



UNITED Scientific
Group
A non-profit organization



CEB-2020

Scientific Program

International Conference on
Cell and Experimental Biology

Virtual Conference

December 9-11, 2020

About the Organizer

International Conference on Cell and Experimental Biology (CEB-2020) 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-2020



Learn

CEB-2020 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.

CEB-2020 Scientific Topics

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

Organizing Committee

Konstantin Khrapko, Ph.D.

Department of Biology, Northeastern University,
Boston, MA

Ergun Sahin, Ph.D.

Huffington Center on Aging,
Department of Physiology and Biophysics,
Baylor College of Medicine, Houston, TX

Torres M I, Ph.D.

Department of Experimental Biology,
University of Jaén, Jaén, Spain

Diana Rigueur, Ph.D.

Center for Craniofacial Molecular Biology,
University of Southern California, Los Angeles, CA



Connect

CEB-2020 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.

Time: 08:00 - 12:10 (EST)

Chair: Gerald W. Hart



08:00-08:30

Title: *Morphological Complexity of Biomembranes and Synthetic Cells*

Reinhard Lipowsky, Head, Department of Theory & Bio-Systems, Max Planck Institute of Colloids and Interfaces, Germany



08:30-09:00

Title: *Using Cytoskeletal Markers for Identifying and Classifying Epithelial Cells*

Israel Hanukoglu, Ph.D.

Professor of Biochemistry and Molecular Biology, Laboratory of Cell Biology, Ariel University, Israel



09:00-09:30

Title: *Genomic and Proteomic Profiling of Specific Cell Types and Cell-Cell Crosstalk in the Epididymis and Kidney*

Sylvie Breton, Ph.D., Professor of Medicine, Université Laval, Canada; Emeritus Professor, Harvard Medical School, Boston, MA; Canada Research Chair in Epithelial Dynamics of the Kidney and Reproductive Organs



09:30-10:00

Title: *Nutrient Regulation of Signaling and Gene Expression by O-GlcNAc*

Gerald W. Hart, Ph.D., University of Georgia, Athens, GA

10:00-10:10

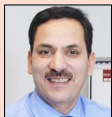
Coffee Break



10:10-10:40

Title: *Moving Misfolded Proteins in and out of the Cell*

Yihong Ye, Ph.D., Laboratory of Molecular Biology, NIDDK, NIH, Bethesda, MD



10:40-11:10

Title: *Next Generation of Gene Edited and Engineered Cellular Therapies for Cancer*

Khalid Shah, MS, Ph.D., Director, Center for Stem Cell Therapeutics and Imaging, Harvard Medical School, Boston, MA



11:10-11:40

Title: *Epigenetic Modifications in the Regulation of Developmental Timing and Rate by Thyroid Hormone Receptor*

Yun-Bo Shi, Ph.D., Section on Molecular Morphogenesis, NICHD/DIR, Bethesda, MD



11:40-12:10

Title: *Excitable Networks in Directed Cell Migration*

Peter N. Devreotes, Ph.D., Johns Hopkins University School of Medicine, Baltimore, MD

CEB20-P1 Generation and Characterization of Isoform-Specific p63^{-/-} Mice

Filipa Pinto, Boston University Henry M. Goldman School of Dental Medicine, Boston, MA

CEB20-P2 Role of the Ubiquitin Ligase ITCH in Clathrin-Mediated Endocytosis of the Epidermal Growth Factor Receptor

Annie Angers, Department of Biological Sciences, University of Montreal, Canada

Riham Ayoubi, Department of Biological Sciences, University of Montreal, Canada

CEB20-P3 Angiogenic Factors Serve as Regulators and Predictors of Immune Reconstitution After Umbilical Cord Blood Transplantation in Adults

Anthos Christofides, Department of Medicine, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA

CEB20-P4 Comparison of Acetate Overflow between E. coli BL21 and E. coli K12 Strains using Different Carbon and Nitrogen Sources

Gema Lozano Terol, Department of Biochemistry and Molecular Biology (B) and Immunology, Faculty of Chemistry, University of Murcia, Spain

Biochemistry and Molecular Biology**Technical Session 1****Time: 13:20 - 18:50 (EST)****Chair: Margarida Barroso****13:20-13:40 Dual Readout of Regulatory Information is a Common Feature of Transcriptional Silencers**

Martha L. Bulyk, Professor of Medicine and Pathology, Co-Chair, Harvard Biophysics Graduate Program, Brigham & Women's Hospital and Harvard Medical School, MA

13:40-14:00 Gene Interactions in Drosophila without Contacts and Chemical Intermediaries

Nina B. Fedorova, Institute of Cytology and Genetics, Siberian Department of Russian Academy of Sciences, Russian Federation

14:00-14:20 Spatiotemporal Organization of the E. coli Transcriptome: Insights into RNA-mediated Regulation

