryo Rokutanda, MD<sup>2</sup>, Yuri Ohara, MD<sup>2</sup>, Chisun Min, MD<sup>2</sup> and Ken-ichi Yamaguchi, MD<sup>2</sup>, <sup>1</sup>St.Luke's International Hospital, <sup>2</sup>St. Luke's International Hospital, Tokyo, Japan



- 606 Induction of Drug Tolerance to Trimethoprim/Sulfamethoxazole in Non-HIV Patients with a History of Sulfonamide Allergy**  
**Regan Pyle, DO<sup>1</sup>**, Miguel A. Park, MD<sup>1</sup>, Gerald W. Volcheck, MD, FAAAAI<sup>2</sup>, Kimberly Poe, RN<sup>1</sup>, Jenna Podjasek, MD<sup>1</sup>, Matthew A. Rank, MD, FAAAAI<sup>3</sup> and Joseph H. Butterfield, MD, FAAAAI<sup>1</sup>, <sup>1</sup>Mayo Clinic, Rochester, MN, <sup>2</sup>Mayo Clinic and Foundation, Rochester, MN, <sup>3</sup>Mayo Clinic, Scottsdale, AZ
- 607 Results of Drug Provocation Tests in Patients with a History of Drug Hypersensitivity Reaction**  
**Wantida Dampnrat, MD**, prince of Songkla university, Hatyai+, Thailand, Prapasri Kulalert, MD, Prince of Songkla University, Songkla, Thailand, Araya Yuenyongviwat, MD, Price of Songkla University, Songkhla, Thailand and Pasuree Sangsupawanich, MD, Prince Songkklanagarind hospital, Hadyai, Thailand
- 608 Effects of Steroid Treatment On Outcomes in Patients with Drug Reaction with Eosinophilia and Systemic Symptoms Syndrome**  
**Elina Jerschow, MD, MSc**, Albert Einstein College of Medicine/Montefiore Medical Center, Bronx, NY, Mili Shum, MD, Cornell Medical Center, Denisa Ferastraoraru, MD, Albert Einstein / Jacobi Medical Center, Bronx, NY, Sharon Yee, MD, University of Colorado, Denver/National Jewish Health, Denver, CO, Sunit Jariwala, MD, Albert Einstein/Montefiore Medical Center, New York, NY, Anna Tavdy, New York Medical Center, Golda Hudes, MD PhD, Albert Einstein / Montefiore Medical Center, New York, NY and David L. Rosenstreich, MD, FAAAAI, Albert Einstein / Montefiore Medical Center, NY
- 609 DRESS Syndrome Induced by Piperacillin-Tazobactam in Eight Patients**  
**Oscar Calderón<sup>1</sup>**, Ana Fianor<sup>2</sup>, Teresa Caballero, MD, PhD<sup>3</sup>, Teresa Bellón<sup>4</sup>, Nieves Prior Gomez, MD<sup>5</sup>, MC Lopez-serrano<sup>6</sup>, Santiago Quirce, MD, PhD<sup>7</sup> and Rosario Cabañas<sup>6</sup>, <sup>1</sup>La Paz University Hospital, <sup>2</sup>Hospital La Paz, <sup>3</sup>Hospital La Paz Research Center (IdiPaz), Madrid, Spain, <sup>4</sup>La Paz University Hospital, ME, Spain, <sup>5</sup>Hospital Universitario La Paz, Madrid, Spain, <sup>6</sup>La Paz University Hospital, Spain, <sup>7</sup>Hospital La Paz Institute for Health Research, Dept. of Allergy, Madrid, Spain
- 610 Management of Adverse Drug Reactions with Suspected Immune Mechanisms in Latin America**  
**Mario Sánchez Borges<sup>1</sup>**, Ricardo Cardona-Villa, MD<sup>2</sup>, Luis Felipe C. Ensina, MD<sup>3</sup>, Dirceu Sole, MD, PhD<sup>4</sup>, Alfredo Arias Cruz<sup>5</sup>, Sandra González Díaz<sup>5</sup>, Alejandra Macias-Weinmann, MD<sup>6</sup>, Maximiliano Gómez<sup>7</sup>, Carlos Serrano<sup>8</sup>, Mabel Noemi Cuello, MD<sup>9</sup>, Paola Toche Pinaud<sup>10</sup>, Ruth Ramirez Giraldo<sup>11</sup>, Miguel Vinuesa, MD, PhD<sup>12</sup>, Adolfo Salvatierra<sup>13</sup>, Camila Telles<sup>14</sup>, Djanira Andrade<sup>14</sup>, Alicia De Falco<sup>15</sup>, Gregorio Mercovich<sup>16</sup>, Adriana Weisz<sup>16</sup> and Edgardo J. Jares, MD<sup>17</sup>, <sup>1</sup>Centro Medico-Docente La Trinidad, Caracas, Venezuela, <sup>2</sup>Universidad de Antioquia, Colombia, <sup>3</sup>Universidade Federal de São Paulo, Brazil, <sup>4</sup>Federal University of Sao Paulo, Sao Paulo, Brazil, <sup>5</sup>Hospital Universitario, Monterrey, Mexico, <sup>6</sup>Hospital Universitario UANL, Monterrey, N.L., Mexico, <sup>7</sup>Hospital San Bernardo, Salta, Argentina, <sup>8</sup>Fundación Valle del Lili, Cali, Colombia, <sup>9</sup>Consultorios San Juan, San Juan, Argentina, <sup>10</sup>Clínica Las Condes, Santiago, Chile, <sup>11</sup>Universidad de Antioquia, Medellín, Colombia, <sup>12</sup>Universidad de Rosario, Rosario, Argentina, <sup>13</sup>Fundair, San Luis, Argentina, <sup>14</sup>Universidade Federal de São Paulo, São Paulo, Brazil, <sup>15</sup>Universidad Nacional de La Plata, La Plata, Argentina, <sup>16</sup>Hospital Municipal Bernardo A. Houssay, Vicente López, Argentina, <sup>17</sup>Hospital Nacional Alejandro Posadas, Buenos Aires, Argentina
- 611 A Survey On Drug Reactions in Latin America**  
**Edgardo J. Jares, MD<sup>1</sup>**, Mario Sánchez Borges<sup>2</sup>, Luis Felipe C. Ensina, MD<sup>3</sup>, Maximiliano Gómez<sup>4</sup>, Galie Mimessi<sup>4</sup>, Alfredo Arias Cruz<sup>5</sup>, Carlos Serrano<sup>6</sup>, Susana Diez-Zuloaga<sup>7</sup>, Mabel Noemi Cuello, MD<sup>8</sup>, Sandra González Díaz<sup>5</sup>, Alejandra Macias Weinmann<sup>5</sup>, Dirceu Sole, MD, PhD<sup>9</sup>, Alicia De Falco<sup>10</sup>, Inês Camelo Nunes<sup>11</sup>, Susana Barayazarra<sup>12</sup>, Ivan Cherez, MD<sup>13</sup>, Andrea Zancchi<sup>12</sup>, Juan F. Schuhl, MD, FAAAAI<sup>14</sup>, Adolfo Salvatierra<sup>15</sup> and Ricardo Cardona-Villa, MD<sup>16</sup>, <sup>1</sup>Hospital Nacional Alejandro Posadas, Buenos Aires, Argentina, <sup>2</sup>Centro Medico-Docente La Trinidad, Caracas, Venezuela, <sup>3</sup>Universidade Federal de São Paulo, Brazil, <sup>4</sup>Hospital San Bernardo, Salta, Argentina, <sup>5</sup>Hospital Universitario, Monterrey, Mexico, <sup>6</sup>Fundación Valle del Lili, Cali, Colombia, <sup>7</sup>Universidad de Antioquia, Medellín, Colombia, <sup>8</sup>Consultorios San Juan, San Juan, Argentina, <sup>9</sup>Federal University of Sao Paulo, Sao Paulo, Brazil, <sup>10</sup>Universidade Nacional de La Plata, La Plata, Argentina, <sup>11</sup>Universidade Federal de São Paulo, São Paulo, Brazil, <sup>12</sup>Nuevo Hospital San Roque, Córdoba, Argentina, <sup>13</sup>Hospital Kennedy, Guayaquil, Ecuador, <sup>14</sup>British Hospital, Montevideo, Uruguay, <sup>15</sup>Fundair, San Luis, Argentina, <sup>16</sup>Universidad de Antioquia, Colombia
- 612 Prevalence and Characteristics of Penicillin Allergy in Urban Adults**  
**Stephanie Albin, MD**, Mount Sinai School of Medicine and Shradha Agarwal, MD, Mount Sinai School of Medicine, New York, NY
- 613 Characterization of Penicillin Allergy Among VA Patients**  
**Mark Biagtan, MD<sup>1,2</sup>**, Sujani Kakumanu, MD<sup>1,2</sup> and Sameer K. Mathur, MD, PhD, FAAAAI<sup>1,2</sup>, <sup>1</sup>University of Wisconsin School of Medicine and Public Health, Madison, WI, <sup>2</sup>William S. Middleton Veterans Hospital, Madison, WI
- 614 Prevalence of Quinolones Allergy in an Allergy Unit**  
**Silvia Uriarte**, Pamela Jara, Mar Fernández- Nieto and Joaquín Sastre, Fundación Jiménez Díaz, Madrid, Spain
- 615 Reported Antibiotic Allergy History and Outcomes in Patients Hospitalized with Community-Acquired Pneumonia**  
**D’Jahna Akinyemi, MD<sup>1</sup>**, Andrea J. Apter, MD, MA, MSc, FAAAAI<sup>2</sup>, Brian Strom<sup>3</sup> and Rui Feng<sup>3</sup>, <sup>1</sup>Johns Hopkins Asthma and Allergy Center, Baltimore, MD, <sup>2</sup>University of Pennsylvania, Media, PA, <sup>3</sup>University of Pennsylvania
- 616 Penicillin Allergy At A Tertiary Centre in Cape Town, South Africa**  
**Tamara Kerbelker, MBChB** and Michael E. Levin, MBBCh, Red Cross War Memorial Children’s Hospital, Cape Town, South Africa
- 617 Characterization of Single and Multiple Antibiotic Allergies in Cystic Fibrosis Patients**  
**Shenil Shah, MD**, Sapna Shah, MD, Erik Lehman, MS, Robert L. Vender, MD, Gavin Graff, MD and Faoud T. Ishmael, MD, PhD, The Pennsylvania State University College of Medicine, Hershey, PA
- 618 A Novel Desensitization Protocol for Inhaled Aztreonam**  
**E. Kwak**, T.R. Mainardi, S.M. Canfield, R.L. Miller and E.A. Dimango, Columbia Presbyterian Medical Center, New York, NY
- 619 A Retrospective Study of Drug-Induced Anaphylaxis Treated in the Emergency Department (ED) or Hospital: Patients’ Characteristics and Their Receipt of Preventive Care**  
**Susan A. Rudders, MD**, Division of Asthma and Allergy, Department of Pediatrics, Rhode Island Hospital, Alpert School of Medicine at Brown University, Providence, RI, Sunday Clark, MPH, ScD, Department of Emergency Medicine, Weill Cornell Medical College, New York, NY, Wenhui Wei, PhD, MS, MBA, Evidence Based Medicine, sanofi US, Bridgewater, NJ and Carlos Camargo Jr., MD, DrPH, Department of Emergency Medicine, Massachusetts General Hospital, Harvard Medical School, Boston, MA
- 620 Prevalence of Pediatric Drug Allergy Based On Drug Provocation Testing**  
**Gita Ram<sup>1</sup>**, Vidya Puthenpura<sup>1</sup> and Antonella Cianferoni, MD, PhD<sup>2</sup>, <sup>1</sup>Children’s Hospital of Philadelphia, <sup>2</sup>3615 Civic Center Boulevard, Children’s Hospital of Philadelphia, Philadelphia, PA
- 621 Incidence and Severity of Pediatric Allergic/Immunologic Adverse Drug Reactions in a Tertiary Care Center**  
**Janelle Sher, MD<sup>1</sup>**, Katherine Hahn, MD, MPH<sup>2</sup>, Misu Paul<sup>3</sup>, Marcella R. Aquino, MD, FAAAAI<sup>1</sup>, Mark Davis-Lorton, MD, FAAAAI<sup>1</sup>, Shan Wang, PhD<sup>2</sup>, Brian Malone, PhD<sup>2</sup> and Luz S.

- Fonacier, MD, FAAAAI<sup>1</sup>, <sup>1</sup>Winthrop University Hospital, Allergy & Immunology, Mineola, NY, <sup>2</sup>Winthrop University Hospital, Mineola, NY, <sup>3</sup>Stonybrook University School of Medicine
- 622 Increasing Radiocontrast Associated Adverse Effects in Cardiovascular Angiography Hospitalizations: New York State 1996-2010**  
Marialina Martell Gravié<sup>1</sup> and Robert Yao-Wen Lin, FAAAAI<sup>1,2,3</sup>, <sup>1</sup>New York Downtown Hospital, New York, NY, <sup>2</sup>New York Medical College, Valhalla, NY, <sup>3</sup>Weill Cornell Medical College, New York, NY
- 623 The Utility of Skin Testing in a Patient with Anaphylaxis to Contrast Media During Cardiac Catheterization: A Case Report**  
Shaili Shah, MD, University of North Carolina, Chapel Hill, NC, Vinod Doreswamy, MD, The Polyclinic, Seattle, WA, Samuel McDowell, MD, LeBauer Heartcare, Cone Health, Greensboro, NC and Maya R. Jerath, MD, PhD, University of North Carolina at Chapel Hill, Chapel Hill, NC
- 624 Clinical Feature and Progress of Contrast Media Anaphylaxis**  
Min-Hye Kim<sup>1</sup>, Min-Suk Yang<sup>2</sup>, Woo-Jung Song<sup>1</sup>, So-Hee Lee<sup>3</sup>, Sae-Hoon Kim<sup>4</sup>, Hye-Ryun Kang<sup>1</sup>, Heung-Woo Park<sup>3</sup>, Sun-Sin Kim<sup>3</sup>, Yoon-Seok Chang<sup>4</sup>, Kyung-Up Min, MD, PhD<sup>5</sup>, You-Young Kim<sup>6</sup> and Sang Heon Cho, MD, PhD<sup>7</sup>, <sup>1</sup>Department of Internal Medicine, Seoul National University College of Medicine, Seoul, Korea, <sup>2</sup>Seoul National University Boramae Medical Center, <sup>3</sup>Seoul National University Hospital, <sup>4</sup>Seoul National University Bundang Hospital, <sup>5</sup>Seoul National University Hospital, Seoul, <sup>6</sup>National Medical Center, Seoul, <sup>7</sup>Department of Internal Medicine, Seoul National University College of Medicine, Seoul, South Korea
- 625 Effectiveness of Electronic Medical Record-Embedded Consultation Support System for Iodinated Radiocontrast Media Hypersensitivity Prevention – an Observational Study in a Tertiary Hospital**  
Min-Suk Yang<sup>1</sup>, Min-Hye Kim<sup>2</sup>, Sang-Il Choi<sup>3</sup>, Jae-Hyoung Kim<sup>3</sup>, Woo-Jung Song<sup>2</sup>, Sae-Hoon Kim<sup>4</sup>, Hye-Ryun Kang<sup>2</sup>, Heung-Woo Park<sup>5</sup>, Yoon-Seok Chang<sup>4</sup>, Sang Heon Cho, MD, PhD<sup>6</sup> and Kyung-Up Min, MD, PhD<sup>7</sup>, <sup>1</sup>SMG-SNU Boramae Medical Center, Seoul, South Korea, <sup>2</sup>Department of Internal Medicine, Seoul National University College of Medicine, Seoul, Korea, <sup>3</sup>Seoul National University Bundang Hospital, Seongnam, GyeongGi, South Korea, <sup>4</sup>Seoul National University Bundang Hospital, <sup>5</sup>Seoul National University Hospital, <sup>6</sup>Department of Internal Medicine, Seoul National University College of Medicine, Seoul, South Korea, <sup>7</sup>Seoul National University Hospital, Seoul
- 626 Comprehensive Allergy Consultation Minimizes Risk of Hypersensitivity Reaction During Subsequent Anesthesia**  
Autumn Chandler Guyer, MD<sup>1</sup>, Michelle Conroy, MD<sup>1</sup>, Carlos Camargo Jr., MD, DrPH<sup>2</sup>, Aidan Long, MD<sup>1</sup> and Aleena Banerji, MD<sup>1</sup>, <sup>1</sup>Massachusetts General Hospital, Harvard Medical School, Boston, MA, <sup>2</sup>Department of Emergency Medicine, Massachusetts General Hospital, Harvard Medical School, Boston, MA
- 627 Incidence of Intraoperative Anaphylaxis in A University General Hospital in Brazil**  
Laila Sabino Garro, MD<sup>1</sup>, Maria José Carvalho Carmona<sup>2</sup>, Iracy Silvia Corrêa Soares<sup>2</sup>, Marcelo Vivolo Aun, MD<sup>1</sup>, Marisa Rosimeire Ribeiro, MD<sup>1</sup>, Adriana Teixeira Rodrigues<sup>1</sup>, Jorge Kalil, MD, PhD<sup>1</sup>, Pedro Giavina-Bianchi, MD, PhD<sup>1</sup> and Antonio Abílio Motta, MD, PhD<sup>1</sup>, <sup>1</sup>Division of Clinical Immunology and Allergy, University of São Paulo, Brazil, <sup>2</sup>Anesthesia Division, University of São Paulo, Brazil
- Nikhil Menon, Medical student<sup>1</sup>**, Elizabeth Feuille, MD<sup>1</sup>, Faith Huang, MD<sup>2</sup> and Anna H. Nowak-Wegrzyn, MD, FAAAAI<sup>3</sup>, <sup>1</sup>Mount Sinai School of Medicine, <sup>2</sup>Mount Sinai Hospital, New York, NY, <sup>3</sup>Mt. Sinai School of Medicine, New York, NY
- 629 M. Pneumoniae Is a Potential Trigger for Eosinophilic Esophagitis**  
Maya D. Srivastava, MD, PhD, FAAAAI, SUNY at Buffalo, East Amherst, NY
- 630 Eosinophilic Esophagitis : Clinical Spectrum of Puertorrican Children**  
Vylma Velazquez, MD, Hospiyal Episcopal San Lucas, Ponce, PR
- 631 A Predictive Score for the Presence of Eosinophils in the Esophagus**  
Margaret Redmond, MD<sup>1</sup>, Jean Brown, MD<sup>2</sup>, Dale Rhoda<sup>1</sup>, Wei Wang<sup>1</sup>, John Russo, MD<sup>1</sup>, Thomas Platts-Mills, MD, PhD, FAAAAI FRS<sup>3</sup> and Elizabeth Erwin, MD<sup>1</sup>, <sup>1</sup>Nationwide Children's Hospital, Columbus, OH, <sup>2</sup>University of South Florida, Tampa, FL, <sup>3</sup>University of Virginia, Charlottesville, VA
- 632 The Relationship Between Atopic Disease, Mast Cell Counts and Irritable Bowel Syndrome-Diarrhea Predominant (IBS-D)**  
R. Joseph Mittel<sup>1</sup>, Mark Demeo<sup>1</sup>, Shiram Jakate<sup>1</sup>, Sue Mikolaitis<sup>1</sup>, Sandra Tilmon<sup>2</sup> and Mary C. Tobin<sup>1</sup>, <sup>1</sup>Rush University, <sup>2</sup>Department of Public Health, Chicago, IL
- 633 Understanding the Role of Familial Allergies in Children with Eosinophilic Esophagitis**  
Nicol Awadalla, MD, Inova Fairfax Hospital, VA, Oral Alpan, MD, O&O ALPAN, LLC, Denise Loizou, RN, O&O Alpan, Fairfax, VA and Girish Hiremath, MD, O & O ALPAN, LLC
- 634 Evidence That Low Titer IgE Antibodies to Milk and Wheat in Adults and Children with Eosinophilic Esophagitis May Be Directed Against a Minor Component of the Extract**  
Anubha Tripathi, MD<sup>1</sup>, Lisa J. Workman, BA<sup>1</sup>, Alicia Clark, BA<sup>1</sup>, Princess U. Ogbogu, MD, FAAAAI<sup>2</sup>, Barrett Barnes, MD<sup>1</sup>, Scott P. Commins, MD, PhD<sup>1</sup>, Thomas Platts-Mills, MD, PhD, FAAAAI FRS<sup>1</sup>, Robert G. Hamilton, PhD, D.ABMLI, FAAAAI<sup>3</sup> and Elizabeth Erwin, MD<sup>4</sup>, <sup>1</sup>University of Virginia, Charlottesville, VA, <sup>2</sup>The Ohio State University, Columbus, OH, <sup>3</sup>Johns Hopkins University School of Medicine, Baltimore, MD, <sup>4</sup>Nationwide Children's Hospital, Columbus, OH
- 635 Perennial Distribution of Pediatric Eosinophilic Esophagitis Diagnoses**  
C. R. Schlegel<sup>1</sup>, N. M. Quintanilla<sup>1</sup>, A. P. Olive<sup>2</sup>, D. P. Duvan<sup>3</sup>, L. Xu<sup>1</sup> and C. M. Davis<sup>4</sup>, <sup>1</sup>Baylor College of Medicine/Texas Children's Hospital, Department of Pediatrics, TX, <sup>2</sup>Gastroenterology, Hepatology and Nutrition, Department of Pediatrics, Baylor College of Medicine/Texas Children's Hospital, TX, <sup>3</sup>Houston Department of Health and Human Services (HDHHS), TX, <sup>4</sup>Immunology, Allergy and Rheumatology, Department of Pediatrics, Baylor College of Medicine/Texas Children's Hospital, TX
- 636 Allergen Sensitization Profiles in A Pediatric Cohort with Eosinophilic Esophagitis**  
S. Nicole Chadha, MD, Li Wang and Donna Sedlak Hummell, MD, Vanderbilt University Medical Center, Nashville, TN
- 637 Food Allergy Testing in Adult Eosinophilic Esophagitis, Clarifying the Role of the Allergist**  
Manujendra Ray, MD, PhD and Benjamin P. Soule, MD, University of Pennsylvania, Philadelphia, PA
- 638 Comparison of Atopic Features Between Children and Adults with Eosinophilic Esophagitis**  
Natalia Vernon, MD, Shenil Shah, MD, Sapna Shah, MD and Giso Ghaffari, MD, FAAAAI, Penn State Milton S. Hershey Medical Center, Hershey, PA
- 639 Eosinophilic Esophagitis: A Comparison of Clinical Approaches towards Pediatric and Adult Patients in a Large HMO**  
Rani Reddy Vatti, MD, Kaiser Permanente, Roseville, CA;

