

# FOCIS<sup>®</sup>

2018  
SCIENTIFIC  
PROGRAM



## SAN FRANCISCO

JUNE 20-23 • MARRIOTT MARQUIS<sup>®</sup>

# FOCIS 2018 Supporters

FOCIS gratefully acknowledges the support that allows FOCIS to fulfill its mission to foster interdisciplinary approaches to both understand and treat immune-based diseases, and ultimately to improve human health through immunology.

## DIAMOND SPONSOR



## PLATINUM SPONSORS



## GOLD SPONSORS



BD Biosciences



PHARMACEUTICAL COMPANIES OF Johnson & Johnson



## SILVER SPONSORS



## BRONZE SPONSORS



Liz and Eric Lefkofsky



## TRAVEL AWARD



Dear Colleagues,

Welcome to the 18th Annual Meeting of the Federation of Clinical Immunology Societies, FOCIS 2018. I am particularly excited about this year's meeting. The scientific program reflects the core tenets of FOCIS by bridging the gap between basic and clinical immunology and discussing the translation of novel immunotherapies to treat diseases. Immune intervention remains the ultimate Precision Medicine field as we dissect the underlying mechanism of immunity to treat a variety of diseases ranging from asthma/allergy to transplantation to autoimmunity to cancer.

We value the participation of each of you who have enabled FOCIS' success over the past 18 years, and we know that you will continue to empower the efforts of our community to move the field forward into the future. I invite you to get involved in FOCIS. Join FOCIS as a member and help us to promote education, research and clinical care through translational immunology. Memberships run on a calendar year basis and are available at the conference. Membership gains you exclusive access to a Members-only Lounge complete with a complimentary espresso bar as well as a festive Members-only Reception in the San Francisco Marriott Marquis Atrium on Thursday, June 21. Most importantly, active membership gives you a voice in the organization and a central place in our community.

Finally, please join me in extending my most heartfelt thanks to the members of the FOCIS 2018 Scientific Program Committee for their time, energy and expertise. I hope you enjoy the fruits of their labor – FOCIS 2018. Welcome to San Francisco!



Sincerely,

Jeffrey Bluestone, PhD, FOCIS President  
University of California, San Francisco





## SCIENTIFIC PROGRAM COMMITTEE



**William Robinson, MD, PhD,**  
Stanford University  
Chair



**Jane Buckner, MD**  
Benaroya Research Institute  
Co-Chair



**Jonathan Maltzman, MD, PhD**  
Stanford University  
Abstract Chair



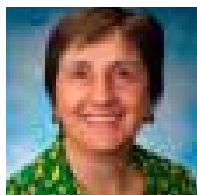
**Jane Grogan, PhD**  
Genentech  
Abstract Co-Chair



**Mark Anderson, MD**  
University of California,  
San Francisco



**Jeffrey Bluestone, PhD**  
University of California,  
San Francisco



**Olivera Finn, PhD**  
University of Pittsburgh



**Jordan Pober, MD, PhD**  
Yale University



**Maria-Grazia Roncarolo, MD**  
Stanford University



**Daniel Rotrosen, MD**  
National Institute of Health/  
National Institute of Allergy  
& Infectious Diseases

## GENERAL INFORMATION

### EVALUATIONS:

Daily online evaluations are available through the mobile app. Delegates will also receive an email reminder and link to the evaluations daily during the meeting. Delegates are asked to complete an evaluation for each session attended. If you received a travel award, you must complete the evaluations before receiving a reimbursement.

### EXHIBIT HALL HOURS:

**Yerba Buena Salon 9, Lower Level**

**Wednesday, June 20** 6:30 pm – 7:30 pm

**Thursday, June 21** 7:30 am – 7:30 pm

**Friday, June 22** 7:30 am – 7:30 pm

### POSTER HALL HOURS:

**Yerba Buena Salon 9, Lower Level**

**Wednesday, June 20** 6:15 pm – 7:30 pm

**Thursday, June 21** 8:00 am – 7:30 pm

**Friday, June 22** 8:00 am – 7:30 pm

### POSTER SET-UP AND TAKE-DOWN HOURS:

**Wednesday, June 20** Set-up: 12:00 pm – 12:45 pm

Take-down: 7:30 pm – 7:45 pm

**Thursday, June 21** Set-up: 7:00 am – 8:00 am

Take-down: 7:30 pm – 7:45 pm

**Friday, June 22** Set-up: 7:00 am – 8:00 am

Take-down: 7:30 pm – 7:45 pm

### REGISTRATION AND SPEAKER CHECK-IN HOURS:

South Registration Desk

**Tuesday, June 19** 12:00 pm – 5:30 pm

\*FOCISed Course Registration Located in the  
SoMa, Second Level (7:00 am – 12:00 pm)

**Wednesday, June 20** 7:00 am – 5:30 pm

**Thursday, June 21** 7:00 am – 5:30 pm

**Friday, June 22** 7:00 am – 5:30 pm

**Saturday, June 23** 7:30 am – 3:00 pm

### SPEAKERS:

Speakers are asked to report to the speaker check-in area located at the Registration Desk (South Registration Desk) of the San Francisco Marriott Marquis at least 24 hours prior to the start of their session.

### PHOTOGRAPHY POLICY:

Please refrain from photography in the sessions, exhibits, and poster hall.

### CME CERTIFICATES AND CERTIFICATES OF ATTENDANCE:

In the past, FOCIS has made it possible for meeting participants to obtain CME credit for attending the annual meeting. In order to enable all those involved in the research and treatment of immune-mediated diseases to participate in the exchange of ideas that contribute to the forward motion of the field, FOCIS will not offer CME credit for FOCIS 2018. Certificates of attendance will be available upon request.

### RELEASE:

Registration and attendance at, or participation in, FOCIS meetings and other activities constitutes an agreement by the registrant to FOCIS' use and distribution (both now and in the future) of the registrant or attendee's image or voice in photographs, videotapes, electronic reproductions and audio tapes of such events and activities.

# FOCiS<sup>®</sup>2018



# Find Yourself *among top immunologists*



Educational  
Opportunities  
online & in-  
classroom

Network with  
leading  
immunologists

Exposure to  
products &  
services that will  
expand your  
science

## JOIN FOCIS

visit the registration  
desk to get started!

**FOCIS**  
Federation of Clinical  
Immunology Societies  
[www.focisnet.org](http://www.focisnet.org)

Use of online  
Career Center,  
including FREE  
job postings

Access to top  
clinicians &  
researchers in  
immunology

Industry  
updates through  
eNewsletter and  
ePublications

Save over  
\$1,000 annually  
with member  
discounts

Exclusively for members  
at FOCIS 2018

*Member Lounge*

Yerba Buena Grand Assembly  
open daily during FOCIS 2018

*Member Reception*

Atrium, Second Level  
Thursday, June 21, 7:30 - 8:30 p.m.

# FOCIS EUROPEAN ADVANCED COURSE

Federation of Clinical Immunology Societies  
[www.focisnet.org](http://www.focisnet.org)

DECEMBER 4 – 7, 2018

Berlin-Brandenburg Center  
for Regenerative Therapies **BCRT**

BERLIN, GERMANY





## Tuesday, June 19

7:00 am – 12:00 pm  
FOCISed Course Registration Desk Open  
SoMa, Second Level

8:00 am – 4:30 pm  
Systems Immunology Course  
(separate registration required)  
Foothill C, Second Level

8:30 am – 5:15 pm  
Basic Immunology in Medicine:  
Update 2018 Course  
(separate registration required)  
Golden Gate A, B2 Level

12:00 pm – 5:30 pm  
Registration Desk Open  
South Registration Desk, Lower Level



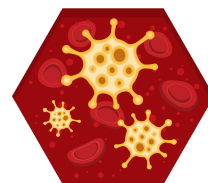
## Wednesday, June 20

7:00 am – 5:30 pm  
Registration Desk Open  
South Registration Desk, Lower Level

7:30 am – 12:00 pm  
**Big Data in Immunology:  
Invited Talks and Hands-on Workshop**  
(separate registration required)  
Nob Hill CD, Lower Level  
Sponsored by



7:30 am – 5:00 pm  
**Cancer Immunity and  
Immunotherapy Course**  
(separate registration required)  
Yerba Buena Salon 7, Lower Level  
Organized in collaboration with



Society for Immunotherapy of Cancer

8:00 am – 12:00 pm  
**Member Society Symposia**  
(included in FOCIS 2018 registration)

### Adjuvanted Vaccines for the Treatment of Immune-mediated Diseases

Yerba Buena 10 & 11, Lower Level

Chair: Kentner Singleton, PhD, National Institute of Allergy and Infectious Diseases, National Institutes of Health

Organized by



8:00 am  
**Welcome and Introduction**  
Kentner Singleton, PhD, National Institute of Allergy and Infectious Diseases, National Institutes of Health

8:10 am  
**Where do Adjuvants Fit in Allergy Immunotherapy?**  
Nikolai Petrovsky, MBBS, FRACP, PhD, Flinders University and Vaxine Pty Ltd

9:00 am  
**Clinical Development of TLR9 Agonists: From Vaccines to Cancer Immunotherapies**  
Robert Coffman, PhD, Dynavax

9:50 am  
**Coffee Break**

10:05 am  
**Engineering Proteins and Polymers to Induce Antigen-specific Immunological Tolerance**  
Jeffrey Hubbell, PhD, University of Chicago

10:55 am  
**Pharmacologic Regulation of Vaccine Responses**  
Dennis Carson, MD, University of California, San Diego





