Final Program

11th Biennial Symposium of the International Eosinophil Society

Portland

Oregon

9-13 July 2019
Join JLB in Commemorating the IES 2019 Conference!

The Journal of Leukocyte Biology will publish a special issue featuring articles related to IES 2019 Conference. Both reviews and reports of original research are welcomed! All articles will be peer-reviewed according to the high standards of the JLB. Please mention the meeting in your cover letter to be sure your article is targeted to this special issue. If submitting a review, please send a brief description of the topic to the editors prior to writing: jlbstaff@leukocytebiology.org (this will ensure topics do not overlap). Questions? Email jlbstaff@leukocytebiology.org.

Submit by November 1, 2019 to be a part of this special-focus issue!
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On behalf of the leadership at IES, I am excited to invite you to Portland, Oregon for our meeting from 9-13 July 2019. Portland is situated at the confluence of the Willamette (will-am-et) River as it flows north to join the Columbia River. Portland has three snowcapped volcanoes visible to the north and east, and a mountain range separating it from the Pacific Ocean to the west. Within a 90 minute drive, you can be hiking in the Columbia Gorge, walking on the Pacific beaches, or sipping pinot in the Willamette Valley. Portland itself is highly walkable, but also has excellent public transportation. The meeting will be held at the Marriott Waterfront Downtown, right along the Willamette River and park, in the center of the city. In between the fabulous talks and posters I hope you are able to catch up with colleagues while enjoying Powell’s Books, the Saturday Market, the Rose Garden, Chinese Garden and Japanese Gardens as well as the many public parks and wonderful restaurants. I look forward to welcoming you to my city!

On behalf of the organizing committee.

Allison Fryer
Scientific Program Director

Bruce Bochner
IES President
Acknowledgements

IES thanks the following partners for their support of the 11th Biennial Symposium

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Journal of Leukocyte Biology

**Grant Support**

National Institutes of Health

Funding for this conference was made possible [in part] by 1 R13 AI147390-01 from the National Institute of Allergy and Infectious Diseases. The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services; nor does mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government.
Exhibit Hall Information

**Booth 100  GlaxoSmithKline**

5 Moore Drive  
Research Triangle Park, North Carolina, 27709  
www.us.gsk.com

GSK is a science-led global healthcare company with a mission to help people do more, feel better, and live longer. We research, manufacture and make available a broad range of medicines, vaccines and consumer healthcare products. Visit our exhibit for information about our products and resources.

**Booth 200  Miltenyi Biotec Inc.**

6125 Cornerstone Court East  
San Diego, CA 92121  
www.miltenyibiotec.com

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**Booth 300  GlaxoSmithKline**

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Research Triangle Park, North Carolina, 27709  
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GSK is a science-led global healthcare company with a mission to help people do more, feel better, and live longer. We research, manufacture and make available a broad range of medicines, vaccines and consumer healthcare products. Visit our exhibit for information about our products and resources.

**Booth 400  GlaxoSmithKline**

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Research Triangle Park, North Carolina, 27709  
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GSK is a science-led global healthcare company with a mission to help people do more, feel better, and live longer. We research, manufacture and make available a broad range of medicines, vaccines and consumer healthcare products. Visit our exhibit for information about our products and resources.

Exhibit Hall Map

Please allow time in your schedule to visit the exhibits located in the poster hall.

**EXHIBITOR HOURS:**  
Wednesday, 10 July  
17:00 – 19:00  
Thursday, 11 July  
17:00 – 19:00
General Information

The 11th Biennial Symposium of the International Eosinophil Society (IES) will be held in Portland, Oregon, USA. Portland, Oregon’s largest city, sits on the Columbia and Willamette rivers, in the shadow of snow-capped Mount Hood. It’s known for its parks, bridges and bicycle paths, as well as for its eco-friendliness and its microbreweries and coffeehouses. Iconic Washington Park encompasses sites from the formal Japanese Garden to Oregon Zoo and its railway. The city hosts thriving art, theater and music scenes.

Currency

The currency used in the USA is the Dollar (USD). There are ATMs widely available for cash withdrawal. Credit cards are also accepted at most hotels, restaurants and shops.

Electricity

The standard electrical voltage in the USA is 120 Volts and 60 Hertz.

Language

The official language of the 11th Biennial Symposium is English.

Time Zone

Portland, Oregon is in the Pacific Daylight Time Zone (GMT-7), which is seven hours behind of the Coordinated Universal Time (UTC).

Tipping

While tipping is not mandatory in most of the United States, it is customary in many circumstances for service, especially at almost all sit-down restaurants which offer table service and many food servers depend on tips as an essential part of their wage.

Breakfast with a Mentor Session

These sessions are geared towards young scientists at the beginning of their career. Sessions will be in an informal setting where scientists will share with young investigators some of what they have experienced and learned in their career thus far.

Space is limited; please check at the registration desk for open slots.