## EGID/Immunologic GI Disorders II

4207

Monday, February 25th, 2013, 9:45 AM - 10:45 AM

- 628 Knowledge of Food Protein-Induced Enterocolitis (FPIES) Among General Pediatricians**

MONDAY

- University of California, Davis, Suzanne S. Teuber, MD, FAAAAI, UC Davis and Mabelle Wilson, PhD, CTSC UC Davis Public Health Sciences/School of Medicine, Davis, CA
- 640 Comparison of Various Treatment Options of Eosinophilic Esophagitis: Patient Perspective**  
Neelu Kalra, MD, Amy Welch, MD and Gisoo Ghaffari, MD, FAAAAI, Penn State Hershey Medical Centre, Hershey, PA
- 641 Combination Therapy Is Effective in Patients with Eosinophilic Esophagitis**  
N. Seth<sup>1</sup>, A. P. Olive<sup>2</sup> and C. M. Davis<sup>1</sup>, <sup>1</sup>Immunology, Allergy and Rheumatology, Department of Pediatrics, Baylor College of Medicine/Texas Children's Hospital, TX, <sup>2</sup>Gastroenterology, Hepatology and Nutrition, Department of Pediatrics, Baylor College of Medicine/Texas Children's Hospital, TX
- 642 Swallowed Fluticasone Is an Effective Maintenance Therapy for Children with Eosinophilic Esophagitis**  
Doerthe A. Andreae, MD, Oksana Yereshov, MS and Mirna Chahade, MD, Mount Sinai School of Medicine, New York, NY
- 643 Review of Treatment Outcomes in Pediatric Patients with Concomitant Eosinophilic Esophagitis and Celiac Disease**  
Kathryn D. Convers, MD, St. Louis University School of Medicine, St. Louis, MO, Jeffrey Teckman, MD, Cardinal Glennon Children's Medical Center, St. Louis, MO and Bradley A. Becker, MD, FAAAAI, Saint Louis University School of Medicine, Saint Louis, MO
- 644 3-Months Elimination Diet in Childhood Eoe: Nutritional and Immunological Aspects**  
Nicolas Kalach, MD, PhD<sup>1,2,3</sup>, Diana Colson<sup>2,3</sup>, Pascale Soulaïnes<sup>2,3</sup>, Benedicte Michaud, MD<sup>4,5</sup>, Lucienne Chatenoud, MD, PhD<sup>5</sup> and Christophe Dupont, MD, PhD<sup>6,7</sup>, <sup>1</sup>Hôpital Saint Vincent de Paul, Groupe Hospitalier de l'Institut Catholique de Lille (GH-ICL), Lille, France, <sup>2</sup>Hôpital Necker, Enfants Malades, Université Paris V René Descartes (Paris, France), Paris, France, <sup>3</sup>Hôpital Cochin-Saint Vincent de Paul, Université Paris V René Descartes (Paris, France), Paris, France, <sup>4</sup>Laboratoire d'immunologie Biologie, Hôpital Necker-enfants Malades, Paris, France, Paris, France, <sup>5</sup>Université Paris Descartes, Hôpital Necker-Enfants Malades, INSERM U1013, Paris, France, <sup>6</sup>Université Paris V René Descartes, Paris, France, <sup>7</sup>Hôpital Necker Enfants Malades, Paris, France
- 645 Tolerance of Baked Milk in a Subset of Patients with Cow's Milk-Mediated Eosinophilic Esophagitis**  
John Leung, MD<sup>1</sup>, Aubrey J. Katz, MD<sup>2</sup>, Qian Yuan, MD, PhD<sup>2</sup>, Rajashri Shuba Iyengar, MD<sup>2</sup>, Perdita Permaul, MD<sup>3</sup>, Jan E. Walter, MD, PhD<sup>2</sup>, Jyoti Ramakrishna, MD<sup>2</sup>, Navneet Hundal, MD<sup>2</sup>, Theadora Swenson, BA<sup>2</sup>, Alexandra R. Alejos, BA<sup>2</sup>, Wayne G. Shreffler, MD, PhD, FAAAAI<sup>2</sup> and Paul E. Hesterberg, MD<sup>2</sup>, <sup>1</sup>Rheumatology, Allergy and Immunology, Massachusetts General Hospital, Boston, MA, <sup>2</sup>Massachusetts General Hospital, Boston, MA, <sup>3</sup>Division of Pediatric Allergy/Immunology, Massachusetts General Hospital, Boston, MA
- 646 Dietary Avoidance in Children with Eosinophilic Esophagitis Is Associated with Improved Growth Parameter**  
Karen A. DeMuth, MD, FAAAAI, Emory University, Atlanta, GA
- 647 Impact of Eosinophilic Disorders On Daily Activities and Frustration with Healthcare Provider Interactions**  
Julia Eismín, MPH<sup>1</sup>, Gillian Mayman, MLIS<sup>1</sup>, Wendy Book, MD<sup>2</sup>, Harvey L. Leo, MD<sup>1</sup> and Noreen Clark, PhD<sup>1</sup>, <sup>1</sup>Center for Managing Chronic Disease, University of Michigan, Ann Arbor, MI, <sup>2</sup>American Partnership for Eosinophilic Disorders, Atlanta, GA
- 648 Quality of Life in a Racially Diverse Cohort of Children with Eosinophilic Esophagitis and Comparison to Other Chronic Pediatric Illnesses**  
Thomas Weiler, MD<sup>1</sup>, Saul Rubin<sup>2</sup>, Hemant Sharma, MD, MHS<sup>3</sup> and Irene Mikhail, MD<sup>1</sup>, <sup>1</sup>Children's National Medical Center, <sup>2</sup>University of Pittsburgh, <sup>3</sup>Children's National Medical Center, Division of Allergy and Immunology, Washington, DC
- 649 Infants with Food Protein-Induced Enterocolitis Syndrome (FPIES) Can Be Classified Into Two Distinct Subgroups Based On the Presence or Absence of Bloody Stool and Their Anti-gen-Specific Cytokine Production Profiles**  
Hideaki Morita, MD, PhD<sup>1</sup>, Ichiro Nomura, MD, PhD<sup>1</sup>, Tetsuo Shoda, MD<sup>1</sup>, Hirotohi Unno, MD<sup>1,2</sup>, Akio Matsuda, PhD<sup>1</sup>, Hirohisa Saito, MD, PhD<sup>1</sup> and Kenji Matsumoto, MD, PhD<sup>1</sup>, <sup>1</sup>Department of Allergy and Immunology, National Research Institute for Child Health and Development, Tokyo, Japan, <sup>2</sup>Department of Pediatrics, Jikei University School of Medicine, Japan
- 650 Systemic Cytokine Responses in Acute Food Protein-Induced Enterocolitis (FPIES)**  
Anna H. Nowak-Wegrzyn, MD, FAAAAI<sup>1</sup>, Thomas Kraus, PhD<sup>2</sup>, Ramon Bencharitiwong, PhD<sup>3</sup>, Thomas Moran, PhD<sup>2</sup> and Hugh A. Sampson, MD, FAAAAI<sup>4</sup>, <sup>1</sup>Mt. Sinai School of Medicine, New York, NY, <sup>2</sup>Mount Sinai School of Medicine, <sup>3</sup>Mount Sinai School Medicine, New York, NY, <sup>4</sup>Mount Sinai School of Medicine, New York, NY
- 651 T Cell Responses to Food Protein in Acute Food Protein-Induced Enterocolitis (FPIES)**  
Jean-Christoph Caubet, MD<sup>1</sup>, Ramon Bencharitiwong, PhD<sup>2</sup>, Madhan Masilamani, PhD<sup>3</sup>, Hugh A. Sampson, MD, FAAAAI<sup>3</sup>, Cecilia Berin, PhD<sup>3</sup> and Anna H. Nowak-Wegrzyn, MD, FAAAAI<sup>4</sup>, <sup>1</sup>University Hospitals of Geneva, Department of Child and Adolescent, Geneva, Switzerland, <sup>2</sup>Mount Sinai School Medicine, New York, NY, <sup>3</sup>Mount Sinai School of Medicine, New York, NY, <sup>4</sup>Mt. Sinai School of Medicine, New York, NY
- 652 Multiparameter Assay to Investigate the Inflammatory Profile of Pediatric Celiac Disease Patients**  
Yvelise Barrios, MD, PhD<sup>1</sup>, Inmaculada Sánchez-Machín, MD<sup>2</sup>, Andres Franco, MD<sup>1</sup>, Honorio Armas, MD<sup>1</sup> and Victor Matheu, MD<sup>3</sup>, <sup>1</sup>Hospital Universitario de Canarias, Tenerife, Spain, <sup>2</sup>Hospital Ofra-Tórax, Tenerife, Spain, <sup>3</sup>Hospital Ofra, Tenerife, Spain
- 653 A New Synbiotic Can Increase Weight Gain in Infants with Cow's Milk Allergy: A Randomized-Controlled Trial**  
Hamid Ahanchian, MD<sup>1</sup>, Hamid Reza Kianifar<sup>2</sup>, Reza Farid, MD, FAAAAI<sup>1</sup> and Seyyed Ali Jafari<sup>2</sup>, <sup>1</sup>Allergy Research Center, Mashhad University of Medical Sciences, <sup>2</sup>Department of Pediatric Gastroenterology, Mashhad University of Medical Sciences, Mashhad, Iran
- 654 Distinct Differences Between Cluster 3 and 4 of Non-IgE Mediated Gastrointestinal Allergy in Allergen-Specific Lymphocyte Proliferation Test and Histological Findings of the GI Mucosa**  
Ichiro Nomura, MD, PhD<sup>1,2</sup>, Hideaki Morita, MD, PhD<sup>2</sup>, Tetsuo Shoda, MD<sup>2</sup>, Kumiko Morita, MD<sup>1</sup>, Akio Matsuda, PhD<sup>2</sup>, Hirohisa Shimizu, MD<sup>3</sup>, Katsuhiko Arai, MD<sup>3</sup>, Atsuko Nakazawa, MD, PhD<sup>4</sup>, Yukihiko Ohya, MD, PhD<sup>1</sup>, Hirohisa Saito, MD, PhD<sup>2</sup> and Kenji Matsumoto, MD, PhD<sup>2</sup>, <sup>1</sup>Division of Allergy, National Center for Child Health and Development, Tokyo, Japan, <sup>2</sup>Department of Allergy and Immunology, National Research Institute for Child Health and Development, Tokyo, Japan, <sup>3</sup>Division of Gastroenterology, National Center for Child Health and Development, Tokyo, Japan, <sup>4</sup>Department of Pathology, National Center for Child Health and Development, Tokyo, Japan
- 655 Toll-Like Receptor Expression with Testosterone in Peripheral Blood Lymphocytes in Adults with Eosinophilic Esophagitis**  
Elizabeth Erwin, MD<sup>1</sup>, Nicholas Young, PhD<sup>2</sup>, Alexandra Friedman<sup>2</sup>, Wael Jarjour, MD<sup>2</sup> and Thomas Platts-Mills, MD, PhD FAAAAI, FRS<sup>3</sup>, <sup>1</sup>Nationwide Children's Hospital, Columbus, OH, <sup>2</sup>Ohio State University, <sup>3</sup>University of Virginia, Charlottesville, VA
- 656 Elucidating Mechanisms of Allergic Inflammation in Eosinophilic Esophagitis**  
Denise Loizou, RN<sup>1</sup>, Otto Louis-Jacques, MD<sup>2</sup>, Benjamin Enav, MD<sup>2</sup>, Julie Kim, MD<sup>2</sup>, Peter Lee, MD<sup>2</sup>, Catherine Chao, MD<sup>2</sup>, Lynn Duffy, MD<sup>2</sup>, Ian Leibowitz, MD<sup>2</sup>, Suhasini Kaushal, MD<sup>1</sup>, Annu Farwah<sup>1</sup>, Ozlem Goker-Alpan, MD<sup>1</sup> and Oral Alpan, MD<sup>1</sup>, <sup>1</sup>O&O ALPAN, LLC, <sup>2</sup>Inova Fairfax Hospital



## Immunotherapy III

4208

Monday, February 25th, 2013, 9:45 AM - 10:45 AM

**657 Biweekly Administration of Subcutaneous Immunoglobulin: Predicting Pharmacokinetic Outcomes Using Modeling and Simulation**

**Jagdev S. Sidhu**, Clinical Pharmacology & Early Development, CSL Ltd, Parkville, Australia, Martin Bexon, MD, CSL Behring AG, Bern 22, Switzerland, Mikhail Rojavin, PhD, Clinical Research and Development, CSL Behring LLC, King of Prussia, PA, Marc Pfister, Quantitative Solutions, Inc., Bridgewater, NJ and Cornelia Landersdorfer, Centre for Medicine Use and Safety, Monash University, Parkville, Australia

**658 Prospective Trial of a Novel Modified Rush Immunotherapy Protocol**

**Elena Resnick, MD**, Mount Sinai School of Medicine, New York, NY, Maria Rosalinda Reyes, RN, Mt. Sinai School of Medicine, New York, NY, Beth Eve Corn, MD, FAAAAI, Mt. Sinai Medical Center, New York, NY and Jody R. Tversky, MD, PhD, Johns Hopkins Medical Center

**659 Path to Immunotherapy – What Is Driving Immunotherapy Use? : The Allergies, Immunotherapy, & Rhinoconjunctivitis (AIRS) Patient Survey**

**David P. Skoner, MD**, West Penn Allegheny Health System, Cranberry TWP, PA, Michael S. Blaiss, MD, FAAAAI, Allergy and Asthma Care, Memphis, TN, Mark S. Dykewicz, MD, FAAAAI, Wake Forest University School of Medicine, Winston Salem, NC, Bryan D. Leatherman, MD, Coastal Ear, Nose and Throat Associates, Gulfport, MS, Nancy Smith, MS, Merck & Co, Inc, WhiteHouse Station, NJ and Felicia C. Allen-Ramey, PhD, Merck & Co, Inc, West Point, PA

**660 Safety of Subcutaneous Immunotherapy with House Dust Mites in Patients with Allergic Rhinitis in Real World**

**Mario Henrique de Almeida Fonseca**, Norma de Paula Motta Rubini, Albertina Varandas Capelo, Eliane Miranda da Silva, Fernando Samuel Sion, João Negreiros Tebyriçá and Carlos Alberto Morais-de-Sá, Federal University of the State of Rio de Janeiro, Rio de Janeiro, Brazil

**661 Improvement of Allergic Rhinitis Symptoms in Children Receiving Hymenoptera Immunotherapy**

**Savitree Padungpak, MD**, Wiparat Manuyakorn, MD, Wasu Kamchaisatian, MD, Suwat Benjaponpitak, MD, Soamarat Vilaiyuk, MD, Cherapat Sasisakulporn, BSc and Wanlapa Teaw-somboonkit, RN, Ramathibodi Hospital, Bangkok, Thailand

**662 Rate of Systemic Reactions to Standardized Allergen Subcutaneous Immunotherapy in Pediatric Patients**

**Elena Crestani, MD, MS<sup>1</sup>**, Tatyana Sare, PharmD<sup>2</sup>, Rocco Anzaldi, PharmD<sup>2</sup>, Al Patterson, PharmD<sup>2</sup>, Lynda C. Schneider, MD FAAAAI<sup>1</sup> and Rima A. Rachid, MD, FAAAAI<sup>1</sup>, <sup>1</sup>Division of Allergy/Immunology, Boston Children's Hospital, Harvard Medical School, Boston, MA, <sup>2</sup>Pharmacy Department, Boston Children's Hospital, Boston, MA

**663 Persistence with Specific Immunotherapy (SCIT & SLIT) Among AR Patients in A US Allergy Practice**

**Robert Anolik, MD, FAAAAI**, Allergy and Asthma Specialists, PC, Blue Bell, PA, Ann M. Schwartz, RN, CCRC, Allergy and Asthma Specialists, PC, East Norriton, PA, Shiva Sajjan, Merck & Co., Inc. and Felicia C. Allen-Ramey, PhD, Merck & Co, Inc, West Point, PA

**664 AAAAI Membership Experience with Allergen Immunotherapy (AIT) Safety in Young Children and Pregnant Women**

**Matthew A. Rank, MD, FAAAAI**, Mayo Clinic, Scottsdale, AZ, David W. Hauswirth, MD, FAAAAI, The Ohio State University, Columbus, OH, Christopher W. Calabria, MD, Dilley Allergy and Asthma, Helotes, TX, Lawrence D. Sher, MD, FAAAAI, Peninsula

Research Associates, Rolling Hills Estates, CA and Desirée E.S. Larenas Linnemann, MD, FAAAAI, Hospital MA@dica Sur, Mexico D.F., Mexico

## Rhinitis/Conjunctivitis II

4209

Monday, February 25th, 2013, 9:45 AM - 10:45 AM

**665 Prevalence of Ocular Symptoms in Patients with Allergic Rhinitis: Korean Multicenter Study**

**Dong-Young Kim**, Seoul National University College of Medicine, Seoul, South Korea

**666 More Seasonal Allergic Rhinitis Patients Improve with Diphenhydramine Compared with Loratadine and Placebo: A Responder Analysis**

**Eduardo Urdaneta, MD<sup>1</sup>**, Mitesh Patel, PharmD<sup>1</sup>, Kathleen B. Franklin, BSN, RN<sup>2</sup> and Mei-Miau Wu, Dr PH<sup>3</sup>, <sup>1</sup>McNeil Consumer Healthcare, Fort Washington, PA, <sup>2</sup>Franklin Consultants, LLC., Phoenixville, PA, <sup>3</sup>J & J Consumer Products, US, Morris Plain, NJ

**667 A Post-Hoc Responder Analysis of Improvement in Symptoms Following Treatment with Ciclesonide Hydrofluoroalkane Nasal Aerosol in Patients with Seasonal and Perennial Allergic Rhinitis**

**John Karafilidis, PharmD<sup>1</sup>**, Holly Huang, PhD, MPH<sup>1</sup> and Eli O. Meltzer, MD, FAAAAI<sup>2</sup>, <sup>1</sup>Sunovion Pharmaceuticals, Marlborough, MA, <sup>2</sup>Allergy and Asthma Medical Group & Research Center, San Diego, CA