Orna Amster-Choder, Professor, Incumbent of Dr. Jacob Grunbaum Chair in Medical Sciences, Department of Microbiology and Molecular Genetics, The Hebrew University Faculty of Medicine, Israel

14:20-14:40 Vascular Colonization as a Trigger for Meningococcal Purpura fulminans

Guillaume Duménil, Institut Pasteur, Unité "Pathogenèse des infections vasculaires", France

14:40-15:00 Highly Selective Cleavage of TH2-promoting Cytokines by the Human Mast Cell Chymase and the Trypsase, Indicating a Potent Negative Feedback Loop on TH2 Immunity

Lars Hellman, Professor, Uppsala University, Department of Cell and Molecular Biology, Sweden

15:00-15:20 The apoM/S1P Axis and Its Effects on Triglyceride Metabolism

Christina Christoffersen, Associated Professor, Department of Biomedical Sciences, University of Copenhagen, Denmark

15:20-15:40 cAMP Signaling in Nanodomains

Andreas Bock, Group Leader, Max Delbrueck Center for Molecular Medicine, Berlin, Germany

15:40-16:00 Expression Profile of Sporadic Cerebral Cavernous Malformations Endothelial Cells by Whole RNA Sequencing

Concetta Scimone, Department of Biomedical, Dental, Morphological and Functional Imaging Sciences, University of Messina, Italy

16:00-16:20 Unraveling the Molecular Bases of Human Congenital Disorders of Glycosylation using Fission Yeast as Experimental Model
Cecilia D'Alessio, Cell Glycobiology and Yeast Applied Genetics Laboratory Instituto de Biociencias, Biotecnología y Biología traslacional (iB3), Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires, Argentina

16:20-16:30 Coffee Break

16:30-16:50 Smurf1-mediated Non-proteolytic Ubiquitination Protects the Liver from Steatosis
Ying E. Zhang, Senior Investigator, Laboratory of Cellular & Molecular Biology, National Cancer Institute, NIH, Bethesda, MD

16:50-17:10 The Role of Hepatic TAZ in Metabolic Regulation
Ji Miao, Assistant Professor of Pediatrics, Division of Endocrinology, Boston Children's Hospital, Harvard Medical School, Boston, MA

17:10-17:30 In Vivo Functional Analysis of Non-Conserved Human Long Non-coding RNA Metabolic Regulators
Haiming Cao, Investigator, Cardiovascular Branch, National Heart, Lung and Blood Institute, National Institutes of Health, Bethesda, MD

17:30-17:50 Excess Dietary Carbohydrate Affects Mitochondrial Integrity in Brown Adipose Tissue
Ning Wu, Van Andel Research Institute, Grand Rapids, MI

17:50-18:10 Easy and Efficient Delivery of Cells to the Bone Marrow in Mice
Takahiro Kuchimaru, Assistant Professor, Center for Molecular Medicine, Jichi Medical University, Japan

18:10-18:30 Activation of the EGF Receptor by Ligand Binding and Oncogenic Mutations: the Rotation Model
Ichiro Maruyama, Professor, Okinawa Institute of Science and Technology Graduate University, Japan

18:30-18:50 Tells of the Co-operative Actions of TDP-43 and FMRP in Spine Transport/Translation of Specific mRNAs
Pritha Majumder, Institute of Molecular Biology, Academia Sinica, Taiwan

Time: 08:00 - 18:30 (EST)

