

# KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

## Biology of B Cell Responses (Q4)

**Scientific Organizers:** Hedda Wardemann, Michael G. McHeyzer-Williams and Michel C. Nussenzweig

*Supported by the Directors' Fund*

## Prophylactic and Therapeutic Antibodies (Q3)

**Scientific Organizers:** Margaret Karow and Neil Stahl

**February 9-14, 2014 • Keystone Resort • Keystone, Colorado, USA**

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*Abstract & Scholarship Deadline: October 9, 2013 / Abstract Deadline: November 14, 2013 / Discounted Registration Deadline: December 10, 2013*

### SUNDAY, FEBRUARY 9

### MONDAY, FEBRUARY 10

#### Keynote Address (Q3)

**Joseph Miletich**, Amgen, USA

*Antibody Therapeutic Indications: Expanding beyond Cancer and Inflammatory Diseases*

#### Keynote Address (Q4)

**Jason G. Cyster**, HHMI/University of California, San Francisco, USA  
*Lymphocyte Migration*

#### Novel Antibody Therapy for Pain (Q3)

**Mark Brown**, Pfizer, USA

*Overview of Analgesic Efficacy and Safety of Tanezumab, a Monoclonal Antibody Targeting Nerve Growth Factor for Treatment of Chronic Pain*

**John A. Latham**, Alder Biopharmaceuticals, USA

*The Discovery and Development of an Anti-CGRP Antibody ALD403 for the Treatment of Migraine*

**Stephen P. Squinto**, Alexion Pharmaceuticals, Inc., USA

*Treatment of Hemolytic Diseases with Inhibitors of the Complement Cascade*

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

#### Programming B Cell Physiology (Q4)

**Barry P. Sleckman**, Washington University School of Medicine, USA  
*Pathways of Normal and Aberrant RAG Double Strand Break Repair in Developing B Cells*

**Cornelis Murre**, University of California, San Diego, USA

*Global analysis of long-range genomic interactions that orchestrate B cell fate*

**Hassan Jumaa**, Max Planck Institute for Immunobiology, Germany

*Pre B Cell Development*

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

#### Workshop 1: Crossing the Blood Brain Barrier (Q3)

##### Short Talks Chosen from Abstracts

#### Workshop 1 (Q4)

##### Short Talks Chosen from Abstracts

#### Treating Chronic Diseases of Metabolism with Antibody-Based Therapeutics (Q3)

**Neil Stahl**, Regeneron Pharmaceuticals, USA

*Reduction of LDL with the Inhibition of PCSK9 by REGN727*

**Peter Libby**, Brigham and Women's Hospital, USA

*Inflammation and Atherosclerosis: A Rationale for Antibody Treatment*

**David J. Glass†**, Novartis Institutes for Biomedical Research, USA

*Building Stronger Bodies through Antibody Treatment of Skeletal Muscle*

#### Short Talk Chosen from Abstracts

#### Self-Tolerance and Autoimmunity (Q4)

**Christopher C. Goodnow**, Australian National University, Australia

*B Cell Self-Tolerance*

**Ann Marshak-Rothstein**, University of Massachusetts Medical School, USA

*(De-)Regulation of B Cell Activation*

**Roberta Pelanda**, National Jewish Health, USA

*Positive and Negative Selection of Primary B Cells*

#### Short Talk Chosen from Abstracts

#### Poster Session 1

### TUESDAY, FEBRUARY 11

#### Tailoring Therapeutics to Meet the Demands of Prophylactic and Long Term Therapy (Q3)

**Herren Wu**, MedImmune, USA

*Engineering Biosuperiors*

**Javier Chaparro-Riggers**, Rinat/Pfizer Inc., USA

*Engineering pH-Sensitive Binding to a PCSK9 Antibody for Improved Pharmacokinetics and Efficacy*

**Tomoyuki Igawa**, Chugai Pharmaceutical, Japan

*Bispecific IgG Antibody Against FIXa and FX (ACE910) for the Treatment of Hemophilia A*

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

#### Initiating and Regulating B Cell Responses (Q4)

**Facundo D. Batista**, Cancer Research UK, London Research Institute, UK

*Dynamic Imaging of Lymphocyte Activation - From Single Molecule to Living Tissue*

**Susan K. Pierce**, NIAID, National Institutes of Health, USA

*B Cell Responses in Malaria*

**Tomohiro Kurosaki**, WPI Immunology Frontier Research Center, Osaka University, Japan

*B Cell Differentiation*

**Jeffrey V. Ravetch**, Rockefeller University, USA

*Regulating B Cell Activation*

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

#### Workshop 2 (Q4)

##### Short Talks Chosen from Abstracts

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### Workshop 3 (Q4)

#### Short Talks Chosen from Abstracts

### Overcoming Challenging Indications for Antibody Therapeutics (Q3)

**Bruce Roberts**, Genzyme Corporation, USA

*From Campath to Lemtrada: MOA and Clinical Path for the Treatment Multiple Sclerosis*

**Andreas Grauer**, Amgen, USA

*Targeting Osteoporosis: Increasing Bone Strength with Antibodies Against RANK-L and Sclerostin*

