



Join Keystone Symposia
for the 2016 conference on:

Exosomes/Microvesicles: Novel Mechanisms of Cell-Cell Communication

June 19–22, 2016

Keystone Resort | Keystone, Colorado | USA

Scientific Organizers: Richard A. Cerione and Xandra O. Breakefield

Extracellular vesicles are thought to serve as a means of cell-to-cell communication and contribute to a number of disease states, including cancer and neurodegeneration, thus offering new targets for therapeutic intervention and novel possibilities for diagnostic biomarkers. However, a number of important questions need to be answered. What are the regulatory cues that determine content and release of these vesicles from "donor" cells? How many different types of extracellular vesicles are there and do they vary among cell types? Are there specific uptake mechanisms of vesicles into "recipient cells" and is the cargo functional in these cells? The time is right for a conference that covers this exciting area and aims to bring together investigators from different disciplines and areas of interest to present their newest findings concerning the biogenesis of extracellular vesicles, how they are shed and dock onto target cells, and the biological and disease consequences of their functions.

Session Topics:

- Extracellular Vesicles and Cargo
- Extracellular Vesicle Biogenesis
- Extracellular Vesicle Release and Docking
- Extracellular Vesicles as Biomarkers and Therapeutic Vehicles
- Extracellular Vesicles in Cancer
- Extracellular Vesicles in Other Aspects of Biology and Disease
- Meeting Wrap-Up: Outcomes and Future Directions



Submitting an abstract is a great way of participating in the conference through poster presentation and possible selection for a short talk.

Scholarship & Discounted Abstract Deadline: Feb 18, 2016

Abstract Deadline: Mar 17, 2016

Discounted Registration Deadline: Apr 19, 2016

For additional details, visit www.keystonesymposia.org/16E4.

KEYSTONE SYMPOSIA™
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SUNDAY, JUNE 19

Arrival and Registration

MONDAY, JUNE 20

Welcome and Keynote Address

***Richard A. Cerione**, Cornell University, USA

Xandra O. Breakefield, Massachusetts General Hospital, USA
The Language of Extracellular Vesicles

Extracellular Vesicles and Cargo

Jan Lötvall, University of Gothenburg, Sweden
Extracellular Vesicles and their RNA Cargo

***Louise Laurent**, University of California, San Diego, USA
ExRNAs as Biomarkers of Placental Function

Raghu Kalluri, University of Texas MD Anderson Cancer Center, USA
The Biology and Function of Exosomes in Cancer

Jennifer C. Jones, NCI, National Institutes of Health, USA
Short Talk: NanoFACS: A Tool to Enable Extracellular Vesicle Subset Sorting for Personalized Medicine

Valery Combes, University of Technology Sydney, Australia
Short Talk: Identification of a Novel Intracellular Actin-Based Structure Implicated in Endothelial Vesiculation

Workshop

Chulhee Choi, Korea Advanced Institute of Science and Technology, South Korea
Efficient intra-cellular Delivery of Therapeutic Proteins via Opto-genetically Engineered Exosomes

Deepak Nagrath, University of Michigan, USA
Tumor Microenvironment Derived Exosomes: A Major Player Regulating Cancer Cell Metabolism

Paul Coats, University of Strathclyde, UK
Mitochondrial Regulation of Exosomal MicroRNA Cargo in Vascular Smooth Muscle Cell Proliferation

***Carole A. Parent**, NCI, National Institutes of Health, USA
Exosomes as Key Regulators of Signal Relay during Chemotaxis

Ryan Middleton, Cedars-Sinai Medical Center, USA
Newt Exosomes are Bioactive on Mammalian Heart, Enhancing Proliferation of Rat Cardiomyocytes and Improving Recovery after Myocardial Infarction

Anaïs Soula, Interdisciplinary Institute for Neurosciences, France
Involvement of Exosomal miRNAs in the Mechanisms of Neuronal Plasticity

Michela Marcatti, University of Texas Medical Branch, USA
Damaged Mitochondrial DNA as a Potent Inducer of Lung Inflammation

Leonid Margolis, NICHD, National Institutes of Health, USA
Extracellular Vesicles in HIV Infection: Analysis and Function