**668 A Post-Hoc Analysis of Improvement in Individual Nasal Symptoms by Their Baseline Severity Following Treatment with Ciclesonide Hydrofluoroalkane Nasal Aerosol in Patients with Seasonal Allergic Rhinitis**

**Dale E. Mohar, MD<sup>1</sup>**, Holly Huang, PhD, MPH<sup>2</sup> and John Karafilidis, PharmD<sup>2</sup>, <sup>1</sup>Kerrville Research Associates, Kerrville, TX, <sup>2</sup>Sunovion Pharmaceuticals, Marlborough, MA

**669 Diagnosis of Nasal and Eye Allergies - the Allergies, Immunotherapy, & Rhinoconjunctivitis (AIRS) Patient Survey**

**Michael S. Blaiss, MD, FAAAAI**, Allergy and Asthma Care, Memphis, TN, Mark S. Dykewicz, MD, FAAAAI, Wake Forest University School of Medicine, Winston Salem, NC, Bryan D. Leatherman, MD, Coastal Ear, Nose and Throat Associates, Gulfport, MS, David P. Skoner, MD, West Penn Allegheny Health System, Cranberry TWP, PA, Nancy Smith, MS, Merck & Co, Inc, WhiteHouse Station, NJ and Felicia C. Allen-Ramey, PhD, Merck & Co, Inc, West Point, PA

**670 Relevance of Aspirin or Allergen Sensitivity On Rhinitis Among Residents of Puerto Rico**

**Javier A. Mendez, MD**, Angel M. Rivera, MD, Rafael H. Zaragoza, MD, PhD, Cristina J. Ramos, MD, Fernando J. Lopez, MD, Iona K. Malinow, MD, Arnaldo E. Perez, MD, Carmen Acantilado, MD and Sylvette Nazario, MD, University of Puerto Rico School of Medicine, San Juan, PR

**671 Visual Analog Scale Showed a Good Correlative with Allergic Rhinitis and Its Impact On Asthma (ARIA) Classification in School Children**

**Akira Akasawa, MD, PhD<sup>1</sup>**, Yuichi Adachi, MD, PhD<sup>2</sup>, Koichi Yoshida, MD<sup>3</sup>, Mayumi Furukawa<sup>3</sup> and Hiroshi Odajima, MD, PhD<sup>4</sup>, <sup>1</sup>Tokyo Metropolitan Children's Medical Center, Tokyo, Japan, <sup>2</sup>University of Toyama, Toyama, Japan, <sup>3</sup>Division of Allergy, Tokyo Metropolitan Children's Medical Center, Tokyo, Japan, <sup>4</sup>Department of Pediatrics, Fukuoka National Hospital, Japan

**672 Mobile Natural Exposure Chamber Technology Standardizes Controlled Environmental Exposure Chamber Challenges Across Multicenter National and International Allergy Trials**

MONDAY

- Piyush Patel, MD, FRCP**, Harry Nandkeshore, MT (AMT), CCRP and Karen Shields, RT, Inflamax Research, Mississauga, ON, Canada
- 673 Total Ocular Symptom Score (TOSS) and Dry Eyes**  
**Leonard Bielory, MD, FAAAAI**, Robert Wood Johnson University Hospital, New Brunswick, NJ; Rutgers University, New Brunswick, NJ; STARx Allergy and Asthma Center, Springfield, NJ, Milton M. Hom, OD, FAAO, Private Practice, Azusa, CA and Andrew Nguyen, PhD, California State University, Fullerton, Fullerton, CA
- 674 Improvement in the Frequency of Allergic Rhinitis Symptoms After Four Weeks of Treatment with Intranasal Ciclesonide 200 Mcg Qd**  
**Francisco Javier Saynes-Marin<sup>1</sup>**, Carmen Cano-Salas<sup>2,3</sup>, Araceli Arellano-Plancarte<sup>2</sup>, Jazmin Chiu-Ugalde<sup>2</sup>, José Antonio Vargas-Romero<sup>2</sup> and Juan Carlos López-Alvarenga<sup>2,4</sup>, <sup>1</sup>Hospital Angeles Metropolitan, Mexico City, Mexico, <sup>2</sup>Takeda México SA de CV, Edo. de Méx., Mexico, <sup>3</sup>Instituto Nacional de Enfermedades Respiratorias, Mexico City, Mexico, <sup>4</sup>Dirección de Investigación, Hospital General de México OD, Mexico City, Mexico
- 675 Correlation of Development of Allergic Rhinoconjunctivitis to Previous Infections in Chinese and Hispanic Immigrant Populations Residing in Brooklyn**  
**Irina Katayeva, MD<sup>1</sup>**, Maria-Anna Vastardi, MD<sup>1</sup>, Haijun Yao, MD<sup>2</sup>, Daniel Puebla-Neira, MD<sup>2</sup>, Kobkul Chotikanatis, MD<sup>3</sup>, Jeremy Weedon, PhD<sup>4</sup>, Helen G Durkin, PhD<sup>1</sup>, Stephan Kohlhoff, MD<sup>1,3</sup> and Rauno Joks, MD<sup>1</sup>, <sup>1</sup>Center for Allergy and Asthma Research at SUNY Downstate, Brooklyn, NY, <sup>2</sup>Lutheran Medical Center, Brooklyn, NY, <sup>3</sup>Pediatric Infectious Disease, SUNY Downstate, <sup>4</sup>Scientific Computing Center, SUNY Downstate
- Hideaki Kouzaki, MD, PhD**, Shiga University of Medical Science, Otsu, Shiga, Japan, Ichiro Tojima, Shiga University of Medical Science, Shiga, Otsu, Japan, Hirohito Kita, MD, Mayo Clinic, Rochester, MN and Takeshi Shimizu, Shiga University of Medical Science, Otsu, SHiga, Japan
- 680 Chlamydia Pneumoniae (Cpn) - Induced in Vitro Interferon Gamma (IFN-γ) and Interleukin 2 (IL-2) Responses of PBMC From Asthmatics**  
**Kobkul Chotikanatis, MD<sup>1</sup>**, Diana Weaver, MD<sup>2</sup>, Danielle Lent<sup>3</sup>, Eva Estrella<sup>3</sup>, Margaret R. Hammerschlag, MD<sup>3</sup>, Rauno O. Joks, MD, FAAAAI<sup>4</sup> and Stephan A. Kohlhoff, MD<sup>1</sup>, <sup>1</sup>SUNY Downstate Medical Center, Center for Allergy and Asthma Research, Brooklyn, NY, <sup>2</sup>Kings County Hospital Center, Brooklyn, NY, <sup>3</sup>SUNY Downstate Medical Center, Brooklyn, NY, <sup>4</sup>State University of New York Downstate Medical Center, Brooklyn, NY
- 681 Prostaglandin I<sub>2</sub> Receptor (IP) Signaling Inhibits Lung Type I Interferon Expression by RSV Infection**  
**Shinji Toki, PhD<sup>1</sup>**, Sara Reiss<sup>1</sup>, Kasia Goleniewska, MS<sup>1</sup>, Martin L. Moore, PhD<sup>2</sup>, Garret FitzGerald, MD<sup>3</sup> and R. Stokes Peebles Jr., MD FAAAAI<sup>1</sup>, <sup>1</sup>Vanderbilt University School of Medicine, Nashville, TN, <sup>2</sup>Emory University, Atlanta, GA, <sup>3</sup>University of Pennsylvania, Philadelphia, PA
- 682 Rhinovirus Induces Differential Expression of Th2-Promoting Epithelial Cytokines From Asthmatics Ex Vivo**  
**Joshua L. Kennedy, MD<sup>1</sup>**, Larry Borish, MD, FAAAAI<sup>2</sup>, Peter W. Heymann, MD<sup>1</sup> and John W. Steinke, PhD, FAAAAI<sup>2</sup>, <sup>1</sup>University of Virginia, Charlottesville, VA, <sup>2</sup>Asthma and Allergic Disease Center, Carter Center for Immunology Research, University of Virginia, Charlottesville, VA
- 683 Genetic Variants in Thymic Stromal Lymphopoietin (TSLP) and Receptor (TSLPR) and Their Influence On the Humoral Immune Response**  
**Luis Fang**, Cesar Muñoz, Luz Hernandez, Beatriz Martinez and Javier Marrugo, University of Cartagena, Cartagena, Colombia
- 684 Immune Modulatory Effects of IL-22 On Allergen-Induced Pulmonary Inflammation**  
**Ping Fang**, asthma & allergy center, Johns Hopkins University School of Medicine

## Cytokines and Chemokines

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Monday, February 25th, 2013, 9:45 AM - 10:45 AM

- 676 Cytokine-Stimulated Human Dermal Microvascular Endothelial Cells and Fibroblasts Produce Thymus and Activation-Regulated Chemokine (TARC)**  
**Tetsuo Shoda, MD**, Kyoko Futamura, MD, PhD, Kenichiro Motomura, MD, Hirohisa Saito, MD, PhD, Kenji Matsumoto, MD, PhD and Akio Matsuda, PhD, Department of Allergy and Immunology, National Research Institute for Child Health and Development, Tokyo, Japan
- 677 Decreased IL-4 and TGF $\beta$ 1 in Allergen-Stimulated A549 Cells with Combined Formoterol and Mometasone**  
**Anthony Szema, MD, FAAAAI**, Stony Brook University School of Medicine, Stony Brook, NY, Andrea Harrington, MS, Stony Brook University Department of Geosciences, Stony Brook, NY, Sayyed Hamidi, Stony Brook University School of Medicine, Stony Brook, NY and Marianne Frieri, MD, PhD, FAAAAI, Nassau University Medical Center, East Meadow, NY; State University of NY @ Stony Brook, Stony Brook, NY
- 678 Elevated MIP-1 $\alpha$  and IL-17 Production in Antigen-Sensitized Mice Infected with Respiratory Syncytial Virus**  
**Masahiko Kato, MD, FAAAAI<sup>1</sup>**, Taisei Ishioka<sup>2</sup>, Yoshiyuki Yamada<sup>1</sup>, Hirokazu Kimura<sup>3</sup>, Hiroyuki Tsukagoshi<sup>2</sup>, Masakazu Yoshizumi<sup>2</sup>, Kunihisa Kozawa<sup>2</sup>, Kenichi Maruyama<sup>1</sup> and Yasuhide Hayashi<sup>1</sup>, <sup>1</sup>Gunma Children's Medical Center, Shibukawa, Japan, <sup>2</sup>Gunma Prefectural Institute of Public Health and Environmental Sciences, Maebashi, Japan, <sup>3</sup>National Institute of Infectious Diseases, Musashimurayama, Japan
- 679 Transcription of Interleukin-25 and Extracellular Release of the Protein Is Regulated by Allergen Proteases in Airway Epithelial CELLS**

## T Cells in Allergic Responses

4211

Monday, February 25th, 2013, 9:45 AM - 10:45 AM

- 685 The Steroidogenic Enzyme Cyp11a1 Is Essential for CD8+ Tc2 Conversion to Enhance Allergen-Induced Airway Hyperresponsiveness and Inflammation**  
**Yi Jia, PhD**, Joanne Domenico, BS, Katsuyuki Takeda, MD, Junyan Han, PhD, Meiqin Wang, MD, PhD, Michael Armstrong, PhD, Nichole Reisdorph, PhD, Brian P. O'Connor, PhD, Joseph J. Lucas, PhD and Erwin W Gelfand, National Jewish Health, Denver, CO
- 686 T Cell-Induced Late Phase Asthmatic Response in Mice**  
**Akio Mori, MD PhD<sup>1</sup>**, Satoshi Kouyama<sup>2</sup>, Akemi Abe<sup>2</sup>, Miyako Yamaguchi<sup>2</sup>, Yo Iijima<sup>2</sup>, Chihiro Mitsui<sup>2</sup>, Chiyako Oshikata<sup>1</sup>, Hide-nori Tanimoto<sup>2</sup>, Yuma Fukutomi, MD<sup>1</sup>, Kiyoshi Sekiya<sup>2</sup>, Masami Taniguchi<sup>2</sup>, Yuji Maeda<sup>2</sup>, Mamoru Ohtomo<sup>2</sup>, Maki Hasegawa<sup>2</sup>, Kazuo Akiyama, MD<sup>3</sup>, Takayuki Ohtomo<sup>4</sup> and Osamu Kaminuma, PhD<sup>5</sup>, <sup>1</sup>Sagamihara National Hospital, Sagamihara, Japan, <sup>2</sup>Sagamihara National Hospital, <sup>3</sup>The National Hospital Organization Sagamihara Hospital, Sagamihara, Japan, <sup>4</sup>Tokyo University of Pharmacy and Life Science, Tokyo, Japan, <sup>5</sup>Tokyo Metropolitan Institute of Medical Science, Tokyo, Japan

- 687 A Potential Th2 Cell Survival Factor, Amphiregulin Production Is Enhanced Following Neurotransmitter Signaling**  
**Kanami Orihara, PhD**, Sonia S. Charran, Kent T. HayGlass, PhD and Redwan Moqbel, PhD, FRCPath FAAAAI, University of Manitoba, Winnipeg, MB, Canada
- 688 Invariant NKT Cells Recognize Ragweed Pollen Lipid and Promote Humoral and Cellular Immune Response in a Mouse Model of Allergic Rhinitis**  
**Mohamed Elfatih Bashir, MS, PhD**, Abu Bekr Mohamed, MD, Marwa Eltayeb, MD, Fuad M. Baroody, MD, FAAAAI, Jayant M. Pinto, MD and Robert M. Naclerio, MD, FAAAAI, The University of Chicago, Chicago, IL
- 689 Foxp3<sup>+</sup>-Treg Cells Enhanced by Repeated Low-Dose Gamma-Irradiation Attenuate Ovalbumin-Induced Allergic Asthma in Mice**  
**Gwan Ui Hong**, Jai Youl Ro, Bum Soo Park and Nam Goo Kim, Sungkyunkwan University School of Medicine
- 690 Hyperpolarized Helium-3 Image Directed Analysis of Lung T Cells in Children with Severe Asthma**  
**Julia Wisniewski, MD**, W. Gerald Teague, MD, Briana Ciampi, Tallissa Altes, Kai Ruppert and Judith A. Woodfolk, MBChB, PhD, FAAAAI, University of Virginia, Charlottesville, VA
- 691 Cross Reactivity Patterns of DRB1\*0401 Restricted T- Cells Specific for Epitopes From the Pooidae Grass Species**  
**Luis Diego Archila<sup>1</sup>**, Jonathan Delong<sup>1</sup>, Eric Wambre, PhD<sup>1</sup>, Eddie A. James<sup>1</sup>, David Robinson<sup>2</sup> and William W. Kwok, PhD<sup>1,3</sup>, <sup>1</sup>Benaroya Research Institute at Virginia Mason, Seattle, WA, <sup>2</sup>Virginia Mason Medical Center, <sup>3</sup>Department of Medicine, University of Washington
- 692 Adiponectin Influences the Effects of Acrolein On T Cells of Atopic Individuals in Vitro**  
**Christina E. Ciaccio, MD**, Brianna Stecklein and Lanny Rosenwasser, MD, FAAAAI, Children's Mercy Hospital, Kansas City, MO
- 693 Inter-Individual Variations of the Specific Immune Response to Peanut Allergic Components: Prospect for Specific Therapy**  
**Eric Wambre, PhD<sup>1</sup>**, Eddie A. James<sup>1</sup>, David Robinson<sup>2</sup> and William W. Kwok, PhD<sup>1,3</sup>, <sup>1</sup>Benaroya Research Institute at Virginia Mason, Seattle, WA, <sup>2</sup>Virginia Mason Medical Center, <sup>3</sup>Department of Medicine, University of Washington

### What's New in Asthma Diagnostics

4601

Monday, February 25th, 2013, 2:00 PM - 3:15 PM

- 694 Serum Periostin Levels Correlate with Bronchial Hyperresponsiveness to Mannitol and Methacholine in Children with Asthma**  
**Heysung Baek, MD, PhD<sup>1</sup>**, Jae-Won Oh, MD, PhD, FAAAAI<sup>2</sup>, Ha-Baik Lee, MD, PhD<sup>2</sup> and Kenji Izuhara, MD, PhD<sup>3</sup>, <sup>1</sup>Hallym University College of Medicine, Seoul, Korea, <sup>2</sup>Hanyang University College of Medicine, Seoul, Korea, <sup>3</sup>Saga Medical School, Saga, Japan
- 695 Meta Analysis of Asthma Exacerbation Rates in Pediatric Studies During Asthma Managed Using Fractional Exhaled Nitric Oxide Versus Standard Clinical Parameters Alone**  
**Joseph D. Spahn, MD**, National Jewish Health, Denver, CO, Jonathan Malka, MD, Pediatric Associates, Aventura, FL, Todd A. Mahr, MD, FAAAAI, Gundersen Lutheran Medical Center, La Crosse, WI and Paul M. Dorinsky, MD, Aerocrine, Inc., Morrisville, NC
- 696 Exhaled Nitric Oxide Concentration During Pediatric Acute Asthma Exacerbations Is Associated with Severity and African-American Race**

**Emily W. Langley, MD**, Division of Allergy, Pulmonary, and Critical Care Medicine, Department of Medicine, Vanderbilt University School of Medicine, Nashville, Tennessee, Tebeb Gebretsadik, MPH, Department of Biostatistics, Vanderbilt University School of Medicine, Nashville, Tennessee, Tina V. Hartert, MD, MPH, Division of Allergy, Pulmonary, and Critical Care Medicine, Department of Medicine, and Center for Asthma and Environmental Sciences Research, Vanderbilt University School of Medicine, Nashville, Tennessee, R. Stokes Peebles Jr., MD, FAAAAI, Allergy, Pulmonary, and Critical Care Medicine; Department of Medicine; Vanderbilt University School of Medicine, Nashville, TN and Donald Arnold, MD, MPH, Departments of Pediatrics and Emergency Medicine, Vanderbilt University School of Medicine, Nashville, Tennessee

**697 Mannitol Challenge for Diagnosis of Exercise -Induced Bronchoconstriction**

**Christopher C. Randolph, MD FAAAAI<sup>1,2</sup>**, David H. Dreyfus, MD, PhD, FAAAAI<sup>3</sup>, Denise M. Kearney, MD<sup>2</sup> and Barbara A. Fraser, CCRC<sup>4</sup>, <sup>1</sup>Center for Allergy, Asthma, Immunology, Waterbury, CT, <sup>2</sup>Center for Allergy, Asthma & Immunology, Waterbury, CT, <sup>3</sup>Center for Allergy, Asthma Immunology, Waterbury, CT, <sup>4</sup>Center for Allergy, Asthma, Immunology, Waterbury, CT

**698 Establishing Normal Exhaled Nitric Oxide (FeNO) Values in Young Children**

**Chris Cleveland, MD<sup>1</sup>**, Summer E. Monforte, MD<sup>2</sup> and Joseph D. Spahn, MD<sup>2</sup>, <sup>1</sup>University of Colorado, Denver, CO, <sup>2</sup>National Jewish Health, Denver, CO