07:00 – 08:00 AM Wednesday, 10 July - Dr. Jackie Wirz
07:00 – 08:00 AM Thursday, 11 July - Dr. Lisa Wheatley
07:00 – 08:00 AM Thursday, 11 July - Dr. Michael Minnicozzi

Ask An Expert

We are introducing a new session that will focus on protocols and methodologies. Eosinophils are tricky cells to work with. Beginning right after their isolation from biological samples to their identification and use in downstream in vitro assays-eosinophils are not the friendliest of cells. This session identifies certain “eosinophil biologists” who have expertise in eosinophil-related methodologies and allows them to share their expertise with the attendees. Don’t forget to follow us @EosinophilSoc and #AskAnEosExpert and #IES2019.

Ask An Expert Session 1, Wednesday 10 July 17:00 – 19:00
17:00 – 18:00
• E1 - A Functional Ex Vivo Human Esophageal Mucosal Explant System for Eosinophilic Esophagitis – Seema Aceves, USA
• E2 - Eosinophils and Influenza Virus: How to Make the Introductions - Amali Samarasinghe, USA
• E3 - Eosinophil-Specific Reagents, Tools, and Techniques – Elizabeth Jacobsen, USA

18:00 – 19:00
• E4 - Use of Flow Cytometry to Identify and Isolate of Mouse Eosinophils - Caroline Percopo, Albert Sek, and Helene Rosenberg, USA
• E5 - Interrogating Signaling Pathways in Primary Human Eosinophils - Jeremy O’Sullivan, USA
• E6 - Quantitative 3D Confocal Microscopy Illuminates Eosinophil-Nerve Interactions in Airways – Matthew Drake, and Alexandra Pincus, USA

Ask An Expert Session 2, Thursday 11 July 17:00 – 19:00
17:00 – 18:00
• E7 - Isolation and Identification of Extracellular Vesicles from Human Eosinophils – Praveen Akuthota, USA
• E8 - Isolation of Human Eosinophils from Whole Blood - Kiho Son, Canada
• E9 - Methods for Enumeration and Measuring Functional Responses of Eosinophil Progenitor Cells - Roma Sehmi, Canada
• E10 - Development and Utility of Eosinophil Granule Protein Measurement in Blood and Body Fluids - Michelle Makiya, USA

18:00 – 19:00
• E11 - How to Visualize ETosis-Mediated Eosinophil Extracellular Traps - Shigeharu Ueki, Japan
• E12 - Activation Markers of Eosinophils by Flow Cytometry: Examples from an EoE Study – Mats Johansson, USA
• E13 - Eosinophil Image Analysis and Degranulation Assays – Paige Lacy and Sarah Almas, Canada
General Information

Travel Arrangements and Airport Transfers
The airport is located 9 miles (14.5 km) northeast of downtown Portland and is conveniently connected to the city center via MAX light rail train.

LIGHT RAIL
The MAX light rail Red Line is the easiest way to travel to and from the airport. Here are some quick facts:

- The trip between the airport and downtown Portland takes about 38 minutes.
- An adult ticket costs $2.50 (Youth $1.25, Honored Citizen $1). MAX ticket machines return change in coins, so small bills are recommended.
- You can roll your luggage on board.
- The first train of the day arrives at PDX at 4:45 a.m. The last train departs PDX at 11:50 p.m.
- The MAX station and ticket machines are located on the lower level, next to the south baggage claim area (turn right at the base of the escalator).

For complete schedules and more information, visit www.trimet.org/schedules/maxredline.htm.

TAXICABS
The average taxi fare from the airport to downtown is approximately $35 before gratuity. Radio Cab offers a discount with coupons available on their website. The one-way trip takes 20-40 minutes. You can find taxis waiting in the center section of the airport terminal’s lower roadway outside of baggage claim; to get back to the airport from the city center, you can order a cab through the city’s main operators or from a hotel with a dedicated taxi stand.

SHUTTLES
When you leave the airport, you will find the shuttles at the bottom entrance of the terminal (outside the baggage claim area) on the other side of the second strip (“Island 2”) near the parking garage.

Venue
The 11th Biennial Symposium of IES will be held at the Portland Marriott Waterfront Downtown. 1401 SW Naito Pkwy. Portland, OR 97201

Weather
The average temperature in July is between 80°F/27°C and 57°F/14°C.
Social Activities

Wednesday, 10 July

NETWORKING EVENT
FOR GRADUATE STUDENTS AND POST-DOCS
Wednesday 7:15pm (after posters!)
meet at the Marriott Hotel Registration desk.

Come join us for a fun and walkable evening out in Portland! We will be exploring the downtown area, starting with the indoor food carts of Pine Street Market and then heading to Ground Kontrol for drinks and games. All trainees welcome!

Thursday, 11 July

TRIP TO MULTNOMAH FALLS
There will be a trip for those interested out to Multnomah Falls leaving from the hotel at 12:45, and will return in time to attend the Ehrlich Award Winner Lecture that is scheduled for 16:00 start.

Availability information can be found at the registration desk.

Cost: $20.00
(An optional box lunch will be available to purchase, $60.00)

Friday, 12 July

TASTE OF OREGON NETWORKING AND DINNER EVENT
There will be an off-site networking event taking place at the Jean Vollum Natural Capital Center at the EcoTrust Building from 18:00 - 19:45, with dinner to follow at the Portland Marriott Waterfront Hotel starting at 20:30.