Extracellular Vesicle Biogenesis

Guillaume van Niel, Institute Curie, France
Exosomes Shed new Light on Endosomal Sorting and Functional Amyloid Formation

Richard A. Cerione, Cornell University, USA
Signals that Lead to Microvesicle Formation

***Stephen J. Gould**, Johns Hopkins University School of Medicine, USA

Exosome Biogenesis: Models, Predictions and Results

Ann M. Wehman, University of Würzburg, Germany
Short Talk: PAD-1 Activates the Phospholipid Flippase TAT-5 to Prevent Extracellular Vesicle Release in C. elegans

Poster Session 1

TUESDAY, JUNE 21

Extracellular Vesicle Release and Docking

Marc Antonyak, Cornell University, USA
Embryonic Stem Cell Microvesicles and Their Roles in Early Development

***Crislyn D'Souza-Schorey**, University of Notre Dame, USA
Extracellular Microvesicles Mediate Tumor Cell Invasion

Phyllis I. Hanson, University of Michigan, USA
ESCRTs, Endosomal Trafficking, and Extracellular Vesicle Biogenesis

Hakho Lee, Massachusetts General Hospital, USA
Nanotechnology Platforms for Quantitative Analyses of Extracellular Vesicles

Andrew R. Nager, Pfizer, USA
Short Talk: Actin-Dependent Ectocytosis and BBSome/beta-Arrestin2-Mediated Retrieval Drive the Removal of Activated GPCRs from Cilia

Chungen Pan, Dalhousie University, Canada
Short Talk: Fusogenic Nonenveloped Reoviruses are Released as Highly Infectious Vesicle-Encapsulated Nonenveloped Virus (VENEV) Particles Inside Fusogenic Exosomes

Extracellular Vesicles as Biomarkers and Therapeutic Vehicles

***Johan Skog**, Exosome Diagnostics, Inc., USA
Exosome Based Liquid Biopsy for Cancer Screening, Patient Stratification and Monitoring

Richard Simpson, La Trobe University, Australia
Comparative Proteome and RNA Analyses of Extracellular Vesicle Subtypes

Anastasia Khvorova, University of Massachusetts Medical School, USA

Exosomes as Therapeutic RNA Delivery Vehicles

Andrew Michael Breglio, NIDCD, National Institutes of Health, USA
Short Talk: Exosomes Protect Inner Ear Hair Cells from Aminoglycoside-Induced Death

Poster Session 2

WEDNESDAY, JUNE 22

Extracellular Vesicles in Cancer

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***Janusz Rak**, McGill University, Canada

Intercellular Trafficking of Oncogenic Macromolecules as Cargo of Extracellular Vesicles in Cancer – Pathways and Barriers

Ayuko Hoshino, Weill Cornell Medicine, USA

Tumor Exosome Integrins Initiate Pre-Metastatic Niches

E. Antonio Chiocca, Brigham and Women's Hospital, USA

Role of Microvesicles in Glioblastoma

Alissa M. Weaver, Vanderbilt University School of Medicine, USA

Role of Exosomes in Promoting Directional Migration of Cancer Cells

Sónia A. Melo, i3S Instituto de Investigacao e Inovacao em Saude, Portugal

Short Talk: ExoNet: Exosomes-Mediate Intra-Tumor Communication in Pancreatic Cancer

Maria Laura Tognoli, University of Oxford, UK

Short Talk: RASSF1C Promotes Tumor Invasiveness via Exosome Release

Extracellular Vesicles in Other Aspects of Biology and Disease

***Leonid Margolis**, NICHD, National Institutes of Health, USA

Mercedes Tkach, Institut Curie, France

Extracellular Vesicles in Immune Response

Kaushik Choudhuri, University of Michigan Medical School, USA

Microvesicle Release in T Cell Communication

Andrew Hill, La Trobe University, Australia

Role of Extracellular Vesicles in Neurodegenerative Diseases

Meeting Wrap-Up: Outcomes and Future Directions

Richard A. Cerione, Cornell University, USA

Xandra O. Breakefield, Massachusetts General Hospital, USA

THURSDAY, JUNE 23

Departure