### Biological Therapies

4602

Monday, February 25th, 2013, 2:00 PM - 3:15 PM

- 699 Persistent Hypogammaglobulinemia After Rituximab Treatment**  
**Yelena Kopyltsova, MD**, North Shore LIJ, Great Neck, NY, Blanka M. Kaplan, MD, FAAAAI, Cohen Children's Medical Center of New York, Great Neck, NY and Vincent R. Bonagura, MD, FAAAAI, Hofstra, Northshore-LIJ School of Medicine, Great Neck, NY
- 700 Thymus Transplantation Restores the Repertoire of Foxp3<sup>+</sup> T Cells in Complete DiGeorge Anomaly**  
**Ivan Chinn, MD<sup>1</sup>**, Joshua D. Milner, MD<sup>2</sup>, Phillip Scheinberg<sup>3,4</sup>, Daniel Douek<sup>4</sup> and M. Louise Markert, MD, PhD, FAAAAI<sup>1</sup>, <sup>1</sup>Duke University Medical Center, Durham, NC, <sup>2</sup>National Institute of Allergy and Infectious Diseases (NIAID), Bethesda, MD, <sup>3</sup>National Heart, Lung, and Blood Institute, Bethesda, MD, <sup>4</sup>National Institute of Allergy and Infectious Diseases, Bethesda, MD
- 701 Immunotolerance Mechanisms Depend On High Vs Low Dose of Sublingual Immunotherapy**  
**Kari Nadeau, MD, PhD, FAAAAI**, Stanford University School of Medicine and Soujanya Vissamsetti, MD, Stanford University
- 702 Mechanisms of Th2 to Treg Vs Th2 to Th1 in Non Rush Vs Rush Food OIT**  
**Shu-Chen Lyu**, Stanford University and Kari Nadeau, MD, PhD, FAAAAI, Stanford University School of Medicine
- 703 Resolvin D1 Inhibits IL-1beta Induced Alveolar Epithelial Cell Activation**  
**Ruan R. Cox Jr.<sup>1</sup>**, Oluwakemi Phillips<sup>1</sup>, Jutaro Fukumoto, MD, PhD<sup>1</sup>, Itsuko Fukumoto, DMD<sup>1</sup>, Prasanna Tamarapu<sup>1</sup>, Tran Luong<sup>1</sup>, Richard F. Lockey, MD<sup>1,2</sup> and Narasaiah Kolliputi, PhD<sup>3</sup>, <sup>1</sup>Morsani College of Medicine, University of South Florida, Tampa, FL, <sup>2</sup>James A. Haley Veterans' Hospital, Tampa, FL, <sup>3</sup>Internal Medicine, Morsani College of Medicine, University of South Florida, Tampa, FL

MONDAY



## Inflammatory Responses to Pollutants, Pesticides, and Endotoxin

4603

Monday, February 25th, 2013, 2:00 PM - 3:15 PM

- 704 Interactions of Natural Killer (NK) Cells and Surfactant Protein D (SP-D) in Regulation of Ozone Induced Airway Inflammation: Involvement of NKp46**  
Moyar Q. Ge<sup>1,2</sup>, Jin Hwang<sup>1</sup>, Imre Redai<sup>1</sup>, Blerina Kokalari<sup>1</sup>, David M. Kemeny, PhD, FAAAAI<sup>2</sup>, Kerry S. Campbell, PhD<sup>3</sup> and Angela Haczku, MD, PhD, FAAAAI<sup>1</sup>, <sup>1</sup>University of Pennsylvania, Philadelphia, PA, <sup>2</sup>National University of Singapore, Singapore, Singapore, <sup>3</sup>Fox Chase Cancer Center, Philadelphia, PA
- 705 Association Between Dichlorophenol Exposure, Asthma Medication Use, and Serum Immunoglobulin E**  
Purvi Parikh, MD, Albert Einstein / Montefiore Medical Center, Gabriele De Vos, MD, Albert Einstein College of Medicine, Bronx, NY, Sunit Jariwala, MD, Albert Einstein/Montefiore Medical Center, New York, NY, David L. Rosenstreich, MD, FAAAAI, Albert Einstein / Montefiore Medical Center, NY, Golda Hudes, MD, PhD, Albert Einstein / Montefiore Medical Center, New York, NY and Elina Jerschow, MD, MSc, Albert Einstein College of Medicine/Montefiore Medical Center, Bronx, NY
- 706 MyD88-Dependent Signaling Is Critical for Acute Organic Dust-Induced Airway Inflammation in Mice**  
Jill A. Poole, MD, FAAAAI<sup>1</sup>, Christopher Bauer<sup>1</sup>, William West, MD<sup>2</sup>, Debra Romberger, MD<sup>3</sup>, Angela Gleason, MA<sup>2</sup>, Todd Wyatt, PhD<sup>4</sup> and Tammy Kielian, PhD<sup>2</sup>, <sup>1</sup>University of Nebraska Medical Center, Omaha, NE, <sup>2</sup>University of Nebraska Medical Center, <sup>3</sup>UNMC, Omaha, <sup>4</sup>UNMC, Omaha, NE
- 707 IL-1 $\beta$  Induces IL-8 Production From Human Airway Epithelial Cells**  
Michelle L. Hernandez, MD<sup>1</sup>, Katherine Mills, BA<sup>1</sup>, Weidong Wu, MD, PhD<sup>2</sup> and Matthew Kesic, PhD<sup>3</sup>, <sup>1</sup>University of North Carolina Chapel Hill School of Medicine, Chapel Hill, NC, <sup>2</sup>UNC Center for Environmental Medicine, Asthma, and Lung Biology, Chapel Hill, NC, <sup>3</sup>Methodist University, Fayetteville, NC
- 708 Exposure to Silica Crystals and Poly (I:C) Induces Caspase-Dependent Apoptosis of Human Bronchial Epithelial Cells**  
Hirotoshi Unno, MD, Kyoko Futamura, MD, PhD, Reiji Kojima, Hideaki Morita, MD, PhD, Hirohisa Saito, MD, PhD, Kenji Matsuoto, MD, PhD and Akio Matsuda, PhD, Department of Allergy and Immunology, National Research Institute for Child Health and Development, Tokyo, Japan

## Anaphylaxis

4604

Monday, February 25th, 2013, 2:00 PM - 3:15 PM

- 709 Activation of the Plasma Contact-System in Patients with Anaphylaxis**  
Anna Sala-Cunill<sup>1,2</sup>, Mar Guilarte<sup>1,2</sup>, Vicky Cardona<sup>1,2</sup>, Jenny Björkqvist<sup>3</sup>, Moises Labrador<sup>1,2</sup>, Katrin Nickel<sup>3</sup>, Olga Luengo<sup>1,2</sup> and Thomas Renne<sup>3,4</sup>, <sup>1</sup>Allergy Section, Internal Medicine Department, Hospital Universitari Vall d'Hebron, <sup>2</sup>Allergy Research Unit, Allergy Department, Institut de Recerca Vall d'Hebron, Universitat Autònoma de Barcelona, Barcelona, Spain, <sup>3</sup>Center of Molecular Medicine Karolinska Institutet, Stockholm, Sweden., <sup>4</sup>Clinical Chemistry, Department of Molecular Medicine and Surgery
- 710 An IgE Receptor Mimetic Peptide (PepE) Protects Mice From IgE Mediated Anaphylaxis**  
Joseph S. Zhou, MD, PhD<sup>1</sup>, Annamaria Sandomenico<sup>2</sup>, Oliver Burton<sup>1</sup>, Hans C. Oettgen, MD, PhD, FAAAAI<sup>1</sup> and Menotti

Ruvo<sup>2</sup>, <sup>1</sup>Boston Children's Hospital, Boston, MA, <sup>2</sup>Istituto di Biostrutture e Bioimmagini, Napoli, Italy

- 711 SHIP-1 Regulates IgG/PAF Mediated Allergen-Induced Fatal Anaphylaxis Through the PI3 Kinase Pathway**  
Sun Young Oh, PhD<sup>1</sup>, Fan Wu, B.S.<sup>1</sup>, Fred D. Finkelman, MD<sup>2</sup>, Tao Zheng, MD<sup>1</sup> and Zhou Zhu, MD, PhD<sup>1</sup>, <sup>1</sup>Johns Hopkins University, Baltimore, MD, <sup>2</sup>Cincinnati Veterans Affairs Medical Center, Cincinnati, OH
- 712 Preclinical Study: Dose Comparison of New-Generation Taste-Masked Epinephrine (E) Sublingual Tablets**  
Keith Simons<sup>1</sup>, Ousama Rachid<sup>1</sup>, Mutasem Rawas-Qalaji<sup>2</sup> and F. Estelle R. R. Simons, MD, FAAAAI<sup>1</sup>, <sup>1</sup>University of Manitoba, Winnipeg, MB, Canada, <sup>2</sup>Nova Southeastern University, Fort Lauderdale, FL
- 713 Anatomical and Anthropometric Determinants of Intramuscular Versus Subcutaneous Administration in Children with Epinephrine Auto-Injectors**  
Peter Arkwright, MD, PhD, FAAAAI<sup>1</sup>, Neville Wright<sup>2</sup> and Daniel Bewick<sup>1</sup>, <sup>1</sup>University of Manchester, Manchester, United Kingdom, <sup>2</sup>Royal Manchester Children's Hospital, Manchester, United Kingdom

## Management of Allergies: New Insights

4605

Monday, February 25th, 2013, 2:00 PM - 3:15 PM

- 714 Allergic Disease in US Children Is Associated with Increased Prevalence of Epilepsy**  
Helen G. Durkin, PhD, SUNY Downstate Medical Center, Center for Allergy and Asthma Research, Brooklyn, NY, Rauno O. Joks, MD, FAAAAI, State University of New York Downstate Medical Center, Brooklyn, NY and Jonathan I. Silverberg, MD, PhD, MPH, St. Luke's-Roosevelt Hospital Center, New York, NY
- 715 Nasal Congestion Worsens Sleep Disturbance and Psychological Wellness in Allergic Rhinitis Patients**  
Rosa Munoz-Cano, MD<sup>1,2</sup>, Vanesa Gonzalez, MD<sup>3</sup>, Maria Rueda, MD<sup>1,3</sup>, Joaquim Mullaol, MD, PhD, FAAAAI<sup>1,4</sup>, M Herdman<sup>5</sup>, Jaime Sanchez-Lopez, MD<sup>1,2</sup>, Joan Bartra, MD, PhD<sup>1,2</sup> and Antonio Valero, MD, PhD<sup>1,2</sup>, <sup>1</sup>Institut d'Investigacions Biomediques August Pi i Sunyer (IDIBAPS). Centro de Investigaciones Biomedicas en Red de Enfermedades Respiratorias (CIBERES), Spain, <sup>2</sup>Servei de Pneumologia i Alergia Respiratoria.Hospital Clinic, Barcelona, Spain, <sup>3</sup>Hospital Quiron, Barcelona, Spain, <sup>4</sup>Unitat de Rinologia i Clinica de l'Olfacto. Servei d'Otorrinolaringologia. Hospital Clinic., Barcelona, Spain, <sup>5</sup>Insight Consultin & Research, Barcelona, Spain
- 716 Relationship Between Maternal Mid Pregnancy Folate Levels and the Risk of Allergic and Respiratory Diseases in Early Childhood: The Mothers and Children's Environmental Health (MOCEH) Study**  
Ja Hyeong Kim, MD, Ulsan University Hospital, Ulsan, Kyoung-Sook Jeong, MD, Department of Occupational and Environmental Medicine, Dongguk University-Seoul, Graduate School of Medicine, Dongguk University Ilsan Hospital, Ilsan, South Korea, Eun-Hee Ha, MD, <sup>3</sup>Department of Preventive Medicine, School of Medicine, Ewha Womans University, South Korea, Hye sook Park, MD, <sup>3</sup>Department of Preventive Medicine, School of Medicine, Ewha Womans University, Mi na Ha, MD, Department of Preventive Medicine, Dankook University College of Medicine, Yun-Chul Hong, MD, Department of Preventive Medicine, Seoul National University College of Medicine, Soo-Young Bhang, MD, Department of Psychiatry, University of Ulsan, College of medicine, Ulsan University Hospital, Soo-Jeong Lee, MD, Department of Obstetrics and Gynecology, University of Ulsan, Collage of

Medicine, Ulsan University Hospital, Kyung Yeon Lee, MD, Department of pediatrics, University of Ulsan, Collage of Medicine, Ulsan University Hospital, Seon-Ho Lee, MD, Department of Laboratory Medicine, University of Ulsan, College of Medicine, Ulsan University Hospital, Yang ho Kim, MD, Department of Occupational and Environmental Medicine, University of Ulsan, Collage of Medicine, Ulsan University Hospital, Ju-Suk Lee, MD, PhD, Samsung Changwon hispital; Sungkyunkwan university, Changwon, South Korea; 1, South Korea, Jin-A Jung, MD, Dong-A University Hospital, Busan and Nam Soo Chang, PhD, Department of Nutritional Science and Food Management, Ewha Womans University, Seoul, Korea

**717 The Role of Molecular Allergology in Allergen-Specific Immunotherapy Adherence and Patient Quality of Life in A Complex Pollen Area: A Simulation Model**

**Barbara Mascialino<sup>1</sup>**, Lisse-Lotte Hermansson<sup>1</sup> and Joaquin Sastre, MD, PhD, FAAAAI<sup>2</sup>, <sup>1</sup>Thermo Fisher Scientific IDD, Uppsala, Sweden, <sup>2</sup>Fundacion Jimenez Diaz, Madrid, Spain

**718 Follow-up Patterns Among Children with Anaphylaxis and Other Allergic Diseases Referred from an Urban Emergency Department to Allergy Clinic**

**Jonathan Hemler, MD<sup>1</sup>**, Amanda Troger<sup>1</sup>, Darlene Kassab Mansoor, MD<sup>1</sup>, Hemant Sharma, MD, MHS<sup>2</sup> and Irene Mikhail, MD<sup>1</sup>, <sup>1</sup>Children's National Medical Center, <sup>2</sup>Children's National Medical Center, Division of Allergy and Immunology, Washington, DC

## Immunotherapy

4606

Monday, February 25th, 2013, 2:00 PM - 3:15 PM

**719 Dose Adjustment During Pollen Seasons in Build-up and Maintenance Vials Lowers the Risk of Severe Systemic Reactions (SRs) to Subcutaneous Allergen Immunotherapy (SCIT): Year 4 of the AAAAI/ACAAI Surveillance Study**

**Tolly Epstein, MD, MS<sup>1,2</sup>**, Gary M. Liss, MD, MS, FRCP<sup>3</sup>, Karen Murphy Berendts, BS, RRT, CCRC<sup>4</sup> and David I. Bernstein, MD, FAAAAI<sup>1</sup>, <sup>1</sup>University of Cincinnati, Cincinnati, OH, <sup>2</sup>Cincinnati VA Medical Center, Cincinnati, OH, <sup>3</sup>Ontario Ministry of Labour, Toronto, ON, Canada, <sup>4</sup>Bernstein Clinical Research Center, LLC, Cincinnati, OH

**720 Is a 30 Minute Vs. 20 Minute Immunotherapy (IT) Waiting Period Justified?**

**Leon S. Greos, MD FAAAAI**, Colorado Allergy and Asthma Centers, P.C., Centennial, CO, Mary H. Thal, BS, RN, Colorado Allergy and Asthma Centers PC, Denver, CO and Allen D. Adinoff, MD, FAAAAI, Colorado Allergy and Asthma Center, Highlands Ranch, CO

**721 Local Nasal 'Protective' Immunoglobulin G4 (IgG4) Responses in Nasal Fluid Following Grass Pollen Sublingual Immunotherapy**

**Nausheen Saleem, BSc (Hons)<sup>1</sup>**, Adam Chaker, MD<sup>1,2,3</sup>, Ulrich Zissler<sup>4</sup>, Carsten B. Schmidt-Weber, PhD<sup>1</sup>, Stephen R. Durham, MA, MD, FRCP<sup>5,6</sup> and Mohamed H. Shamji, BSc, MSc, PhD<sup>7,8</sup>, <sup>1</sup>Imperial College London, <sup>2</sup>Universitätsklinikum Dusseldorf, Dusseldorf, Germany, <sup>3</sup>ENT department, TU Munich, München, Germany, <sup>4</sup>ENT department, TU Munich, <sup>5</sup>Imperial College, London, United Kingdom, <sup>6</sup>Medical Research Council and Asthma UK Centre for Allergic Mechanisms of Asthma, UK, <sup>7</sup>MRC & Asthma UK Centre in Allergic Mechanisms of Asthma, <sup>8</sup>Imperial College London, United Kingdom

**722 Antigen-Specific T<sub>H</sub> Cell Monitoring by CD154 Expression in Japanese Cedar-Specific SCIT**

**T. Nomura<sup>1,2</sup>**, I. Tsuge<sup>1</sup>, C. Inuo<sup>1</sup>, Y. Nakajima<sup>1</sup>, K. Tanaka<sup>1</sup>, N. Naruse<sup>3</sup>, S. Suzuki<sup>3</sup>, H. Ando<sup>3</sup>, Y. Kondo<sup>3</sup>, S. Saitoh<sup>2</sup> and A. Urisu<sup>3</sup>,

<sup>1</sup>Department of Pediatrics, School of Medicine, Fujita Health University, Toyoake, Japan, <sup>2</sup>Department of Pediatrics and Neonatology, Graduate School of Medical Sciences, Nagoya City University, Nagoya, Japan, <sup>3</sup>Department of Pediatrics, The Second Teaching Hospital, Fujita Health University, Nagoya, Japan

**723 Immunological Mechanism of Sublingual Immunotherapy**

**Reza Farid, MD, FAAAAI**, Allergy Research Center, Mashhad University of Medical Sciences, Farahzad Jabbari, mashhad university, Mashhad, Iran and Homa Sadri, Dr, Mashhad Universiti, Mashhad, Iran

## The Role of Lymphocytes in Mediating Asthma and Allergic Inflammation

4607

Monday, February 25th, 2013, 2:00 PM - 3:15 PM

**724 Th2 Mediated Airway Diseases Strongly Linked to Fungal T Cell Memory**

**Paul Porter, PhD<sup>1</sup>**, Chu-Lin Tsai, MD, PhD<sup>2</sup>, Martin Citardi, MD<sup>3</sup>, Samer Fakhri, MD<sup>3</sup>, David B. Corry, MD<sup>1</sup> and Amber U. Luong, MD, PhD<sup>4</sup>, <sup>1</sup>Baylor College of Medicine, Houston, TX, <sup>2</sup>University of Texas School of Public Health, Houston, TX, <sup>3</sup>University of Texas Medical School at Houston, Houston, TX, <sup>4</sup>University of Texas Medical School at Houston

**725 LIGHT Is Associated with Increased Cellular Infiltrate and Levels of Th1 Cytokines As Well As Well As Reduced Lung Function in Human Asthma**

**Jonathan Romeo, DO**, Annette T. Hastie, PhD, Susan Foster, PhD, Wendy Moore, MD, Stephen P. Peters, MD, PhD, FAAAAI, Eugene R. Bleecker, MD, FAAAAI and Mark S. Dykewicz, MD, FAAAAI, Wake Forest University School of Medicine, Winston Salem, NC

**726 Immunomodulatory Effects of IL-27 On Allergen-Induced Th2 Responses**

**Tomokazu Matsuoka<sup>1,2</sup>**, Faith Wing chun, BSc (Hons)<sup>1</sup>, Bryony Stott, MSc<sup>1</sup>, Stephen R. Durham, MA, MD, FRCP<sup>2,3</sup> and Mohamed H. Shamji, BSc, MSc, PhD<sup>4,5</sup>, <sup>1</sup>Imperial College London, <sup>2</sup>Medical Research Council and Asthma UK Centre for Allergic Mechanisms of Asthma, UK, <sup>3</sup>Imperial College, London, United Kingdom, <sup>4</sup>MRC & Asthma UK Centre in Allergic Mechanisms of Asthma, <sup>5</sup>Imperial College London, United Kingdom

**727 Grass Pollen Allergics Have Fewer IL-10-Producing B Cells Than Non-Atopic Controls**

**James E G Charlesworth<sup>1,2</sup>**, Andrea Goldstone<sup>1</sup>, Moises A. Calderon, MD, PhD<sup>2,3</sup>, David Cousins<sup>2</sup>, Stephen R. Durham, MA, MD, FRCP<sup>2,3</sup> and Mohamed H. Shamji, BSc, MSc, PhD<sup>4,5</sup>, <sup>1</sup>Imperial College London, <sup>2</sup>Medical Research Council and Asthma UK Centre for Allergic Mechanisms of Asthma, UK, <sup>3</sup>Imperial College, London, United Kingdom, <sup>4</sup>MRC & Asthma UK Centre in Allergic Mechanisms of Asthma, <sup>5</sup>Imperial College London, United Kingdom

**728 Rab11+ Recycling Endosomes Controls Signaling Output and Cellular Response of Memory CD4 T Cells in Asthma**

**Chaoyu Chen, MS**, Dipa Sheth, MD, Dave Gupta, MD, Magdalena Gorska, MD, PhD and Rafeul Alam, MD, PhD, FAAAAI, National Jewish Health, Denver, CO