Above is the walking route from the hotel to EcoTrust. 1.4 miles one way, approximately 28 minutes.

Another option to use would be the MAX Green Line and MAX Yellow line of the Portland transit system, with the station located 8 blocks away from the Marriott (corner of 6th & Madison) and ending 5 blocks away from the EcoTrust Building (corner of 6th & Hoyt)

These events will be available to all attendees to take part in. If you would like to bring a guest, please stop by registration to purchase a ticket.
### Scientific Program

**Tuesday, 9 July 2019**

All Scientific Sessions to take place at Portland Marriott Waterfront Downtown in room Salon E, Level 1, unless otherwise noted.

#### Welcome (Portland Marriott Downtown Waterfront)

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Presenter(s)</th>
</tr>
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<tbody>
<tr>
<td>18:00 - 18:30</td>
<td>Welcome</td>
<td>Bruce Bochner, USA &amp; Allison Fryer, USA</td>
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<tr>
<td>18:30 - 19:00</td>
<td>History of Eosinophil Discovery or Why Did Eosinophils Capture My Attention</td>
<td>Jerry Gleich, USA</td>
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<tr>
<td>19:00 - 21:00</td>
<td>Welcome Reception</td>
<td>Location: Truss/ Mt. Hood Room, Level 2</td>
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**Wednesday, 10 July 2019**

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>07:00 - 08:00</td>
<td>Breakfast with a Mentor Session: How to Navigate a Scientific Conference</td>
<td>Jackie Wirz, USA</td>
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<td>Location: Salem Room, Level 1</td>
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**Moderators:** Joan Cook-Mills, USA and Elizabeth Jacobsen, USA

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>08:15 - 08:45</td>
<td>On the Origin of Eosinophils by Means of Natural Selection: Preservation of a Favored Leukocyte in the Struggle for Life</td>
<td>Steve Ackerman, USA</td>
</tr>
<tr>
<td>08:45 - 09:15</td>
<td>Eosinophils and Disease Models from Mouse to Man: We are Stronger Together</td>
<td>Helene Rosenberg, USA</td>
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<tr>
<td>09:15 - 09:45</td>
<td>Eosinophil Identity in the Tissue Contexts of Development, Homeostasis, and Disease</td>
<td>Sergejs Berdnikovs, USA</td>
</tr>
<tr>
<td>09:45 - 10:00</td>
<td>Abstract Presentations:</td>
<td></td>
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<tr>
<td>09:45 - 10:00</td>
<td>Real-Time in Vivo Imaging of Tissue Resident Eosinophils under Homeostatic and Inflammatory Conditions</td>
<td>Kamala D. Patel, Canada</td>
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<tr>
<td>10:00 - 10:30</td>
<td>Morning Break</td>
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#### Session 2: Eosinophil Life Cycle, Hematopoiesis and Recruitment, Activation and Death

**Moderators:** Dagmar Simon, Switzerland and Peter Weller, USA

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<tr>
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<tbody>
<tr>
<td>10:30 - 11:00</td>
<td>Hemopoietic Mechanisms in Eosinophilic Inflammation</td>
<td>Roma Sehmi, Canada</td>
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<tr>
<td>11:00 - 11:30</td>
<td>Eosinophils in Liver Death</td>
<td>Todd Davidson, USA</td>
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<tr>
<td>11:30 - 12:00</td>
<td>Eosinophil ETosis and DNA Traps: A New Look at Eosinophilic Inflammation</td>
<td>Shigeharu Ueki, Japan</td>
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<tr>
<td>12:00 - 12:30</td>
<td>Eosinophil Shape Change and Granule Secretion</td>
<td>Paige Lacy, Canada</td>
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<tr>
<td>12:30 - 13:00</td>
<td>IES Business Meeting</td>
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<tr>
<td>13:00 - 14:30</td>
<td>Lunch (on your own)</td>
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<tr>
<td>14:30 - 15:30</td>
<td>Gleich Award Winner Lecture: Eosinophil Depletion Suppresses Radiation-Induced Small Intestinal Fibrosis</td>
<td>Naoki Takemura, Japan</td>
</tr>
<tr>
<td>15:30 - 16:00</td>
<td>Eosinophil Extracellular DNA Traps in Skin Diseases</td>
<td>Dagmar Simon, Switzerland</td>
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**Scientific Program**

**Wednesday, 10 July 2019**

### Abstract Presentations:

16:00 - 16:15  
First Ultrastructural Demonstration of Galectin-10 in Resting and Activated Human Eosinophils  
*Rossana Melo, Brazil*

16:15 - 16:30  
Siglec-8 Signals through an Unanticipated Set of Molecules to Induce Integrin Upregulation and Activation, ROS Production, and Cell Death in Eosinophils  
*Jeremy O’Sullivan, USA*

### 17:00 - 19:00  
**Poster Session 1, Location: Room - Salon F & I, Level 1**

#### Ask An Expert Session 1

17:00 – 18:00  
**E1 - A Functional Ex Vivo Human Esophageal Mucosal Explant System for Eosinophilic Esophagitis**  
*Seema Aceves, USA*

