FINAL PROGRAM

2ND INTERNATIONAL CONFERENCE ON

CELL AND EXPERIMENTAL BIOLOGY

JULY 12-14, 2021 | VIRTUAL

WRITE TO US

organizer@cebconference.com

www.cellexpbiol.unitedscientificgroup.org
About the Organizer

2nd International Conference on Cell and Experimental Biology (CEB-2021) is organized by United Scientific Group (USG), a nonprofit organization with tax-exempt status under Section of Internal Revenue Code 501(c)(3) of the United States of America.

USG has a history of successfully organizing and managing, scientific meetings, symposiums and panel discussions ranging from 50 to 350 participants, throughout the United States of America and internationally.

USG is led by a group of senior scientists as the board of directors, who are committed to work together and contribute their best services to the scientific community by supporting scientific meeting organization and open access content publication.

Our vision is to create various scientific networking platforms by organizing conferences to bridge the gap between research and business for the translation of scientific discoveries and innovative thoughts into implementable solutions and products which benefit humankind.

We believe in creating a platform where knowledge exchange and growth of scientific wisdom can take place by connecting and sharing valuable inputs and opinions of practitioners and academicians from across the globe. This will help address the rising scientific queries and provide solutions for a smarter and more advanced future.

Through the years, USG Conferences has hosted Nobel Laureates, National Academy Members, industry and academic stalwarts, innovators, and entrepreneurs, who interact with the audience through a talk and during the networking sessions.

Reasons to Attend CEB-2021

Learn
CEB-2021 includes the most influential pioneers, speakers, keynotes, informative panels and some of the best networking you’ll find in the field of cell and experimental biology. The conference is unique in its approach of encouraging a dialogue between speakers and delegates through its well-planned agenda with the series of talks, poster presentations, panel discussions and networking events that will keep participants engaged in learning.

Discover
The conference aims to provide timely, evidence-based information that helps Physiologists, Cellular Biologists, Anatomists, Biotechnologists, Pathologists and other allied experts from academic institutions, government agencies, societies, non-profit organizations and the industry.

Connect
CEB-2021 connects life sciences and biomedical researchers from all over the globe to network and share cutting-edge research that leads to new breakthroughs and career advancement. This meeting is focused to deliver top notch scientific lectures in the fields of anatomy, biochemistry, cell and molecular biology, investigative pathology, pharmacology, and physiology.

Previous Edition

CEB-2020 virtual conference was held on 9-11 December, and it was a great success! The conference has brought together more than 140 speakers from leading institutes and organizations having a diverse subject expertise to deliver intensive and thought-provoking presentations.

Scientific Sessions
The conference is focused to deliver top notch scientific lectures in the fields biochemistry, cell and molecular biology, investigative pathology, pharmacology, and physiology. The subject areas may include, but are not limited to the following domains:

→ Biochemistry and Molecular Biology
→ Cell and Developmental Biology
→ Investigative Pathology
→ Pharmacology and Toxicology
→ Epithelial and Mucosal Pathobiology
→ Cell and Tissue Injury
→ Synthetic Biology
→ Experimental Biology and Disease Physiology
→ Animal Physiology
→ Cell Signaling & Cancer Biology
### Keynote Speakers

**Day 1 | July 12, 2021**

**Time: 7:50-12:15 (EST)**

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<th>7:50 - 8:00</th>
<th>Introduction</th>
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| **Mogens H. Jensen, Ph.D.**  
Professor of Complex Systems and Biophysics,  
Former President, Royal Danish Academy of Science and Letters,  
Niels Bohr Institute, University of Copenhagen, Denmark |  
**Title:** Oscillations and Chaos in p53 and NF-kB Protein Response | 8.00-8.35 |

| **Dr. Andrea Califano**  
Clyde and Helen Wu Professor of Chemical and Systems Biology, Chair, Columbia Department of Systems Biology, Director, Sulzberger Columbia Genome Center, New York, NY |  
**Title:** Network-based Elucidation and Pharmacological Targeting of Cell State Dependencies | 8.35-9.10 |

| **Kenneth A. Jacobson, Ph.D.**  
John W. Daly Distinguished Scientist, Senior Investigator and Chief, Molecular Recognition Section, Laboratory of Bioorganic Chemistry, NIDDK, National Institutes of Health, Bethesda, MD |  
**Title:** Design and Therapeutic Potential of Purinergic Receptor Ligands | 9.10-9.45 |

| **Karl Matter, Ph.D.**  
UCL Institute of Ophthalmology,  
University College London, UK |  
**Title:** Rho GTPase Signalling During Epithelial Morphogenesis and Polarization | 9.45-10.20 |

| 10:20-10:30 | Break |

| **Jorge Moscat, Ph.D.**  
Homer T. Hirst III Professor of Oncology in Pathology, Vice Chair for Experimental Pathology, Weill Cornell Medicine, Assoc. Director Meyer Cancer Center, NY |  
**Title:** Reprogramming and Heterogeneity of Tumor Associated Fibroblasts in Colorectal Cancer | 10.30-11.05 |

| **Debbie C. Thurmond, Ph.D.**  
Ruth and Robert Lanman Chair and Professor, Department of Molecular & Cellular Endocrinology, Director, Arthur Riggs Diabetes & Metabolism Research Institute, City of Hope/Beckman Research Institute, Duarte, CA |  
**Title:** SNARE Protein Regulation of Mitochondrial Structure and Function | 11.05-11.40 |

| **Stephen J. Galli, M.D.**  
Mary Hewitt Loveless, MD Professor, Professor of Pathology and of Microbiology and Immunology, Department of Pathology, Stanford Univ. School of Medicine, Stanford, CA |  
**Title:** Mast Cells and IgE Orchestrate Protective Immune Responses to Venoms and Staphylococcus aureus. Is this the “Good Side” of Allergy? | 11.40-12.15 |
Cell Signaling & Cancer Biology