Chair: Robin Ketteler, Bennett Van Houten and Tuyen Dang

- 08:00-08:20 Nuclear Interacting SET Domain Protein 1 in Erythroid Differentiation and Leukemogenesis**
Samantha Tauchmann, University Children's Hospital Basel, Department of Biomedicine, University of Basel, Switzerland
- 08:20-08:40 Specific RNA Binding of BICC1 and Its Regulation**
Daniel B. Constam, Associate Professor, Ecole Polytechnique Fédérale de Lausanne (EPFL), School of Life Sciences, Switzerland
- 08:40-09:00 The Impact of Magnesium(II) Ions and Sugar Puckering on the Formation of Tertiary Contacts of Nucleic Acids - Fundamentals in (self)splicing and Potentially Reverse Transcription**
Richard Borner, Laserinstitut Hochschule Mittweida (LHM), University of Applied Sciences Mittweida, Germany
- 09:00-09:20 Cell-type-specific Genomics Reveals Histone Modification Dynamics in Mouse Meiosis**
Gabriel Lam, Genetics and Biochemistry Branch, National Institute of Diabetes, Digestive and Kidney Diseases (NIDDK), National Institutes of Health (NIH), Bethesda, MD
- 09:20-09:40 Structural and Biochemical Studies on Trimethoprim Resistant DHFR from Pathogenic Bacteria**
Dennis L. Wright, Professor of Medicinal Chemistry, Department of Pharmaceutical Sciences, University of Connecticut, Groton, CT
- 09:40-10:00 Ribonucleotides Embedded in Genomic DNA are not Random and Show Specific Preferences of Incorporation**
Francesca Storici, Professor, Associate Chair for Graduate Affairs, School of Biological Sciences, Georgia Institute of Technology, Atlanta, GA
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- 10:00-10:10 Coffee Break**
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- 10:10-10:30 Comprehensive Mapping of the Human Cytokine Gene Regulatory Network**
Juan Fuxman Bass, Assistant Professor, Boston University, Biology Department, Boston, MA
- 10:30-10:50 Uncovering the Role of Non-canonical MicroRNA Processing During Erythropoiesis**
Daniel Cifuentes, Assistant Professor of Biochemistry, Boston University School of Medicine, Boston, MA
- 10:50-11:10 Chemoptogenetic-Mediated Singlet Oxygen Damage to Mitochondria Causes Telomere Dysfunction**
Bennett Van Houten, Richard M. Cyert Professor of Molecular Oncology, Department of Pharmacology and Chemical Biology, Co-Leader, Genome Stability Program, UPMC Hillman Cancer Center, Associate Director for Basic Research, Aging Institute, University of Pittsburgh, Pittsburgh, PA
- 11:10-11:30 Enhancing Chemotherapy with Translesion Synthesis Inhibitors**
Pei Zhou, Department of Biochemistry, Duke University School of Medicine, Durham, NC
- 11:30-11:50 Developing Targeted Therapies for Malignant Brain Tumors: Non-coding RNA and Gene Editing**
Anna M. Krichevsky, Associate Professor of Neurology, Brigham and Women's Hospital, Dana-Farber/Harvard Cancer Center, HMS Initiative for RNA Medicine, Harvard Medical School, Boston, MA
- 11:50-12:10 Aptamer-based Imaging of Polyisoprenoids Applied to the Malaria Parasite**
Maria Belen Cassera, Associate Professor, Biochemistry & Molecular Biology Department, Center for Tropical and Emerging Global Diseases (CTEGD), University of Georgia, Athens, GA
- 12:10-12:30 Deciphering the Metabolic Outliers in Genetic Diseases**
Min Ni, Assistant Professor, Genetic and Metabolic Disease Program, Children's Research Institute, UT Southwestern Medical Center, Dallas, TX
- 12:30-12:50 Regulation of Diacylglycerol Kinases by Membrane Shape**
José Carlos Bozelli, Jr., Department of Biochemistry and Biomedical Sciences, McMaster University, Health Sciences Centre, Ontario, Canada
- 12:50-13:10 Adnp and 14-3-3 Regulate Neuronal Morphogenesis in the Developing Cortex**
Kazuhito Toyooka, Assistant Professor, Department of Neurobiology and Anatomy, Drexel University College of Medicine, Philadelphia, PA

- 13:10-13:30 Protein Oligomerization Monitored Using Photoswitching Anisotropy Homo-FRET**
George H. Patterson, Section on Biophotonics, National Institute of Biomedical Imaging and Bioengineering, National Institutes of Health, Bethesda, MD
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- 13:30-14:00 Lunch Break**
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- 14:00-14:20 Polyunsaturated Fatty Acid Desaturation is a Mechanism for Glycolytic NAD⁺ Recycling**
Eugene P. Rhee, Nephrology Division and Endocrine Unit, Massachusetts General Hospital, Boston, MA
- 14:20-14:40 Non-proteolytic Ubiquitination in the Regulation of Mitochondria-Nuclear Communication**
Valentina Perissi, Associate Professor of Biochemistry, Boston University School of Medicine, Co-Director Adipose Biology and Nutrition Metabolism Core, Boston Nutrition Obesity Center, Boston, MA
- 14:40-15:00 Regulation of Pain and Opioid Sensitivity by the Skin - the Role of Hair Color and UV Light**
Lajos V. Kemény, Department of Dermatology, Cutaneous Biology Research Center, Massachusetts General Hospital, Harvard Medical School, Boston, MA
- 15:00-15:20 RNA-binding Protein HuR Restrains Inflammatory Cytokine Production in Innate Cells**
Shiguang Yu, Assistant Professor, Department of Neurology, Thomas Jefferson University, Philadelphia, PA
- 15:20-15:40 Use of a Tethered Ligand Signaling Mechanism by Polycystin-1**
Robin L. Maser, Associate Professor, Department of Clinical Laboratory Sciences, Department of Biochemistry and Molecular Biology, and The Jared Grantham Kidney Institute at the University of Kansas Medical Center, Kansas City, KS
- 15:40-16:00 Developing Dual-Targeted Nanoparticles to Circumvent the Resistance to Src Inhibition in Head and Neck Cancer**
Yong Teng, Department of Oral Biology & Dx Sciences, DCG, Georgia Cancer Center, Augusta University, GA
- 16:00-16:20 RNA Stabilization via Thio-phosphate and Gene Regulation**
Elizabeth Frayne, University of Phoenix, Phoenix, AZ; Frayne Consultants, La Mirada, CA
- 16:20-16:40 Elucidating XRN2-mediated DNA Repair in Glioblastoma Multiforme**
Tuyen Dang, Department of Neurosurgery and Stephenson Cancer Center at OU Health Science Center, Oklahoma City, OK
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- 16:40-16:50 Coffee Break**
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- 16:50-17:10 RNA Mango Fluorescence Technology for RNA Detection**
Peter Unrau, Professor, Department of Molecular Biology and Biochemistry, Simon Fraser University, Canada
- 17:10-17:30 Adaptor Protein Regulates Adipocyte Differentiation by Modulating a PDGFR α -Nrf2-PDGFR α Autocrine Loop**
Nida Haider, Division of Experimental Medicine, McGill University Health Centre Research Institute, McGill University, Montreal, Quebec, Canada
- 17:30-17:50 Control of Membrane Trafficking Decisions by Ubiquitin**
Robert C. Piper, Roy J. Carver Professor, Department of Molecular Physiology and Biophysics, Associate Dean for Research, Carver College of Medicine, University of Iowa, Iowa City, IA
- 17:50-18:10 Novel Mechanism of Manganese Homeostasis Regulation**
Ningning Zhao, Principal Investigator, Department of Nutritional Sciences, The University of Arizona, Tucson, AZ
- 18:10-18:30 A Translational Model for Venous Thromboembolism: MicroRNA Expression in Hibernating Black Bears**
Suraj Panjwani, Research Fellow, University of Massachusetts Medical School, Worcester, MA