**E2 - Eosinophils and Influenza Virus: How to Make the Introductions**  
*Amali Samarasinghe, USA*

**E3 - Eosinophil-Specific Reagents, Tools, and Techniques**  
*Elizabeth Jacobsen, USA*

18:00 – 19:00  
**E4 - Use of Flow Cytometry to Identify and Isolate of Mouse Eosinophils**  
*Caroline Percopo, Albert Sek, and Helene Rosenberg, USA*

**E5 - Interrogating Signaling Pathways in Primary Human Eosinophils**  
*Jeremy O’Sullivan, USA*

**E6 - Quantitative 3D Confocal Microscopy Illuminates Eosinophil-Nerve Interactions in Airways**  
*Matthew Drake, and Alexandra Pincus, USA*

#### Poster 1

**Eosinophil Infiltration Does Not Exacerbate Muscle Pathology in the MDX Mouse Model of Duchenne Muscular Dystrophy**  
*Albert Sek*

#### Poster 3

**In Vitro and In Vivo Inhibition of Eosinophil Activation by Lysophosphatidylcholine and Synthetic Alkyl-Lysophosphatidylcholine**  
*Eva Knuplez*

#### Poster 5

**Characterizing SIGLECf+GR1- and SIGLECf+GR1+ Mouse Bone Marrow-Derived Eosinophils (bmEos) Cultured Ex Vivo**  
*Eric Mai*

#### Poster 9

**Nasal Polyps as a Presenting Sign of Systemic Eosinophilic Diseases**  
*Yossi Rosman*

#### Poster 11

**Dexpramipexole Responsiveness is increased in Eosinophilic Patients**  
*Calman Prussin*

#### Poster 13

**Single Site, Five-Year Experience with Human Eosinophil Isolation by Density Gradient Centrifugation and Immunomagnetic Negative Separation**  
*Yun Cao*

#### Poster 15

**Genetic Variation in Surfactant Protein-A2 and the Effect on Eosinophil Resolution in Allergic Airways**  
*Alane Blythe C. Dy*

#### Poster 17

**Eosinophil Cytolysis on IgG Requires Microtubule Array Formation, and p38 Phosphorylation Downstream of Reactive Oxygen Species Production**  
*Stephane Esnault*

#### Poster 19

**IL-9 and IL-13 Storage and Release from Eosinophils**  
*Sarah Almas*

#### Poster 21

**The Role of Eosinophils in Obesity-Related Asthma**  
*Gina Calco*

#### Poster 23

**Kinetic Studies of Galectin-10 Release From Eosinophils to Proliferating T Cells**  
*Christine Lingblom*

#### Poster 25

**Eosinophil Responses to IL-4, IL-33 and Bacteria are Differentially Regulated by Apoptotic Cells**  
*Avishay Dolitzky*
Scientific Program

Wednesday, 10 July 2019

Poster 27  Harnessing Hymenolepis Diminuta Extract to Active Anti-Tumorigenic Activities of Eosinophils in Colorectal Cancer
Inbal Hazot

Poster 29  Granulocyte Kinetics in the Blood and Sputum of Patients with Eosinophilic and Neutrophilic Inflammation
Leo Koenderman

Poster 31  IgG4-Related Disease and Hypereosinophilic Syndrome: Overlapping Phenotypes?
Matthieu Groh

Poster 33  Allergic Bronchopulmonary Aspergillosis as a Complication of COPD: A New Entity?
Matthieu Groh

Poster 35  Intrinsic Sex-Specific Differences in Fibrotic Gene Expression and Pathology Contribute To Male Disease Predisposition in Pediatric Eosinophilic Esophagitis
Loan Duong

Poster 37  Urine Levels of Eosinophil Granule Proteins; A Better Biomarker of Eosinophilic Disease Activity?
Michelle Makiya

Poster 39  Fluid Shear Stress Induces Rapid Actin Rearrangement in Eosinophils
Kiho Son

Poster 41  Kruppel-Like Factor 3 (KLF3) Regulates Adipose Tissue Beiging via Eosinophils
Emily Vohralik

Poster 43  Association of Blood Eosinophil Phenotypes and Patient Self-Assessment Data with Response to Treatment in Eosinophilic Esophagitis
Sofie Albinsson

Poster 45  Eosinophilic Gastrointestinal Disease Treatment Approaches are Associated with Frequency of Feelings of Isolation
Pablo Albonia

Poster 47  Human Eosinophils Express a Distinct Gene Expression Program in Response to IL-3 Compared To Common Beta-Chain Cytokines IL-5 and GM-CSF
Praveen Akuthota

Poster 49  Eosinophils Suppress TH1 Responses and Restrict Bacterially Induced Gastrointestinal Inflammation
Isabelle Arnold

Poster 51  Clinical and Endoscopic Features of the Fibrostenotic Phenotype in Eosinophilic Esophagitis
Paul Fichtinger

Poster 53  Molecular, Endoscopic, Histological and Circulating Biomarker-Based Diagnosis of Eosinophilic Gastritis: Cross Sectional Multi-Site Study
Tetsuo Shoda