## Asthma Updates

5201

Tuesday, February 26th, 2013, 9:45 AM - 10:45 AM

**729 Effect of Budesonide/Formoterol Pressurized Metered-Dose Inhaler (BUD/FM pMDI) in African-American Patients with**

- Moderate to Severe Asthma: Responder Analysis in Patients with Versus without Fixed Airflow Obstruction (FAO)**  
**Bradley E. Chipps, MD, FAAAAI<sup>1</sup>**, Donald P. Tashkin, MD<sup>2</sup>, Tom Uryniak<sup>3</sup> and Frank Trudo<sup>3</sup>, <sup>1</sup>Capital Allergy & Respiratory Disease Center, Sacramento, CA, <sup>2</sup>University of California, Los Angeles, CA, <sup>3</sup>AstraZeneca LP, Wilmington, DE
- 730 CC10 A38G Polymorphism (rs3741240) Is Associated with Asthma Susceptibility and Bronchial Hyperresponsiveness Mediated by the Eosinophilic Inflammation in Korean Children**  
**Kyungmo Hong<sup>1</sup>**, Hyun-Kyung Kim<sup>2</sup>, Mi-Jin Kang, MS<sup>3</sup>, Ho-Sung Yu, BS<sup>3</sup>, Byoung-Ju Kim, MD, PhD<sup>4</sup>, Young Ho Jung, MD<sup>5,6</sup>, Jinho Yu, MD, PhD<sup>5</sup> and Soo-Jong Hong, MD, PhD<sup>5,6</sup>, <sup>1</sup>Goucher College, Baltimore, USA, <sup>2</sup>Childhood Asthma Atopy Center, Department of Pediatrics, Asan Medical Center, University of Ulsan College of Medicine, <sup>3</sup>Asan Institute for Life Sciences, University of Ulsan College of Medicine, Seoul, South Korea, <sup>4</sup>Department of Pediatrics, Hae-undae Paik Hospital, Inje University College of Medicine, Busan, South Korea, <sup>5</sup>Childhood Asthma Atopy Center, Department of Pediatrics, Asan Medical Center, University of Ulsan College of Medicine, Seoul, South Korea, <sup>6</sup>Research Center for Standardization of Allergic Disease, Seoul, South Korea
- 731 Safety of Modified Dust Mite Subcutaneous Immunotherapy in Severe Allergic Asthma**  
**Ruperto González**, Hospital Ofra-Tórax, S/C de Tenerife, Spain, Paloma Poza, Hospital Ofra-Tórax, santa cruz de tenerife, Spain, Victor Matheu, MD, Hospital Ofra, Tenerife, Spain and Inmaculada Sánchez-Machín, MD, Hospital Ofra-Tórax, Tenerife, Spain
- 732 The Role of Exhaled Nitric Oxide in Guiding Asthma Management**  
**Dermot Ryan<sup>1</sup>**, Mike David Thomas<sup>2</sup>, Paul M. Dorinsky, MD<sup>3,4</sup>, Annie Burden<sup>5</sup>, Julie von Ziegenweid<sup>5</sup>, Catherine Hutton<sup>6</sup>, Alison Chisholm<sup>6</sup> and David Price, FRCPG, MRCGP, DRCOG<sup>5,7</sup>, <sup>1</sup>Woodbridge Medical Centre, Loughborough, United Kingdom, <sup>2</sup>University of Southampton, Southampton, United Kingdom, <sup>3</sup>Teva Pharmaceuticals, Blue Bell, PA, <sup>4</sup>Aerocrine, Inc., Morrisville, NC, <sup>5</sup>Research In Real Life, Cambridge, United Kingdom, <sup>6</sup>Research in Real Life, Cambridge, United Kingdom, <sup>7</sup>University of Aberdeen, United Kingdom
- 733 The Influences of Low BMI On the Treatment of Fixed Airway Obstruction**  
**June-Hyuk Lee<sup>1</sup>**, Sung-Woo Park, MD<sup>2</sup>, Dojin Kim<sup>1</sup> and Ansoo Jang, MD<sup>3</sup>, <sup>1</sup>Soonchunhyang univ bucheon hospital, <sup>2</sup>Soonchunhyang Univ. Hospital, Bucheon, <sup>3</sup>Soon Chum Hyang University Hospital, Bucheon
- 734 A Study of Vitamin D Levels in Children with Asthmatic Exacerbation At Queen Sirikit National Institute of Child Health**  
**Varuit Thongbai, MD**, Mukda Vangveeravong, MD, Tassalapa Daengsuwan, MD and Gun Phongsamart, MD, Queen Sirikit National Institute of Child Health, Bangkok, Thailand
- 735 Safety and Tolerability of Fel d 1-Derived Peptide Antigen Desensitization in Subjects with Controlled Asthma**  
**Pascal LC Hickey, BPharm, PhD**, Adiga Life Sciences, Hamilton, Canada, Amarjit Singh Cheema, MD, Alpha Medical Research, Mississauga, ON, Canada, Mark Larche, PhD, McMaster University/St. Joseph's Healthcare, Hamilton, ON, Canada and Rod Hafner, PhD, Circassia, Oxford, United Kingdom
- 736 Longitudinal Evaluation of the Prognostic Value for Difficult Asthma of Rhinitis Clusters**  
**Ioana Octavia Agache, MD<sup>1</sup>**, Cristina Ciobanu<sup>2</sup>, Valentina Barbieru<sup>3</sup> and Liliana Rogozea<sup>3</sup>, <sup>1</sup>Transylvania University Brasov, Brasov, Romania, <sup>2</sup>Theramed Medical Center, <sup>3</sup>Transylvania University Brasov
- 737 Childhood Asthma Profile in Participants of Asthma Control Program**  
**Gesmar Segundo<sup>1,2</sup>** and Juliana Ribeiro<sup>1</sup>, <sup>1</sup>Universidade Federal de Uberlandia, Uberlandia, Brazil, <sup>2</sup>Centro Universitário de Patos de Minas, Patos de Minas, Brazil
- 738 Churg-Strauss Syndrome in Japan**  
**Shunsei Hirohata**, Kitasato University School of Medicine, Sagami-hara, Japan
- 739 An Application of Computerized Asthma-Specific QOL in Korean Asthmatics**  
**Kim Mi-Ae<sup>1</sup>**, Ye Young-Min<sup>1</sup>, Park Jung-Won<sup>2</sup>, Lee Jae-Hyun<sup>2</sup>, Lee Soo-Keol<sup>3</sup>, Kim Cheol-Woo<sup>4</sup>, Jung Ki-Suck<sup>5</sup>, Kim Joo-Hee<sup>5</sup>, Yoo Hye-Soo<sup>1</sup>, Lee Seung Ihm<sup>1</sup>, Kim Seung-Hyun<sup>1</sup>, Shin Yoo Seob<sup>1</sup> and Park Hae-Sim<sup>1</sup>, <sup>1</sup>Ajou University School of Medicine, Suwon, South Korea, <sup>2</sup>Yonsei University College of Medicine, Seoul, South Korea, <sup>3</sup>Dong-A University College of Medicine, Pusan, South Korea, <sup>4</sup>Inha University College of Medicine, Incheon, South Korea, <sup>5</sup>Hallym University Medical School, Pyungchon, South Korea
- 740 Reproducibility of Acq-7 Questionnaire in the Assessment of Asthma Control**  
**Mariana N. Cardoso, MD<sup>1</sup>**, Herberto J. Chong Neto, MD, PhD FAAAAI<sup>1</sup>, Carlos Antonio Riedi, MD PhD<sup>1</sup> and Nelson A. Rosario, MD, PhD, FAAAAI<sup>1,2</sup>, <sup>1</sup>Federal University of Paraná, Curitiba, Brazil, <sup>2</sup>Federal University of Paraná, Curitiba, Brazil
- 741 Follow-up of Wheezing in Preschool Children From Cuiabá, MT, Brazil**  
**Lillian SANCHEZ LACERDA Moraes, MD, MSc**, Federal University of Mato Grosso, Dirceu Sole, MD, PhD, Federal University of Sao Paulo, Sao Paulo, Brazil and Olga Takano, MD, PhD, Federal University of Mato Grosso, cuiabá, Brazil
- 742 How Does Asthma Related Internet Search Correlate with Extrinsic Triggers in Urban Centers?**  
**Rohit Divekar, MBBS, PhD** and Suresh Bhavnani, PhD, Univ. of Texas Medical Branch at Galveston, Galveston, TX
- 743 Analysis of Relationship Between Asthma and Rhinitis Symptoms in Patients Treated in University Hospital by Using Sacra Questionnaire**  
**Hiroyuki Nagase, MD, PhD<sup>1</sup>**, Naoya Sugimoto<sup>1</sup>, Yuko Nakase<sup>1</sup>, Yusuke Tanaka<sup>1</sup>, Asae Kamiyama<sup>1</sup>, Yasuhiro Kojima<sup>1</sup>, Hisanao Yoshihara<sup>1</sup>, Michio Kuramochi<sup>1</sup>, Hiroyuki Tashimo<sup>1</sup>, Hidenori Arai<sup>1</sup>, Masao Yamaguchi<sup>1</sup> and Ken Ohta<sup>1,2</sup>, <sup>1</sup>Teikyo University School of Medicine, Tokyo, Japan, <sup>2</sup>National Hospital Organization Tokyo National Hospital, Tokyo, Japan
- 744 Associations Between Asthma and Puberty in Swedish Children**  
**Jennifer Protudjer, PhD**, Cecilia Lundholm, MSc, Anna Bergstrom, PhD, Inger Kull, PhD and Catarina Almqvist, MD, PhD, Karolinska Institute, Stockholm, Sweden
- 745 Outcome of Pre-School Children with Asthma: A Japanese Cohort Study**  
**Mayumi Furukawa**, Division of Allergy, Tokyo Metropolitan Children's Medical Center, Tokyo, Japan, Mari Sasaki, Division of Allergy Tokyo Metropolitan Children's Medical Center, Hiriko Watanabe, NHO Kanagawa Hospital, Hiroshi Odajima, MD, PhD, Department of Pediatrics, Fukuoka National Hospital, Japan, Takao Fujisawa, MD, FAAAAI, Mie National Hospital, Mie, Japan, Motohiro Ebisawa, MD, PhD, FAAAAI, Sagami National Hospital and Akira Akasawa, MD, PhD, Tokyo Metropolitan Children's Medical Center, Tokyo, Japan

## Other BCI Topics

5202

Tuesday, February 26th, 2013, 9:45 AM - 10:45 AM

- 746 Association Between Polymorphisms of Itpkc and CASP3 in IVIG Unresponsiveness and Coronary Artery Lesion in Kawasaki Disease**



- Ho-Chang Kuo, MD**, Chang Gung University College of Medicine, Kaohsiung, Taiwan; Department of Pediatrics, Kaohsiung Chang Gung Memorial Hospital, Kaohsiung, Taiwan
- 747 Clinical and Immunologic Role of Mannose Binding Lectin Deficiency**  
**Payal Patel, MD<sup>1</sup>**, Mariam S. Rasheed, MD<sup>2</sup>, Ernest Visconti<sup>3</sup>, Jenny Shliozberg, MD, FAAAAI<sup>4</sup> and Arye Rubinstein, MD, FAAAAI<sup>1</sup>, <sup>1</sup>Albert Einstein College of Medicine, Bronx, NY, <sup>2</sup>Albert Einstein College of Medicine, New York, NY, <sup>3</sup>Staten Island University Hospital, Staten Island, NY, <sup>4</sup>Montefiore Medical Center, New York, NY
- 748 Strategies to Query and Display Allergy-Derived Epitope Data From the Immune Epitope Database (IEDB)**  
**Kerrie C. Vaughan<sup>1</sup>**, Bjoern Peters<sup>1</sup>, Mark Larche<sup>2</sup>, Anna Pomes<sup>3</sup>, David Broide<sup>4</sup> and Alessandro Sette<sup>1</sup>, <sup>1</sup>La Jolla Institute for Allergy and Immunology, La Jolla, CA, <sup>2</sup>Division of Clinical Immunology & Allergy, Department of Medicine, McMaster University, Hamilton, ON, Canada, <sup>3</sup>Indoor Biotechnologies, Charlottesville, VA, <sup>4</sup>Allergy and Immunology, Department of Medicine, University of California, San Diego, San Diego, CA
- 749 Immune System Dysregulation Persists During Long-Duration Spaceflight**  
**Brian Crucian<sup>1</sup>**, Sara Zwart<sup>2</sup>, Satish Mehta<sup>3</sup>, Raymond Stowe<sup>4</sup>, Peter Uchakin<sup>5</sup>, Heather Quiariarte<sup>6</sup>, Duane Pierson<sup>1</sup>, Scott M. Smith<sup>1</sup> and Clarence Sams<sup>1</sup>, <sup>1</sup>NASA Johnson Space Center, Houston, TX, <sup>2</sup>Universities Space Research Association, Houston, TX, <sup>3</sup>Enterprise Advisory Services Inc., Houston, TX, <sup>4</sup>Microgen Laboratories, La Marque, TX, <sup>5</sup>Mercer University, Macon, GA, <sup>6</sup>JES Tech, Houston, TX
- 750 A Simple, Sensitive and Selective Fluorogenic Assay to Monitor Kallikrein Activity in Activated Plasma**  
**Jianwen Zhang**, Debra Kellogg, Ramanda Wilson, Leigh Harman, Shanta Bantia and YS Babu, BioCryst Pharmaceuticals, Inc, Birmingham, AL
- 751 A Human Monoclonal IgE Resource - a Tool to Understand Allergen-IgE Interactions**  
**Mats Ohlin** and Mattias Levin, Lund University, Sweden
- 752 Upper Respiratory Cytokine Production in Children with Pandemic H1N1 Versus Seasonal H3N2 Influenza A Infection**  
**Hazar Kobayaa, MD<sup>1</sup>**, Joseph Domachowski<sup>2</sup>, Basim Asmar<sup>3</sup>, Cynthia Bonville<sup>4</sup> and Elizabeth A. Secord, MD, FAAAAI<sup>3</sup>, <sup>1</sup>Wayne State Medical Center, <sup>2</sup>SUNY Upstate Medical Center, <sup>3</sup>Wayne State University, <sup>4</sup>Upstate Medical Center
- 753 The Effects of Diabetes Mellitus and in Vitro Hyperglycemia On Cytokine Secretion From Peripheral Blood Leucocytes**  
**Najwan Ibraheem**, Jordan University of Science and Technology, Nizar Abuharfil, Faculty of Science and Arts - Jordan University of Science and Technology, Fawaz Ammari, Faculty of Medicine - JUST and Ammar K. Daoud, MD, FAAAAI, Faculty of Medicine, Jordan University of Science and Technology (J.U.S.T), Irbid, Jordan
- 754 Immune Responses to Allopurinol in A Patient with DRESS Syndrome**  
**Krikor Manoukian, MD**, University of California Irvine, CA, Sudhanshu Agrawal, University of California Irvine and Sudhir Gupta, MD, PhD, FAAAAI, University Of CA - Irvine, Irvine, CA
- 755 Altered Frequency and Composition of Cultured Peripheral Blood Natural Killer Cells From Cow's Milk Allergic Subjects**  
**Madhan Masilamani, PhD<sup>1</sup>**, Akshay Bhatt, MS<sup>2</sup>, Lara Ford, MD<sup>2</sup>, Jacob Daniel Kattan, MD<sup>1</sup> and Hugh A. Sampson, MD, FAAAAI<sup>1</sup>, <sup>1</sup>Mount Sinai School of Medicine, New York, NY, <sup>2</sup>Mt. Sinai School of Medicine
- 756 BCX-4161, a Small Molecule and Orally Bioavailable Plasma Kallikrein Inhibitor for the Treatment of Hereditary Angioedema**  
**Shanta Bantia**, Jianwen Zhang, Ramanda Wilson, Cynthia D. Parker, Debra Kellogg, Pravin Kotian and YS Babu, BioCryst Pharmaceuticals, Inc, Birmingham, AL
- 757 Factor XII-Independent Activation of the Complex of Prekallikrein with High Molecular Weight Kininogen: Implications for Hereditary Angioedema**  
**Kusumam Joseph, PhD**, Medical University of South Carolina, Charleston, Baby Tholanikunnel, PhD, Medical University of South Carolina and Allen P. Kaplan, Medical University of South Carolina, Charleston, SC
- 758 Multiplexed Analysis of Primary Cord Blood Adherent-Mononuclear Cell-Supernatants Related to Maternal Atopy**  
**Jenny Thiele, MSc<sup>1</sup>**, Yifei Zhu<sup>1</sup> and Anne K. Ellis, MD, MSc, FRCPC, FAAAAI<sup>2,3</sup>, <sup>1</sup>Queens University, <sup>2</sup>Allergy Research Unit, Kingston General Hospital, Kingston, ON, Canada, <sup>3</sup>Departments of Medicine and Biomedical & Molecular Science, Queen's University, Kingston, ON, Canada
- 759 Q-PCR Analysis of GATA-1 in Umbilical Cord Blood: Optimizing RNA Extraction and Reverse Transcription Techniques**  
**Vanessa N. Omana, BSc**, Queen's University, Jenny Thiele, MSc, Queens University and Anne K. Ellis, MD, MSc, FRCPC, FAAAAI, Allergy Research Unit, Kingston General Hospital, Kingston, ON, Canada; Departments of Medicine and Biomedical & Molecular Science, Queen's University, Kingston, ON, Canada

## Anaphylaxis I

5203

Tuesday, February 26th, 2013, 9:45 AM - 10:45 AM

- 760 Tryptase Levels in Children Presenting with Anaphylaxis to the Montreal Children's Hospital**  
**Michelle Halbrich, MD<sup>1</sup>**, Ann Elaine Clarke, MD, MSc<sup>2</sup>, Sebastian La Vieille, MD<sup>3</sup>, Harley Eisman, MD<sup>1</sup>, Reza Alizadehfar, MD<sup>1</sup>, Lawrence Joseph, PhD<sup>1</sup>, Judy Morris, MD<sup>4</sup> and Moshe Ben-Shoshan, MD, MSc<sup>1</sup>, <sup>1</sup>McGill University, Montreal, QC, Canada, <sup>2</sup>McGill University Health Centre, Montreal, Canada, <sup>3</sup>Food Directorate, Ottawa, ON, Canada, <sup>4</sup>University de Montreal, Montreal, QC, Canada
- 761 Anaphylaxis in Children Treated At the Montreal Children's Hospital: Rate, Clinical Characteristics, Triggers and Management**  
**Moshe Ben-Shoshan, MD, MSc<sup>1,2</sup>**, Sebastian La Vieille, MD<sup>3</sup>, Harley Eisman, MD<sup>1,4</sup>, Reza Alizadehfar, MD<sup>4,5</sup>, Emma Perkins, BSc<sup>6</sup>, Lawrence Joseph, PhD<sup>1</sup>, Judy Morris, MD<sup>7,8</sup> and Ann Elaine Clarke, MD, MSc<sup>9,10</sup>, <sup>1</sup>McGill University, Montreal, QC, Canada, <sup>2</sup>Montreal Children's Hospital, Montreal, Canada, <sup>3</sup>Food Directorate, Ottawa, ON, Canada, <sup>4</sup>Montreal Children's Hospital, Montreal, QC, Canada, <sup>5</sup>McGill University, Brossard, Canada, <sup>6</sup>McGill University Health Center, Montreal, QC, Canada, <sup>7</sup>University de Montreal, Montreal, QC, Canada, <sup>8</sup>Sacré-Coeur Hospital, <sup>9</sup>McGill University Health Centre, Montreal, Canada, <sup>10</sup>Montreal General Hospital
- 762 Auvi-Q Versus Epipen: Preferences of Adults, Caregivers, and Children**  
**Adriana Guana<sup>1</sup>**, F. Estelle R. R. Simons, MD, FAAAAI<sup>2</sup>, Sheldon Wang<sup>1</sup> and Carlos Camargo Jr., MD, DrPH<sup>3</sup>, <sup>1</sup>Sanofi US, <sup>2</sup>University of Manitoba, Winnipeg, MB, Canada, <sup>3</sup>Department of Emergency Medicine, Massachusetts General Hospital, Harvard Medical School, Boston, MA
- 763 Characterization of Cannabis Sativa Allergens**  
**Ajay Nayak, PhD<sup>1</sup>**, Brett Green, PhD<sup>1</sup>, Gordon L. Sussman, MD, FAAAAI<sup>2</sup>, Noam Berlin, BSc<sup>3</sup>, Hemant Lata, PhD<sup>4</sup>, Suman Chandra, PhD<sup>4</sup>, Mahmoud ElSohly, PhD<sup>4</sup>, Justin Hettick, PhD<sup>1</sup> and Donald H. Beezhold, PhD FAAAAI<sup>1</sup>, <sup>1</sup>CDC/NIOSH, Morgantown, WV, <sup>2</sup>University of Toronto, Toronto, ON, Canada, <sup>3</sup>Gordon Sussman Clinical Research, Toronto, ON, Canada, <sup>4</sup>University of Mississippi, Oxford, MS