Time: 12:20-19:00 (EST)

Chair: Jianming Xu (12:20 - 15:00)  
Jing Yang (15:10 - 19:00)

12:20-12.40
Speaking on
In Vivo Cell Lineage Tracing Links ERa Loss in HER2-Positive Breast Cancers to the Arising of a Highly Aggressive Breast Cancer Subtype

Jianming Xu, Ph.D.
Department of Molecular and Cellular Biology, Baylor College of Medicine, Houston, TX

12.40-13.00
Speaking on
Acetyl-CoA Synthetase 2: A Critical Linkage in Obesity-Induced Tumorigenesis in Myeloma

Jing Yang, Ph.D.
Associate Professor, Houston Methodist Cancer Center, Houston Methodist Research Institute, Houston, TX

13.00-13.20
Speaking on
Novel Therapeutic Direction in Renal Cancer

Partha Roy, Ph.D.
Associate Professor of Bioengineering and Pathology, University of Pittsburgh, Pittsburgh, PA

13.20-13.40
Speaking on
Dynamic Signaling Modulates Gene Expression and Drug Response Plasticity in Breast Cancer

Alexander E. Davies, Ph.D.
Department of Veterinary Biosciences, College of Veterinary Medicine, The Ohio State University, Columbus, OH

13:40-14:00
Break

14.00-14.20
Speaking on
Genetic and Metabolic Mechanisms of Endometrial Cancer Pathogenesis

Mike R. Wilson, Ph.D.
Department of Obstetrics, Gynecology and Reproductive Biology, College of Human Medicine, Michigan State University, Grand Rapids, MI

14.20-14.40
Speaking on
How to Treat Cancer and Cancer Metastasis with Akt Inhibitors: Lessons Learnt from Studies in Mice

Nissim Hay, Ph.D.
Distinguished UIC Professor, Assoc. Director, Basic Science, University of Illinois Cancer Center, Dept. of Biochemistry and Molecular Genetics, The University of Illinois at Chicago, Chicago, IL

14.40-15.00
Speaking on
Cancer Cell Line Identification: Assessment of Genetic Drift in Large Pharmacogenomic Datasets

Rene Quevedo, Ph.D.
University Health Network, Canada

15:00-15:10
Break
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<tr>
<td>15.10-15.30</td>
<td>Steven Zheng, Ph.D.</td>
<td>SOD1 Promotes Ribosome Biogenesis and Growth of KRAS Mutant Non-small Cell Lung Cancer</td>
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<td>15.30-15.50</td>
<td>Tuyen Dang, Ph.D.</td>
<td>XRN2-mediated Glioblastoma Invasion</td>
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<td>15.50-16.10</td>
<td>Irina Matei, Ph.D.</td>
<td>Exosomes as Biomarkers and Effectors of Tumor Progression and Metastasis</td>
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<td>16.10-16.30</td>
<td>Zhen Lu, M.D.</td>
<td>DIRAS3 Disrupts K-RAS Clustering and Signaling, Enhancing Autophagy and Response to Autophagy Inhibition</td>
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<td>16.30-16.50</td>
<td>Charles Spruck, Ph.D.</td>
<td>FBXO44/SUV39H1 Promote DNA Replication-Coupled Repetitive Element Silencing in Cancer Cells</td>
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<td>16.50-17.10</td>
<td>Debanjan Dhar, Ph.D.</td>
<td>Mechanisms of NASH and HCC Development</td>
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<td>17.10-17.20</td>
<td>Jay Desgrosellier, Ph.D.</td>
<td>Break</td>
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<tr>
<td>17.20-17.40</td>
<td>Weiwen Long, Ph.D.</td>
<td>The Activated Stem Cell State in Breast Cancer Progression</td>
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<td>17.40-18.00</td>
<td></td>
<td>Differential Roles of F-Box Proteins in Protein Degradation and Cancer Development: FBXL16 as an Antagonist of Others</td>
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Day 1 | July 12, 2021

Dionysios C. Watson, Ph.D.
Medical Oncology fellow, University Hospitals, Case Western Reserve University, Cleveland, OH

18.00-18.20

Unified Workflow for Scalable Isolation of Extracellular Vesicles from Prokaryotes and Eukaryotes

Aditya Ganju
Laboratory of Signal Transduction, Memorial Sloan Kettering Cancer Center, New York, NY

18.20-18.40

ENT1 Insertion into Ceramide-rich Platforms Functionalizes Gemcitabine Uptake

Auburn Ramsey
Department of Biological Sciences, Arkansas State University, Jonesboro, AR

18.40-19.00

The Cytoskeletal Protein CAP1 Fulfills Context-Dependent Functions in the Adhesion and Migration of Colon Cancer Cells
Day 2 | July 13, 2021

Cell Signaling & Cancer Biology

Time: 6:10-11:50 (EST)

Chairs: Angus Cameron (6:10 - 9:10)  
Sebastian Oltean (9:20 - 11:50)

Amitava Sengupta, Ph.D.
Principal Scientist, Stem Cell & Leukemia Lab, Cancer Biology Division, CSIR-Indian Institute of Chemical Biology, India  
6.10-6.30
Speaking on  
Epigenetic Insights of Mesenchymal Stromal Cell Lineage Commitments and Hematopoiesis

Alessandro Zannotti, Ph.D.
Department of Experimental and Clinical Medicine, Universita Politecnica delle Marche, Italy  
6.30-6.50
Speaking on  
Macrophages and Immune Responses in Uterine Fibroids

Angus Cameron, Ph.D.
Kinase Biology Laboratory, Barts Cancer Institute, Queen Mary, University of London, John Vane Science Centre, UK  
6.50-7.10
Speaking on  
Conserved Regulation of Myofibroblast Function by the Protein Kinase N Family in Embryogenesis and Cancer