Cell and Developmental Biology

Technical Session 2

Time: 07:00 - 17:00 (EST)**Chair: Arieh Moussaieff, Christopher J. Westlake and Zachary F. Burton**

- 07:00-07:20 Diagnostic Exploitation of the Circulating Rare Cell Population. Systemic Cytology for Systemic Pathologies**
Stefan Schreier, School of Bioinnovation and Bio-based Product Intelligence, Faculty of Science, Mahidol University, Thailand
- 07:20-07:40 Lipid Desaturation Regulates Self-renewal and Differentiation of Pluripotent and Trophoblast Stem Cells**
Arieh Moussaieff, Assistant Professor, Head, Laboratory of Cell Metabolism, Institute for Drug Research, Faculty of Medicine, Hebrew University of Jerusalem, Israel
- 07:40-08:00 Functional Genomics of Cystic Fibrosis: Illuminating Pathways and Therapies**
Margarida D. Amaral, Professor, Director of BioISI - Biosystems & Integrative Sciences Institute Faculty of Sciences, University of Lisboa, Portugal
- 08:00-08:20 A Conserved Notochord Enhancer Controls Pancreas Development in Vertebrates**
Jose Carlos Bessa, IBMC (Instituto de Biologia Molecular e Celular) / i3S, Universidade do Porto, Portugal
- 08:20-08:40 How Repeats can Influence the Life of a Cell: the Case of FA-SAT!**
Raquel Maria Garcia Dos Santos Chaves, Professor of University of Trás-os-Montes and Alto Douro (UTAD), Head of the Group Cytogenomics and Animal Genomics @CytAGLab, Principal Investigator of Biosystems & Integrative Sciences Institute (BioISI), Portugal
- 08:40-09:00 Identification of Novel Post-translational Mechanisms in Autophagy**
Robin Ketteler, MRC Laboratory for Molecular Cell Biology, University College London, UK
- 09:00-09:20 Endocytosis of GM-CSF Receptor β is Essential for Signal Transduction Regulating Mesothelial-Macrophage Transition**
Viktória Zsiros, Department of Anatomy, Histology and Embryology, Semmelweis University, Hungary
- 09:20-09:40 Kinesin-1 Regulates Antigen Cross-presentation through the Scission of Tubulations from Early Endosomes in Dendritic Cells**
Gaël Ménasché, Laboratory of Molecular Basis of Altered Immune Homeostasis, INSERM U1163, Imagine Institute, France
- 09:40-10:00 Matrix Metalloproteinases in Age-Related Macular Degeneration**
Luis Garcia Onrubia, Clinical University Hospital of Valladolid; Institute of Applied Ophthalmobiology, University of Valladolid, Spain
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- 10:00-10:10 Coffee Break**
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- 10:10-10:30 Rescuing Chromatin Bridges from Breaking in Cytokinesis**
George Zachos, Associate Professor of Cell Biology, Group Leader, Department of Biology, University of Crete, Greece
- 10:30-10:50 Cellular Delivery of α -Lipoic Acid by the Na⁺/Multivitamin Transporter**
Matthias Quick, Associate Professor of Neurobiology, Department of Psychiatry and Center for Molecular Recognition, CUIMC New York, NY
- 10:50-11:10 Ciliogenesis Membrane Organization Requirements Revealed by Super Resolution Fluorescence Microscopy and 3-D Volume Electron Microscopy**
Christopher J. Westlake, Laboratory of Cell and Developmental Signaling, NCI, NIH, Frederick, MD
- 11:10-11:30 Physical Basis of Receptor Tyrosine Kinase Signaling**
Kalina Hristova, Professor of Materials Science and Engineering and Biomedical Engineering, Institute for NanoBioTechnology, Johns Hopkins University, Baltimore, MD
- 11:30-11:50 How Vesicles Find their Target**
Peter Novick, Professor of Cellular and Molecular Medicine, George Palade Endowed Chair, University of California San Diego, La Jolla, CA
- 11:50-12:10 Expected Ratio of Types of Founders' mtDNA to Surrounding Populations' mtDNA**
Joseph Livni, Independent Researcher, Woburn, MA