- 764 Allergic Sensitization in Transfusion Recipients, Not Blood Donors, Is a Risk Factor for Allergic Transfusion Reactions**  
**Gabriel Verzino, MHS<sup>1</sup>, Aaron Tobian, MD, PhD<sup>2</sup>, Dayand Borge, MD, PhD<sup>3</sup>, Jessica Rabe Savage, MD, MHS<sup>1</sup>, Paul Ness, MD<sup>2</sup>, Robert G. Hamilton, PhD, D.ABMLI, FAAAAI<sup>4</sup> and William Savage, MD, PhD<sup>1</sup>, <sup>1</sup>Brigham and Women's Hospital, <sup>2</sup>Johns Hopkins University School of Medicine, <sup>3</sup>Greater Chesapeake and Potomac Red Cross, <sup>4</sup>Johns Hopkins University School of Medicine, Baltimore, MD**
- 765 Using Omega-5 Gliadin ( rTri a 19) in the Diagnosis of Anaphylaxis**  
**Sai Hurng Kham Murng, MBBS MRCP (UK), William Egner, MD, PhD, Anna Shrimpton, MBChB, FRCPath and Ravishankar B. Sargur, MD, MBBS, MRCP, Northern General Hospital, Sheffield, United Kingdom**
- 766 Characterization of the Causative Allergens for Wheat-Dependent Exercise-Induced Anaphylaxis Sensitized with Hydrolyzed Wheat Proteins in Facial Soap**  
**Tomoharu Yokooji<sup>1</sup>, Saki Kurihara<sup>1</sup>, Tomoko Murakami<sup>1</sup>, Yuko Chinuki<sup>2</sup>, Susumu Harada<sup>3</sup>, Hitoshi Takahashi<sup>2</sup>, Eishin Morita<sup>2</sup>, Kaori Ishii<sup>4</sup>, Makiko Hiragun<sup>4</sup>, Michihiro Hide<sup>4</sup> and Hiroaki Matsuo<sup>1</sup>, <sup>1</sup>Department of Pathophysiology and Therapeutics, Graduate School of Biomedical and Health Sciences, Hiroshima University, Hiroshima, Japan, <sup>2</sup>Department of Dermatology, Shimane University, Izumo, Japan, <sup>3</sup>Harada Skin Clinic, Nishinomiya, Japan, <sup>4</sup>Department of Dermatology, Graduate School of Biomedical and Health Sciences, Hiroshima University, Hiroshima, Japan**
- 767 Streptomycin in a Blueberry Pie? Risk of Allergic Sensitization and Reaction to Antibiotics Contained in Foods**  
**François Graham, MD, MSc<sup>1</sup>, Philippe Begin, MD, MSc<sup>1</sup>, Louis P. Paradis, MD, FAAAAI<sup>1</sup>, Yves Babin, PhD<sup>2</sup> and Anne M. Des Roches, MD, FAAAAI<sup>3</sup>, <sup>1</sup>CHUM, Hôpital Notre-Dame, Montreal, QC, Canada, <sup>2</sup>Ministère de l'Agriculture, des Pêcheries et de l'Alimentation du Québec, Quebec, QC, Canada, <sup>3</sup>CHU Sainte-Justine, Montreal, QC, Canada**
- 768 Severe Marijuana Allergy Controlled with Omalizumab**  
**David B. Engler, MD, FAAAAI, Houston Allergy & Asthma Clinic, Houston, TX, Alnoor A. Malick, MD, FAAAAI, The Allergy Clinic, Pasadena, TX, Sunil K. Saraf, MD, The Allergy Clinic, The Woodlands, TX and Lisa Adams Dargel, PA-C, The Allergy Clinic, Manvel, TX**
- 769 A Patient with Carminic Acid-Induced Anaphylaxis; Usefulness of the Basophil Activation Test**  
**Naoya Sugimoto<sup>1</sup>, Masao Yamaguchi<sup>1</sup>, Yuko Nakase<sup>1</sup>, Yusuke Tanaka<sup>1</sup>, Hiroyuki Tashimo<sup>1</sup>, Hidenori Arai<sup>1</sup>, Hiroshi Akiyama<sup>2</sup>, Hiruyuki Nagase, MD, PhD<sup>1</sup> and Ken Ohta<sup>1,3</sup>, <sup>1</sup>Teikyo University School of Medicine, Tokyo, Japan, <sup>2</sup>National Institute of Health Sciences, Tokyo, Japan, <sup>3</sup>National Hospital Organization Tokyo National Hospital, Tokyo, Japan**
- 770 Anaphylactic Shock in Oral Allergy**  
**Parwinder Gill and Gordon L. Sussman, MD, FAAAAI, University of Toronto, Toronto, ON, Canada**
- 771 Bullous Mastocytosis; Cutaneous or Systemic Disease?**  
**Lauren Kinneman, MD<sup>1</sup>, Barbara Molloy, MD<sup>1</sup>, Robert Silverman, MD<sup>1</sup>, Jasbir Johal, MD<sup>1</sup>, Noel Mensah-Bonsu<sup>1</sup> and Oral Alpan, MD<sup>2</sup>, <sup>1</sup>Inova Fairfax Hospital, <sup>2</sup>Amerimmune, LLC, VA**
- 772 IgE Specific to Oxycodone Identified by ELISA Inhibition in a Young Woman with Symptoms of Anaphylaxis Following Oral Ingestion: First Case Report of Oxycodone-Mediated Anaphylaxis**  
**Daniel A. Steigelman, MD, David Rose, MD, Robert Anthony Gomez and Tonya S. Rans, MD, Wilford Hall Ambulatory Surgical Center, Lackland AFB, TX**
- 773 Characteristics of Patients with Delayed Allergic Reactions to Mammalian Meat Presenting to a Tertiary Care Academic Medical Center in North Carolina**  
**Maya R. Jerath, MD, PhD and Saira Zafar Sheikh, MD, University of North Carolina at Chapel Hill, Chapel Hill, NC**
- 774 Pediatric Alpha-Gal: IgE Antibodies to Galactose-Alpha-1,3-Galactose in Children Presenting with Delayed Urticaria or Anaphylaxis**  
**Hayley James<sup>1</sup>, Josh L. Kennedy, MD<sup>1</sup>, Thomas Platts-Mills, MD PhD, FAAAAI, FRS<sup>1</sup>, Amy Polen Stallings, MD<sup>2</sup>, Lisa J. Workman, BA<sup>1</sup>, Anubha Tripathi, MD<sup>1</sup>, Shawna Pochan, DNP, CNM<sup>1</sup>, Charles Lane, MD<sup>3</sup>, Luis A. Matos, MD, MBA, FAAAAI<sup>4</sup>, Saju S. Eapen, MD<sup>4</sup>, Dane C. McBride, MD, FAAAAI<sup>4</sup>, Peter W. Heymann, MD<sup>1</sup> and Scott P. Commins, MD, PhD<sup>1</sup>, <sup>1</sup>University of Virginia, Charlottesville, VA, <sup>2</sup>Duke University, NC, <sup>3</sup>Allergy Partners, Lynchburg, VA, <sup>4</sup>Asthma and Allergy Center, Roanoke, VA**
- 775 Appearance of CD63+ Basophils After Food Challenge Occurs in Both Alpha-Gal Positive Subjects and Controls**  
**Susan Mozzicato, MD<sup>1</sup>, Hayley James<sup>1</sup>, Michael H. Land, MD, FAAAAI<sup>2</sup>, Shawna Pochan, DNP, CNM<sup>1</sup>, Lisa J. Workman, BA<sup>1</sup>, Thomas Platts-Mills, MD, PhD, FAAAAI FRS<sup>1</sup> and Scott P. Commins, MD PhD<sup>1</sup>, <sup>1</sup>University of Virginia, Charlottesville, VA, <sup>2</sup>Allergy, Southern California Permanente Medical Group, San Diego, CA**
- 776 Positive Basophil Activation Test in a Patient with Exercise-Induced Anaphylaxis**  
**Rafael Firszt, MD, University of Utah, Salt Lake City, UT**
- 777 Maternal Transmission of Peanut Allergy Susceptibility Is Associated with IL-4 Promoter Demethylation in Offspring**  
**Ying Song, MD, Ching-feng Huang, ChangDa Liu, Paul Faybusovich, Jia Chen, PhD and Xiu-Min Li, MD, Mount Sinai School of Medicine, New York, NY**
- 778 Oral Sensitization to Peanut in Balb/c Mice Is Enhanced by Dietary Elimination of Soybean Components - towards a Better Mouse Model for Food Allergy**  
**Lisa Chang, BS<sup>1</sup>, Hugh A. Sampson, MD, FAAAAI<sup>2</sup> and Madhan Masilamani, PhD<sup>2</sup>, <sup>1</sup>Mt. Sinai School of Medicine, New York, NY, <sup>2</sup>Mount Sinai School of Medicine, New York, NY**
- 779 Epicutaneous Sensitization Results in IgE-Dependent Intestinal Mast Cell Expansion and Food Anaphylaxis**  
**Raif Geha, MD<sup>1</sup>, Lisa Bartnikas, MD<sup>1</sup>, Michael Gurish<sup>2</sup>, Oliver Burton<sup>1</sup>, Sabine Leisten<sup>1</sup>, Erin Janssen<sup>1</sup>, Hans C. Oettgen, MD, PhD, FAAAAI<sup>1</sup>, Jacqueline Beaupré<sup>1</sup>, Christopher Lewis<sup>1</sup>, K. Frank Austen<sup>3</sup>, Stephanie Schulte<sup>2</sup>, Jason L. Hornick, MD, PhD<sup>2</sup> and Michiko K. Oyoshi, PhD<sup>1</sup>, <sup>1</sup>Boston Children's Hospital, Boston, MA, <sup>2</sup>Brigham and Women's Hospital, MA, <sup>3</sup>Brigham and Women's Hospital/Harvard Medical School, Boston, MA**
- 780 Anisakis Simplex Excretion/Secretion Antigens Inhibit Anaphylactic Response in a Murine Model**  
**Guadalupe Marco Martín, MD, Alejandro La Rotta Hernández, MD, Patricia Martínez Lezcano, MD, Jose Manuel Zubeldia Ortuno, MD, PhD and María L. Baeza Ochoa de Ocariz, MD, PhD, Hospital General Universitario Gregorio Marañón, Madrid, Spain**

## Food Allergy II

5204

Tuesday, February 26th, 2013, 9:45 AM - 10:45 AM

- 781 Real-Time Surveillance of Epinephrine Administration in Schools Supports the Argument for 'Stock' Epinephrine Availability**  
**Elizabeth Ferzacca<sup>1,2</sup>, Alexandra R. Alejos, BA<sup>2</sup>, Robert Leibowitz, PhD<sup>3</sup>, Michael Pistiner, MD, MMSc<sup>4</sup>, Wayne G. Shreffler, MD, PhD, FAAAAI<sup>2,5</sup> and Anne Sheetz, RN, BSN, MPH<sup>3</sup>, <sup>1</sup>Barnard, <sup>2</sup>Massachusetts General Hospital, Boston, MA, <sup>3</sup>Massachusetts Department of Public Health, Boston, MA, <sup>4</sup>Harvard Vanguard Medical Associates, Boston, MA, <sup>5</sup>Harvard Medical School, Boston, MA**
- 782 24-Hour Helpline Access for Food Allergic Reaction Treatment Advice in Children Prescribed Epinephrine Auto-Injectors: Randomised Controlled Trial**

- Audrey Dunn Galvin**<sup>1</sup>, Maeve M. Kelleher<sup>2</sup>, Aziz Sheikh<sup>3</sup>, Claire Cullinane<sup>2</sup>, John Fitzsimons<sup>4</sup> and Jonathan O. Hourihane<sup>1</sup>, <sup>1</sup>University College Cork, Cork, Ireland, <sup>2</sup>University College Cork, Ireland, <sup>3</sup>The University of Edinburgh, United Kingdom, <sup>4</sup>Our Lady of Lourdes Hospital Drogheda, Ireland
- 783 Events Reported to a 24 Hour Helpline for Food Allergic Reaction Treatment Advice in Children Prescribed Epinephrine Auto-Injectors: Randomised Controlled Trial**  
**Jonathan O. Hourihane**<sup>1</sup>, Maeve M. Kelleher<sup>2</sup>, Audrey Dunn Galvin<sup>1</sup>, Claire Cullinane<sup>2</sup>, John Fitzsimons<sup>3</sup> and Aziz Sheikh<sup>4</sup>, <sup>1</sup>University College Cork, Cork, Ireland, <sup>2</sup>University College Cork, Ireland, <sup>3</sup>Our Lady of Lourdes Hospital Drogheda, Ireland, <sup>4</sup>The University of Edinburgh, United Kingdom
- 784 Adult Food Allergy Knowledge and Attitudes Among Internists and Family Practice Providers**  
**Gillian Bassirpour, MD**, University of Michigan, Division of Internal Medicine, Ann Arbor, MI and Alan P. Baptist, MD, MPH, University of Michigan, Division of Allergy, Ann Arbor, MI
- 785 Perspectives of Parents and Caregivers Regarding Timing the Transfer of Responsibilities for Anaphylaxis Recognition and Use of an Epinephrine Auto-Injector From Adults to Children and Teenagers**  
**Elinor Simons, MD, MS, FAAAAI**, Hospital for Sick Children-CHES, Toronto, ON, Canada, Scott H. Sicherer, MD, FAAAAI, Mt. Sinai School of Medicine, New York, NY, Christopher C. Weiss, PhD, Food Allergy & Anaphylaxis Network, Fairfax, VA and F. Estelle R. R. Simons, MD, FAAAAI, University of Manitoba, Winnipeg, MB, Canada
- 786 Knowledge of the Ibero-American Physicians On Anaphylaxis: Results of the Ibero-American Online Survey for Physicians On the Management and Treatment of Anaphylaxis (IOSPTA) - Latin American Society of Allergy, Asthma & Immunology (LASAAI)**  
**Dirceu Sole, MD PhD**, Federal University of Sao Paulo, Sao Paulo, Brazil, Juan C. Ivancevich, MD, Division of Immunology, Medical School, Universidad del Salvador, Buenos Aires. Head of the Division of Allergy and Immunology, Clínica Santa Isabel, Buenos Aires, Argentina and Victoria Cardona, MD, PhD, Hospital Universitario Vall D'Hebron, Barcelona, Spain
- 787 Anaphylaxis in the Adult Population: Are We Following Current Treatment Guidelines?**  
**Yarden Yanishevsky, MD**<sup>1</sup>, Ann Elaine Clarke, MD, MSc<sup>2,3</sup>, Sebastian La Vieille, MD<sup>4</sup>, Scott Delaney, MD<sup>5</sup>, Reza Alizadehfar, MD<sup>1</sup>, Lawrence Joseph, PhD<sup>2,6</sup>, Judy Morris, MD<sup>7</sup> and Moshe Ben-Shoshan, MD, MSc<sup>1</sup>, <sup>1</sup>Division of Paediatric Allergy and Clinical Immunology, Department of Paediatrics, McGill University Health Center, Montreal, QC, Canada, <sup>2</sup>Division of Clinical Epidemiology, Department of Medicine, McGill University Health Centre, Montreal, QC, Canada, <sup>3</sup>Division of Allergy and Clinical Immunology, Department of Medicine, McGill University Health Centre, Montreal, QC, Canada, <sup>4</sup>Food Directorate, Health Canada, Ottawa, ON, Canada, <sup>5</sup>Department of Emergency Medicine, McGill University Health Center, Montreal, QC, Canada, <sup>6</sup>Departments of Epidemiology and Biostatistics, McGill University, Montreal, Canada, <sup>7</sup>Department of Emergency Medicine, Hôpital du Sacré-Coeur, Montreal, QC, Canada
- 788 Anaphylaxis: Hospital Doctors' Knowledge of Management Guidelines**  
**Jae Won Jeong**, Inje University Ilsan Paik Hospital, Goyang, South Korea, Chan Sun Park, Inje University Haeundae Paik Hospital, Busan, South Korea, Jae Woo Jung, Chungang University, Seoul, South Korea, Hye Kyung Park, Pusan National University, Busan, South Korea, Se Hoon Kim, Seoul National University Bundang Hospital, Seongnam, South Korea, Tae Bum Kim, Asan Medical Center, Seoul, South Korea, Seong Wook Son, Dongkuk University, Goyang, South Korea, Jae Woo Kwon, Kangwon University, Chuncheon, South Korea and Sang Rok Lee, Cheongju St Mary's Hospital, Cheongju, South Korea
- 789 Simulation-Based Education Is an Effective Teaching Tool for Pediatric Trainees, in the Diagnosis and Management of Pediatric Anaphylaxis**  
**Natalie Beaven Miller, MD**<sup>1</sup>, James Fehr<sup>1</sup>, Andrew White<sup>1</sup>, Leonard B. Bacharier, MD, FAAAAI<sup>2</sup> and Alysa G. Ellis, MD<sup>1</sup>, <sup>1</sup>Washington University, Saint Louis, MO, <sup>2</sup>Department of Pediatrics, Washington University School of Medicine and St. Louis Children's Hospital, Saint Louis, MO
- 790 Knowledge, Attitudes and Behaviors of Pediatric Residents Regarding Anaphylaxis Diagnosis and Management**  
**Artemio M. Jongco III, MD, PhD, MPH**<sup>1,2</sup>, Robert Sporter, MD<sup>1</sup>, Sheila Bina, MD<sup>3</sup>, Marie A. Cavuoto Petrizzo, MD, FAAAAI<sup>4</sup>, Susan Schuval, MD, FAAAAI<sup>5</sup> and Blanka M. Kaplan, MD FAAAAI<sup>1</sup>, <sup>1</sup>Cohen Children's Medical Center of New York, Great Neck, NY, <sup>2</sup>Feinstein Institute for Medical Research, Manhasset, NY, <sup>3</sup>Stony Brook University Hospital, Stony Brook, NY, <sup>4</sup>Pro-Health Care LLP, Westbury, NY, <sup>5</sup>Stony Brook U Medical Center, Stony Brook University Medical Center, Stony Brook, NY
- 791 Creation and Validation of Web-Based Audiovisual Educational Materials for Caregivers of Children with Food Allergy**  
**Jamie Rosen** and Scott H. Sicherer, MD, FAAAAI, Mt. Sinai School of Medicine, New York, NY
- 792 Correct Parental Reaction Perception Affects Quality of Life in Food Allergy**  
**Laura E. Howe, MD**<sup>1</sup>, Timothy J. Franxman, MD<sup>1</sup> and Matthew J. Greenhawt, MD, MBA, MSc<sup>2</sup>, <sup>1</sup>University of Michigan, Ann Arbor, MI, <sup>2</sup>Department of Internal Medicine, The University of Michigan Medical School, Division of Allergy and Clinical Immunology, Ann Arbor, MI
- 793 Accuracy of Allergists' Estimation of Anxiety in Children with Food Allergy**  
**Melissa Rubes**<sup>1</sup>, Anna Podolsky<sup>2</sup>, Nicole Caso<sup>1</sup>, Rachel Annunzio<sup>1</sup>, Scott H. Sicherer, MD, FAAAAI<sup>3</sup> and Eyal Shemesh<sup>2</sup>, <sup>1</sup>Fordham University, Bronx, NY, <sup>2</sup>Mt. Sinai School of Medicine, NY, NY, <sup>3</sup>Mount Sinai School of Medicine, New York, NY
- 794 Treatment of Allergic Reactions and Quality of Life Among Caregivers of Food Allergic Children**  
**Claire E. Ward, MD**, CS Mott Children's Hospital, University of Michigan, Department of Pediatrics, Ann Arbor, MI, Lynda Mitchell, Kids With Food Allergies Foundation, Doylestown, PA and Matthew J. Greenhawt, MD, MBA, MSc, Department of Internal Medicine, The University of Michigan Medical School, Division of Allergy and Clinical Immunology, Ann Arbor, MI
- 795 The High Economic Burden of Childhood Food Allergy in the United States**  
**Ruchi Gupta, MD, MPH**<sup>1,2</sup>, David Holdford, BSPHarm, MS, PhD, FAPhA<sup>3</sup>, Lucy Bilaver, PhD, MS, MPP<sup>1,4</sup>, Ashley Dyer, MPH<sup>1</sup> and David Meltzer, MD, PhD<sup>5</sup>, <sup>1</sup>Northwestern University Feinberg School of Medicine, Chicago, IL, <sup>2</sup>Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, IL, <sup>3</sup>Virginia Commonwealth University, Richmond, VA, <sup>4</sup>Northern Illinois University, DeKalb, IL, <sup>5</sup>University of Chicago, Chicago, IL
- 796 Anaphylaxis Identification Using Direct and Combined ICD-9 Methods**  
**Timothy Trojan, MD**, University of Texas Southwestern at Dallas, Dallas, TX, Ying Ma, PhD, Center for Clinical Innovation, Parkland Health and Hospital System, Dallas, TX and David A. Khan, MD, FAAAAI, University Texas SW Medical Center, Dallas, TX