Anthony Uren, Ph.D.
TBA  
7.10-7.30
Speaking on  
Subclonal Mutations in Lymphoma Reveal Mutation Co-Selection

Victoria Sanz-Moreno, Ph.D.
Centre for Tumour Microenvironment, Barts Cancer Institute, Queen Mary University of London, UK  
7.30-7.50
Speaking on  
New Roles of ROCK Signalling in Cancer Progression

Sebastian Oltean, Ph.D.
Associate Professor in Experimental Medicine and Therapeutics, Institute of Biomedical & Clinical Sciences, University of Exeter Medical School, UK  
7.50-8.10
Speaking on  
Modulation of Alternative Splicing as a New Therapeutic Avenue in Cancer

Johanna Laakkonen, Ph.D.
Associate Professor, University of Eastern Finland, Finland  
8.10-8.30
Speaking on  
Endothelial Crosstalk of VEGF and BMPs: A New Player in Hippo Signaling

Antoine Mathieu, Ph.D.
Institut de Recherche Interdisciplinaire en Biologie Humaine et moléculaire (IRIBHM), Université Libre de Bruxelles, Belgium  
8.30-8.50
Speaking on  
SHIP2 and its New Partners are Involved in Invadopodia Formation
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<tr>
<td>8.50-9.10</td>
<td>Ilaria Dando, Ph.D.</td>
<td>Cancer Stem Cells Undergo Metabolic Plasticity Toward the Gaining of the Quiescent State</td>
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<td>9.10-9.20</td>
<td>Ivana Kurelac, Ph.D.</td>
<td>The Effect of Respiratory Complex I Inhibition on Solid Tumor Microenvironment</td>
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<td>9.20-9.40</td>
<td>Chuan-Hsiang (Bear) Huang, Ph.D.</td>
<td>Excitability of the Ras-PI3K-ERK Signaling Network</td>
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<td>9.40-10.00</td>
<td>Marta Truffi, Ph.D.</td>
<td>Targeting Cancer-Associated Fibroblasts by FAP-Selective Ferritin Nanocages Loaded with Navitoclax</td>
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<td>10.00-10.20</td>
<td>Vanesa Fernández-Sáz, Ph.D.</td>
<td>Synergistic Mechanism of IMiDs and Proteasomal Inhibitors in Multiple Myeloma</td>
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<td>10.20-10.40</td>
<td>Asma Shaikh-Kader</td>
<td>The Effect of Photobiomodulation at 660 nm on the Levels of Cyclooxygenase 2, Interleukin-6 and Tumour Necrosis Factor-A in In Vitro Diabetic Wounded Fibroblast Models</td>
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<td>10.40-11.00</td>
<td>Mirela Sedic, Ph.D.</td>
<td>Proteomic Profiling of BRAFV600E Mutant Colon Cancer Cells Reveals the Role of Nucleophosmin in Mediating the Resistance to BRAF Inhibition by Vemurafenib</td>
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<td>11.00-11.20</td>
<td>Ioanna Sigala</td>
<td>Nuclear Translocation of SRPK1 is Associated with 5-FU Sensitivity in Cancer Cells</td>
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<td>11.20-11.40</td>
<td>Ioanna Sigala</td>
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Day 2 | July 13, 2021

9:10-9:20 Break

11:00-11:20 Break
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<th>Speaker</th>
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<th>Location</th>
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<tr>
<td>12:10-12:30</td>
<td>Yan Chun Li, Ph.D.</td>
<td>Critical Roles of Socs1 mRNA Methylation in the Control of Cytokine Storm</td>
<td>Department of Medicine, The University of Chicago, Chicago, IL</td>
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<td>12:30-12:50</td>
<td>Lin Wu, Ph.D.</td>
<td>Metabolic Plasticity Enables Microenvironment Specific Modulation of Th17 cells</td>
<td>Dan Littman Lab, Skirball Institute, New York University School of Medicine, New York, NY</td>
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<td>12:50-13:10</td>
<td>J. Arjuna Ratnayaka, Ph.D.</td>
<td>Proteinopathy in the Retinal Pigment Epithelium (RPE): Implications for Sight-loss in Old Age</td>
<td>Lecturer (Vision Sciences), Faculty of Medicine, University of Southampton, UK</td>
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<td>13:10-13:30</td>
<td>Cherng-Wen Darren Tan, Ph.D.</td>
<td>Proteoliposome-like Structure Derived from Simultaneous Evisceration and Enucleation of Cells: a Top-Down Story</td>
<td>Institute for Synthetic Bioarchitectures, Department of Nanobiotechnology, University of Natural Resources and Life Sciences, Austria</td>
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<td>13:30-13:50</td>
<td>Torres Lopez Ml, Ph.D.</td>
<td>PD1/PDL Pathway Dysregulation in Celiac Disease, and the Role for Diagnostic and as a Therapeutic Target</td>
<td>Professor, Department of Experimental Biology, University of Jaén, Spain</td>
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<td>13:50-14:10</td>
<td>Linglin Xie, Ph.D.</td>
<td>PCSK6 Plays an Important Role in Placenta Development</td>
<td>Department of Nutrition, Texas A&amp;M University, College Station, TX</td>
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<td>14:10-14:30</td>
<td>Magdalena Cal, Ph.D.</td>
<td>Yeast, Saccharomyces cerevisiae, as a Model for Research of the Molecular Activity of Potential Drugs</td>
<td>Department of Mycology and Genetics, Institute of Genetics and Microbiology, University of Wroclaw, Poland</td>
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<td>14:30-14:50</td>
<td>Ursula Fearon, Ph.D.</td>
<td>Rheumatoid Arthritis CD14+ Monocytes and Tissue Macrophages Display Metabolic and Inflammatory Dysfunction, A Phenotype that Precedes Clinical Manifestation of Disease</td>
<td>Professor of Molecular Rheumatology, Trinity Biomedical Sciences Institute, Trinity College Dublin, the University of Dublin, Ireland</td>
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**Chair:**
- Ursula Fearon (12:10 - 17:00)
- Yong Zhou (17:00 – 18:50)