## Antibodies in the Prevention and Treatment of Human Disease

**Foothill G, Second Level**

Chair: Janice Reichert, PhD, The Antibody Society

Organized by



**8:00 am**

**The Antibody Society: Our Mission and Current Initiatives**

Paul Carter, PhD, Genentech

**8:05 am**

**Antibody Therapeutics in Clinical Development: Antibodies to Watch in 2018**

Jan Reichert, PhD, The Antibody Society

**8:25 am**

**Antibody-drug Conjugates: License to Kill**

John Lambert, PhD, ImmunoGen

**8:50 am**

**Recharging the Immune System with Immunomodulatory Antibodies**

Alan Korman, PhD, Bristol-Myers Squibb

**9:15 am**

**Novel Antibody Formats: More Than Twice the Power**

Paul Carter, PhD, Genentech

**9:40 am**

**Insights Provided by Antibody Repertoires and B Cell Analysis**

Nina Luning Prak, MD, PhD, University of Pennsylvania

**10:05 am**

**Vaccine Development by Reverse Engineering**

Dennis Burton, PhD, The Scripps Research Institute

## Cytokines and Interferons in Translation Immunology

**Yerba Buena 14 & 15, Lower Level**

Chair: Ari Molofsky, MD, PhD, University of California, San Francisco

Organized by



**8:00 am**

**Welcome and Introduction**

Ari Molofsky, MD, PhD, University of California, San Francisco

**8:10 am**

**SOCS Protein Regulation of NK Cell-mediated Tumor**

Sandra Nicholson, PhD, Walter and Eliza Hall Institute

**8:35 am**

**Targeting the IL-7R Pathway in Leukemia**

Scott K. Durum, PhD, National Cancer Institute, National Institutes of Health

**9:00 am**

**The Relevance of IL-17A/IL-17RA Axis in Host Defense During Chronic Respiratory Infections by Pseudomonas Aeruginosa**

Nicola Ivan Lorè, PhD, Salute San Raffaele University

**9:25 am**

**IL-10 Producing CCR6<sup>+</sup> T Cells are a Distinct Population of B Helper T Cells That Play a Pathogenic Role in Systemic Lupus Erythematosus**

Jens Geginat, PhD, National Institute of Molecular Genetics

**9:50 am**

**Coffee Break**

**10:20 am**

**Adventitial Stromal Cells Regulate the Group 2 Innate Lymphoid Cell Tissue Niche**

Ari B. Molofsky, MD PhD, University of San Francisco, California

**10:45 am**

**Interrogating IFN- $\gamma$  Signaling Through the Design of Partial Agonists**

Juan Luis Mendoza, PhD, Stanford University

**11:10 am**

**IFN $\gamma$  Inhibits ILC2 During Influenza**

Dennis Metzger, PhD, Albany Medical College

**11:35 am**

**Interleukin-13 Predisposes to More Severe Influenza Infection in Chronic Lung Diseases**

Malcolm Starkey, PhD, University of Newcastle

## HLA as the Target of the Transplant Response

**Foothill C, Second Level**

Chairs: Elaine F. Reed, PhD, University of California, Los Angeles; Jonathan Maltzman, MD, PhD, Stanford University

Organized by



**8:00 am**

**Introduction**

**8:10 am**

**Polymorphisms of HLA Drive Both Adaptive and Innate NK Cell Responses**

John Trowsdale, PhD, FMedSci, Cambridge University

**8:45 am**

**Epitope Analyses and Impact on T Cells and Antibodies**

Chris Wiebe, MD, FRCPC, University of Manitoba

**9:20 am**

**HLA Antibodies, IgG Subclass, Complement and Impact on Rejection**

Nicole Valenzuela, PhD, University of California, Los Angeles

**9:55 am**

**Coffee Break**

**10:15 am**

**NK Cells and Heterogeneity of Their Reactivity**

Catherine Blish, MD, PhD, FIDSA, Stanford University

**10:50 am**

**Role of NK Cells in Transplant Rejection**

Xian Li, MD, PhD, Houston Methodist Hospital

**11:25 am**

**Desensitization Strategies in Solid Organ Transplantation**

Jon Kobashigawa, MD, Cedars-Sinai



## Reproductive Immunology & Immune Regulation in Pregnancy

### Pacific I, Fourth Floor

Chairs: Alexander Beristain, PhD, University of British Columbia; Wendy Robinson, PhD, University of British Columbia

Organized by



#### 8:10 am Introduction

Alex Beristain, PhD, University of British Columbia;  
Wendy Robinson, PhD, University of British Columbia

#### 8:20 am Uterine Natural Killer Cells: Helpers or Adversaries of Early Pregnancy

Alex Beristain, PhD, University of British Columbia

#### 9:00 am What Can Epigenetic Profiling Tell Us About Inflammation Associated with Preterm Birth

Wendy Robinson, PhD, University of British Columbia

#### 9:40 am Epigenetic Convergence of Genetic and Maternal Immune Risks in Autism Brain and Placenta

Janine LaSalle, PhD, University of California, Davis

#### 10:20 am Coffee Break

#### 10:40 am Maternal Immune Contribution to the Clinical Presentation of Pre-eclampsia

Sylvie Girard, PhD, Université de Montreal

#### 11:20 am Intrauterine Delivery of Subunit Vaccines Induces a Systemic and Mucosal Immune Response in Rabbits

Heather L. Wilson, PhD, University of Saskatchewan

## Targeting Immune Response: Synergistic Therapeutic Strategies

### Nob Hill B, Lower Level

Chairs: Nibhriti Das, Sr., Nayati Multi Super Specialty Hospital; Taruna Madan, MPharm, PhD, ICMR-National Institute for Research in Reproductive Health

Organized by



#### 8:00 am Insight into the Indian Immunology Society

Alpana Sharma, All India Institute of Medical Sciences

#### 8:10 am Pro and Antitumor Functions of Human Gamma Delta T cells: Implications in Cancer Immunotherapy

Shubhada Chiplunkar, Research & Education in Cancer, India

#### 8:25 am The Clinical Relevance of HLA and Non-classical HLA Genes in Transplantation

Uma Kanga, All India Institute of Medical Sciences

#### 8:40 am SP-D, Guarding the Vaginal Mucosal Barrier Against HIV-1

Taruna Madan, ICMR-National Institute for Research in Reproductive Health

#### 8:55 am Realm of Innate Immune Cells and Chemokine Receptors in Pemphigus Vulgaris: Plausible Therapeutic Targets

Alpana Sharma, All India Institute of Medical Sciences

#### 9:10 am Role of Vitamin D in Innate Immunity Modulation Based Therapeutic Targets in Pulmonary TB

Archana Singh, All India Institute of Medical Sciences

#### 9:25 am TLR4 Mediated Immunomodulation in Tuberculosis: An Alternative Approach to Combat TB

Pramod Gupta, Bhabha Atomic Research Centre

#### 9:40 am Ex Vivo Generation and Single-Cell Analysis of Human Monoclonal Antibodies from Dengue Virus Infected Patients

Pragati Sharma, International Centre for Genetic Engineering and Biotechnology

#### 9:55 am Highlights

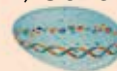
Taruna Madan, ICMR-National Institute for Research in Reproductive Health

## Understanding Human Immune Response Variability

### Yerba Buena 12 & 13, Lower Level

Chair: Darragh Duffy, PhD, Institut Pasteur; Matthew Albert, MD, PhD, Genentech

Organized by



Milieu Interieur  
VERS UNE IMMUNOLOGIE PERSONNALISÉE

in partnership with

MYRIAD RBM

#### 8:00 am Milieu Interieur: Dissecting Genetic and Non-genetic Sources of Immune Response Variation

Matthew Albert, MD, PhD, Genentech

#### 8:30 am Dissecting Natural Variability in Thymic Function

Antoine Toubert, MD, PhD, University Paris VII, Inserm

#### 9:00 am Anti-TNF Therapy in Chronic Inflammatory Disease, How it Works and Why it Doesn't

Lars Rogge, PhD, Institut Pasteur

**9:30 am**

**Development of Multiparameter Functional Immune Assays as Predictors of Response to Immunotherapy**

Richard Lee, MD, PhD, NHS, University of Bristol

**10:00 am**

**Impact of CMV Latent Infection on Diverse Immune Phenotypes**

Cecile Alanio, MD, PhD, University of Pennsylvania

**10:30 am**

**Coffee Break**

**11:00 am**

**Understanding Variability in Response to Cancer Immunotherapy**

Alejandra Urrutia, PhD, Genentech

**11:30 am**

**Standardized Immunomonitoring for Improved Clinical Management of Tuberculosis Patients**

Darragh Duffy, PhD, Institut Pasteur

**At Crossroads of Autoimmunity and Primary Immunodeficiency**

**Nob Hill A, Lower Level**

Chairs: Mark S. Anderson, MD, PhD, University of California, San Francisco; Kasia Bourcier, National Institute of Allergy and Infectious Diseases, National Institutes of Health

Organized by



National Institute of  
Allergy and  
Infectious Diseases

**10:00 am**

**New Precision Medicine Treatments for Autoimmunity from Gene Identification**

Michael Lenardo, MD, National Institute of Allergy and Infectious Diseases, National Institutes of Health

**10:30 am**

**Genes and SNPs - Travel Through Genome in Autoimmune Diseases**

David Hafler, MD, FANA, Yale New Haven Hospital

**10:55 am**

**Single Gene Disorders Leading to Autoimmunity**

Jennifer M. Puck, MD, University of California, San Francisco

**11:20 am**

**STAT 3 Mutations and T1D**

Mark S. Anderson, MD, PhD, University of California, San Francisco

**11:45 am**

**The Mucosal Interface: Lessons from Early Onset Inflammatory Bowel Disease**

Kathleen E. Sullivan, MD, PhD, Children's Hospital of Philadelphia

**12:00 pm – 2:00 pm**

**FOCIS Centers of Excellence (FCE) Fusion: Careers. Collaboration. Connection. (Invitation Only)**

**SoMa, Second Level**

Sponsored by



PHARMACEUTICAL COMPANIES OF Johnson & Johnson

**12:45 pm – 5:00 pm**

**Member Society Symposia**

(included in FOCIS 2018 registration)

**Fine Tuning the Immune System: Spotlight on Immune Therapies for Autoimmune Disorders, Cancer, and Transplantation**

**Yerba Buena Salons 12 & 13, Lower Level**

Chairs: Barbara Detrick, PhD, Johns Hopkins University; Elaine Reed, PhD, University of California, Los Angeles

Organized by



Sponsored in part by



**12:45 pm**

**Introduction**

Barbara Detrick, PhD, Johns Hopkins University

**12:55 pm**

**Modulating the Immune System to Target Cancer: Closer Look at the Checkpoint Inhibitors - The Promises and Challenges**

Padmanee Sharma, MD, PhD, MD Anderson Cancer Center

**1:35 pm**

**Immune Therapies in Organ Transplantation**

Roslyn B. Mannon, MD, University of Alabama

**2:15 pm**

**Immune Based Therapy: A Promising Strategy for Restoring T Cell Tolerance in Autoimmune Disease**

Jane H. Buckner, MD, Benaroya Research Institute

**2:55 pm**

**Coffee Break**

**3:10 pm**

**T Regulatory Cell Therapy in Transplantation**

Megan Levings, PhD, University of British Columbia

**3:50 pm**

**Novel Ways to Boost the Immune Response: Oncolytic Viruses as Cancer Vaccines**

Donald M. McDonald, MD, PhD, University of California, San Francisco



## Cytokines and Mucosal Inflammation

### Yerba Buena Salons 10 & 11, Lower Level

Chair: Lauren Zenewicz, PhD, The University of Oklahoma Health Sciences Center; Cecilia Johansson, PhD, Imperial College London

