

KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

Tissue Fibrosis and Repair: Mechanisms, Human Disease and Therapies (Z4)

Scientific Organizers: Shelia M. Violette, Neil C. Henderson, Benjamin D. Humphreys and Melanie Koenigshoff

Supported by the Directors' Fund

Resolution of Inflammation (Z3)

Scientific Organizers: Carla V. Rothlin, Kodi S. Ravichandran, Ashley W. Seifert and Gabrielle Fredman

June 12-16, 2022 • Keystone Resort • Keystone, CO, USA

Supported by the Directors' Fund

Scholarship Deadline: March 1, 2022 / Abstract Deadline: March 15, 2022 / Discounted Registration Deadline: April 12, 2022

SUNDAY, JUNE 12

Arrival and Registration

MONDAY, JUNE 13

Welcome and Keynote Address (Z4)

Scott L. Friedman, Icahn School of Medicine at Mount Sinai, USA
Advances in the Field of Fibrosis: Linking our Understanding of Injury and Repair Mechanisms to the Development of Novel Therapies

Welcome and Keynote Address (Z3)

Yasmine Belkaid, NIAID, National Institutes of Health, USA
Commensal Specific T Cell in Tissue Repair Responses

Regulation of Fibrosis by Altering Senescence and Aging (Z4)

Anne Brunet, Stanford University, USA
Heterogeneity in Old Fibroblasts is Linked to Variability in Reprogramming and Wound Healing

Ana Maria Cuervo, Albert Einstein College of Medicine, USA
Selective Autophagy and Aging in Fibrosis

David Lagares, Massachusetts General Hospital/Harvard Medical School, USA
Novel Therapeutic Targets to Modulate Fibroblast Senescence and Apoptosis in Fibrotic Disease

Short Talk(s) Chosen from Abstracts

Rethinking Myeloid Cells in Resolution, Repair and Regeneration II (Z3)

Kodi S. Ravichandran, University of Virginia, USA
Can We Chat and Resolve This? Metabolite-Based Communication between Myeloid Cells and Others

Elina I. Zuniga, University of California, San Diego, USA
pDCs in the Resolution of Inflammation and Induction of Repair Responses in Viral Infection

Andrés Hidalgo, Fundación Centro Nacional de Investigaciones Cardiovasculares Carlos III, Spain
Macrophages Network Keep a Healthy Heart

Short Talks Chosen from Abstracts

Fibroblast Diversity in Fibrotic Disease (Z4)

Rachel C. Chambers, University College London, UK
Dampening Critical Signaling Nodes that Drive Fibrosis

Alison Simmons, Weatherall Institute of Molecular Medicine, UK
Structural Remodeling of the Human Colonic Mesenchyme in Inflammatory Bowel Disease

Neil C. Henderson, University of Edinburgh, Queen's Medical Research Institute, UK
Spatiotemporal Regulation of Liver Fibrosis

Short Talk(s) Chosen from Abstracts

Rethinking Myeloid Cells in Resolution, Repair and Regeneration II (Z3)

Ashley W. Seifert, University of Kentucky, USA
Macrophage Heterogeneity during Musculoskeletal Regeneration in Spiny Mice

Will Wood, University of Edinburgh, UK
Drosophila Hemocytes in Tissue Repair and Regeneration

Benedicte Chazaud, Université Claude Bernard Lyon, France
Myeloid Cells in Muscle Repair and Regeneration

Short Talks Chosen from Abstracts

Poster Session 1

TUESDAY, JUNE 14

Stromal Cells Spanning Inflammation to Resolution (Joint)

Christopher D. Buckley, University of Birmingham, UK
Fibroblast Heterogeneity in Inflammation and Tissue Damage

Valerie Horsley, Yale University, USA
Myofibroblast Proliferation and Heterogeneity in Skin Repair

Andreas Ramming, University of Erlangen-Nuremberg, Germany
Regulation of Fibroblast Polarization in Tissue Fibrosis

Carla V. Rothlin, Yale University, USA
Integration of Cell Death Sensing in Tissue Repair Responses

Short Talks Chosen from Abstracts

Using Spatial Transcriptomics to Define Pathways Regulating Tissue Injury and Fibrosis (Z4)

Rafael Kramann, RWTH Aachen University, Germany
Spatial Transcriptomics Define Pathways Regulating Myocardial and Kidney Fibrosis

Naftali Kaminski, Yale University School of Medicine, USA
Cell-Based Precision Medicine in Pulmonary Fibrosis: The Future is Now

Orit Rozenblatt-Rosen, Genentech, USA
Atlases as Roadmaps to Understanding Disease

Short Talk(s) Chosen from Abstracts

Interface of Inflammation, Resolution and Disease (Z3)