**Iain Chessell**<sup>†</sup>, MedImmune, UK

*Antibody Therapeutics in Neuroscience*

#### Short Talk Chosen from Abstracts

### B Cell Responses to Foreign Antigens (Q4)

**Antonio Lanzavecchia**, Institute for Research in Biomedicine, Switzerland

*B Cell Memory to Infection*

**Patrick C. Wilson**, University of Chicago, USA

*The Human B Cell Response to Viral Infection*

**Hedda Wardemann**, Max-Planck Institute for Infection Biology, Germany

*Talk Title to be Determined*

#### Short Talk Chosen from Abstracts

### Poster Session 2

## WEDNESDAY, FEBRUARY 12

### Prophylaxis vs. Therapeutic Treatment of Infectious Disease (Q3)

**Jaap Goudsmit**<sup>†</sup>, Crucell Holland B.V., Netherlands

*Vaccines vs. Antibody Therapy for the Treatment of Infectious Disease*

**Jeanine Wiener-Kronish**, Massachusetts General Hospital, USA

*Treatment of Pseudomonas aeruginosa Infection with Antibody Therapeutics*

**Deborah C. Molrine**, University of Massachusetts Medical School, USA

*Antibody Mixtures: Treating Clostridium with an Antibody Combination*

**JoAnn Suzich**, MedImmune, USA

*A Novel Multi-Mechanistic Monoclonal Antibody for Treating P. aeruginosa Infections*

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

### Regulating B Cell Immunity (Q4)

**Marc K. Jenkins**, University of Minnesota Medical School, USA

*Origins of CD4+ Memory T Cells*

**Michael G. McHeyzer-Williams**, The Scripps Research Institute, USA

*Regulating B Cell Immunity*

**Carola G. Vinuesa**, Australian National University, Australia

*Selection of Memory B Cells*

**Shane Crotty**, La Jolla Institute for Allergy and Immunology, USA

*T Cell Help to B Cells: Differentiation and Function of Follicular Helper CD4 T Cells (T<sub>fh</sub>)*

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

### Workshop 2: Smallerbody and Polyclonal Antibody Approaches (Q3)

#### Short Talks Chosen from Abstracts

### Workshop 4 (Q4)

#### Short Talks Chosen from Abstracts

### Workshop 5 (Q4)

#### Short Talks Chosen from Abstracts

### In vivo Induction of Therapeutic Antibodies for Prophylactic Treatment of Disease (Q3)

**Peter M. Palese**, Mount Sinai School of Medicine, USA

*The Next Generation of Anti-Influenza Antibody Inducing Vaccines*

**Daniel Zagury**<sup>†</sup>, Neovacs SA, France

*Active and Passive Anticytokine Immune Therapies: Current Status and Development*

**Ronald G. Crystal**, Weill Medical College of Cornell University, USA

*Viral Vectors as Platforms for Anti-Addiction Vaccines*

**Ira Mellman**, Genentech, Inc., USA

*Antibody Mediated Antigen Delivery for Vaccine Antigens to Dendritic Cells*

### Germinal Center Biology (Q4)

**David M. Tarlinton**, Walter and Eliza Hall Institute of Medical Research, Australia

*B Cell Responses*

**Mark J. Shlomchik**, Yale University School of Medicine, USA

*Germinal Center Selection and the Development of Memory B and Plasma Cells*

**Michel C. Nussenzweig**, HHMI/Rockefeller University, USA

*Germinal Center Biology*

#### Short Talk Chosen from Abstracts

### Poster Session 3

## THURSDAY, FEBRUARY 13

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### Generation of Diversity (Joint)

**Max D. Cooper**, Emory University, USA  
*Immune System Ontogeny and Phylogeny*

**David G. Schatz**, Yale University School of Medicine, USA  
*Targeting of V(D)J Recombination and Somatic Hypermutation*

**Cristina Rada**, MRC Laboratory of Molecular Biology, UK  
*Ig Gene Mutagenesis*

**Frederick W. Alt**, Boston Children's Hospital, USA  
*Mechanisms of CSR and SHM*

**Short Talk Chosen from Abstracts**

### Workshop 3: Off-Target Activities of Antibodies (Q3)

**Short Talks Chosen from Abstracts**

### Workshop 6 (Q4)

**Short Talks Chosen from Abstracts**

### What We've Learned from Antibody Treatment of Inflammation (Q3)

**Marc Feldmann**, University of Oxford, UK  
*Antibody Therapy of Rheumatoid Arthritis: Getting Closer to a Cure*

**Thomas A. Waldmann**, National Institutes of Health, USA  
*T-Cell Cytokine Receptors: Targets for Monoclonal Antibody Mediated Treatment of Lymphoma and Autoimmune Diseases*

**Stephen T. Holgate**, Southampton General Hospital, UK  
*Treating Asthma with Antibody Therapeutics*

**Short Talk Chosen from Abstracts**

### B Cell Cancer Biology (Q4)

**Klaus Rajewsky**<sup>†</sup>, Max Delbrück Center for Molecular Medicine, Germany  
*B Cell Immune Regulation*

**Louis M. Staudt**, NCI, National Institutes of Health, USA  
*Therapies Targeting Pathological Signaling in B Cell Lymphomas*

**Riccardo Dalla-Favera**, Columbia University, USA  
*Human Germinal Center B Cell Tumors*

**Short Talk Chosen from Abstracts**

### FRIDAY, FEBRUARY 14