Organized by



SOCIETY FOR  
MUCOSAL IMMUNOLOGY

**1:00 pm**  
**Introduction**

**1:05 pm**  
**Immune Regulation of Intestinal Health**

Gregory Sonnenberg, PhD, Weill Cornell Medical College

**1:40 pm**  
**Environmental Regulation of the Mucosal Cytokine IL-22**  
Lauren A. Zenewicz, PhD, University of Oklahoma Health Sciences Center

**2:15 pm**  
**Regulation and Down-stream Components of Type-2 Immunity in the Gut**

Mark S. Wilson, PhD, Genentech

**2:50 pm**  
**Break**

**3:10 pm**  
**Regulation of Lung Inflammation During Viral Infections**  
Cecilia Johansson, PhD, Imperial College London

**3:45 pm**  
**Antiviral Immunity in Vaginal Versus Rectal Mucosa**  
Shomyseh Sanjabi, PhD, Gladstone Institutes

**4:20 pm**  
**Immune Recognition of the Microbiota**  
Gregory Barton, PhD, University of California, Berkeley

## Exploring '-omics' Insights in Autoimmunity and Tolerance

### Foothill C, Second Level

Chair: Philip Bernstein, PhD, Immune Tolerance Network

Organized by



Immune  
Tolerance  
Network

in partnership with



LUPUS  
RESEARCH  
ALLIANCE



**1:00 pm**  
**Introduction & Welcome**

**1:05 pm**  
**Defining the Architecture of Rheumatoid Arthritis at the Single Cell Level**

Soumya Raychaudhuri, MD, PhD, Brigham & Women's Hospital

**1:50 pm**  
**Epigenetic Landscape of Rheumatoid Arthritis: Location, Location, Location**

Gary Firestein, MD, University of California, San Diego

**2:35 pm**  
**Epigenetic Programming of Autoreactive T Cells in Type 1 Diabetes**

Ben Youngblood, PhD, St Jude Children's Hospital

**3:20 pm**

**The Power of ONE: Solving Biomedical Challenges Through Single Cell Genomics Approaches**

Alexandra-Chloe Villani, PhD, Massachusetts General Hospital, Harvard Medical School

**4:05 pm**

**Multi-omics Approaches in Allergic Disease: Epigenetics and Beyond**

Kathleen Barnes, PhD, University of Colorado, Denver

**4:50 pm**

**Wrap-up**

## Gene, Peptide, and Cellular Therapy in Immune-mediated Uveitis

### Pacific I, Fourth Floor

Chairs: Phoebe Lin, MD, PhD, University of Oregon Health Sciences; Kathryn Pepple, MD, PhD, University of Washington

Organized by



AMERICAN  
UVEITIS SOCIETY

**1:00 pm**

**Welcome and Introduction**

Phoebe Lin, MD, PhD, University of Oregon Health Sciences

**1:20 pm**

**Challenges Facing Gene Therapy for Uveitis**

Colin Chu, PhD, FRCOphth, University of Bristol

**1:55 pm**

**Gene Delivery of a Secretable and Cell-penetrating Nrf2 Peptide Decreases Inflammation in the Endotoxin-induced Mouse Model of Uveitis**

Cristhian Ildefonso, PhD, University of Florida

**2:30 pm**

**Regulatory B Cell Therapy in Uveitis**

Charles Egwuagu, MD, MPH, National Eye Institute, National Institutes of Health

**3:05 pm**

**T Cell Therapy for the Treatment of Uveitis**

Bahram Bodaghi, MD, PhD, FEBO, University of Pierre and Marie Curie

**3:40 pm**

**Understanding the Inflammatory Response to Intraocular Gene Therapy**

Kathryn Pepple, MD, PhD, University of Washington

**4:15 pm**

**Panel Discussion**





## New Insights into Cell Populations in Autoimmune Target Tissue Using Single Cell Technologic Advances

### Foothill G, Second Level

Chairs: Betty Diamond, MD, Feinstein Institute; Michael Holers, MD, University of Colorado, Denver

Organized by



**1:00 pm**

### Overview of Session/AMP Consortium Structure

Jennifer Anolik, MD, PhD, University of Rochester

**1:05 pm**

### Large Scale Molecular Dissection of a Rheumatoid Arthritis Cohort: Single Cell Analysis

Soumya Raychaudhuri, MD, PhD, Brigham and Women's Hospital and Broad Institute

**1:30 pm**

### Large Scale Molecular Dissection of a Lupus Nephritis Cohort: Single Cell Analysis

Nir Hacohen, PhD, Brigham and Women's Hospital and Broad Institute

**1:55 pm**

### Novel Populations of T cells in SLE and RA

Deepak Rao, MD, PhD, Brigham and Women's Hospital

**2:15 pm**

### Insights into B Cell Participation in RA

Jennifer Anolik, MD, PhD, University of Rochester

**2:30 pm**

### Insights on B Cell Participation in SLE Via Single Cell Analysis of Target Tissue

Betty Diamond, MD, Feinstein Institute

**2:40 pm**

### Coffee Break

**3:00 pm**

### Diverse Myeloid Lineages in the RA Synovium

Laura T. Donlin, PhD, Hospital for Special Surgery

**3:20 pm**

### Myeloid Cells in the Lupus Kidney

Anne Davidson, MBBS, Feinstein Institute

**3:40 pm**

### Stromal Cell Pathology In RA

Michael Brenner, MD, Brigham and Women's Hospital and Harvard Medical School

**4:00 pm**

### Droplet-based Single Cell Analysis of Lupus Nephritis

Chaim Putterman, MD, Albert Einstein College of Medicine; Tom Tuschl, PhD, Rockefeller University

**4:25 pm**

### Insights into Renal Resident Cell Participation in Lupus Nephritis

Mathias Kretzler, MD, University of Michigan

**4:45 pm**

### What We are Learning and Where We are Going Next

Michael Brenner, MD, Brigham and Women's Hospital

## Role of HLA and KIR in Immune-Mediated Diseases, Transplantation, and Infection

### Yerba Buena 14 & 15, Lower Level

Host: Jeffrey Rice, PhD, National Institute of Allergy & Infectious Diseases, National Institutes of Health

Chairs: Mary Carrington, PhD, Frederick National Laboratory for Cancer Research; Effie Petersdorf, MD, Fred Hutchinson Cancer Research Center; Jeffrey Rice, PhD, National Institute of Allergy and Infectious Diseases, National Institutes of Health

Organized by



**1:00 pm**

### Introduction

Jeffrey Rice, PhD, National Institute of Allergy and Infectious Diseases, National Institutes of Health  
Mary Carrington, PhD, Frederick National Laboratory for Cancer Research  
Effie Petersdorf, MD, Fred Hutchinson Cancer Research Center

**1:10 pm**

### The Impact of Diversity in HLA Expression Levels on Clinical Outcomes

Mary Carrington, PhD, Frederick National Laboratory for Cancer Research

**1:45 pm**

### HLA Immunogenetics in Hematopoietic Stem Cell Transplantation

Effie Petersdorf, MD, Fred Hutchinson Cancer Research Center

**2:20 pm**

### Harnessing HLA and KIR Immunogenetics to Exploit NK Cell Functions for Treatments in Cancers and Viral Infections

Amir Horowitz, PhD, Mount Sinai

**2:50 pm**

### Coffee Break

**3:05 pm**

### HLA-B Assembly Variations: Staying Together or Falling Apart

Malini Raghavan, PhD, University of Michigan

**3:40 pm**

### Immunogenetics of Narcolepsy

Emmanuel Mignot, MD, PhD, Stanford University

**4:15 pm**

### HLA Immunogenetics in Autoimmunity, Allergy, and Infectious Disease

Katsushi Tokunaga, DSc, University of Tokyo

**4:45 pm**

### Discussion

**5:30 pm – 6:15 pm**

**Opening Keynote Address: Imaging Immunity - Creating a Spatiotemporal Understanding of Host Defense and Pathologic Responses**

Ronald N. Germain, MD, PhD, National Institute of Allergy and Infectious Diseases, National Institutes of Health

**Yerba Buena 8, Lower Level**

Chair: Jeffrey Bluestone, PhD, University of California, San Francisco

**6:15 pm – 7:45 pm**

**Opening Reception & Poster Presentations**

**Yerba Buena 9, Lower Level**

Network with attendees while visiting exhibits and posters with authors present. Complimentary light hors d'oeuvres and wine served.

Sponsored by



**Thursday, June 21**

**7:00 am – 5:30 pm**

**Registration Desk Open**

**South Registration Desk, Lower Level**

**8:00 am – 7:30 pm**

**Posters Available for Viewing** (authors optional)

**Yerba Buena 9, Lower Level**

**8:00 am – 9:30 am**

**Host-Microbiome Interactions**

**Yerba Buena 8, Lower Level**

Chair: Timothy Niewold, MD, New York University

Sponsored by



**8:00 am**

**Immune Homeostasis via Compartmentalized Gut Lymph Node Drainage**

Daniel Mucida, PhD, The Rockefeller University

**8:30 am**

**The Role of the Gut Microbiome in Response and Toxicity to Immune Checkpoint Blockade**

Jennifer A. Wargo, MD, MMSc, MD Anderson Cancer Center

**9:00 am**

**Toward a Genetic Theory of Infectious Diseases**

Jean-Laurent Casanova, MD, PhD, Rockefeller University & INSERM U1163, Necker Hospital for Sick Children

**9:30 am – 10:00 am**

**Networking Break**

**Yerba Buena 9, Lower Level**

**10:00 am – 11:30 am**

**CARS for Cancer and Autoimmunity**

**Yerba Buena 8, Lower Level**

Chair: Megan Levings, PhD, University of British Columbia

**10:00 am**

**Targeting Autoimmunity with CAR T Cells**

Aimee S. Payne, MD, PhD, University of Pennsylvania

**10:30 am**

**Gene Edited CAR T Cells**

Michel Sadelain, PhD, Memorial Sloan Kettering Cancer Center

**11:00 am**

**CAR T cells for Cancer: Progress and Challenges**

Crystal Mackall, MD, Stanford University

**11:30 am – 1:00 pm**

**Lunch Break**

Delegates on their own for lunch

**11:45 am – 1:00 pm**

**Lunch Programs**

(included in FOCIS 2018 registration)