- 12:10-12:30 Tumor Exosomes: From Mediators of Systemic Disease to Biomarkers of Metastatic Spread**
Irina Matei, Weill Cornell Medicine, Children's Cancer and Blood Foundation, Departments of Pediatrics, Cell & Developmental Biology, Drukker Institute for Children's Health and Meyer Cancer Center, New York, NY
- 12:30-12:50 Accelerated Differentiation for Human Pluripotent Stem Cells**
Victor Li, Co-founder and CEO at StemCellerant, LLC, Boston, MA
- 12:50-13:10 Unlocking the Potential of Stem Cells to Model Airway Diseases**
Hongmei Mou, Assistant Professor, The Mucosal Immunology & Biology Research Center, Massachusetts General Hospital/Harvard Medical School, Boston, MA
- 13:10-13:30 Cell Membrane Transmits High-Level Integrin Tensions for Rear De-Adhesion During Rapid Cell Migration**
Xuefeng Wang, Associate Professor, Department of Physics & Astronomy, Iowa State University, Ames, IA
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- 13:30-14:00 Lunch Break**
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- 14:00-14:20 Autophagy in the Physiology of Neuronal Synapses**
Zheng Li, Section on Synapse Development Plasticity, National Institute of Mental Health, National Institute of Health, Bethesda, MD
- 14:20-14:40 RNA Binding Protein SRSF3 is Required for Cardiac Integrity Preservation**
Mannix Auger-Messier, Centre de Recherche du CHUS, Department of Medicine, Université de Sherbrooke, Québec, Canada
- 14:40-15:00 Evolution of Life on Earth: tRNA, Aminoacyl-tRNA Synthetase and Genetic Code Evolution**
Zachary F. Burton, Professor Emeritus, Michigan State University, E. Lansing, MI
- 15:00-15:20 Early Growth Response 1 (Egr1) Coordinates Metabolic and Circadian Regulation of Adipose Functions**
Konstantin Kandror, Professor of Biochemistry and Medicine, Boston University School of Medicine, Boston, MA
- 15:20-15:40 In Vivo Tracking of Genetically Engineered Immune Cells in Humans and Discovery of Long-term Lymphoid Progenitors**
Luca Biasco, Director, AVROBIO, Cambridge, MA
- 15:40-16:00 Signaling for Cell Migration: RAS's RSKy Adventure in the Cytoskeleton**
Michelle Mendoza, Oncological Sciences, Huntsman Cancer Institute, University of Utah, Salt Lake City, UT
- 16:00-16:20 Exploring the Role of Type 2 Node Proteins in NDR-family Kinase Localization during Fission Yeast Cytokinesis**
John W. Goss, Department of Biological Sciences, Wellesley College, 106 Central Street, Wellesley, MA
- 16:20-16:40 Parathormone Activates TRPV4 Channels in MG-63 Cells Through a cAMP-dependent Mechanism**
Arleth Pozo, Research Assistant, Immunology Research laboratory, Université du Québec à Montréal (UQAM), Canada
- 16:40-17:00 The Molecular Mechanisms of FUNDC1 Mediated Mitophagy**
Guo Chen, State Key Laboratory of Medicinal Chemical Biology, Tianjin Key Laboratory of Protein Science, College of Life Sciences, Nankai University, China

Day 3 | December 11, 2020

Cell and Developmental Biology

Technical Session 2

Time: 08:00 - 10:30 (EST)

Chair: Chuanjin Wu

08:00-08:20 Principles of Neural Stem Cell Lineage Progression

Simon Hippenmeyer, Professor, Institute of Science and Technology Austria, Austria

08:20-08:40 Uncovering Pathways Controlling Differentiation and Plasticity of Multiciliated Ependyma

