

# Keystone Symposia in Hannover

## Skin Health and Disease: Immune, Epithelial and Microbiome Crosstalk

Herrenhausen Palace | Hannover, Germany | April 8–11, 2019

### Scientific Organizers:

**Michel Gilliet**, University Hospital of Lausanne, Switzerland

**Emma Guttman**, Mount Sinai Hospital, USA

**Anthony Oro**, Stanford University, USA

**Manolis Pasparakis**, University of Cologne, Germany

Organized in collaboration with Volkswagen Foundation

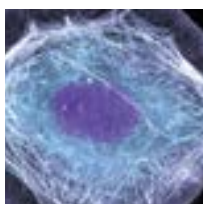
*The skin is the largest human organ and the primary interface between the body and the environment. It provides the first line of defense against invading pathogens and trauma via its physical barrier properties but also via active defense mechanisms orchestrated by a coordinated interplay between epithelial and immune cells. Recently, the skin microbiota has emerged as an important third player that critically influences skin homeostasis and inflammation by interacting with epithelial and immune cells. This conference aims to illustrate these reciprocal interactions and describe their impact on skin physiology and pathophysiology. A central focus will be to discuss how the composition of the skin microbiota regulates homeostasis and determines susceptibility to inflammatory, allergic and neoplastic diseases of the skin and other epithelial tissues. Emerging concepts concerning the mechanisms influencing epithelial-immune-microbiota crosstalk and opportunities for therapeutic interventions will be discussed. The symposium will also provide a unique setting for in-depth, cross-disciplinary discussions between basic skin scientists and biologists studying immune responses in other barrier organs, dermatologists, cancer biologists, immunologists and many researchers from disparate fields who normally do not have opportunities to meet. Finally, the conference will also foster interaction with potential industry partners, who increasingly see the skin as a major focus for gaining insights into immune mechanisms and for development of targeted therapies for patients with chronic inflammatory diseases, allergic diseases and cancer.*

### Session Topics:

- Epithelial-Microbiome Interactions in the Skin
- Epithelial-Immune Interactions in the Skin
- Microbiota-Immune Interactions in Skin and other Epithelial Surfaces
- Workshop: Therapeutic Innovation for Skin Diseases
- Skin Dysbiosis and Allergic Inflammation
- Epithelial-Microbiota-Immune Interactions in Tumorigenesis and Systemic Diseases
- Emerging Therapeutic Concepts Treatment *plus one additional workshop*

Global Health Travel Award Deadline: Nov 13, 2018; Scholarship/Discounted Abstract Deadline: Dec 12, 2018; Abstract Deadline: Jan 10, 2019; Discounted Registration Deadline: Feb 7, 2019

Visit [www.keystonesymposia.org/19D4](http://www.keystonesymposia.org/19D4) for more details.



KEYSTONE SYMPOSIA™  
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Left image of skin cell courtesy of National Institutes of Health

# KEYSTONE SYMPOSIA

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## Skin Health and Disease: Immune, Epithelial and Microbiome Crosstalk (D4)

April 8-11, 2019 • Herrenhausen Palace • Hannover, Germany

Scientific Organizers: Michel Gilliet, Emma Guttman, Anthony Oro and Manolis Pasparakis

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### MONDAY, APRIL 8

#### Arrival and Registration

### TUESDAY, APRIL 9

#### Welcome and Keynote Address

**Richard L. Gallo**, University of California, San Diego, USA  
*Skin Microbiome in Health and Disease*

#### Epithelial-Microbiome Interactions in the Skin

\***Julie A. Segre**, NHGRI, National Institutes of Health, USA  
*Structure and Function of the Human Skin Microbiome*

**Yasmine Belkaid**, NIAID, National Institutes of Health, USA  
*The Skin Microbiota in the Control of Skin Immunity*

**Elizabeth A. Grice**, University of Pennsylvania, USA  
*Microbial Roles in Skin Barrier Function and Repair*

**Short Talk(s) Chosen from Abstracts**

#### Workshop 1

**Short Talks Chosen from Abstracts**

#### Epithelial-Immune Interactions in the Skin

\***Manolis Pasparakis**, University of Cologne, Germany  
*Epithelial Cell Death and Skin Inflammation*

**Amy S. Paller**, Northwestern University, USA  
*Genetic Barrier Disorders with Inflammation and Microbiome Abnormalities*

**Angela M. Christiano**, Columbia University, USA  
*Immune Control of Hair Follicles*

**Short Talk(s) Chosen from Abstracts**

#### Poster Session 1

### WEDNESDAY, APRIL 10

#### Microbiota-Immune Interactions in Skin and other Epithelial Surfaces

\***Michel Gilliet**, University Hospital of Lausanne, Switzerland  
*Role of Microbiota in Innate Immune Responses of the Skin*

**Daniel H. Kaplan**, University of Pittsburgh, USA  
*Immune Shaping of Skin Microbiota*

**Dan R. Littman**, HHMI/New York University School of Medicine, USA  
*Intestinal Microbiome in Immunity and Autoimmunity*

**Speaker to be Announced**

**Short Talk(s) Chosen from Abstracts**

#### Workshop 2: Therapeutic Innovation for Skin Diseases

**Short Talks Chosen from Abstracts**

#### Skin Dysbiosis and Allergic Inflammation

\***Emma Guttman**, Mount Sinai Hospital, USA  
*Th2/Th22 Driven Allergic Inflammation*

**Heidi H. Kong**, National Institutes of Health, USA  
*Skin Microbiota and Development of Atopic Dermatitis*

**Brian Kim**, Washington University School of Medicine, USA  
*Restoring Dysbiosis in Atopic Dermatitis*

**Short Talk(s) Chosen from Abstracts**

#### Poster Session 2

### THURSDAY, APRIL 11

#### Epithelial-Microbiota-Immune Interactions in Tumorigenesis and Systemic Diseases

\***Anthony Oro**, Stanford University, USA  
*Microenvironment Signaling in Skin Tumor Development and Resistance*

**Gian Paolo Dotto**, University of Lausanne, Switzerland  
*Genetic and Epigenetic Determinants of Cancer associated Fibroblast Activation in Field Cancerisation*

**Tiffany C. Scharschmidt**, University of California, San Francisco, USA  
*Early Life Immune-Microbe Crosstalk in Skin*

**Short Talk(s) Chosen from Abstracts**

#### Emerging Therapeutic Concepts

**Speaker to be Announced**

**Kari Nadeau**, Stanford University, USA  
*Novel Therapies and Immune Regulation of Food Allergies*

\***James G. Krueger**, Rockefeller University, USA  
*Therapeutic Targeting Epithelial/Immune Pathways in Inflammatory Skin Diseases*

**Short Talk Chosen from Abstracts**

#### Meeting Wrap-Up: Outcomes and Future Directions (Organizers)

### FRIDAY, APRIL 12

#### Departure