**Day 2 | July 13, 2021**

**Technical Session**

**Experimental Biology and Disease Physiology**

**Time:** 12:10 - 18:50 (EST)
Day 2 | July 13, 2021

Arshi Khanam, Ph.D.
Division of Clinical Care and Research, Institute of Human Virology, University of Maryland School of Medicine, Baltimore, MD

PD-1 Expressing CD8+CXCR5+ T cells Constitute Effector Rather Than Exhaustive Phenotype in Chronic Hepatitis B Patients

Constantinos Mikelis, Ph.D.
Assistant Professor, Department of Pharmaceutical Sciences, Texas Tech University Health Sciences Center, Jerry H. Hodge School of Pharmacy, Amarillo, TX

The Impact of Endothelial RhoA on Tumor Cell Transmigration and Metastasis

Greg Baker, Ph.D.
Laboratory of Systems Pharmacology, Department of Systems Biology, Harvard Medical School, Boston, MA

Experimental and Computational Tools for Acquiring and Analyzing Fluidics and Microscopy-based Single-cell Data

Joerg Waldhaus, Ph.D.
Department of Otolaryngology–Head and Neck Surgery, Kresge Hearing Research Institute, University of Michigan, Ann Arbor, MI

Mapping the Regulatory Landscape of Auditory Hair Cells from Single-cell Multi-omics Data

Karin Ardon-Dryer, Ph.D.
Assistant Professor, Department of Geosciences, Atmospheric Science Group, Texas Tech University, Lubbock, TX

The Impact of Clay Minerals on Lung Cells—an Analysis at the Single Cell Level

Patrick Ganzer, Ph.D.
Senior Research Scientist, Battelle Memorial Institute, Columbus, OH

Using Neurotechnology and Artificial Intelligence to Treat Disease

Yong Zhou, Ph.D.
Associate Professor, Department of Medicine, University of Alabama at Birmingham, AL

Mechano-niche in Lung Repair/Regeneration Following Injury

Masakazu Kamata, Ph.D.
Associate Professor, Department of Microbiology, University of Alabama at Birmingham, AL

Humanized Mouse Models for Cancer-Immunotherapy

17:40-17:50 Break
Day 2 | July 13, 2021

**Luigi Donato, Ph.D.**
Department of Biomedical and Dental Sciences and Morphofunctional Imaging, Division of Medical Biotechnologies and Preventive Medicine, University of Messina, Messina, Italy

*Retinal Ribbon Synapses and Phototransduction Gene Network: How Ion Channels-Encoding Genes Mutations could impair Retinal Biology*

17.50-18.10

**Yuliang Xie, Ph.D.**
Assistant Professor, Roy J. Carver Department of Biomedical Engineering, University of Iowa, IA

*Microfluidic Methods in Study of Cystic Fibrosis Lung Disease*

18.10-18.30

**Lin Liu**
Xie Lab, Department of Nutrition, Texas A&M University, College Station, TX

*Osr1 Deletion in the Macrophages Promoted Hepatic Inflammation and Nonalcoholic Steatohepatitis (NASH) Progression*

18.30-18.50
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<tr>
<td>Huaizong Shen, Ph.D.</td>
<td>Structural Basis for the Modulation of Human KCNQ4 by Retigabine and Linopirdine</td>
<td>6.30-6.50</td>
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<td>Jie Zheng, Ph.D.</td>
<td>Interneuron Accumulation of tau Protein Impairs Adult Hippocampal Neurogenesis</td>
<td>6.50-7.10</td>
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<td>Zhuoyi Song, Ph.D.</td>
<td>Multiscale ‘Whole-Cell’ Models to Study Neural Information Processing – New Insights from Fly Photoreceptor Studies</td>
<td>7.10-7.30</td>
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<td>Jin Young Kim, Ph.D.</td>
<td>How Circadian Clocks Work for a Brain Repair System: Demyelination Regulates BMAL1 to Signal Adult Neural Stem Cells to Enhance Remyelination</td>
<td>7.30-7.50</td>
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<td>Charlie Arber, Ph.D.</td>
<td>Familial Alzheimer’s Disease Mutations in PSEN1 Lead to Premature Neurogenesis in Human Stem Cells</td>
<td>7.50-8.10</td>
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<td>Zubair Ahmed, Ph.D.</td>
<td>Inhibiting the DNA Damage Pathway to Promote Recovery from CNS Injury</td>
<td>8.10-8.30</td>
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<td>Concetta Scimone, Ph.D.</td>
<td>Involvement of Imprinted Genes in Molecular Mechanism Resulting in Pediatric Brain Arteriovenous Malformation</td>
<td>8.30-8.50</td>
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**Chair:** Marielle Afanassieff (6:30 - 9:00)
Wanli Smith (9:10 - 13:40)
Day 2 | July 13, 2021

**Nicoletta Plotegher, Ph.D.**
Senior Post-doctoral Fellow - Physiology, Genetics and Behavior Unit Department of Biology, University of Padova, Italy

8.50-9.10

Speaking on
Lysosomes Shape Neuronal Ca\(^{2+}\) Handling

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**Michal Izrael, Ph.D.**
VP of R&D, Neurodegenerative Diseases Department at Kadimastem Ltd, Israel

9.20-9.40

Speaking on
Safety and Efficacy of First-In-Human Intrathecal Transplantation of Human Astrocytes (Astrorx®) in ALS Patients: Phase I/IIa Clinical Trial Results

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**Channa Bao, Ph.D.**
Biogen, Cambridge, MA

9.40-10.00

Speaking on
Mechanisms of Regulation and Diverse Activities of Tau-Tubulin Kinase (TTBK) Isoforms