**11:30 am – 1:00 pm**

**Lupus Insight Prize Award**

Presented by the Lupus Research Alliance

**Nob Hill CD, Lower Level**



**11:45 am – 12:30 pm**

**Industry Tutorial: BioLegend**

**Yerba Buena 10 & 11, Lower Level**



**11:45 am – 1:00 pm**

**Industry Tutorial: Tessa Therapeutics**

**Yerba Buena 12 & 13, Lower Level**



**11:45 am – 1:00 pm**

**Industry Tutorial: Beckman Coulter**

**Yerba Buena Salons 14 & 15, Lower Level**



1:00 pm – 2:45 pm

## Immune Checkpoints as On and Off Signals

Yerba Buena 12 & 13, Lower Level

Chair: Kevan Herold, MD, Yale University

Sponsored by



1:00 pm

### Unravelling the Natural Function of the CTLA-4 Checkpoint

Lucy S.K. Walker, PhD, University College London

1:25 pm

### Abstract Presentation: Immune Checkpoint Inhibitor Diabetes Mellitus: An Atypical Presentation of Type 1 Diabetes Mellitus? (Poster # T.28)

Zoe Eloise Quandt, MD, MS, University of California, San Francisco

1:40 pm

### Response and Resistance to PD-1 Blockade Therapy

Antoni Ribas, MD, PhD, University of California, Los Angeles

2:05 pm

### Abstract Presentation: Resistance to PD1 Blockade in the Absence of Metalloprotease-mediated LAG3 Shedding (Poster # T.26)

Lawrence Andrews, PhD, University of Pittsburgh

2:20 pm

### TIGIT: A Key Inhibitor of the Cancer Immunity Cycle

Jane Grogan, PhD, Genentech

## Neuroimmune Axis

Yerba Buena 10 & 11, Lower Level

Chair: David Hafler, MD, Yale University

1:00 pm

### Innate Immune Mechanisms of Synapse Remodeling During Brain Development

Anna V. Molofsky, MD, PhD, University of California, San Francisco

1:25 pm

### Abstract Presentation: Protective Roles of Myeloid SOCS3 to Neuroinflammation in Neurodegenerative Parkinson's Disease (Poster # T.27)

Hongwei Qin, University of Alabama at Birmingham

1:40 pm

### Immune: Glial Interactions and CNS Compartmentalized Inflammation in Multiple Sclerosis

Amit Bar-Or, MD, FRCPC, University of Pennsylvania and McGill University

2:05 pm

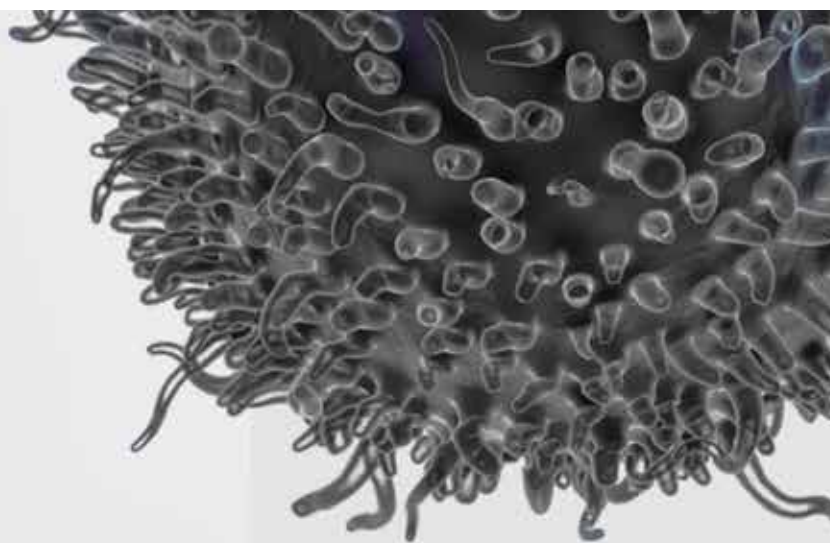
### Abstract Presentation: Schwann Cell-derived Periostin Promotes Autoimmune Peripheral Polyneuropathy via Macrophage Recruitment (Poster # T.31)

Yan Wang, The University of North Carolina at Chapel Hill

2:20 pm

Michael Wilson, MD, University of California, San Francisco

# VIR



# A WORLD WITHOUT INFECTIOUS DISEASE.



## Structure-based Vaccine Design

### Yerba Buena 14 & 15, Lower Level

Chair: William Robinson, MD, PhD, Stanford University

1:00 pm

#### A Molecular Arms Race - The Immune System Versus HIV

Pamela J. Bjorkman, PhD, California Institute of Technology

1:25 pm

#### Abstract Presentation: Discovery of a Novel Human Anti-IL-2 Antibody that Potentiates Regulatory T Cells by a Structure-based Mechanism (Poster # T.30)

Eleonora Trotta, PhD, University of California, San Francisco

1:40 pm

#### Super-antibodies and Vaccine Design

Dennis R. Burton, PhD, Scripps Research Institute

2:05 pm

#### Abstract Presentation: Ex Vivo Generation and Single-Cell Analysis of Human Monoclonal Antibodies from Dengue Virus Infected Patients (Poster # T.29)

Pragati Sharma, MSc, International Center for Genetic Engineering and Biotechnology

2:20 pm

#### The Clonal Evolution of Humoral Immunity Throughout the Repeated-immunization Protocol for Anthrax Vaccine

Thomas Kepler, PhD, Boston University

2:45 pm – 3:15 pm

#### Networking Break

### Yerba Buena 9, Lower Level

3:15 pm – 5:15 pm

#### Oral Abstract Sessions

## Cytokines: Not Your Father's Interleukin

### Yerba Buena 12 & 13, Lower Level

Co-chairs: Steven Ziegler, PhD, Benaroya Research Institute; Brian Kotzin, MD

3:15 pm

#### Alpha Kinase 1 Controls Intestinal Inflammation via Suppression of the IL-12/IL-23 Axis (Poster # T.25)

Nathaniel West, Genentech

3:30 pm

#### SEB Stimulation Induces Functional Pathogenic Features in Th17 Cells from Psoriasis Patients (Poster # T.3)

Octavio Castro, Instituto Mexicano del Seguro Social

3:45 pm

#### A Novel Role of Human Lung Endothelial Cells in Allergic Airway Disease by Producing and Responding to IL-33 (Poster # T.7)

Chanie L. Howard, University of Chicago

4:00 pm

#### A Single Dose of Siltuximab can Transiently Modify T-effector Resistance to Suppression in T1D (Poster # T.19)

Cate Speake, Benaroya Research Institute

4:15 pm

#### A New Model of Autoimmune Retinopathy Demonstrates the Critical Importance of IL-10 to Retinal Protection (Poster # T.10)

Enayat Nikoopour, University of Michigan

4:30 pm

#### Tc17/MAIT Cells in Psoriatic Arthritis: Regulatory Role of the IL-23 and its Receptor System (Poster # T.15)

Siba Raychaudhuri, University of California, Davis

4:45 pm

#### A Novel Self-regulatory Mechanism of Th17 Cells Controls Autoimmune Uveitis Through Interleukin-24 (Poster # T.6)

Wai Po Chong, Sun Yat-Sen University

5:00 pm

#### A Novel Inhibitor (N5-1) of Interferon Regulatory Factor 5 (IRF5) Ameliorates Disease Severity in NZB/W F1 Mice (Poster # T.18)

Su Song, Feinstein Medical Research Institute

## Innate Immunity: Who Needs RAG?

### Yerba Buena 14 & 15, Lower Level

Chairs: Megan Levings, PhD, University of British Columbia; Timothy Niewold, MD, New York University

3:15 pm

#### Immune-modulatory Role of miR-511-3p on Mannose Receptor Expression and Impact on Human DC Function (Poster # T.2)

Dennis Awuah, University of Nottingham

3:30 pm

#### Monocyte NOTCH2 Expression Predicts Interferon-beta Immunogenicity in Multiple Sclerosis Patients (Poster # T.1)

Marsilio Adriani, University College London

3:45 pm

#### Role of SLC7A5 in Metabolic Reprogramming of Human Monocyte/Macrophage Immune Responses (Poster # T.9)

Bo Ruem Yoon, Seoul National University

4:00 pm

#### Direct Control of Inflammation in Rheumatoid Disorders with Tolerogenic Nanoparticles (Poster # T.11)

J. Daniel Ferrari, Selecta Biosciences

4:15 pm

#### An Abnormal Mucosal Immune Response to an Ocular Surface Commensal Precipitates Inflammation in a Model of Muckle-wells Syndrome (Poster # T.4)

Rachel Caspi, National Eye Institute, National Institutes of Health

4:30 pm

#### NHERF1 Mediates the Pathogenesis of Airway Inflammation in a Murine Model of House Dust Mite-induced Asthma (Poster # T.20)

Hariharan Subramanian, Michigan State University

4:45 pm

#### Meta-analysis of Maternal and Fetal Transcriptomic Data Elucidates the Role of Adaptive and Innate Immunity in Preterm Birth (Poster # T.24)

Bianca Vora, BS, University of California, San Francisco

5:00 pm

#### Toxoplasma Gondii Induces IL-1 $\beta$ Production and Pyroptosis Independent Release from Primary Human Monocytes through the Syk Signaling Pathway (Poster # T.13)

William J. Pandori, University of California, Irvine

## **Tolerance: Reigning It In**

### **Yerba Buena 10 & 11, Lower Level**

Chairs: Donna Farber, PhD, Columbia University;  
Ignacio Anegón, MD, Nantes University

**3:15 pm**

### **Helios Drives Preferential Regulatory T Cell Differentiation in Fetal Naïve T Cells (Poster # T.12)**

Melissa Ng, University of California, San Francisco

**3:30 pm**

### **Identification of Transplant Injury Specific Metabolites in the Kidney Transplant Urine by Metabolomics (Poster # T.17)**

Tara Sigdel, PhD, University of California, San Francisco

**3:45 pm**

### **Repairing Foxp3 Mutations in Scurfy T Cells Restores Regulatory T Cell Function (Poster # T.8)**

Lukas Jeker, University Hospital and University of Basel

**4:00 pm**

### **B Cell Immune Repertoire Sequencing Identifies Pre-transplant Rejection Risk (Poster # T.14)**

Silvia Pineda, University of California, San Francisco

**4:15 pm**

### **Induction of T-allo10, an Alloantigen Specific Type 1 Regulatory T Cell Product Suitable for Cellular Therapy in Hematopoietic Stem Cell Transplantation for Hematologic Malignancies (Poster # T.5)**