Poster 57  Eosinophils Alter Steady-State Small Intestinal IL-1α and IL-1β Levels but are not Required for the Maintenance of Secretory IGA nor for Control of an Enteric Bacterial Pathogen
Rachael Brown

Poster 59  Transgenic Expression of a Novel Secreted Active Form of IL-33 Promotes Eosinophilia in a Mouse Model of Eosinophilic Esophagitis
Benjamin Wright

Poster 61  Hypereosinophilia Associated with Clonal CD3-CD4+ T Cells: Characterization and Outcome of a New Cohort of Patients
Sylvain Verbanck

Poster 63  CD200R1 is Upregulated in the Esophageal Epithelium in Eosinophilic Esophagitis
Netali Ben Baruch-Morgenstern

Poster 65  Eosinophil Subtype Specific Metabolic Activities
Sergei I. Ochkur

Poster 67  Eosinophils Modulate ILC2 Activities
Elizabeth Jacobsen

Poster 69  Inhibition of Eosinophil Transendothelial Migration by 5HTP Stimulation of HTR1A and HTR1B in Endothelial Cells
Joan Cook-Mills

Poster 71  PIN1 Regulates IL-5 Induced Eosinophil Polarization and Migration
Zhong-Jian Shen
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Poster 73  Adipose Tissue Eosinophils in Cancer-Associated Cachexia
Patrick Lenehan

Poster 75  Pharmacodynamic And Clinical Efficacy Data from Patient Sputum Subgroups in DREAM Treated with Mepolizumab Across A 10-fold Dose Range
Charlene Prazma

Poster 77  Palmitoylation of Galectin-10 in Human Eosinophils
Haibin Wang

Thursday, 11 July 2019

07:00 - 08:00  Breakfast with a Mentor Session: How NIH Supports Clinical Trials
Lisa Wheatley, USA
Location: Salem Room, Level 1

07:00 - 08:00  Breakfast with a Mentor Session: Program Officers, Study Sections, RFA and PAs: Learn the language, protocols and best practices to interact with the NIH
Michael Minnicozzi, USA
Location: Medford Room, Level 1

Session 3: Eosinophils and Host Defense
Moderators: Isabelle Arnold, Switzerland and Lisa Spencer, USA
08:00 - 08:30  When Eosinophils Meet Viruses
Amali Samarasinghe, USA

08:30 - 09:00  Eosinophils Suppress Th1 Responses and Restrict Bacterially Induced Gastrointestinal Inflammation
Isabelle Arnold, Switzerland

Abstract Presentations:
09:00 - 09:30  Eosinophil Phenotypes in Immune Pathways
Elizabeth Jacobsen, USA

09:30 - 09:45  Single Cell RNA Sequencing of Inflammatory Tissue T Cells in Eosinophilic Esophagitis
Ting Wen, USA

09:45 - 10:00  Identification of Eosinophil-Specific Gene-Enhancer Regions
Jennifer Felton, USA

10:00 - 10:30  Morning Break

Session 4: Eosinophils and Nerves
Moderators: Richard Costello, Ireland and Manali Mukherjee, Canada
10:30 - 11:00  Maternal Inflammation and Offspring Eosinophils regulate Airway Nerve Development
Katie Lebold, USA

11:00 - 11:30  Eosinophils Promote Sensory Nerve Growth in Human Asthma
Matthew Drake, USA

11:30 - 12:00  Eosinophils and Itch
David Jacoby, USA

Abstract Presentations:
12:00 - 12:15  Asthma is Associated with Brain Neurodegeneration: A Possible Effect of Eosinophil Inflammation?
William Busse, USA

12:15 - 12:30  Characterization of a Mouse Model of Heart Disease in Hypereosinophilia
Nives Zimmermann, USA

12:30 - 15:00  Lunch (on your own)
Scientific Program

Thursday, 11 July 2019

Session 5: Eosinophils and Metabolic Disease

Moderators: Zhenying Nie, USA and Helene Rosenberg, USA

15:00 - 15:30 Extreme IL-33-Dependent Eosinophil Accumulation in Adipose Tissue
Alyssa Hasty, USA

Abstract Presentations:

15:30 - 15:45 The Role of Adipose Tissue-Resident Eosinophils in Adipocyte Metabolism and Whole-Body Energy Homeostasis
Elena Anna De Filippis, USA

15:45 - 16:00 Eosinophils in Beige Adipose Tissue Activation
Kate Quinlan, Australia

16:00 - 16:30 Ehrlich Award Winner Lecture:
Regulation and Control of Eosinophilia
Marc Rothenberg, USA

17:00 - 19:00 Poster Session 2, Location: Room - Salon F Level 1

Ask An Expert Session 2

17:00 – 18:00 E7 - Isolation and Identification of Extracellular Vesicles from Human Eosinophils
Praveen Akuthota, USA
E8 - Isolation of Human Eosinophils from Whole Blood
Kiho Son, Canada
E9 - Methods for Enumeration and Measuring Functional Responses of Eosinophil Progenitor Cells
Roma Sehmi, Canada
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18:00 – 19:00 E11 - How to Visualize ETosis-Mediated Eosinophil Extracellular Traps
Shigeharu Ueki, Japan
E12 - Activation Markers of Eosinophils by Flow Cytometry: Examples from an EoE Study
Mats Johansson, USA
E13 - Eosinophil Image Analysis and Degranulation Assays
Paige Lacy and Sarah Almas, Canadian Assays