Khadar Abdi, Duke University School of Medicine, Duke Molecular Physiology Institute, Durham, NC

08:40-09:00 Regulation of Synapse Development and Plasticity by microRNAs in Drosophila

David Van Vector, Professor of Cell Biology, Faculty Director, Curriculum Fellows Program Director, Biological and Biomedical Sciences (BBS) Graduate Program, Harvard Medical School, Blavatnik Institute of Cell Biology, Boston, MA

09:00-09:20 A FAK/HDAC5 Signaling Network Controls Osteocyte Mechanotransduction

Marc Wein, Assistant Professor of Medicine, Harvard Medical School, Associate Member, Broad Institute of MIT and Harvard, Massachusetts General Hospital, Boston, MA

09:20-09:40 AP-2b/KCTD1 are Critical Regulators of Distal Nephron Differentiation and Function

Alexander G. Marneros, Associate Professor, Harvard Medical School, Cutaneous Biology Research Center, Massachusetts General Hospital, Boston, MA

09:40-10:00 Tubulogenic Growth by Ribosomal Regulation in the Embryo

Rajprasad Loganathan, Department of Cell Biology, Johns Hopkins School of Medicine, Baltimore, MD

10:00-10:20 Dysregulation of Cell Type-Specific Membrane Protein Complexes in the Pathogenesis of Ichthyosis and Epidermodysplasia Verruciformis

Chuanjin Wu, Staff Scientist, Laboratory of Immune Cell Biology, National Cancer Institute, NIH, Bethesda, MD

10:20-10:30

Coffee Break

Cell Signaling & Cancer Biology

Technical Session 3

Time: 10:30 - 18:30 (EST)

Chair: Rony Seger and Arthur M. Edelman

10:30-10:50 The Role of Gastrin and the ECL Cell in Gastric Carcinogenesis. Implications for Prophylaxis and Treatment

Helge Waldum, Department of Clinical and Molecular Medicine, Faculty of Medicine and Health Sciences, Norwegian University of Science and Technology, Norway

10:50-11:10 Epithelial to Mesenchymal Transition (EMT) in Head and Neck Cancer

Julia Ingruber, Department of Otorhinolaryngology and Head and Neck Surgery, Medical University of Innsbruck, Austria

11:10-11:30 The Nuclear Translocation of MAPKs as a Therapeutic Target for Cancer and Inflammation

Rony Seger, Department of Biological Regulation, Weizmann Institute of Science, Rehovot, Israel

11:30-11:50 Deficiency of GABARAP but Not Its Paralogs Causes Enhanced EGF-Induced EGFR Degradation

Jochen Dobner, Institut für Physikalische Biologie, Heinrich-Heine-Universität Düsseldorf, Germany

11:50-12:10 Overcoming Tumor Antigen Heterogeneity in the Context of Adoptive T Cell Transfer for Solid Tumors

Astero Klampatsa, Team Leader, Thoracic Oncology Immunotherapy Group, Division of Cancer Therapeutics, The Institute of Cancer Research, UK