Nicola L. Harris, Monash University, Australia
Emerging Concepts on Type 2 Immunity in Homeostasis, Helminth Infections and Tissue Repair

Ira Tabas, Columbia University, USA
Inflammation Resolution in Atherosclerosis

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Bruce D. Levy, Brigham and Women's Hospital, USA
Dysregulated Inflammation Resolution Mechanisms in Lung Infection and Asthma

Short Talks Chosen from Abstracts

Poster Session 2

WEDNESDAY, JUNE 15

Epithelial Injury, Repair and Fibrosis (Z4)

Benjamin D. Humphreys, Washington University, USA
Failed Epithelial Repair after Injury and Fibrosis: A Multimodal Single Cell Analysis

Melanie Königshoff, University of Colorado Denver, USA
Reprogrammed Epithelial Cells Modify the ECM Niche in Pulmonary Fibrosis

Purushothama Rao Tata, Duke University School of Medicine, USA
Epithelial Cell Plasticity Associated with Lung Repair and Regeneration in Fibrosis

Anna Greka, Harvard Medical School, USA
Targeting Toxic Proteinopathy to Treat Progressive Fibrosis

Speaker to be Announced

Short Talk(s) Chosen from Abstracts

Neuroimmune Interactions in Resolution of Inflammation (Z3)

Daniel Mucida, Rockefeller University, USA
Neuroimmune Interactions in the Resolution of Intestinal Inflammation

Speaker to be Announced

Jonathan Kipnis, Washington University School of Medicine, USA
Advantageous Brain Drain: Lymphatics of the Brain and its Communication with the Immune System

Phillip Popovich, Ohio State University, USA
Resolution of Inflammation in Spinal Cord Injury

Short Talks Chosen from Abstracts

Emerging Concepts in Inflammation and Tissue Repair (Joint)

Judith Campisi, Buck Institute for Research on Aging, USA
Cellular Senescence in Tissue Repair and Regeneration

Gabrielle Fredman, Albany Medical Center, USA
New Mechanisms for Specialized Pro-Resolving Mediators in Atherosclerosis and Aging

Florent Ginhoux, Singapore Immunology Network, Singapore
Macrophage Heterogeneity in Tissue Repair

Short Talks Chosen from Abstracts

Poster Session 3

THURSDAY, JUNE 16

Translational Prognostic and Diagnostic Biomarker Strategies (Z4)

Christine Kim Garcia, Columbia University Medical Center, USA
Genetic Markers of Susceptibility and Prognosis in Pulmonary Fibrosis

Gisli Jenkins, University of Nottingham, UK
Advances in Biomarkers in Pulmonary Fibrosis (Stratification and Surrogate Efficacy Markers)

Andrzej S. Krolewski, Joslin Diabetes Center, USA
Circulating Proteins as Biomarkers of Progressive Kidney Disease

Peter Caravan, Harvard Medical School, Massachusetts General Hospital, USA
Boston Use of Non-Invasive Imaging to Monitor Progression of Fibrosis in Disease

Short Talk(s) Chosen from Abstracts

Translating Inflammation and Resolution to Therapies (Z3)

Bart N. Lambrecht, VIB, Ghent University, Belgium
It is Crystal Clear: Antibody-Based Resolution of Pathogenic Crystals in the Asthmatic Lung

Charles N. Serhan, Brigham and Women's Hospital, USA
The Resolution of Inflammation: Origins and New Directions

Shelia M. Violette, Q32 Bio, USA
Targeting Complement in Chronic Inflammatory Disease

Speaker to be Announced

Short Talks Chosen from Abstracts

Fibrosis: Advances in the Development of Novel Therapies (Z4)

Thomas A. Wynn, Pfizer, USA
Major Advances in the Development of Novel Therapies for Tissue Repair and Fibrotic Disease

Matthew Thomas, Boehringer Ingelheim, Germany
Lessons Learned with Nintedanib Regulating Fibrosis across Multiple Diseases

Tim P. Rolph, Akero Therapeutics, USA
Efruxifermin a Long-Acting FGF21 Analog as a Therapy for NASH

Short Talk(s) Chosen from Abstracts

New Approaches to Regeneration (Z3)

Ophir Klein, University of California, San Francisco, USA
Regenerative Strategies of the Intestinal Epithelium

Didier Stainier, Max Planck Institute for Heart and Lung Research, Germany
Macrophages in Heart Regeneration

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Edward Botchwey, Georgia Tech & Emory University, USA

Lipid Mediators in Regenerative Immunotherapy

Short Talks Chosen from Abstracts

Meeting Wrap-Up: Outcomes and Future Directions (Organizers)
(Z4)

Meeting Wrap-Up: Outcomes and Future Directions (Organizers)
(Z3)

FRIDAY, JUNE 17

Departure