Posters:

Poster 2 Eosinophils from Normal Donors: How Do They Vary? How Do They Define Us?
Caroline Percopo
Poster 4 Determining the Role of Eotaxin-1 in Eosinophil Development In Order To Promote Heterogeneity via an Ex Vivo Culture System
Ajinkya Limkar
Poster 6 Eosinophilia and Hookworm Infection: A Living Drug for Autoimmune Diseases
David Pritchard
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Jong-Min Jeong

Friday, 12 July 2019

Session 6: Eosinophils in Chronic Inflammatory Disease - Asthma

Moderators: William Busse, USA and Jeremy O’Sullivan, USA

08:00 - 08:30 ASTHMA - Autoimmune Responses, Eosinophils and Complex Airway Disease 
Manali Mukherjee, Canada

08:30 - 09:00 ASTHMA - Anti IL5 Therapies for Severe Asthma: Targeting The Ligand vs The Receptor 
Parameswaran Nair, Canada

09:00 - 09:30 LUNG - Targeting Eosinophils in Eosinophil Granulomatosis with Polyangiitis 
Michael E. Wechsler, USA

Abstract Presentations:

09:30 - 09:45 Lung Eosinophils Increase Vagus Nerve Mediated Airway Reflex Bronchoconstriction in Mice 
Zhenying Nie, USA

09:45 - 10:00 Idiopathic Eosinophilic Vasculitis, Another Side of Hypereosinophilic Syndrome? A Comprehensive Analysis of 115 Cases in Asthma-Free and ANCA-Negative Patients 
Guillaume Lefèvre, France

10:00 - 10:30 Morning Break
## Scientific Program

### Friday, 12 July 2019

**Session 7: Eosinophils in Chronic Inflammatory Disease- GI**

**Moderators: Seema Aceves, USA and Marc Rothenberg, USA**

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<tr>
<td>10:30 - 11:00</td>
<td>ESOPHAGUS - Eosinophilic Esophagitis-like Disease: Description of a New Disease Entity</td>
<td>Hans-Uwe Simon, Switzerland</td>
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<td>11:00 - 11:30</td>
<td>GI OR SUBSETS - Local Allergen Challenge Increases Tissue Eosinophil Populations at Remote Tissue Sites Along The Skin:Lung:Gut Axis and Primes for Exacerbated Allergic Reactions to New Antigens</td>
<td>Lisa Spencer, USA</td>
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<tr>
<td>11:30 - 12:00</td>
<td>GI - Markers of Chronic Inflammatory Bowel Disease</td>
<td>Marie Carlson, Sweden</td>
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<td>12:00 - 12:30</td>
<td>GI and SKIN - A Pathophysiological Potpourri of Conundrums and Challenges in Eosinophil-Related Epithelial Inflammation</td>
<td>Kristin Leiferman, USA</td>
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**Abstract Presentations:**

- **12:30 - 12:45** Functional Role of Kallikrein 5 and Proteinase Activated Receptor (PAR)2 in Eosinophilic Esophagitis
  - Nurit Azouz, USA

- **12:45 - 13:00** Efficacy ofRpc4046, an Anti-Interleukin-13 Monoclonal Antibody, In Patients with Active Eosinophilic Esophagitis: Analysis of the Steroid-Refractory Subgroup from the Heroes Study
  - Cristian Rodriguez, USA

**Lunch** *(on your own)*

**13:00 - 15:00**

**CEGIR Lecture Session**

*(If you are interested in lunch please order from the registration desk by end of day Thursday, 11 July)*

- *Findings from the Consortium of Eosinophilic Gastrointestinal Disease Researchers (CEGIR)*
  - Introduction and Structure of CEGIR - Marc Rothenberg, USA
  - Early Findings from the CEGIR EGID Observational Cohort - Ikuo Hirano, USA
  - Partnering with Patients - Seema Aceves, USA and Representatives from PAGS
  - Logistical Operations-Publications and Data Sharing - Sandeep Gupta, USA
  - Training the Next Generation of EGID Leaders - Quan Nhu, USA
  - NIAID Interests and Roles in Disease Consortia - Lisa Wheatley, USA and Mike Minnicozzi, USA
  - Questions and Answers and Discussion

**Session 8: Eosinophils in Cancer**

**Moderators: Florence Roufosse, Belgium and Hans-Uwe Simon, Switzerland**

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<tr>
<td>15:00 - 15:30</td>
<td>Activated Eosinophils Exert Distinct Anti-Tumorigenic Activities in Colorectal Cancer</td>
<td>Ariel Munitz, Israel</td>
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<tr>
<td>15:30 - 16:00</td>
<td>Charcot-Leyden Crystals as a Drugable Target in Type 2 Immunity</td>
<td>Bart Lambrecht, United States</td>
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**Abstract Presentations:**