- 12:10-12:30 Pro-survival Bcl-2 Proteins Suppress Beclin 1/Atg6-mediated Lethal Autophagy in Polyploid Cells**
Jing Zhang, J. Michael Bishop Institute of Cancer Research, China
- 12:30-12:50 Targeting Oncogenic Signaling Networks Through Drug Polypharmacology**
Uwe Rix, Associate Member, Department of Drug Discovery, Moffitt Cancer Center, Tampa, FL
- 12:50-13:10 Design, Bioproduction, and Tumor Delivery of Extracellular Vesicles Carrying Heterodimeric Interleukin-15**
Dionysios C. Watson, Medical Oncology fellow, University Hospitals, Case Western Reserve University, Cleveland, OH
- 13:10-13:30 EphrinB2-Ror2 Interaction Regulates Neural Tube Closure**
Jaeho Yoon, Center for Cancer Research, National Cancer Institute, NIH, Frederick, MD
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- 13:30-14:00 Coffee Break**
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- 14:00-14:20 The Role of 3D Cancer Cell Growth in Organelle Morphology and Function**
Margarida Barroso, Professor, Department of Molecular and Cellular Physiology, Albany Medical College, Albany, NY
- 14:20-14:40 An IKKalpha-nucleophosmin Axis Utilizes Inflammatory Signaling to Promote Genome Integrity**
Yinling Hu, Senior Investigator, Cancer and Inflammation Program, Head, Inflammation and Tumorigenesis Section, National Cancer Institute, Frederick, MD
- 14:40-15:00 S6K1 and S6K2 Networking with the AXL Tyrosine Kinase in PTEN-deficient Glioblastoma**
Pranjal Sarma, Department of Cancer Biology, VONTZ Center for Molecular Studies, University of Cincinnati, Cincinnati, OH
- 15:00-15:20 An HPV-Independent Mechanism of Cervical Carcinogenesis**
Cheng Wang, Associate Professor of Obstetrics, Gynecology, and Reproductive Biology, Massachusetts General Hospital/Harvard Medical School, Boston, MA
- 15:20-15:40 Regulation of Macrophages by AEG-1: Implications in Cancer**
Devanand Sarkar, Professor, Department of Human and Molecular Genetics, Associate Director of Education and Training, Massey Cancer Center, Virginia Commonwealth University, Richmond, VA
- 15:40-16:00 The Characterization of Mammalian Stringent Response in Cancer Cells**
Jen-Tsan Ashley Chi, Department of Molecular Genetics and Microbiology, Duke Center for Genomic and Computational Biology, Duke Medical School, Durham, NC
- 16:00-16:20 Targeting Mitochondrial Metabolism in Lymphoid Cancer**
Stefan M. Schieke, Assistant Professor, Department of Dermatology, University of Wisconsin-Madison, Madison, WI
- 16:20-16:40 Role of pSer784-VCP in DNA Damage Response and Cancer Chemotherapy Efficacy**
Jieya Shao, Department of Medicine, Washington University School of Medicine, St. Louis, MO
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- 16:40-16:50 Coffee Break**
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- 16:50-17:10 HCF-1 Regulates De Novo Lipogenesis through a Nutrient-Sensitive Complex with ChREBP**
Dong Wook Choi, Department of Cancer Biology, Dana-Farber Cancer Institute, Harvard Medical School, Boston, MA
- 17:10-17:30 CaMKK2 – A Master Kinase with Roles in AMPK and AKT Signaling in Cancer**
Arthur M. Edelman, Associate Professor, Department of Pharmacology & Toxicology, Jacobs School of Medicine and Biomedical Sciences, Buffalo, NY
- 17:30-17:50 The Ins and Outs of Cancer Therapy: Modifying Endocytosis Reversibly in Clinical Applications**
Fiona Simpson, Associate Professor, The University of Queensland Diamantina Institute, The University of Queensland, Brisbane Australia
- 17:50-18:10 Inhibition of RNA Polymerase I Transcription Activates the DNA Damage Response and Demonstrates Therapeutic Efficacy in Ovarian Cancer**
Elaine Sanij, Victorian Cancer Agency Mid-Career Research Fellow, Senior Research Fellow, Cancer Signalling Laboratory, Cancer Research Division, Peter MacCallum Cancer Centre, Victorian Comprehensive Cancer Centre, Melbourne, Australia
- 18:10-18:30 Unraveling the Mechanisms Controlling PI3K/AKT-driven Senescence in Cancer**
Keefe Chan, Sir Peter MacCallum Department of Oncology and Department of Biochemistry and Molecular Biology, University of Melbourne, Cancer Research Division, Peter MacCallum Cancer Centre, Australia