Pauline Chen, Stanford University

**4:30 pm**

### **Reshaping Undesired Immune Reactivity by Regulatory T Cells - Experience from Kidney Transplantation (One Study) and Chronic GvHD (PegTreg) (Poster # T.23)**

Hans-Dieter Volk, Charité University

**4:45 pm**

### **A Role for Early Oral Exposure to House Dust Mite Proteases in Food Allergy Susceptibility (Poster # T.22)**

Akila Rekima, University of Western Australia

**5:00 pm**

### **The Effect of Fenretinide on Regulatory B Cell Development and Semaphorin 4C in Allergic Asthma Model (Poster # T.21)**

Shao Tao, McGill University

**3:15 pm – 5:15 pm**

## **Principles of Flow Cytometry for Immune Monitoring Course**

### **Nob Hill CD, Lower Level**

Chair: J. Philip McCoy, PhD, National Heart, Lung, and Blood Institute, National Institutes of Health; Holden Maecker, PhD, Stanford University

Sponsored by



**3:15 pm**

### **High-dimensional Fluorescence Cytometry**

Pratip K. Chattopadhyay, PhD, New York University

**4:15 pm**

### **Sorting of Difficult Populations**

Pradeep Dagur, MSc, PhD, National Heart, Lung, and Blood Institute, National Institutes of Health

**5:20 pm – 5:25 pm**

### **Presentation of the FCE Fusion Award**

#### **Yerba Buena 8, Lower Level**

Megan Levings, PhD, University of British Columbia

**5:25 pm – 5:30 pm**

### **Presentation of the C. Garrison Fathman Fellows Fund Trainee Travel Award**

#### **Yerba Buena 8, Lower Level**

Megan Levings, PhD, University of British Columbia

**5:30 pm – 6:15 pm**

### **Robert B. Nussenblatt Presidential Lecture: Traveling the Road to Immune Tolerance: From Biologics to Cell Therapy**

Jeffrey Bluestone, PhD, University of California, San Francisco

#### **Yerba Buena 8, Lower Level**

Chair: Maria-Grazia Roncarolo, MD, Stanford University

Sponsored by



6:15 pm – 7:30 pm

**Exhibit and Poster Reception**

**Yerba Buena 9, Lower Level**

Network with attendees while visiting exhibits and posters with authors present. Complimentary light hors d'oeuvres and wine served.

Sponsored by



7:30 pm – 8:30 pm

**FOCIS Member Reception** (FOCIS members only)

**Atrium, Second Level**

Join us for hors d'oeuvres, drinks and fun! Let FOCIS show you how much we value you!

**Not a member? Join now at the registration desk.**

Sponsored by



**Friday, June 22**

7:00 am – 5:30 pm

**Registration Desk Open**

**South Registration Desk, Lower Level**

7:30 am – 7:30 pm

**Posters Available for Viewing** (authors optional)

**Yerba Buena 9, Lower Level**

**CGIFF**

C. GARRISON FATHMAN  
FELLOWS FUND



C. Garrison Fathman, MD

**Congratulations!**  
**Sofía Russo**

Winner of the sixth annual C. Garrison Fathman Fellows Fund Trainee Travel Award! The C. Garrison Fathman Fellows Fund was established to enable trainees and fellows to attend FOCIS Annual Meetings, educational courses, and to participate in exchange programs that advance human health through immunology.



Your contribution supports trainees and fellows throughout immunology. Donate online at [www.focisnet.org](http://www.focisnet.org) or by calling (414) 359-1670, extension 1108.

8:00 am – 9:30 am

**A Systems Immunology Approach to Infectious Disease**

**Yerba Buena 8, Lower Level**

Chairs: Mark S. Anderson, MD, PhD, University of California, San Francisco; Magnus Fontes, PhD, Genentech

Sponsored by



8:00 am

Bali Pulendran, PhD, Stanford University

8:30 am

**New Insights Into Cell Type-specific Intrinsic Antiviral Immunity**

Charles M. Rice, PhD, Rockefeller University

9:00 am

**Deciphering the Human Immunome**

James E. Crowe, MD, Vanderbilt University

9:30 am – 10:00 am

**Networking Break**

**Yerba Buena 9, Lower Level**

9:55 am – 10:00 am

**Scientific Program Committee Awards Presentation**

**Yerba Buena 8, Lower Level**

10:00 am – 11:30 am

**Microenvironment - Connecting Immune Regulation with Disease**

**Yerba Buena 8, Lower Level**

Chairs: Kevan Herold, MD, Yale University; George Tsokos, MD, Beth Israel Deaconess Medical Center

Sponsored by



10:00 am

**Scleroderma: An Example of Cancer Immunoediting in Humans?**

Antony Rosen, MD, Johns Hopkins University

10:30 am

**Modulating Immune Response in Solid Tumors**

Lisa M. Coussens, PhD, Oregon Health & Science University

11:00 am

**Immune-stimulatory Components of Tumor Microenvironments**

Max Krummel, PhD, University of California, San Francisco

11:30 am – 1:00 pm

**Lunch Break**

Delegates on their own for lunch

11:45 am – 1:00 pm

**Lunch Programs**

(included in FOCIS 2018 registration)

11:45 am – 1:00 pm

**NIH Grant Applications: A Look at Your Summary Statement**

**Yerba Buena 10 & 11, Lower Level**

Chair: Thomas Esch, PhD, National Institute of Allergy and Infectious Diseases, National Institutes of Health



## Rising Stars Showcase

### Yerba Buena 14 & 15, Lower Level

Chairs: John E. Connolly, PhD; Ifor Williams, MD, PhD,  
American Association for the Advancement of Science

Sponsored by



11:45 am

#### HLA-Dependent Islet Autoimmunity Association with Systemic Antibody Responses to Intestinal Commensal Bacteria in Pediatric Subjects

Alexandra Paun, PhD, The Hospital for Sick Children

12:00 pm

#### Aging and Chronic Viral Infection Associations with Development of Antibodies to Citrullinated Protein Antigens

Heather Berens MD, PhD, University of Colorado, Denver

12:15 pm

#### Single-cell Analysis Redefines the Determinants of Crohn's Disease Inflammation to Delineate Distinct Cellular Signatures Across Patients

Jerome Martin, PharmD, PhD, Icahn School of Medicine at Mount Sinai

12:30 pm

#### HMGB1 Redox Forms Differentially Mediate Innate-to-Adaptive Immune Switch after Ischemia-Reperfusion Injury in Human Orthotopic Liver Transplantation

Rebecca A. Sosa, PhD, University of California, Los Angeles

1:00 pm – 2:45 pm

## Cell Therapy for Transplant Tolerance

### Yerba Buena 14 & 15, Lower Level

Chair: Qizhi Tang, PhD, University of California, San Francisco

1:00 pm

#### Regulatory Immune Cell Therapy in Transplantation

Angus W. Thomson, PhD, DSc, DSc (Med), University of Pittsburgh

1:25 pm

#### Abstract Presentation: BPX-501 Cell Infusion After Alpha/Beta T Cell and B Cell Depleted HLA-haploidentical HSCT (Haplo-HSCT) in Children with Primary Immunodeficiencies (Pids): High Rate of Cure with Low Risk of Acute and Chronic Gvhd (Poster # F.25)

Alice Bertaina, MD, PhD, Stanford University

1:40 pm

#### Targeting the Thymus for the Induction of Tolerance

Mark S. Anderson, MD, PhD, University of California, San Francisco

2:05 pm

#### Abstract Presentation: Durable Mixed Hematopoietic Chimerism Through Megadose Bone Marrow and Regulatory T Cells for the Induction of Immune Tolerance in Non-human Primates across MHC-barriers (Poster # F.24)

Paula Alonso-Guallart, DVM, Columbia University

2:20 pm

#### Cell Therapy with Engineered CAR-CD8<sup>+</sup>Tregs to Avoid Transplant Rejection

Carole Guillonnet, PhD, Université de Nantes

## Memory in Innate and Adaptive Immunity

### Yerba Buena 14 & 15, Lower Level

Chairs: Jane Buckner, MD, Benaroya Research Institute; Lewis Lanier, PhD, University of California, San Francisco

1:00 pm

#### Tissue-resident Memory T Cell Responses to Melanoma

Mary Jo Turk, PhD, Dartmouth College

1:25 pm

#### Abstract Presentation: Elucidating the Function of Mosaic, a Novel Gene Mediating Autoimmunity (Poster # F.26)

Alice Chan, MD, PhD, University of California, San Francisco

1:40 pm

#### Helper T Cell "Memory" During Persistent Phagosomal Infection

Marc K. Jenkins, PhD, University of Minnesota

2:05 pm

#### Abstract Presentation: Unique Effects of Human Tr1 Cells on Suppressing Innate Immunity and Promoting Epithelial Health (Poster # F.27)

Laura Cook, PhD, BC Children's Hospital Research Institute

2:20 pm

#### Epigenetic Control of Innate and Adaptive Lymphocyte Memory

Joseph Sun, PhD, Memorial Sloan Kettering Cancer Center

## Scientific Breakthroughs in Industry

### Yerba Buena 10 & 11, Lower Level

Chairs: John Connolly, PhD, Tessa Therapeutics; Frank Nestle, MD, Sanofi

Sponsored by



1:00 pm

#### Th17 Pathway Biology: From Basic Research to Preclinical Development

Daniel Cua, PhD, Merck Research Labs

1:25 pm

#### Abstract Presentation: Selective Inhibition of NF-κB Inducing Kinase (NIK) is Therapeutically Efficacious in IFNγ-accelerated Lupus Nephritis Prone Mice (Poster # F.28)

Nico Ghilardi, Genentech

1:40 pm

#### Primary Resistance Mechanisms to Immunotherapy

Sanjeev Mariathasan, PhD, Genentech

2:05 pm

#### Abstract Presentation: Identification of Potent RORc Inhibitors for the Treatment of IL-17-mediated Inflammatory Diseases: Is it Worth the Risk? (Poster # F.10)

Celine Eidenschenk, PhD, Genentech

2:20 pm

#### Dual Biomarker Strategy to Understand Novel Translational Biomarkers to Stratify Patients Effectively for Personalized Cancer Immunotherapy