- **16:00 - 16:15** Eosinophils Promote GM-CSF-Dependent Anti-Tumor Immunity Through Activation of Type I T-Cell Responses
  - Alessandra Gurtner, Switzerland

- **16:15 - 16:30** Activated Eosinophil Subsets are an Integral Part of the Tumor Microenvironment in Lung Metastasis, Displaying Anti-Tumorigenic Activities
  - Sharon Grisaru, Israel
Scientific Program

Saturday, 13 July 2019

Session 9: The Now and Future of Eosinophils as a Drug Target

Moderators: Matthew Drake, USA and Fei Li Kuang, USA

08:00 - 08:30  “Siglec”ting the Allergic Response for Therapeutic Targeting
Bruce Bochner, USA

08:30 - 09:00  Developing Dexpramipexole for the Treatment of Eosinophilic Disorders
Calman Prussin, USA

09:00 - 09:30  Subtypes of Responders to Treatment in Hypereosinophilic Syndrome
Paneez Khoury, USA

09:30 - 10:00  Eosinophil Depletion in Humans: Is It Safe?
Amy Klion, USA

10:00 - 10:30  EOS, Exacerbations and Adherence…The Good, Bad and Ugly of Severe Asthma
Richard Costello, Ireland

Abstract Presentation:
10:30 - 10:45  Alpha IIb integrin (CD41) on blood eosinophils is a potential biomarker for disease activity in eosinophilic esophagitis (EoE)
Mats Johansson, USA

10:45 - 11:15  Morning Break

11:15 - 12:15  Roundtable Discussion 1
New Emerging or Controversial Topics - Is There More Than One Type of Eosinophil?

12:15 - 13:15  Roundtable Discussion 2
New Emerging or Controversial Topics - Eosinophils—What are They Good For?

JLB Dedicated IES Meeting Issue
Submit by November 1, 2019

Questions:
jlbstaff@leukocytebiology.org

The Journal of Leukocyte Biology (JLB) will publish a special focus issue featuring articles related to topics of the IES 2019 meeting. Both review papers (“overviews”) and original investigations are encouraged. All articles will be published online within weeks of acceptance, with the full “cluster” of articles published together in a special issue of JLB.

Submit your work for the dedicated issue by November 1, 2019 for the JLB July 2020 Issue. When submitting, be sure to note your paper is related to the IES 2019 Conference!
**Awards**

**IES Travel Grant Recipients**

IES was able to offer the ability to young and early career participants the chance to apply to be a Travel Grant recipient at the Biennial Symposium. Each applicant was asked to provide a short letter of application, a copy of their abstract, a letter of recommendation from a current member of IES and a copy of their Curriculum Vitae. Waived registration and a travel stipend were awarded to the following attendees:

- Sofie Albinsson, Sweden
- Sarah Almas, Canada
- Shmulik Avlas, Israel
- Nurit Azouz, United States
- Marina Barroso, Brazil
- Julien Catherine, Belgium
- Mythili Dileepan, United States
- Avishay Dolitzky, Israel
- Julia Dunn, United States
- Loan Duong, United States
- Alane Blythe C. Dy, United States
- Sharon Grisaru, Israel
- Milica Grozdanovic, United States
- Marwan Hassani, Netherlands
- Melanie Kienzl, Austria
- Ajinkya Limkar, United States
- Eric Mai, United States
- Mario Manresa, United States
- Quan Nhu, United States
- Albert Sek, United States
- Tetsuo Shoda, United States
- Kiho Son, Canada
- Glaucia Thompson, Brazil
- Sylvain Verbanck, Belgium

Travel Grant Recipients will be awarded with a certificate during the dinner event scheduled 12 July 2019.
Awards

Gleich Award

Dr. Naoki Takemura will receive the fifth Gerald J. Gleich prize to be awarded at the 11th Biennial Symposium of the International Eosinophil Society, Inc. in Portland, Oregon, United States. The prize was specifically created to recognize individuals who have published high impact findings during the intervals since the preceding meeting. This award was named in honor of our esteemed colleague, Dr. Gerald J. Gleich, whose career has been devoted to the exploration of the eosinophilic leukocyte and to the elucidation of its role in health and disease. The prize is bestowed by a consulting committee and Dr. Gerald J. Gleich.

Naoki Takemura, Ph.D., is now a lecturer at Laboratory of Biorepose Regulation, Graduate School of Pharmaceutical Sciences Osaka University, Japan. His long-standing interest has been in food, and therefore he was studying functional foods and gut physiology at School of Agriculture, Hokkaido University, Japan. He received his PhD from Graduate School of Life Science, Hokkaido University in 2010 for his study on the development of anti-obesity diet therapy using probiotics and prebiotics. During this research, he became strongly interested in gut immune system and started to work as a postdoc in the laboratory of Prof. Shizuo Akira at Osaka University in Japan, a world authority on research of innate immunity. Thereafter, he moved and served as an assistant professor at International Research and Development Center for Mucosal Vaccines, Institute of Medical Science, The University of Tokyo and Graduate School of Medicine, Chiba University in Japan. In his immunology research, he mainly studied the role of innate immunity in the development of radiation-induced gastrointestinal syndrome and also tried to develop new types of mucosal vaccines. He received several encouraging awards for his studies from domestic conferences (e.g. Japanese Association for Dietary Fiber Research, the Japanese Society for Immunology).