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**Fengquan Zhou, Ph.D.**
Professor, Department of Orthopedic Surgery and Department of Neuroscience, Johns Hopkins University School of Medicine, Baltimore, MD

10.00-10.20

Speaking on
Epigenetic Regulation of CNS Axon Regeneration

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**Jeffrey Henderson, Ph.D.**
Division of Biomolecular Science, Leslie Dan Faculty of Pharmacy, University of Toronto, Canada

10.20-10.40

Speaking on
Apoptotic/Necroptotic Regulatory Interactions in Cortical Stroke

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**Julio Morales, Ph.D.**
Department of Neurosurgery, Stephenson Cancer Center, University of Oklahoma Health Sciences Center, Oklahoma City, OK

10.40-11.00

Speaking on
RNA:DNA Hybrids Mediate DSB Repair Pathway Choice

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**Karl Fernandes, Ph.D.**
Full Professor, Research Centre on Aging, and Department of Medicine, Faculty of Medicine and Health Sciences, Université de Sherbrooke, Canada

11.00-11.20

Speaking on
Correction of Aberrant Brain Fatty Acid Metabolism in Alzheimer’s Disease

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**Mingyao Ying, Ph.D.**
Department of Neurology, Hugo W. Moser Research Institute at Kennedy Krieger, JHU School of Medicine, Baltimore, MD

11.20-11.40

Speaking on
Human iPS Cell-derived Neurons: Disease Modeling and Therapeutic Development
Speaking on Tauopathy-associated tau Modifications Selectively Impact Neurodegeneration and Mitochondrial Health in a Novel C. elegans Single-copy Transgenic Model

Sanjib K. Guha, Ph.D.
Department of Anesthesiology, University of Rochester Medical Center, Rochester, NY

Time: 11.40-12.00

Break

12:00-12:20

Mutant TMEM230 Induced Neurodegeneration and Impaired Axonal Mitochondrial Transport

Wanli Smith, Ph.D.
Assoc. Professor, Director of Cellular Neurobiology Laboratory, Neurobiology Division, Department of Psychiatry, Johns Hopkins University School of Medicine, Baltimore, MD

Time: 12.20-12.40

Single-cell Dissection in Brain Samples and Organoids

Yoshiaki Tanaka, Ph.D.
Assistant Professor, Maisonneuve-Rosemont Hospital Research Center (CRHMR) Department of Medicine, Faculty of Medicine University of Montreal, Canada

Time: 12.40-13.00

Modeling Brain Disorders Using Human Induced Pluripotent Stem Cell-derived Mini Brains in Culture Dish

Xiaowen Bai, Ph.D.
Associate Professor, Medical College of Wisconsin, Department of Cell Biology, Neurobiology & Anatomy, Milwaukee, WI

Time: 13.00-13.20

Negative Regulation of TLR4 Receptor Signaling in Mast Cells: Participation of Opioid, Nicotinic and Cannabinoid Receptors

Zyanya Espinosa-Riquer
Center for Research and Advanced Studies, Mexico

Time: 13.20-13.40

Break

13:40-14:00

Biochemistry and Molecular Biology

Time: 14:00-18:30 (EST)

Chair: Jun Huang

Nuclear Condensates and Gene Expression Regulation - Probing the Connection Using Live-Cell Imaging Approaches

Yaron Shav-Tal, Ph.D.
Vice Dean, The Mina & Everard Goodman Faculty of Life Sciences & Nano-medicine Research Center, Institute of Nanotechnology and Advanced Materials, Bar-Ilan University, Israel

Time: 14.00-14.20

Structural Insight of Androgen Receptor-coactivator Complexes

Zhao Wang, Ph.D.
Assistant Professor, Department of Biochemistry and Molecular Biology, Department of Molecular and Cellular Biology, Baylor College of Medicine, Houston, TX

Time: 14.20-14.40
Yuqi Wang  
Professor of Biology at Saint Louis University, St. Louis, MO  
Speaking on  
Activation of a MAPK Hog1 by DNA Damaging Agent and Its Potential Role

Yong Teng, Ph.D.  
Associate Professor, Department of Hematology and Medical Oncology, Emory University School of Medicine, Winship Cancer Institute of Emory University, Atlanta, GA  
Speaking on  
FGF19/FGFR4 Signaling Axis Confines and Switches the Role of Melatonin in Head and Neck Cancer Metastasis

Parisa Kalantari, Ph.D.  
Research Assistant Professor, Department of Immunology, Tufts University, Boston, MA  
Speaking on  
NLRP3 and AIM2 Inflammasome-Triggered Pathogenic Th17 Immune Response Promotes Severe Immunopathology in Schistosomiasis

Ye Zheng, Ph.D.  
Associate Professor, Nomis Center for Immunobiology and Microbial Pathogenesis, Salk Institute for Biological Studies, La Jolla, CA  
Speaking on  
A Genome-wide CRISPR Screen Reveals a Role for the BRD9-containing Non-canonical BAF Complex in Foxp3 Expression and Regulatory T Cell Function

Brian Russo, Ph.D.  
Assistant Professor, Department of Immunology and Microbiology University of Colorado Anschutz Medical Campus, Aurora, CO  
Speaking on  
Shigella flexneri Disruption of Cellular Tension Promotes Intercellular Spread

16:20-16:30 Break

Joyce Lo, Ph.D.  
Biogen, Cambridge, MA  
Speaking on  
Highly Efficient Neuronal Gene Knockout In Vivo by CRISPR-Cas9 via Neonatal Intracerebroventricular Injection of AAV in Mice to Expedite Drug Target Validation

Allen Seylani, Ph.D.  
Postbaccalaureate Fellow, National Heart, Lung and Blood Institute, NIH, USA  
Speaking on  
GCN5L1 Interacts with WHAMM and KIF5B To Regulate Autolysosome Tubulation