Jianda Yuan, MD, PhD, Merck

2:45 pm – 3:15 pm  
Networking Break  
Yerba Buena 9, Lower Level

3:15 pm – 5:15 pm  
Oral Abstract Sessions

### Autoimmunity: Out of Control Immune Response Yerba Buena 12 & 13, Lower Level

Chair: Ifor Williams, MD, PhD, Emory University

3:15 pm  
**Persistence of Transcriptomic Signature in CD4 Memory T Cells in Polyarticular JIA Patients Despite Anti-TNFA Biologics Therapy (Poster # F.7)**  
Jing Yao Leong, Translational Immunology Institute/Singapore Health Services Pte Ltd

3:30 pm  
**A Multi-dimensional Approach to Dissecting the Complex Interplay between the Tissue Microenvironment and Immune Landscape in Psoriatic Arthritis (Poster #F.3)**  
Sherlynn Chan, Translational Immunology Institute (TII) / Singhealth Health Services Pte Ltd

3:45 pm  
**Development of Citrullinated-vimentin-specific CAR for Targeting Tregs to Treat Autoimmune Rheumatoid Arthritis (Poster # F.16)**  
Caroline Raffin, University of California, San Francisco

4:00 pm  
**Aire-dependent Thymic FoxP3<sup>+</sup> Regulatory T Cells in Type 1 Diabetes (Poster # F.2)**  
Jennifer A. Bridge, University of California, San Francisco

4:15 pm  
**From T Cell Receptor to Antigen, Systems Approach to Discovering T Cell Antigen(S) in Multiple Sclerosis and Experimental Autoimmune Encephalomyelitis (Poster # F.19)**  
Naresha Saligrama, Stanford University

4:30 pm  
**Multi-cohort Transcriptome Analysis Implicates Novel Biological Mechanisms In Active Systemic Lupus Erythematosus (Poster # F.5)**  
Winston A. Haynes, Stanford University

4:45 pm  
**Increases in Eomes-expressing Th Cells in Secondary Progressive Multiple Sclerosis Reveal Patients at Risk of Increased Disability (Poster # F.17)**  
Ben J.E. Raveney, National Institute of Neuroscience, National Center for Neurology and Psychiatry

5:00 pm  
**Gene Editing in Primary Human T Cells to Assess Autoimmune Associated Snps Within the Gene PTPN22 (Poster # F.1)**  
Warren Anderson, University of Washington

### Host Defense: Homeland Security Yerba Buena 14 & 15, Lower Level

Chairs: Graham Simmons, PhD, Blood Systems Research Institute; Alain Fischer, MD, PhD, Collège de France

3:15 pm  
**HCV-induced Heterologous Immunity Regulates Alloreactive T Cell Exhaustion in Liver Transplantation (Poster # F.9)**  
Elliot Merritt, King's College London

3:30 pm  
**Tumor suppressor BAP1 is essential for thymic development and proliferative responses of T lymphocytes**  
Sascha Rutz, Genentech (Poster # F.12)

3:45 pm  
**Role of CD1d Receptor in the Pathology Caused by the Human Respiratory Syncytial Virus and the Human Metapneumovirus (Poster # F.18)**  
Emma Rey-Jurado, Pontificia Universidad Católica de Chile

4:00 pm  
**A Combined Immunodeficiency with Severe Inflammation and Allergy Caused by ARPC1B Deficiency (Poster # F.22)**  
Stefano Volpi, Istituto Giannina Gaslini

4:15 pm  
**Transcriptional Signatures of Influenza Vaccine Immune Responses in Elderly Individuals (Poster # F.13)**  
Inna G. Ovsyannikova, Mayo Clinic

4:30 pm  
**Influenza A virus (IAV) infection in humans leads to expansion of highly diverse CD8 T cell repertoires cross-reactive with Epstein Barr virus (EBV) (Poster # F.20)**  
Anna Gil, University of Massachusetts Medical School

4:45 pm  
**An Atlas of the Mosquito Immune System at Single-cell Resolution (Poster # F.15)**  
Gianmarco Raddi, University of Cambridge, Sanger Institute, National Institutes of Health, University of California, Los Angeles

5:00 pm  
**Genome Editing of Long-term Human Hematopoietic Stem Cells for X-linked Severe Combined Immunodeficiency (Poster #F.14)**  
Mara Pavel-Dinu, Stanford University

### Immuno-oncology: Wild West of Immunology Yerba Buena 10 & 11, Lower Level

Chairs: Tania Watts, PhD, University of Toronto; Lawrence Fong, MD, University of California, San Francisco

3:15 pm  
**In Vitro and in Vivo Pharmacodynamic Profile of DV281, a TLR9 Agonist, in Development as an Inhalational Therapeutic for Lung Cancer (Poster # F.87)**  
Sariah Kell, Dynavax Technologies

3:30 pm  
**Augmentation of a Novel Adenoviral Vaccine Strategy by Checkpoint Inhibitors (Poster # F.4)**  
Erika J. Crosby, Duke University

3:45 pm  
**Convertible CAR T Cells Provide Dose Control of Activity and Targeting Flexibility (Poster # F.6)**  
Kaman Kim, Xyphos Inc.

4:00 pm  
**Tmem176b is a Checkpoint in IL-1 $\beta$ -dependent Tumor Immunity (Poster # F.96)**  
Sofia Russo, Institut Pasteur de Montevideo

**4:15 pm**  
**Engineering Antigen-specific T Cells from Human Pluripotent Stem Cells (Poster # F.21)**  
 Linda T. Vo, University of California, San Francisco

**4:30 pm**  
**MicroRNA-23a Plays an Essential Role in Graft-versus-host Disease (Poster # F.11)**  
 Xiaoli Nie, Duke University

**4:45 pm**  
**Boosting Anti-tumor Response by Conferring Cysteine Autonomy to T Cells (Poster # F.8)**  
 Melanie Lancien, Université de Nantes

**5:00 pm**  
**Using Synthetic Biotic™ Medicines to Activate Innate and Adaptive Immunity and Drive Antitumor Immune Response (Poster # F.23)**  
 Dan Leventhal, Synlogic

**3:15 pm – 5:15 pm**  
**Principles of Flow Cytometry for Immune Monitoring Course**

**Nob Hill CD, Lower Level**

Chairs: J. Philip McCoy, PhD, National Heart, Lung, and Blood Institute, National Institutes of Health; Holden Maecker, PhD, Stanford University

Sponsored by



**3:15 pm**  
**Simoa Assays on Single Sorted Cytokine+ Cells**  
 J. Philip McCoy, PhD, National Heart, Lung, and Blood Institute, National Institutes of Health

**4:15 pm**  
**Panel Discussion: Update on Gating Guidelines**  
 Panelists: J. Philip McCoy, PhD, National Heart, Lung, and Blood Institute, National Institutes of Health; Holden Maecker, PhD, Stanford University; Janet Staats, BS, Duke University; Anagha Divekar, PhD, BioLegend

**5:30 pm – 5:40 pm**

**State of FOCIS**

**Yerba Buena 8, Lower Level**

Jeffrey Bluestone, PhD, University of California, San Francisco; FOCIS President

**5:40 pm – 6:25 pm**

**Keynote Address: Taming a Colossal Giant: The Human Allograft Response**

Megan Sykes, MD, Columbia University

**Yerba Buena 8, Lower Level**

Chair: Laurence Turka, MD, Third Rock Ventures

**6:25 pm – 7:30 pm**

**Exhibit and Poster Reception**

**Yerba Buena 9, Lower Level**

**Network with attendees while visiting exhibits and posters with authors present. Complimentary light hors d'oeuvres & wine served.**

Sponsored by



# CANCER RESEARCH IS COMPLICATED

**Connect the Dots  
with BioLegend's**

**biolegend.com/cancer**

## Immuno-Oncology Research Tools

**Flow Cytometry Antibodies** for Immunotherapy Monitoring

**TotalSeq™** Antibody-Oligonucleotide Conjugates for Proteogenomics Profiling

**Veri-Cells™** Lyophilized Control Cells for Flow Cytometry

**GolnVivo™** Pathogen-free Biofunctional Antibodies

**Flex-T™** MHC Tetramers to Identify Antigen-Specific Cells

**MojoSort™** Magnetic Cell Separation System

**LEGENDplex™** Multiplex Assays for the Quantification of Soluble Biomarkers

**Recombinant Proteins** for Bioassays

**Phospho-specific Antibodies** for the Characterization of Protein Activation States

BioLegend is ISO 13485:2003 Certified



World-Class Quality | Superior Customer Support | Outstanding Value

Tel: 858.768.5800  
**biolegend.com**  
 08-0067-17



## Saturday, June 23

7:30 am – 3:00 pm

Registration Desk Open

South Registration Desk, Lower Level

8:00 am – 9:30 am

### Immunodeficiency

Yerba Buena 8, Lower Level

Chair: Jonathan Maltzman, MD, PhD, Stanford University

Sponsored by



8:00 am

**Autoimmunity, Autoinflammation, and Immunodeficiency: What Do We Learn from Monogenetic Traits?**

Bodo Grimbacher, MD, University Medical

Center Freiburg

8:30 am

**Genetic Defect of Immunity to EBV**

Alain Fischer, MD, PhD, Collège de France

9:00 am

**Primary Immunodeficiency**

Jennifer M. Puck, MD, University of California, San Francisco

9:30 am – 10:00 am

Networking Break

Yerba Buena 9, Lower Level

10:00 am – 11:30 am

### Allergy

Yerba Buena 8, Lower Level

Chair: Kari Nadeau, MD, PhD, Stanford University

10:00 am

**Immune Heterogeneity in Severe Steroid-refractory Asthma**

Anuradha Ray, PhD, University of Pittsburgh

10:30 am

**Early Life Environmental Exposure, Allergies and Asthma**

James Gern, MD, University of Wisconsin, Madison

11:00 am

**Mast Cells: Primary, Secondary, or Redundant Roles in Immunity**

Stephen Galli, MD, Stanford University

11:30 am – 1:00 pm

Lunch Break

Delegates on their own for lunch

1:00 pm – 2:45 pm

### New Mechanisms for Old Players: Complement

Yerba Buena 10 & 11, Lower Level

Chair: William Robinson, MD, PhD, Stanford University

1:00 pm

**Complement: Taming the Hydra for Therapeutic Benefit**

Michael Holers, MD, University of Colorado, Denver

1:25 pm

**Abstract Presentation: Human Memory CD8 T Cell Effector Potential is Epigenetically Preserved During In Vivo Homeostasis (Poster # F.30)**