During his research about gut immunology, he got interested in small intestinal eosinophils, because their functions still remain almost unclear, despite being abundantly present in small intestine under normal conditions. Using pathological specimens of small intestines from humans and mice, he found their pivotal role in radiation-induced intestinal fibrosis, one of the most troublesome adverse effect in cancer patients received abdominal radiation therapy.

In March 2019, he took the current position to enlarge his research area to cell biology. He is now studying the relationship between dietary nutrition and innate immune responses by various cells in mucosal tissues, including eosinophils, other immune cells, and non-immune cells like epithelial cells.

The Gerald J. Gleich Award
International Eosinophil Society, Inc.
2019

Naoki Takemura, PhD

In recognition of the most intriguing, high impact finding related to eosinophil biology published in the years 2017-2019.
Awards

Ehrlich Lectureship

The Ehrlich Lectureship is awarded at the Biennial Symposia of the International Eosinophil Society, Inc. to an individual(s) who has made seminal scientific contributions to research on the eosinophil and related allergy/immunology fields in terms of eosinophil biochemistry, development, cellular, molecular, structural, or immunobiology and/or the participation of the eosinophil in the pathogenesis of Eosinophil-associated allergic or parasitic diseases and hypereosinophilic syndromes. The recipient this year is Dr. Marc Rothenberg.

Dr. Rothenberg is director of the Division of Allergy and Immunology at Cincinnati Children’s Hospital Medical Center and the Bunning Professor of Pediatrics at Cincinnati Children’s within the University of Cincinnati College of Medicine. He graduated summa cum laude with highest honors in chemistry and biochemistry from Brandeis University. He then completed the MD/PhD program at Harvard Medical School under Dr. Frank Austen, conducting studies on eosinophil hematopoiesis, as he developed the first culture system for human eosinophils. After completing residency at Children’s Hospital, Boston, Dr. Rothenberg did a fellowship in allergy/immunology and hematology at Children’s Hospital. Dr. Rothenberg did post-doctorate training with Dr. Philip Leder, Harvard Medical School, where he cloned the eotaxin chemokine. After being faculty at Harvard Medical School for one year, he came to the University of Cincinnati and Cincinnati Children’s, where he has helped build a top program in research, and his division is a leader in allergy and immunology.

His research is focused on molecular analysis of allergic inflammation, primarily on the pathogenesis of eosinophilia. His laboratory takes a multi-disciplinary approach including the development of preclinical murine models: genetics, genomics, molecular immunology, and biochemistry. Dr. Rothenberg’s awards include the 2007 E Mead Johnson Award from the Society of Pediatric Research, 2010 National Institutes of Health MERIT Award, being elected fellow of the American Association for the Advancement of Science American Society for Clinical Investigation, and recognition by Clarivate as a top 1% Highly Cited Researcher. His publications number over 400. He has served on review panels for journals/grant agencies including National Institutes of Health (NIH), Burroughs Trust, and Medical Research Council of the United Kingdom. He served for four years on the Advisory Council of National Institute of Allergy and Infectious Disease. He has been Associate Editor of the Journal of Allergy and Clinical Immunology since 2004. His research has been supported by sources including the NIH, Human Frontier Science Program Organization, Burroughs Wellcome Fund, Dana Foundation, Department of Defense, PCORI and the US-Israel Binational Fund.
Awards

Service Award

The International Eosinophil Society, Inc., its leaders and members present to Dr. Bruce S. Bochner the distinguished Service Award both for his cardinal leadership with the International Eosinophil Society, Inc. and for his career-long contributions to innovative studies of the immunobiology of eosinophils.

Bruce S. Bochner, MD attended medical school at the University of Illinois College of Medicine in Chicago, and graduated with honors. After completing Internal Medicine residency training at the same institution, he began his postdoctoral allergy and immunology training at Johns Hopkins in the Division of Allergy and Clinical Immunology of the Department of Medicine, where he joined the faculty in 1988. In 1999, he became Professor of Medicine at Johns Hopkins, and from 2003-2013 was the Director of the Division of Allergy and Clinical Immunology. As of August 2013, Dr. Bochner moved to Chicago to become the Samuel M. Feinberg Professor of Medicine in the Division of Allergy and Immunology at the Northwestern University Feinberg School of Medicine. His primary clinical and NIH-funded research interests are on eosinophil and mast cell-related diseases and their treatment. His lab has a particular focus on the function of a receptor called Siglec-8 on these cells and he is a cofounder of a company called Allakos, Inc. that is actively testing anti-Siglec-8 therapies. He has been a member of the IES since its inception, has attended all but one IES meeting, hosted the 2015 IES meeting in Chicago, and has served in a number of IES leadership roles including its current president.
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Funding for this conference was made possible [in part] by 1 R13 AI147390-01 from the National Institute of Allergy and Infectious Diseases. The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services; nor does mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government.