Saptarshi Roy, Ph.D.  
Department of Basic and Translational Sciences, University of Pennsylvania, School of Dental Medicine, Philadelphia, PA  
Speaking on  
Mas-related G Protein-Coupled Receptor-X2 and Adaptor Protein β-arrestin2 Differentially Regulates Mast Cell-Mediated Inflammation and Anaphylaxis

Ellen Busschers  
Department of Molecular and Cellular Biology, Baylor College of Medicine, Houston, TX  
Speaking on  
Maf1 and RNA Polymerase III Transcription Regulates Osteoblast Differentiation and Bone Biology
Jun Huang, Ph.D.
Assistant Professor, Pritzker School of Molecular Engineering, University of Chicago, Chicago, IL

Seon Hee Kim, Ph.D.
Department of Bio-Analytical Science, University of Science & Technology, South Korea

Lattice Light-Sheet Microscopy Multi-dimensional Analyses (LaMDA) of T-Cell Receptor Dynamics Predict T-Cell Signaling States

Detection of the Small Oligonucleotide Products of Nucleotide Excision Repair in Cultured Cells and Human Skin
Day 3 | July 14, 2021

Biochemistry and Molecular Biology

**Time: 7:00 - 17:15 (EST)**

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<td>Carl White, Ph.D.</td>
<td>Utilizing Improved BRET Approaches to Understand the Complexities Endogenous GPCR Function</td>
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<td>7.20-7.40</td>
<td>Tobias Bald, Ph.D.</td>
<td>Loss of T Cell Activating Receptors; A Novel Immune Escape Mechanism</td>
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<td>7.40-8.00</td>
<td>Jochen Dobner, Ph.D.</td>
<td>Unconventional Roles of GABARAP-Type Proteins in Surface Protein Trafficking</td>
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<td>8.00-8.20</td>
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<td>Mycobacterial Cell Surface Adhesive Properties at the Nanoscale</td>
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<td>8.20-8.40</td>
<td>Alicia Roque, Ph.D.</td>
<td>Regulation of Histone H1 Subtypes: Lessons Learned from OMICs</td>
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<td>8.40-9.00</td>
<td>Caroline Leijonhufvud, M.D.</td>
<td>CRISPR/Cas9-Based Gene Engineering of Human Natural Killer Cells</td>
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<td>9.00-9.20</td>
<td>Ester Boix, Ph.D.</td>
<td>A Ribonuclease Secreted by Leucocytes During Infection Shows a Multifaceted Behaviour, Combining Catalytic and Antimicrobial/Antiviral Activities with Immunomodulation Properties</td>
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<td>9.20-9.40</td>
<td>Sebastian Mathea, M.D., Ph.D.</td>
<td>Structural Insights into Pseudokinase Domains</td>
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**Chairs:**
- Sebastian Mathea (07:00 - 09:40)
- Tobias Ulmer (09:50 - 12:45)
- Marco Brotto (13:00 - 15:45)
- Lan Guan (13:00 - 17:15)
Dayoung Oh, Ph.D.
Assistant Professor, Touchstone Diabetes Center, Department of Internal Medicine, UT Southwestern Medical Center, Dallas, TX

Speaking on
Revisiting PPARγ as a New Friend of GPR120 in the Treatment of Metabolic Disorders: A New Look at an Old Friend

Devanand Sarkar, Ph.D.
Professor, Department of Human and Molecular Genetics, Associate Director of Training and Education, Massey Cancer Center, Virginia Commonwealth University, Richmond, VA

Speaking on
Regulation of Nuclear Receptor Function by Astrocyte Elevated Gene-1 (AEG-1)

Francesca Storici, Ph.D.
HHMI Faculty Scholar, GRA Distinguished Cancer Scientist, Professor, Associate Chair for Graduate Affairs, School of Biological Sciences, Georgia Institute of Technology, Atlanta, GA

Speaking on
Frequency and Patterns of Ribonucleotide Incorporation Around Autonomously Replicating Sequences Mark the Division of Labor of Yeast DNA Polymerases

Juan Fuxman Bass, Ph.D.
Assistant Professor, Boston University, Biology Department, Boston, MA

Speaking on
The Role of Human Virus Transcriptional Regulators on Host Gene Expression

Tobias Ulmer, Ph.D.
Department of Physiology and Neuroscience, Zilkha Neurogenetic Institute, Keck School of Medicine, University of Southern California, Los Angeles, CA

Speaking on
Insight into Pathological Integrin \( \alpha IIb \beta 3 \) Activation from Safeguarding the Inactive State

Darya Alizadeh, Ph.D.
Assistant Research Professor, Department of Hematology and Hematopoietic Cell Transplantation, City of Hope, Duarte, CA

Speaking on
IFN\( \gamma \) is Critical for CAR T Cell Mediated Myeloid Activation and Induction of Endogenous Immunity

Jorge Genovese, Ph.D.
Leonhardt's Launchpads Irvine Inc., CA

Speaking on
Electrical Stimulation for Gene Expression Modulation and Therapeutic Proteins Production

Jürgen Wess, Ph.D.
Chief, Molecular Signaling Section, Lab. of Bioorganic Chemistry, NIDDK, National Institutes of Health, Bethesda, MD

Speaking on
Identification of GPCR Signaling Pathways as Potential Targets for Novel Antidiabetic Drugs
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12:45-13:00  Break

12:30-12:45  Speaking on
Chiara Siniscalchi, Ph.D.
Department of Environmental, Biological and Pharmaceutical Sciences and Technologies, University of Campania “Luigi Vanvitelli”, Italy
What microRNAs Could Tell us About the Human X Chromosome

13.00-13.25  Speaking on
Lan Guan, Ph.D.
Professor, Director, Center for Membrane Protein Research, Texas Tech University Health Sciences Center, Lubbock, TX
Molecular Recognition of Sugar Binding in the Melibiose Permease MelB