Ben Youngblood, St Jude Children's Research Hospital

1:40 pm

**Endosome-based Signaling by Complement Membrane Attack Complexes**

Dan Jane-Wit, MD, PhD, FACC, RPVI, Yale University

2:05 pm

**Abstract Presentation: Complement Induces Inflammasome Assembly in IFN- $\gamma$ -primed Human Endothelium: Mechanisms and Consequences for Allograft Rejection (Poster # F.32)**

Catherine Xie, BS, MPhil, Yale University

2:20 pm

**C1q in Health and Disease - Roles Outside the Complement System**

Marina Botto, FMedSci, Imperial College London

### Terminating Inflammation

Yerba Buena 12 & 13, Lower Level

Chair: Terri Laufer, MD, University of Pennsylvania

1:00 pm

**To Ubiquitinate or To Deubiquitinate, That is the Question**

Dan Kastner, MD, PhD, National Institutes of Health

1:25 pm

**Bronchopulmonary Dysplasia: a Failure to Repair or Too Much Repair**

Steven Ziegler, PhD, Benaroya Research Institute at Virginia Mason

1:40 pm

**Lung Fibrosis and Atypical Monocyte**

Shizuo Akira, MD, PhD, Osaka University

2:05 pm

**A Novel IgG-IL2 Mutein to Selectively Activate T Regulatory Cells**

Annalisa D'Andrea, PhD, Roche

2:20 pm

**Abstract Presentation: Caspase-1 Laden Extracellular Vesicles from Cystic Fibrosis Lungs Activate Inflammasome Signalling in Neutrophils and Epithelial Cells (Poster # F.31)**

Osric Anthony Forrest, BSc, Emory University

### Trainee Networking Session

Trainee Networking Session: Discovering Your Path

Yerba Buena 14 & 15

1:00pm – 2:45pm



## Speaker, Organizer and Contributor Disclosure Index

It is the policy of FOCIS to ensure balance, independence, objectivity and scientific rigor in all educational activities. All faculty members participating in FOCIS-sponsored activities are required to disclose to FOCIS and the audience any real or potential conflict of interest that may have a direct bearing on the subject matter they are presenting. This pertains to relationships with pharmaceutical companies, device manufacturers or other corporations whose products or services are related to the subject matter of the presentation topic. The intent of this policy is not to prevent a speaker with a potential conflict of interest from making a presentation. It is intended that any potential conflict should be identified openly so that the audience members may form their own judgments about the presentation with full disclosure of the facts. Presentations which provide information in whole or in

part related to non-approved uses for drug products and/or devices must clearly acknowledge the unlabeled indications or the investigative nature of their proposed uses to the audience. Speakers who plan to discuss non-approved uses for commercial products and/or devices must disclose this intent to the FOCIS audience.

The following presenters have indicated a relationship in which the context of their presentations could be perceived by some as a real or apparent conflict of interest, but do not consider that it will influence their presentations. If a presenter is not listed, he or she had no relationship to disclose. The number following each company name represents the specific relationship from the key below.

**Bar-Or, Amit:** Sanofi-Genzyme (1), Biogen Idec (1), Novartis (1), Atara Therapeutics (1), Magenta (1), EMD/Merck-Serono (1), Receptos-Celgene (1), Roche-Genentech (1)

**Bluestone, Jeffrey A.:** Juno (1, 4, 6)

**Coussens, Lisa:** Acerta Pharma, LLC (6), CellSignaling Technologies (1), Deciphera Pharmaceuticals, LLC, Janssen Research & Development, LLC (6), Roche Glycart AG (6), Syndax Pharmaceuticals Inc. (1, 6)

**Crowe, Jr., James E.:** CompuVax (1), IDBiologics (4), Meissa Vaccines (1), PaxVax (1), Pfizer (1), Sanofi (1, 6), Takeda (1)

**D'Andrea, Annalisa:** Roche (2)

**Galli, Stephen:** Enable Biosciences (1, 5)

**Grogan, Jane:** Genentech (2)

**Guillonnet, Carole:** TxCell (1, 5, 6)

**Jane-Wit, Dan:** AbbVie Pharmaceutical Research and Development (6)

**Mackall, Crystal:** Adaptimmune LLC (1), Adricity (1), Pfizer (1), Roche (1), TPG (1), Unum Therapeutics (1), Vor Pharmaceuticals (1)

**Payne, Aimee S.:** Novartis (5), Tycho Therapeutics, Inc. (4, 5)

**Puck, Jennifer M.:** InVita (2), Up-To-Date (5)

**Ribas, Antoni:** Amgen (1), Merck (1), Novartis (1), Roche-Genentech (1)

**Wargo, Jennifer A.:** Astra Zeneca (1), Binational Science Foundation (6), GSK (1), Illumina (1), Merck (1), MRA (6), Novartis (1), Parker Institute (6), Roche-Genentech (1), SU2C (6)

**Yuan, Jianda:** Merck (2, 4)

**Key:** 1 – Consultant / Advisor, 2 – Employee, 3 – Lecture Fees, 4 – Equity / Owner, 5 – Patents/Royalty, 6 – Grant Support

# FOCIS 2018 Exhibitors

## Acknowledgements

FOCIS gratefully acknowledges the support that allows FOCIS to fulfill its mission to foster interdisciplinary approaches to both understand and treat immune-based diseases, and ultimately to improve human health through immunology.

## Organization

10x Genomics

Arcus Biosciences

Audentes

BioLegend

Cellular Technology Ltd.

Cytobank

Immudex USA, LLC

Immune Epitope Database  
& Analysis Resources (IEDB)

iRepertoire

JPT Peptide Technologies GmbH

Myriad RBM

Precision for Medicine

ProlImmune

Promega

Qognit

Science Immunology

StemCell Technologies, Inc.

Tessa Therapeutics

Thermo Fisher Scientific

## Booth

104

118

325

103

116

301

300

114

112

313

315

200

305

317

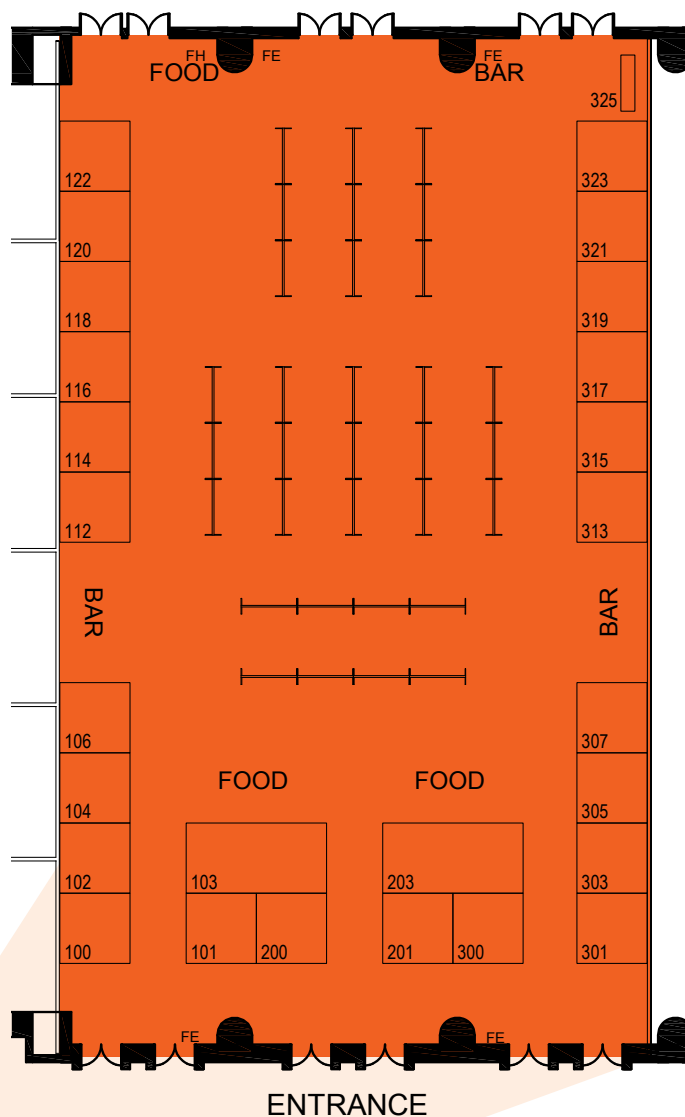
102

106

201

203

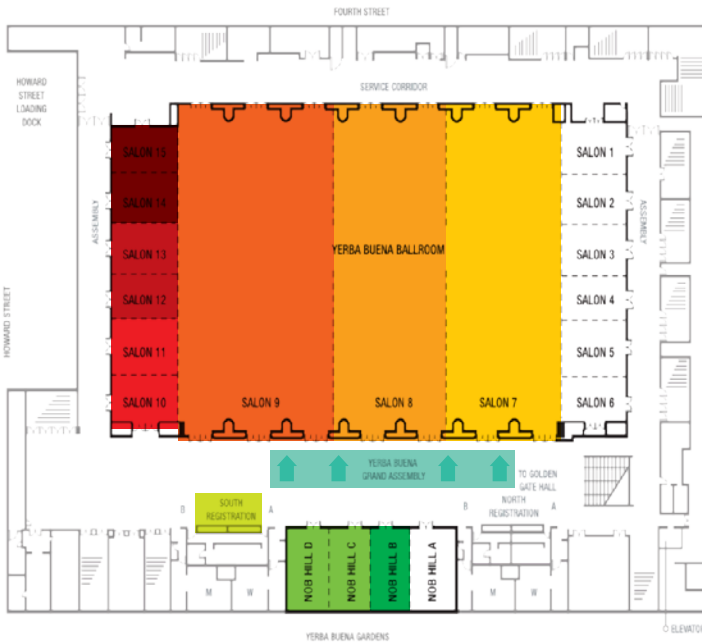
307





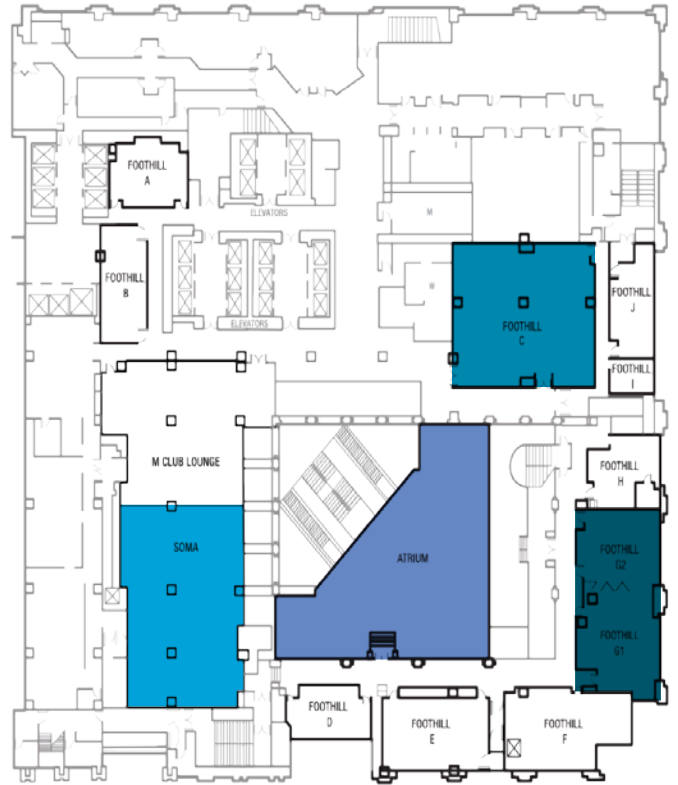
# Hotel Maps *(Hotel Maps are also available to view in the mobile app)*