Time: 07:00 - 15:10 (EST)**Chair: Fabiana Quagliarini and Eberhard O. Voit**

- 07:00-07:20 Transcriptomic Investigation of Molecular Mechanisms Mediating Adverse Effects of Prenatal Exposure to Oxidative Stress in a Neuronal Cell Model: Significance for Psychiatric Diseases**
Behnaz Khavari, School of Biomedical Sciences and Pharmacy, Faculty of Health and Medicine, University of Newcastle, Australia
- 07:20-07:40 A Modular PROTAC Design for Drug Therapy Using Single Amino Acid-based Degradation Signal**
Hai Rao, Professor, Department of Molecular Medicine/IBT, The University of Texas Health , San Antonio, TX
- 07:40-08:00 Cistromic Reprogramming of the Diurnal Glucocorticoid Hormone Response by High-Fat Diet**
Fabiana Quagliarini, Institute for Diabetes and Cancer (IDC), Helmholtz Center Munich (HMGU) and German Center for Diabetes Research (DZD), Germany
- 08:00-08:20 Challenging Peripheral Arterial Disease: Growth Hormone (GH) Favors Neovascularization by Decreasing NOX4 Activity and Increasing VEGFR2/KDR**
Diego Caicedo Valdés, Angiology and Vascular Surgery Department, University Hospital of Santiago de Compostela, Spain
- 08:20-08:40 Novel Signaling Hub of Insulin Receptor Dystrophin Glycoprotein Complex and Plakoglobin Regulates Muscle Size**
Shenhav Cohen, Faculty of Biology, Technion Institute of Technology, Haifa, Israel
- 08:40-09:00 Targeting the Water Channel Protein, Aquaporin-4, to Prevent Edema after Spinal Cord Injury**
Zubair Ahmed, Neuroscience and Ophthalmology, Institute of Inflammation and Ageing, University of Birmingham, UK
- 09:00-09:20 Weaving Biological Snapshots into Stories Through Computational Modeling**
Eberhard O. Voit, Professor and David D. Flanagan Chair in Biological Systems, Georgia Research Alliance Eminent Scholar, The Wallace H. Coulter Department of Biomedical Engineering at Georgia Tech and Emory University Atlanta, GA
- 09:20-09:40 How Amoebae Locate and Eat Bacteria**
Miao Pan, Laboratory of Immunogenetics, National Institute of Allergy and Infectious Disease, NIH, Rockville, MD
- 09:40-10:00 Hypoxia Produces Pro-arrhythmic Late Sodium Current in Cardiac Myocytes by SUMOylation of Nav1.5 Channels**
Leigh D. Plant, Assistant Professor, Department of Pharmaceutical Sciences, Northeastern University, Boston, MA
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- 10:00-10:10 Coffee Break**
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- 10:10-10:30 Inflammatory Mechanisms Underlying Brain Dysfunction in Rett Syndrome**
Juan Mauricio Garre, Department of Neurology, Columbia University, New York, NY
- 10:30-10:50 A Novel Rapid Ablation of Cells Expressing Human CD59 in Animals by Intermedilysin**
Xuebin Qin, Professor, Division of Comparable Pathology, Tulane National Primate Research Center, and Department of Immunology and Microbiology, Tulane University School of Medicine, New Orleans, LA
- 10:50-11:10 Use of DREADD Technology to Identify Novel Targets for Anti-Diabetic Drugs**
Jürgen Wess, Chief, Molecular Signaling Section, Lab. of Bioorganic Chemistry, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, Bethesda, MD
- 11:10-11:30 Modeling Lineage Heterogeneity and Lineage Plasticity in Bladder Cancer**
David Mulholland, Icahn School of Medicine at Mount Sinai, Department of Oncological Sciences, New York, NY
- 11:30-11:50 Axonal Transport as an *In Vivo* Biomarker for Retinal Neuropathy**
Lucia Le Roux, MD Anderson Cancer Center, Department of Cancer Systems Imaging, Houston, TX

- 11:50-12:10 A Gene Expression Network Analysis Identifies Complement 1 q Like 3 Secreted Protein that Inhibits Insulin Secretion from Pancreatic Beta Cells**
Sushant Bhatnagar, Assistant Professor of Medicine, Division of Endocrinology, Diabetes, and Metabolism, University of Alabama at Birmingham, AL
- 12:10-12:30 The Role of Alzheimer's Disease Relevant Tau Modifications in Neurodegeneration and Mitochondrial Dysfunction**
Sanjib K. Guha, Postdoctoral Associate, Department of Anesthesiology, University of Rochester Medical Center, Rochester, NY
- 12:30-12:50 Using Neurotechnology and Artificial Intelligence to Treat Disease**
Patrick Ganzer, Principal Research Scientist, Battelle Memorial Institute, Columbus, OH
- 12:50-13:10 DolphinNext: A Distributed Data Processing Platform for High Throughput Genomics**
Alper Kucukural, Associate Professor, Program in Molecular Medicine, Co-director Bioinformatics Core, University of Massachusetts Medical School, Worcester, MA
- 13:10-13:30 STING-dependent Type-1 Interferon Restrains Schistosome Immunopathology Via Down-Regulation of the CD209A Lectin Receptor**
Parisa Kalantari, Research Assistant Professor, Department of Immunology, Tufts University School of Medicine, Boston, MA
- 13:30-13:50 A TRPA1 Inhibitor Suppresses Neurogenic Inflammation and Smooth Muscle Contraction for the Treatment of Asthma**
Lorena Riol-Blanco, Department of Immunology, Genentech, Inc., South San Francisco, CA
- 13.50-14.10 Epigenetic Switch, Carcinogenesis and Combination Therapy**
Sibaji Sarkar, Mass Bay Community College, Wellesley, MA
- 14.10-14.30 A Human *In Vitro* Model for Type-1 Diabetes Unravels Gene Editing Targets for Immune Protection of Stem Cell-Derived Beta Cells**
Elad Sintov, Department of Stem Cell and Regenerative Biology, Harvard Stem Cell Institute, Harvard University, Cambridge, MA
- 14.30-14.50 Understanding the Insulin Signaling Pathway in Obesity**
Sang W. Park, Assistant Professor, Harvard Medical School, Division of Endocrinology, Boston Children's Hospital, Boston, MA
- 14.50-15.10 Structure-forming CAG Repeats Interfere with Gap Repair to Cause Genome Instability**
Erica Polleys, Department of Biology, Tufts University, Medford, MA

******Last minute changes due to functional, private, or organizational needs can be necessary. The event organizer accepts no liability for any additional costs caused by a change of program. Program is subject to change**

***We wish to see you
at
CEB-2020, Boston***



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