13.25-13.45  Speaking on
Marco Brotto, Ph.D.
George & Mary Hazel Jay Endowed Professor, Director, Bone-Muscle Research Center, University of Texas at Arlington, TX
Lipid Signaling Regulation of Skeletal Muscle Proliferation and Regeneration – Roles of PGE2

13.45-14.05  Speaking on
Nicholas Guydosh, Ph.D.
Stadtman Investigator, Laboratory of Biochemistry and Genetics, NIDDK/NIH, Bethesda, MD
Activation of the Antiviral Factor RNase L Promotes Translation Outside Coding Sequences

14.05-14.25  Speaking on
Pinghui Feng, Ph.D.
Section of Infection and Immunity, Norris Comprehensive Cancer Center, University of Southern California, Los Angeles, CA
Deamidation Shunts RelA from Mediating Inflammatory Response to Aerobic Glycolysis

14.25-14.45  Speaking on
Racheal G. Akwii
Texas Tech University Health Sciences Center, Amarillo, TX
Angiopoietin-2-induced Lymphatic Endothelial Cell Migration Drives Lymphangiogenesis Via the B1 Integrin-Rhoa-Formin Axis

14.45-15.05  Speaking on
Richard Cooley, Ph.D.
Assistant Professor (Senior Research), Department of Biochemistry & Biophysics, Oregon State University, Corvallis, OR
Evolving Genetic Code Expansion: Next Generation Technologies for Revealing Molecular Mechanisms of Oxidative Stress and Protein Nitration

15.05-15.25  Speaking on
Sang W. Park, Ph.D.
Assistant Professor, Harvard Medical School, Division of Endocrinology, Boston Children’s Hospital, Boston, MA
Molecular Mechanism of Insulin Resistance in Obesity
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**Tianmin Fu, Ph.D.**
Assistant Professor, Department of Biological Chemistry and Pharmacology, College of Medicine, The Ohio State University, Columbus, OH

**Visualizing a Sugar-coated Proton Pump**

15:45-15:55

**Wei Ying, Ph.D.**
Assistant Professor, Division of Endocrinology & Metabolism, Department of Medicine, University of California, San Diego, CA

**Tuning Insulin Sensitivity by Macrophage-produced Exosomal miRNAs**

16.15-16.35

**Wenyi Feng, Ph.D.**
Associate Professor, Department of Biochemistry and Molecular Biology, SUNY Upstate Medical University, Syracuse, NY

**FMRP Functions as an R-loop Regulator: Implications for Replication Stress-induced Global Chromosome Breakage in the Fragile X Genome**

16.35-16.55

**Yali Dou, Ph.D.**
Professor of Medicine, Professor of Biochemistry and Molecular Biology, Co-leader, Genomics and Epigenomics Regulation Program, Norris Comprehensive Cancer Center, University of Southern California, Los Angeles, CA

**Mechanism for Histone Methylation Heterogeneity**

16.55-17.15
Day 3 | July 14, 2021

Cell and Developmental Biology

Time: 7:40 - 18:10 (EST)

Chairs: Torres Lopez MI (7:40 - 9:40)
Ben Afzali (9:50 - 12:30)
Maura McGrail (12:40 - 15:20)
Xiang-Dong Fu (15:30 - 18:10)

7:40-8.00
Xiaopeng Hu
Shanghai Jiao Tong University, China
Speaking on
GAS5/miR-21 Axis as a Potential Target to Rescue ZCL-082-Induced Autophagy of Female Germline Stem Cells In Vitro

8.00-8.20
David Jackson, Ph.D.
Professor of Human Immunology, MRC Human Immunology Unit, MRC Weatherall Institute for Molecular Medicine, University of Oxford, UK
Speaking on
Leucocyte Trafficking in the Lymphatics: the Key Roles of Hyaluronan and Its Receptors During Vessel Entry

8.20-8.40
Ionel Sandovici, Ph.D.
Research Associate, Metabolic Research Laboratories, MRC Metabolic Diseases Unit, Department of Obstetrics & Gynaecology, University of Cambridge, UK
Speaking on
Novel Insights into the Regulation of Pancreas Development and Function by the Imprinted Igf2 Gene

8.40-9.00
Jan Hendrik Niess, Ph.D.
Department of Biomedicine, University of Basel and Clarunis - University Center for Gastrointestinal and Liver Diseases, Switzerland
Speaking on
GPR35-mediated TNF Production in Macrophages

9.00-9.20
Lousineh Arakelian, Ph.D.
Unite de Therapie Cellulaire, Hopital Saint-Louis, Assistance Publique - Hopitaux de Paris; Universite de Paris, Inserm U976 et CIC de Biotherapies CBT501, France
Speaking on
Self-organization and Culture of Mesenchymal Stem Cell Spheroids in Acoustic Levitation

9.20-9.40
Marielle Afanassieff, Ph.D.
Stem cell and Brain Research Institute, University of Lyon, INSERM U1208, France
Speaking on
Rabbit Pluripotent Stem Cells: Why and How to Produce Them

9:40-9:50 Break
Speaking on Unraveling the Origin and Impact of Extrachromosomal Circular DNA on Eukaryotic Genomes

Sam Keating, Ph.D.
Section for Ecology and Evolution, Department of Biology, University of Copenhagen, Denmark

Olivier Cuvier, Ph.D.
Principal Investigator/IDR-Inserm, Group leader Lab of Chromatin Dynamics, Center for Integrative Biology (CBI), CNRS - Univ. of Toulouse, France

Detecting How Chromatin Insulators and KMTs Maintain 3D Compartments and Prevent Promiscuous Long-range Contacts with Off-target Genes

Mohamed Kamal, Ph.D.
Pharmacology and Biochemistry Department, Faculty of Pharmacy, The British University in Egypt (BUE), Cairo, Egypt