## LOWER B2 LEVEL



- Yerba Buena 7
- Yerba Buena 8
- Yerba Buena 9
- Yerba Buena 10 & 11
- Yerba Buena 12 & 13
- Yerba Buena 14 & 15
- Yerba Buena Grand Assembly
- Nob Hill B
- Nob Hill CD
- South Registration Desk

## SECOND LEVEL



- SoMa
- Atrium
- Foothill C
- Foothill G

## PACIFIC (FOURTH FLOOR)



- Pacific I

## B2 LEVEL



- Golden Gate A

# Using the FOCIS Events Conference App



## Make the Most of Your On-Site Experience!



### View the Agenda

View the full schedule and easily find the sessions that you want to attend by using the browse by menu.



### Visit Exhibitors

View exhibitors' profiles and easily find their booth on the interactive floor plan.



### Create Your Schedule

Attendees can schedule sessions and personal items, then sync with their own calendars!



### Social Features

Attendees can view and communicate with other app users, speakers, and exhibitors.

\*Download before you go! On-Site WiFi service can affect the functionality of the app.

## 1. Download the FOCIS Events App



Search for "FOCIS Events" in the Apple App Store or Google Play Store.

INSTALL and OPEN the app then "SEARCH" for FOCIS 2018."

CLICK to launch.



Search for an Event

## 2. Login to the FOCIS 2018 App.

To start using the app, click "Create Account" and enter your name and email address to create an account and get logged in.

Did you create an account using the conference website? Click "Login" and enter the credentials that were emailed to you.



## 3. Take notes during a presentation

Browse the event information and create a personal schedule by selecting the star next to presentation titles. These favorited presentations can now be found under "My Schedule." Click the "Take Notes" button in the bottom nav and begin typing. Access your notes and print them out by clicking the "Online Personal Summary" in the hamburger menu.

### No mobile device? No Problem.

As long as you have an internet connection, you can view the schedule on your laptop via this link:

<https://www.eventscribe.com/2018/FOCIS>



International Archives of  
**Allergy and  
Immunology**

New Editor-in-Chief:

**Hans-Uwe Simon**, Bern

[www.karger.com/iaa](http://www.karger.com/iaa)



Journal of **Innate  
Immunity**

Editors-in-Chief:

**Heiko Herwald**, Lund

**Arne Eggesten**, Lund

[www.karger.com/jin](http://www.karger.com/jin)



K118200

With immediate effect:  
no page or color charges,  
no charges for supplementary material

**KARGER**



Creating a world free from immune diseases. **That's our vision.**

At Janssen, we like to dream big. And our hope for immune and inflammatory diseases is no exception.

Through science and collaboration, we look to transform how diseases like Crohn's disease, ulcerative colitis, rheumatoid arthritis, lupus and psoriasis are treated today—and prevented tomorrow.

We dream of a future free of the pain and challenges for the approximately one in 10 people worldwide living with these diseases. We are relentless in our pursuit to advance science and deliver breakthrough medicines to make a difference in people's lives.

But bringing forward new solutions isn't enough. We want to shorten the journey from diagnosis to treatment. And through our education and access programs, we're here to help forge that path.

We are Janssen. We collaborate with the world for the health of everyone in it.

Learn more at [www.janssen.com](http://www.janssen.com)

**janssen**  **Immunology**  
PHARMACEUTICAL COMPANIES OF 



# High Resolution Profiling of Adaptive Immune Context and Repertoire

## The Chromium Single Cell Immune Profiling Solution

simultaneously examines hundreds to tens of thousands of T and B cells on a cell-by-cell basis

- Profile lymphocytes to detect rare full-length V(D)J transcripts and cell type sub-populations
- Measure T cell receptor, B cell immunoglobulin, and 5' gene expression from the same sample
- Enrich for paired, full length V(D)J sequences



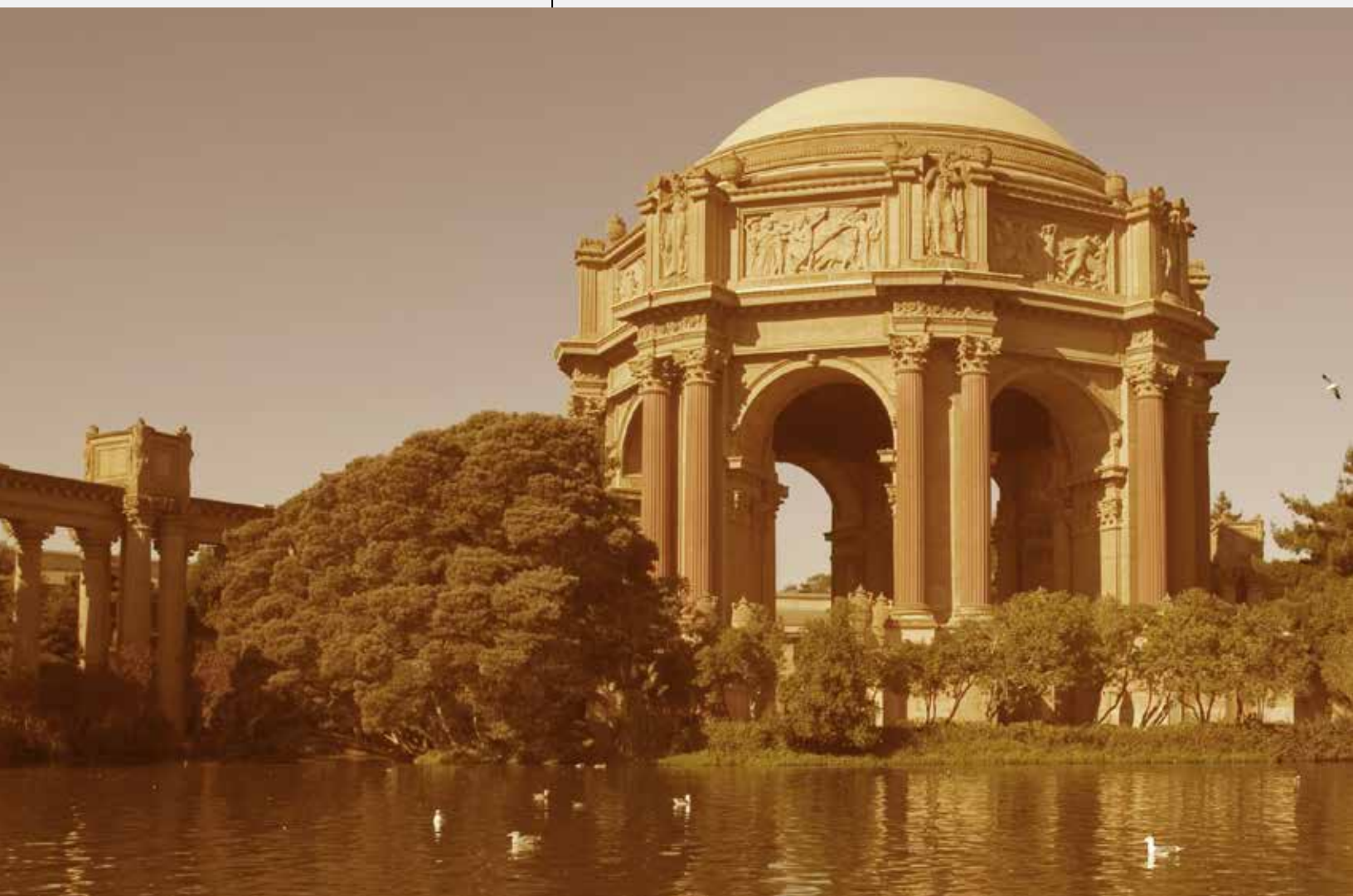
### SEE OUR POSTER

Thurs, June 21, 2018  
6:15 – 7:30pm

### *Analysis of Infiltrating B Cell Populations in the Tumor Microenvironment Using Single Cell Transcriptomics*

Category: Immune monitoring

Poster ID: T.100



# SOLVING THE SOLID TUMOR CHALLENGE

Learn more about Tessa's Virus-Specific T cell (VST) platform – one of the first cell therapies to show success against solid tumors.



## Broad Antigen Specificity

Polyclonal population of VSTs recognize multiple viral antigens<sup>1</sup>



## Proven Solid Tumor Penetration

Complete and partial responses observed in multiple solid tumor indications<sup>1,2</sup>



## Long-Term Persistence

Long-term persistence over 10 years demonstrated by gene-marked VSTs<sup>3</sup>

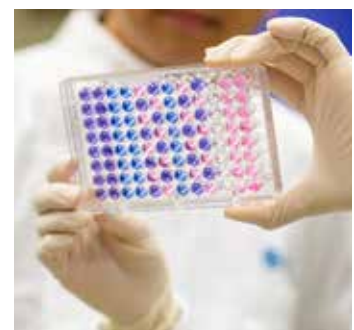


## Minimal Toxicity

No Grade 3 and Grade 4 toxicities observed<sup>1,2,3</sup>



**Effective tumor response mimics core aspects of the body's natural, anti-viral immunity**



## References:

<sup>1</sup> Chia WK et al. Mol Ther 2014

<sup>2</sup> Louis CU et al. J Immunother 2010

<sup>3</sup> Heslop H et al. Blood 2010

Visit Tessa Therapeutics at FOCIS 2018



[www.tessatherapeutics.com](http://www.tessatherapeutics.com)



# SAVE THE DATE

# FOCIS<sup>®</sup>



2019

# BOSTON

# JUNE 19-21

BOSTON MARRIOTT  
COPLEY PLACE