## Rhinitis/Rhinosinusitis

5205

Tuesday, February 26th, 2013, 9:45 AM - 10:45 AM

- 797 CT-Imaging of the Upper Sinus Airways in a Model of Allergic Sinus Congestion and Treatment**



Walter C. Spear, MS, Igor Patrikeev, PhD, Massoud Motamedi, MD and Bill T. Ameredes, PhD, University of Texas Medical Branch, Galveston, TX

- 798 **Allergic Fungal Sinusitis: A Challenging Disorder for the Clinician**  
T.M. Nsouli<sup>1,2,3</sup>, C. Schluckebier<sup>3</sup> and J. Bellanti<sup>1,2</sup>, <sup>1</sup>Georgetown University Medical Center, Washington, DC, <sup>2</sup>International Center for Interdisciplinary Studies of Immunology, Washington, DC, <sup>3</sup>Watergate and Burke Allergy and Asthma Centers, Washington, DC
- 799 **Post-Translational Modification of CCL23 in Chronic Rhinosinusitis with Nasal Polyps**  
Anjeni Keswani, MD<sup>1</sup>, Julie Poposki, MS<sup>1</sup>, Sarah Peterson, MD<sup>1</sup>, Lydia Suh, BSc<sup>1</sup>, James Norton, MS<sup>2</sup>, Anju Peters, MD<sup>1</sup>, Leslie C. Grammer, MD, FAAAAI<sup>1</sup>, Bruce Tan, MD<sup>3</sup>, Rakesh Chandra, MD<sup>3</sup>, David Conley, MD<sup>3</sup>, Juan Jaen, PhD<sup>4</sup>, Thomas Schall, PhD<sup>4</sup>, Robert Kern, MD<sup>5</sup>, Robert P. Schleimer, PhD, FAAAAI<sup>2</sup> and Atsushi Kato, PhD<sup>2</sup>, <sup>1</sup>Northwestern University Feinberg School of Medicine, Chicago, IL, <sup>2</sup>Department of Medicine, Division of Allergy-Immunology, Northwestern University Feinberg School of Medicine, Chicago, IL, <sup>3</sup>Northwestern University Feinberg School of Medicine, Chicago, IL, <sup>4</sup>Chemocentryx Inc, <sup>5</sup>Northwestern University Feinberg School of Medicine, Chicago, IL
- 800 **Increased Expression of the Epithelial Anion Transporter Pendrin in Nasal Polyp Tissues of Patients with Chronic Rhinosinusitis**  
Sudarshan Seshadri, PhD<sup>1</sup>, Xiang Lu, MD, PhD<sup>1</sup>, Andrew Choi<sup>1</sup>, Roderick Carter, BSc<sup>1</sup>, James Norton, MS<sup>1</sup>, Atsushi Kato, PhD<sup>1</sup>, Lydia Suh, BSc<sup>1</sup>, Anju Peters, MD<sup>1</sup>, David Conley, MD<sup>2</sup>, Rakesh Chandra, MD<sup>2</sup>, Bruce Tan, MD<sup>2</sup>, Leslie C. Grammer, MD, FAAAAI<sup>1</sup>, Robert Kern, MD<sup>2</sup> and Robert P. Schleimer, PhD, FAAAAI<sup>1,2</sup>, <sup>1</sup>Department of Medicine, Division of Allergy-Immunology, Northwestern University Feinberg School of Medicine, Chicago, IL, <sup>2</sup>Department of Otolaryngology, Northwestern University Feinberg School of Medicine, Chicago, IL
- 801 **Evaluation of Allergies in Children with Recurrent Ear and Sinus Infections**  
Rafka Chaiban, MD, Chadi A. Makary, MD, Benjamin Addicks and Yesim Yilmaz Demirdag, MD, West Virginia University School of Medicine, Morgantown, WV
- 802 **Patients Living with Allergy Symptoms: The Allergies, Immunotherapy,**  
Mark S. Dykewicz, MD, FAAAAI, Wake Forest University School of Medicine, Winston Salem, NC, Michael S. Blaiss, MD, FAAAAI, Allergy and Asthma Care, Memphis, TN, Bryan D. Leatherman, MD, Coastal Ear, Nose and Throat Associates, Gulfport, MS, David P. Skoner, MD, West Penn Allegheny Health System, Cranberry TWP, PA, Nancy Smith, MS, Merck & Co, INC, WhiteHouse Station, NJ and Felicia C. Allen-Ramey, PhD, Merck & Co, Inc, West Point, PA
- 803 **A Novel Validated Electronic Patient Data Acquisition Tool Standardizes Patient Reported Outcomes (PRO) Data Acquisition Across Multi-Center Environmental Exposure Chamber and Field Studies**  
Dan Wilson<sup>1</sup>, Giles Wilson<sup>1</sup> and Piyush Patel, MD, FRCP<sup>2</sup>, <sup>1</sup>Logos Technologies Inc, London, United Kingdom, <sup>2</sup>Inflamax Research, Mississauga, ON, Canada
- 804 **Novel Natural Exposure Chamber Technology Mimics Environmental Allergen Levels Whilst Providing Well-Controlled Airborne Allergen Exposures with High Specificity to Allergic Patients**  
Harry Nandkeshore, MT (AMT), CCRP, Karen Shields, RT, Stephanie Recker, MSC, CCRP and Piyush Patel, MD, FRCP, Inflamax Research, Mississauga, ON, Canada

## Immunotherapy/Immune Deficiencies

5206

Tuesday, February 26th, 2013, 9:45 AM - 10:45 AM

- 805 **Efficacy of and Adherence with Subcutaneous Allergen Immunotherapy: Comparison Between Allergic Rhinitis and Mixed Rhinitis**  
Gang Cheng, MD, PhD<sup>1</sup>, Andrew M. Smith, MD<sup>1,2</sup> and Jonathan A. Bernstein, MD<sup>3</sup>, <sup>1</sup>Division of Immunology Allergy & Rheumatology, University of Cincinnati Medical Center, CINCINNATI, OH, <sup>2</sup>Cincinnati VA Medical Center, CINCINNATI, OH, <sup>3</sup>University of Cincinnati Medical Center, Cincinnati, OH
- 806 **Experience with Scig Infusion in Patients with Primary Immunodeficiencies: From Clinical Trials to Real-World Practice**  
Emily Carne<sup>1</sup>, Zoya Panahloo<sup>2</sup>, Gillian Potter<sup>3</sup>, Nicola Salome-Bentley<sup>4</sup>, Christine Symons<sup>5</sup>, Jane Gilliam<sup>5</sup>, Sarita Workman<sup>6</sup>, Sophie Barber<sup>1</sup>, Katrin Morris<sup>1</sup>, Tariq El-Shanawany<sup>1</sup> and Stephen Jolles<sup>1</sup>, <sup>1</sup>University Hospital of Wales, Cardiff, United Kingdom, <sup>2</sup>CSL Behring UK Ltd, Haywards Heath, United Kingdom, <sup>3</sup>University Hospital Southampton NHS Foundation Trust, Southampton, United Kingdom, <sup>4</sup>John Radcliffe Hospital, Oxford, United Kingdom, <sup>5</sup>Plymouth Hospital NHS Trust, Plymouth, United Kingdom, <sup>6</sup>Royal Free Hospital, London, United Kingdom
- 807 **Individuals, Subgroups or Cohorts? A Population Pharmacokinetic Modeling Approach to Optimize Dosing of Hizentra®**  
Martin Bexon, MD<sup>1</sup>, Jonathan M. Edelman, MD<sup>2</sup>, Mikhail Rojavin, PhD<sup>2</sup>, Jutta Neufang-Hueber<sup>3</sup>, Jagdev S. Sidhu<sup>4</sup> and Cornelia Landersdorfer<sup>5</sup>, <sup>1</sup>Clinical Research and Development, CSL Behring AG, Berne, Switzerland, <sup>2</sup>Clinical Research and Development, CSL Behring LLC, King of Prussia, PA, <sup>3</sup>Global Clinical Operations, CSL Behring AG, Berne, Switzerland, <sup>4</sup>Clinical Pharmacology & Early Development, CSL Ltd, Parkville, Australia, <sup>5</sup>Centre for Medicine Use and Safety, Monash University, Parkville, Australia
- 808 **Use of Modified (Cluster) Rush Immunotherapy to Safely Reach Maintenance in Pediatric Patients Who Fail a Conventional Schedule**  
Julia A. Cronin, MD<sup>1</sup>, Deborah D. Murphy, RN<sup>1</sup>, Amy Polen Stallings, MD<sup>2</sup>, Scott P. Commins, MD, PhD<sup>1</sup> and Peter W. Heymann, MD<sup>1</sup>, <sup>1</sup>University of Virginia, Charlottesville, VA, <sup>2</sup>Duke University, NC
- 809 **Ragweed Allergy Immunotherapy Tablet Reduces Use of Ocular Antihistamines in Patients with Ragweed Pollen-Induced Allergic Rhinoconjunctivitis**  
David I. Bernstein, MD, FAAAAI<sup>1,2</sup>, Hendrik Nolte, MD, PhD<sup>3</sup>, Peter Creticos, MD, FAAAAI<sup>4</sup>, Amarjot Kaur, PhD<sup>3</sup>, Nancy Liu, PhD<sup>5</sup>, Gary D. Berman, MD, FAAAAI<sup>6</sup>, Jacques Hebert, MD<sup>7</sup> and Jennifer Maloney, MD<sup>3</sup>, <sup>1</sup>University of Cincinnati, Cincinnati, OH, <sup>2</sup>Bernstein Clinical Research Center, LLC, Cincinnati, OH, <sup>3</sup>Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc, Whitehouse Station, NJ, <sup>4</sup>Johns Hopkins University School of Medicine, Baltimore, MD, <sup>5</sup>Merck, Whitehouse Station, NJ, <sup>6</sup>Allergy and Asthma Specialists, Minneapolis, MN, <sup>7</sup>Centre de Recherche Applique en Allergie de Quebec, Quebec City, QC, Canada
- 810 **Effect of Allergy Immunotherapy Tablet in Patients with or without Local Application-Site Reactions**  
Gary D. Berman, MD, FAAAAI<sup>1</sup>, Michael S. Blaiss, MD, FAAAAI<sup>2</sup>, Peter Creticos, MD, FAAAAI<sup>3</sup>, Jennifer Maloney, MD<sup>4</sup>, Kevin R. Murphy, MD<sup>5</sup>, Harold S. Nelson, MD, FAAAAI<sup>6</sup>, Amarjot Kaur, PhD<sup>4</sup>, Nancy Liu, PhD<sup>7</sup> and Hendrik Nolte, MD, PhD<sup>4</sup>, <sup>1</sup>Allergy and Asthma Specialists, Minneapolis, MN, <sup>2</sup>University of Tennessee Health Science Center, Memphis, TN, <sup>3</sup>Johns Hopkins University School of Medicine, Baltimore, MD, <sup>4</sup>Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc, Whitehouse Station, NJ, <sup>5</sup>Boys Town National Research Hospital, Boys Town, NE, <sup>6</sup>National Jewish Health, Denver, CO, <sup>7</sup>Merck, Whitehouse Station, NJ

- 811 The Effects of Pollen Season On Adverse Reactions to SCIT**  
**Devi Jhaveri, DO<sup>1</sup>**, Julie Abraham, MD<sup>2</sup>, Shiela Bigelow, DO<sup>2</sup>, Lyndsy Boggs, DO<sup>2</sup>, Megan Betteley, BS<sup>3</sup>, Mary Ann O’Riordan, MS<sup>2</sup>, David A. Swender, DO<sup>4</sup>, Leah W. Chernin, DO<sup>5</sup>, Theodore H. Sher, MD, FAAAAI<sup>6</sup>, Robert W. Hostoffer, DO<sup>6</sup> and Haig Tcheurekdjian, MD, FAAAAI<sup>6</sup>, <sup>1</sup>University Hospitals, South Euclid, OH, <sup>2</sup>Rainbow Babies and Children’s Hospital, Cleveland, OH, <sup>3</sup>Case Western Reserve University School of Medicine, Cleveland, OH, <sup>4</sup>Oaklawn Medical Group, Marshall, MI, <sup>5</sup>University Hospitals Richmond Medical Center, Cleveland Heights, OH, <sup>6</sup>Allergy/Immunology Associates, Inc., South Euclid, OH
- 812 AAAAI Survey On Allergen Immunotherapy (AIT) in Patients with Specific Medical Conditions**  
**Desirée E.S. Larenas Linnemann, MD, FAAAAI**, Hospital Medica Sur, Mexico city, Mexico, David W. Hauswirth, MD, FAAAAI, The Ohio State University, Columbus, OH, Christopher W. Calabria, MD, Dilley Allergy and Asthma, Helotes, TX, Lawrence D. Sher, MD, FAAAAI, Peninsula Research Associates, Rolling Hills Estates, CA and Matthew A. Rank, MD, FAAAAI, Mayo Clinic, Scottsdale, AZ
- 813 The Incidence of Systemic Allergic Reaction During Subcutaneous and Cluster Immunotherapy: A Retrospective Chart Review**  
**Danielle S. Seiden**, Jefferson Medical College, Philadelphia, PA, Jayeon Lee, RN, NYEE, New York, NY, Gabriele De Vos, MD, Albert Einstein College of Medicine, Bronx, NY and Jennifer S. Collins, MD, New York Eye and Ear Infirmary, New York, NY

## Asthma Therapeutic Updates

5601

Tuesday, February 26th, 2013, 2:00 PM - 3:15 PM

- 814 A Randomized Placebo-Controlled Safety and Pharmacodynamic Study of KB002, a Chimeric Anti-GM-CSF Monoclonal Antibody, in Patients with Asthma**  
**Nestor A. Molfino, MD, MSc<sup>1</sup>**, Philip G. Bardin, MD, PhD<sup>2</sup>, Philip J. Thompson, MD<sup>3</sup>, Alison Luckey, BM, DPM<sup>4</sup> and Geoffrey Yarranton, PhD<sup>1</sup>, <sup>1</sup>Kalobios, <sup>2</sup>Monash University and Medical Centre, Melbourne, Australia, <sup>3</sup>University Department of Medicine, Claremont, Australia, <sup>4</sup>Primorus Health, New Zealand
- 815 Over-Expression of the LTC4 Synthase Gene in Mice Reproduces Human Aspirin-Induced Asthma**  
**Tatsuya Yokoyama<sup>1</sup>**, Hirokuni Hirata<sup>2</sup>, Mineaki Watanabe<sup>1</sup>, Naruo Yoshida<sup>1</sup>, Taichi Shiobara<sup>1</sup> and Takeshi Fukuda<sup>3</sup>, <sup>1</sup>Dokkyo medical university, Japan, <sup>2</sup>dokkyo, <sup>3</sup>Dokkyo Medical University School of Medicine, Mibu, Japan
- 816 Effect of Inhaled Corticosteroids (ICS) Vs. Inhaled Corticosteroid with Long-Acting Beta2 Agonists (ICS/LABA) On Asthma Control: Results From National Asthma Survey**  
**Neetu Talreja, MD**, Dennis K. Ledford, MD, FAAAAI and Richard F. Lockey, MD, Morsani College of Medicine University of South Florida and James A. Haley Veteran Hospital
- 817 A Randomized, Double-Blind, Placebo-Controlled, Multiple-Dose Study to Evaluate the Safety, Tolerability, and Efficacy of Brodalumab (AMG 827) in Subjects with Moderate to Severe Asthma**  
**William W. Busse, MD, FAAAAI**, University of Wisconsin School of Medicine and Public Health, Madison, WI, Stephen T. Holgate, MD, DSc, FAAAAI, Southampton General Hospital, Southampton, United Kingdom, Edward M. Kerwin, MD, FAAAAI, Allergy and Asthma Center of Southern OR, Medford, OR, Yun Chon, PhD, Amgen Inc, Thousand Oaks, CA, JingYuan Feng, Amgen, Inc, Thousand Oaks, CA, Joseph H. Lin, MD, Amgen, Newbury Park,

CA and Shao-Lee Lin, MD, FAAAAI, Amgen, Inc., Thousand Oaks, CA

- 818 Calcium-Dependent Pathways Are Essential for Canonical Glucocorticoid [GR] Receptor Signaling**  
**Ashwini Reddy, MD**, UTMB, Galveston, TX, Lata Kaphalia, PhD, UTMB and William J. Calhoun, MD, FAAAAI, University of Texas Medical Branch, Galveston, TX

## Immunodeficiency

5602

Tuesday, February 26th, 2013, 2:00 PM - 3:15 PM

- 819 Evaluation of the B Cell Compartment in CVID and Respi Patients**  
**Tracy Hwangpo, MD, PhD<sup>1</sup>**, Ewa Szymanska<sup>1</sup>, Cunren Liu<sup>1</sup>, Marsha Brand<sup>1</sup>, Elizabeth Brown<sup>1</sup> and Harry Schroeder<sup>2</sup>, <sup>1</sup>UAB, <sup>2</sup>UAB, AL
- 820 Continuous G-CSF Treatment Induces Complete Clinical Remission and Restoration of IL-17 Secretion in Autosomal Dominant Chronic Mucocutaneous Candidiasis**  
**Eduardo Shahar, MD<sup>1,2</sup>**, G Wildbaum<sup>2</sup>, R Katz<sup>1</sup>, N Karin<sup>2</sup>, Amos Etzioni, MD<sup>2,3</sup> and Shimon Pollack, MD<sup>1,2</sup>, <sup>1</sup>Rambam Medical Center, Haifa, Israel, <sup>2</sup>Rappaport Faculty of Medicine-Technion, Haifa, Israel, <sup>3</sup>Meyer Children Hospital, Haifa, Israel
- 821 Bacterial Specificity of IgM and Susceptibility to Pneumonia in Primary Humoral Immunodeficiency**  
**Paul J. Maglione, MD, PhD**, Mount Sinai Medical Center, New York, NY and Charlotte Cunningham-Rundles, MD, PhD, FAAAAI, Mt. Sinai Medical Center, New York, NY
- 822 TREC Newborn Screening Can Identify Patients with Leaky SCID and May Improve Outcome**  
**Alice Chan, MD, PhD<sup>1</sup>**, Morton Cowan, MD<sup>2</sup>, Jennifer M. Puck, MD<sup>1,2</sup> and Laurence E. Cheng, MD, PhD<sup>3</sup>, <sup>1</sup>UCSF, San Francisco, CA, <sup>2</sup>University of California San Francisco, San Francisco, CA, <sup>3</sup>UCSF Medical Center, San Francisco, CA
- 823 Disseminated HPV Following Stem Cell Transplant (SCT) in NK(-) Severe Combined Immune Deficiency (SCID) and Association with NK Cell Dysfunction**  
**Kapil Saxena, MS<sup>2</sup>**, Sarah K. Nicholas, MD<sup>2</sup>, Pinaki Banerjee, PhD<sup>3</sup>, Filiz Seeborg, MD, MPH<sup>3</sup>, Theresa Wright, MD<sup>4</sup>, Caridad Martinez, MD<sup>5</sup>, Jordan Orange, MD, PhD, FAAAAI<sup>3</sup> and I. Celine Hanson, MD, FAAAAI<sup>3</sup>, <sup>1</sup>Baylor College of Medicine/Texas Children’s Hospital, Houston, TX, <sup>2</sup>Pediatric Immunology, Allergy, and Rheumatology, Baylor College of Medicine, Houston, TX, <sup>3</sup>Allergy and Immunology Service/Texas Children’s Hospital/Baylor College of Medicine, Houston, TX, <sup>4</sup>Dermatology Service/Texas Children’s Hospital/Baylor College of Medicine, Houston, TX, <sup>5</sup>Center for Cell and Gene Therapy/Texas Children’s Hospital/Baylor College of Medicine, Houston, TX