Mesenchymal Stem Cells in Diabetes mellitus Treatment—Several Weapons for One Target

Alakananda Basu, Ph.D.
Professor, Department of Microbiology, Immunology & Genetics, UNT Health Science Center, Fort Worth, TX

Contrasting Roles of S6K1 and S6K2 in Breast Cancer

Sarah D. Mahan, Ph.D.
Promega Corporation, 2800 Woods Hollow Road, Madison, WI

Characterizing Mechanistic Improvements of Epigenetic PROTAC Degradation Compounds

Ben Afzali, Ph.D.
Chief, Immunoregulation Section, Kidney Diseases Branch, NIDDK, National Institutes of Health, Bethesda, MD

Transcriptional Regulation of T Cell-mediated Tissue Inflammation and Repair

Bokai Zhu, Ph.D.
Assistant Professor of Medicine, Aging Institute of UPMC, Pittsburgh Liver Research Center, Division of Endocrinology and Metabolism, Department of Medicine, University of Pittsburgh School of Medicine, Pittsburgh, PA

Unveiling “Musica Universalis” of the Cell: A Brief History of the Mammalian 12h Rhythms

Jaan Mannik, Ph.D.
Associate Professor, Department of Physics and Astronomy, The University of Tennessee, Knoxville, TN

What Triggers the Z-ring Formation in Escherichia coli?

12:30-12:40 Break
Speaking on Delivery of Functional Lysosomal Transport Proteins Via Microvesicles Derived from Baculovirus-Infected Spodoptera Cells to Cultured Fibroblasts and Ex Vivo Rabbit Cornea

Jess G. Thoene, M.D.
Active Professor Emeritus, Department of Pediatrics, Division of Pediatric Genetics, Metabolism & Genomic Medicine, University of Michigan, Ann Arbor, MI

12.40-13.00

Speaking on Sex, Mitochondria and Fat Metabolism

Karthickeyan Chella Krishnan, Ph.D.
Assistant Professor, Pharmacology & Systems Physiology, University of Cincinnati College of Medicine, Cincinnati, OH

13.00-13.20

Speaking on A Tale of TERRA and the Transcriptional Regulation of Telomeres

Kate Beishline, Ph.D.
Assistant Professor, Department of Biological and Allied Health Sciences, Bloomsburg University, Bloomsburg, PA

13.20-13.40

Speaking on The Role of Mitochondria in Hematopoietic Stem Cell Regenerative Stress

Marie-Dominique Filippi, Ph.D.
Cincinnati Children’s Hospital Research Foundation, University and Cincinnati College of Medicine, Cincinnati, OH

13.40-14.00

Speaking on Zebrafish Cre/lox Conditional Gene Alleles Generated by CRISPR/Cas9 Precision Targeted Integration

Maura McGrail, Ph.D.
Associate Professor, Department of Genetics, Development and Cell Biology, Iowa State University, Ames, IA

14.00-14.20

Speaking on Mitochondria-Associated Degradation Pathway (MAD) Function beyond the Outer Membrane

Pin-Chao Liao, Ph.D.
Department of Pathology and Cell Biology, Columbia University, New York, NY

14.20-14.40

Speaking on B Cell Engagement with HIV-1 Founder Virus Envelope Predicts Development of Broadly Neutralizing Antibodies

Samantha Townsley, Ph.D.
U.S. Military HIV Research Program, Center of Infectious Disease Research, Walter Reed Army Institute of Research, Silver Spring, MD

14.40-15.00

Speaking on Xist Attenuates Acute Inflammatory Response by Female Cells

Seena K. Ajit, Ph.D.
Associate Professor, Pharmacology & Physiology, Drexel University College of Medicine, Philadelphia, PA

15.00-15.20

15:20-15:30 Break
Speaking on: Loss of Jedi-1 Impairs Microglial Phagocytosis, Resulting in Reduced Postnatal Neurogenesis in the Subventricular Zone
Vivianne Morrison, Ph.D.
Vanderbilt University Department of Biochemistry and Vanderbilt Brain Institute, Nashville, TN

Speaking on: SRPK1-catalyzed Protamine-to-Histone Exchange in Fertilized Oocyte
Xiang-Dong Fu, Ph.D.
Distinguished Professor, Department of Cellular and Molecular Medicine, University of California, San Diego, George Palade Laboratories, La Jolla, CA

Speaking on: XX Sex Chromosome Complement Promotes Atherosclerosis in Mice
Yasir AlSiraj, Ph.D.
Assistant Professor, Department of Pharmacology and Nutritional Sciences, University of Kentucky, Lexington, KY

Speaking on: Dynamics and Regulation of Nuclear Condensates
Yi Zhang, Ph.D.
Department of Pharmacology, University of Colorado Anschutz Medical Campus, Aurora, CO

Speaking on: Lysosomes in Chromosome Segregation
Jonathan Stahl-Meyer, Ph.D.
The Danish Cancer Society Research Center, Cell Death and Metabolism, Denmark

Speaking on: Targeting Mitochondrial Metabolism to Rescue a Drosophila Model of Barth Syndrome
Deena Damschroder
Department of Physiology, Wayne State University, Detroit, MI

Speaking on: Revisiting Platelets and Toll-like Receptors (TLRs): A Spotlight on Platelet-TLRs in Acute Myocardial Infarction
Kathryn Hally, Ph.D.
Department of Surgery and Anaesthesia, The University of Otago, New Zealand

Speaking on: Knockdown of A Disintegrin and Metalloprotease 12 (ADAM12) in 3T3-L1 Cells Reduces Cell Numbers, Delays Differentiation and Increases Lipid Accumulation During Adipogenesis In Vitro
Chantal Coles, Ph.D.
Murdoch Children’s Research Institute, The Royal Children's Hospital, Australia