## Effects of Viral and Bacterial Infections on Asthma

5603

Tuesday, February 26th, 2013, 2:00 PM - 3:15 PM

- 824 Characterization of RV-Specific T Cell Responses in Healthy and Infected Individuals**  
**John W. Steinke, PhD, FAAAAI<sup>1</sup>**, Lixia Liu, MD<sup>2</sup>, Joshua L. Kennedy, MD<sup>2</sup>, Peter W. Heymann, MD<sup>2</sup>, Thomas J. Braciale, MD<sup>3</sup> and Larry Borish, MD, FAAAAI<sup>1</sup>, <sup>1</sup>Asthma and Allergic Disease Center, Carter Center for Immunology Research, University of Virginia, Charlottesville, VA, <sup>2</sup>University of Virginia, Charlottesville, VA, <sup>3</sup>University of Virginia Hospital, Charlottesville, VA

TUESDAY

- 825 Differential Effects of HRV Species On Cold and Asthma Symptoms**  
**Hiba Bashir, MD<sup>1</sup>**, Yury Bochkov, PhD<sup>2</sup>, Fue Vang<sup>3</sup>, Tressa Pappas, BS<sup>2</sup>, Kristine Grindle<sup>3</sup>, Theresa Kang, RN<sup>2</sup>, Lisa Salazar, BS<sup>2</sup>, Elizabeth L. Anderson, BSN, MA<sup>2</sup>, Sheila Turcsanyi<sup>3</sup>, Michael D. Evans, MS<sup>2</sup>, Ronald E. Gangnon, PhD<sup>2</sup>, Kirsten Kloefer, MD<sup>3</sup>, Daniel J. Jackson, MD<sup>4</sup>, Robert F. Lemanske Jr., MD FAAAAI<sup>2</sup> and James Gern, MD, FAAAAI<sup>2</sup>, <sup>1</sup>University of Wisconsin Hospitals and Clinics, Madison, WI, <sup>2</sup>University of Wisconsin School of Medicine and Public Health, Madison, WI, <sup>3</sup>University of Wisconsin, Madison, WI, <sup>4</sup>Pediatrics, University of Wisconsin School of Medicine and Public Health, Madison, WI
- 826 Effects of Human Rhinovirus Species On Viral Replication in Differentiated Sinus Epithelial Cells**  
**Kazuyuki Nakagome, MD**, Yury Bochkov, PhD, Shamailla Ashraf, PhD, Rebecca Brockman-Schneider, MS and James Gern, MD, FAAAAI, University of Wisconsin School of Medicine and Public Health, Madison, WI
- 827 Role of Mycoplasma Pneumoniae in Childhood Asthma**  
**Edward G. Brooks, MD**, Vanessa Hill, MD, Margaret Burks, BS, Jay Peters, MD, Harjinder Singh, MD, Thirumalai Kannan, PhD, Schruthi Vale, MS, Mariana Cagle, Molly Principe, Joel Barry Baseman, PhD and Pamela R. Wood, MD, Univ. Texas Health Science Center San Antonio, San Antonio, TX
- 828 Detection of Streptococcus Pneumoniae and Human Rhinovirus Is Associated with Loss of Asthma Control**  
**Kirsten Kloefer, MD**, Rose Vrtis, BS, Tressa Pappas, BS, Theresa Kang, RN, Lisa Salazar, BS, Elizabeth L. Anderson, BSN MA, Yury Bochkov, PhD, Wai-Ming Lee, PhD, Michael D. Evans, MS, Ronald E. Gangnon, PhD, Robert F. Lemanske Jr., MD FAAAAI and James Gern, MD, FAAAAI, University of Wisconsin School of Medicine and Public Health, Madison, WI

**Drug/AD**

5604

Tuesday, February 26th, 2013, 2:00 PM - 3:15 PM

- 829 Safely Diagnosing Clinically Significant Penicillin Allergy with Only Penicilloyl-Poly-Lysine, Penicillin, and Oral Amoxicillin**  
**Eric M. Macy, MD, FAAAAI**, 5th Floor, SCPMG-Kaiser Permanente San Diego, San Diego, CA and Eunis Ngor, MS, Kaiser Permanente Health Care Program, Department of Research and Evaluation, Pasadena, CA
- 830 Protein Haptenation by Amoxicillin: Immunological Detection with Monoclonal Anti-Amoxicillin Antibodies and Identification of Candidate Target Proteins in Human Serum**  
**Adriana Ariza<sup>1,2</sup>**, Daniel Ruiz-Abánades<sup>1,2</sup>, Vivian de los Ríos<sup>1</sup>, Miguel Blanca, MD, PhD<sup>3</sup>, María José Torres, MD, PhD<sup>3</sup> and Dolores Pérez-Sala<sup>1</sup>, <sup>1</sup>Department of Chemical and Physical Biology, Centro de Investigaciones Biológicas, C.S.I.C., Madrid, Spain, <sup>2</sup>Research Unit for Allergic Diseases, Fundación IMABIS-Hospital Carlos Haya, Málaga, Spain, <sup>3</sup>Allergy Service, Carlos Haya Hospital, Málaga, Spain
- 831 Th2 Cytokines and Filaggrin Deficiency Enhance Staphylococcus Aureus Alpha-Toxin Induced Keratinocyte Death**  
**Anne M. Brauweiler, PhD<sup>1</sup>**, Elena Goleva, PhD<sup>2</sup>, Michiko K. Oyoshi, PhD<sup>3</sup>, Raif S. Geha, MD<sup>3</sup> and Donald Y.M. Leung, MD, PhD<sup>1</sup>, <sup>1</sup>Department of Pediatrics, Division of Allergy-Immunology, National Jewish Health, Denver, CO, <sup>2</sup>National Jewish Health, Department of Pediatrics, Denver, CO, <sup>3</sup>Division of Immunology, Children's Hospital, Harvard Medical School, Boston, MA
- 832 An Open Label Study in Adults with Atopic Dermatitis to Assess Immune Response to Fluzone® Intradermal Vaccine**

- Donald Y.M. Leung, MD, PhD<sup>1</sup>**, Chris Cheadle, PhD<sup>2</sup>, Joanne Streib, BA<sup>3</sup>, Trudi Madigan, RN<sup>3</sup>, Susan B. Leung, RN<sup>3</sup>, Caroline Bronchick, RN<sup>3</sup>, Seungshin Rhee, MS<sup>4</sup>, Kathleen C. Barnes, PhD, FAAAAI<sup>2</sup>, Gloria David, PhD<sup>4</sup> and Adriana Weinberg, MD<sup>5</sup>, <sup>1</sup>Department of Pediatrics, Division of Allergy-Immunology, National Jewish Health, Denver, CO, <sup>2</sup>Johns Hopkins University, Baltimore, MD, <sup>3</sup>Department of Pediatrics, Division of Allergy-Immunology, National Jewish Health, Denver, CO, <sup>4</sup>Rho, Inc., Chapel Hill, NC, <sup>5</sup>University of Colorado Health Sci Ctr., Denver, CO
- 833 Selective Transgenic Expression of IL-22 in the Skin Induces Atopic Dermatitis (AD) Like Dermatitis**  
**Hongfei Lou, MD<sup>1</sup>**, Min-Hee OH, PhD Student<sup>1</sup>, Li Zhou, PhD<sup>1</sup>, Fan Wu, B.S.<sup>1</sup>, Zhou Zhu, MD, PhD<sup>2</sup> and Tao Zheng, MD<sup>1</sup>, <sup>1</sup>Johns Hopkins University, Baltimore, MD, <sup>2</sup>The Johns Hopkins University School of Medicine, Baltimore, MD

**Improving Asthma Outcomes**

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Tuesday, February 26th, 2013, 2:00 PM - 3:15 PM

- 834 School-Based Asthma Clinic Improves Asthma Outcomes**  
**Alysa G. Ellis, MD<sup>1</sup>**, Emily Glynn, PNP-BC<sup>2</sup>, Lisa D. Henry, PNP-BC<sup>2</sup>, Lisa A. Meadows, PNP-BC<sup>2</sup>, Deborah Loman, PhD, CPNP<sup>3</sup>, Diana Sundara<sup>3</sup>, Anyah Land<sup>2</sup>, Catherine Rains<sup>2</sup>, Jonathan Strutt, MD<sup>4</sup>, Kali Svarczkopf, MD<sup>4</sup> and Robert C. Strunk IV, MD, FAAAAI<sup>4</sup>, <sup>1</sup>Washington University, Saint Louis, MO, <sup>2</sup>St. Louis Children's Hospital, Saint Louis, MO, <sup>3</sup>St. Louis University School of Nursing, Saint Louis, MO, <sup>4</sup>Washington University School of Medicine, Saint Louis, MO
- 835 Factors Related to Decision Making and Substance Use in Adolescents with Asthma: A Presenting Clinical Profile**  
**Mary C. O'Laughlen, PhD, RN, FNP-BC**, Patricia J. Hollen, PhD, RN, FAAN, Wenjun Xin, MS, James T. Patrie, MS, Ivora D. Hinton, PhD and Martha A. Hellems, MD, MS, University of Virginia, Charlottesville, VA
- 836 Interviewing Adolescents with Asthma: Are We Doing Enough?**  
**Matthew Altman, MD**, University of Washington, Seattle, WA, Andrea J. Apter, MD, MA, MSc, FAAAAI, University of Pennsylvania, Media, PA, Kenneth Ginsburg, MD, The Children's Hospital of Philadelphia, Philadelphia, PA and David R. Naimi, DO, Northwest Asthma and Allergy Center, Seattle, WA
- 837 Comparative Effectiveness of Budesonide/Formoterol Combination (BFC) and Fluticasone/Salmeterol Combination (FSC) Among Asthma Patients**  
**Setareh Williams<sup>1</sup>**, Ozgur Tunceli<sup>2</sup>, David Kern<sup>2</sup>, Ned Pethick<sup>1</sup>, Hanaa Elhefni<sup>1</sup>, Catrin Wessman<sup>1</sup>, Siting Zhou<sup>2</sup> and Frank Trudo<sup>1</sup>, <sup>1</sup>AstraZeneca, <sup>2</sup>HealthCore
- 838 University and Public Health System Partnership: A Systematic Intervention for Assistance of Patients with Asthma in Brazil**  
**Marcos R. Goncalves, MD<sup>1</sup>**, Janaina Melo, MD<sup>2</sup>, Adriana S. Moreno, PhD<sup>2</sup>, Virginia Ferriani, MD, PhD<sup>2</sup>, Ana Carla Araujo, MD, PhD<sup>2</sup>, Elcio Vianna, MD, PhD<sup>2</sup>, Marcos Borges, MD, PhD<sup>2</sup>, Persio Roxo Jr, MD, PhD<sup>2</sup>, Rosa Ferreira, MD, PhD<sup>3</sup>, Luane Mello, MD, PhD<sup>2</sup>, Jorgete Silva, MD, PhD<sup>2</sup>, Patricia Stefanelli, MD<sup>2</sup>, Larissa Oliveira, MD<sup>2</sup>, Andrea Vernier, MD<sup>2</sup>, Luana Queiroz, MD<sup>2</sup>, Rosângela Villela, MD<sup>2</sup>, Marina Dias<sup>2</sup>, Davi Aragon<sup>2</sup>, Nelio Domingos, MD<sup>4</sup> and L. Karla Arruda, MD, PhD, FAAAAI<sup>2</sup>, <sup>1</sup>School of Medicine of Ribeirao Preto - University of Sao Paulo, Ribeirao Preto, Brazil, <sup>2</sup>School of Medicine of Ribeirao Preto - University of Sao Paulo, Ribeirao Preto, Brazil, <sup>3</sup>University Center Barao de Maua, Ribeirao Preto, Brazil, <sup>4</sup>Department of Pediatrics - Prefeitura Municipal, Ribeirao Preto

**TUESDAY**



## Rhinitis and Rhinosinusitis Pathophysiology

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Tuesday, February 26th, 2013, 2:00 PM - 3:15 PM

- 839 Evaluation of in Vivo and in Vitro Responses to Nole e1 in Systemic and Local Allergic Rhinitis**  
**Paloma Campo, MD, PhD<sup>1</sup>**, Carmen M. Rondon Segovia, MD<sup>2</sup>, Mayte Villalba, PhD<sup>3</sup>, Cristobalina Mayorga, PhD<sup>4</sup>, MJ Sanchez-Quintero, BS<sup>5</sup>, Oscar Palomares, PhD<sup>3</sup>, Luisa Galindo, RN<sup>2</sup>, Lidia Melendez, Lab. Tech.<sup>5</sup>, Jose Luis Rodriguez-Bada, Lab. Tech.<sup>5</sup> and Miguel Blanca, MD, PhD<sup>2</sup>, <sup>1</sup>Allergy Service Carlos Haya Hospital, Malaga, Spain, <sup>2</sup>Carlos Haya Hospital, Malaga, Spain, <sup>3</sup>Department of Biochemistry and Molecular Biology, Faculty of Chemistry, Madrid, Spain, <sup>4</sup>Research Laboratory, Carlos Haya Hospital, Malaga, Spain, <sup>5</sup>Research Laboratory, Hospital Carlos Haya, Malaga, Spain
- 840 Levels of the Cytokines IL-5, IL-13 and Rantes in Nasal Lavage Fluids Parallel the Cytokine Content of Nasal Polyps in Patients with Chronic Rhinosinusitis with Nasal Polyps (CRSwNP)**  
**Christopher Ocampo, MD, PhD**, Lydia Suh, BSc, Robert Kern, MD, Atsushi Kato, PhD, David Conley, MD, Rakesh Chandra, MD, Bruce Tan, MD, James Norton, MS, Anju Peters, MD, Leslie C. Grammer, MD, FAAAAI and Robert P. Schleimer, PhD, FAAAAI, Northwestern University Feinberg School of Medicine, Chicago, IL
- 841 Aeroallergen Wheal Area Especially for Molds At Ages Two and Three Predicts Allergic Rhinitis At Age Four: The Cincinnati Childhood Allergy and Air Pollution Study (CCAAPS)**  
**Christopher D. Codispoti, MD, PhD<sup>1</sup>**, Grace K. LeMasters, PhD<sup>2</sup>, Linda Levin, PhD<sup>2</sup>, Patrick Ryan, PhD<sup>3</sup>, Tiina Reponen, PhD<sup>2</sup>, Gurjit K. Khurana Hershey, MD, PhD, FAAAAI<sup>4</sup>, Manuel S. Villareal, MD, FAAAAI<sup>2,5</sup>, James E. Lockey, MD, MS, FAAAAI<sup>6</sup> and David I. Bernstein, MD, FAAAAI<sup>2</sup>, <sup>1</sup>University of Cincinnati, <sup>2</sup>University of Cincinnati, Cincinnati, OH, <sup>3</sup>Cincinnati Children's Hospital Medical Center, Cincinnati, OH, <sup>4</sup>Children's Hospital Medical Center, Cincinnati, OH, <sup>5</sup>Fragge Allergy and Asthma Clinics, PSC, Fort Mitchell, KY, <sup>6</sup>University Cincinnati College Medicine, Cincinnati, OH
- 842 Decreased Production of Antimicrobial Peptides in Chronic Rhinosinusitis Associated with Age and Elevated Soluble gp130**  
**Sun Hye Lee, PhD<sup>1</sup>**, Seong Ho Cho, MD<sup>1</sup>, Kathryn E. Hulse, PhD<sup>1</sup>, James Norton, MS<sup>1</sup>, Jason Siebert<sup>1</sup>, David Conley, MD<sup>2</sup>, Rakesh Chandra, MD<sup>2</sup>, Anju Peters, MD<sup>1</sup>, Robert Kern, MD<sup>1,2</sup>, Leslie C. Grammer, MD, FAAAAI<sup>1</sup> and Robert P. Schleimer, PhD, FAAAAI<sup>1,2</sup>, <sup>1</sup>Department of Medicine, Division of Allergy-Immunology, Northwestern University Feinberg School of Medicine, Chicago, IL, <sup>2</sup>Department of Otolaryngology, Northwestern University Feinberg School of Medicine, Chicago, IL
- 843 Inhibitory Effects of Mometasone Furoate and Azithromycin On Phorbol Ester-Induced Mucin Production From Human Airway Epithelial Cells**  
**Orapan Poachanukoon, MD<sup>1</sup>**, Napaporn Pattanacharoenchai<sup>2</sup> and

Sittichai Koontongkaew<sup>2</sup>, <sup>1</sup>Thammasat University, Pathumtani, Thailand, <sup>2</sup>Thammasat University, Pathumtani

## Recent Advances in Eosinophil and Mast Cell Biology

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Tuesday, February 26th, 2013, 2:00 PM - 3:15 PM

- 844 Mice with Attenuated Expression of the  $\alpha 2, 3$  Sialyltransferase ST3gal-III (St3gal3) Display Enhanced Allergic Eosinophilic Airway Inflammation**  
**Takumi Kiwamoto, MD, PhD**, Mary E. Brummet, Mary Motari, Ronald Schnaar, PhD, Zhou Zhu, MD, PhD and Bruce S. Bochner, MD, FAAAAI, The Johns Hopkins University School of Medicine, Baltimore, MD
- 845 Epicutaneous Sensitization in Filaggrin Gene-Depleted Mouse Induces Prolonged Airway Eosinophilia without Obvious Dermatitis**  
**Yusuke Suzuki<sup>1,2</sup>**, Katsunori Masaki<sup>1</sup>, Shizuko Kagawa<sup>1,2</sup>, Hiroshi Kawasaki<sup>3,4</sup>, Keisuke Nagao<sup>3</sup>, Akiharu Kubo<sup>3,5</sup>, Tomoko Bet-suyaku<sup>1</sup>, Masayuki Amagai<sup>3</sup> and Koichiro Asano<sup>6</sup>, <sup>1</sup>Division of Pulmonary Medicine, Department of Medicine, Keio University School of Medicine, Tokyo, Japan, <sup>2</sup>MSD Endowed Program for Allergy Research, Tokyo, Japan, <sup>3</sup>Department of Dermatology, Keio University School of Medicine, Tokyo, Japan, <sup>4</sup>The Association for Preventive Medicine of Japan, Tokyo, Japan, <sup>5</sup>Center of Integrated Medical Research, Tokyo, Japan, <sup>6</sup>Department of Pulmonary Medicine, Tokai University School of Medicine, Isehara, Japan
- 846 Thymic Stromal Lymphopoietin Promotes Peripheral Blood CD34<sup>+</sup> Cell Eosinophilic Lineage Commitment**  
**Claudia C.K. Hui, MSc**, Sina Rusta-Sallehy, BSc, Delia Heroux, BSc and Judah Aryeh Denburg, MD, FRCPC, FAAAAI, McMaster University, Hamilton, ON, Canada
- 847 Hypoxia Inducible Factor (HIF) Alpha Subunits Modulate Eosinophil Migration, Oxidative Burst, and Degranulation**  
**Laura E. Crotty Alexander, MD<sup>1,2</sup>**, Shari Nicatia, BSc<sup>1,3</sup>, Elisa McEachern, BS<sup>1</sup>, Randall Johnson, PhD<sup>4</sup>, David H. Broide, MB, ChB, FAAAAI<sup>5</sup> and Victor Nizet, MD<sup>2</sup>, <sup>1</sup>VA San Diego Healthcare System, La Jolla, CA, <sup>2</sup>University of California, San Diego, La Jolla, CA, <sup>3</sup>Utrecht University, Utrecht, Netherlands, <sup>4</sup>University of Cambridge, United Kingdom, <sup>5</sup>Division of Allergy, Immunology
- 848 Functional Expression of the Novel C5a Receptor C5L2 in Human Mast Cells**  
**Priyanka Pundir, DVM<sup>1,2</sup>** and Marianna Kulka, PhD<sup>2</sup>, <sup>1</sup>Department of Biomedical Sciences, Atlantic Veterinary College, Charlottetown, PE, Canada, <sup>2</sup>National Research Council Canada, Charlottetown, PE, Canada

TUESDAY