

**ISEV Workshop: Large Extracellular Vesicles
Columbus, Ohio**

March 4-5, 2024

Co-Chairs: Shaurya Prakash & Dolores Di Vizio
IOC: Mona Batish, Charles Lai, Metka Lenassi, Eduardo Reategui, and Shannon Stott

PROGRAM

March 4th

8,15 - 8,45 Registration & breakfast (Ballroom Foyer)

8,45 - 9,00 Welcome (Ballroom BC)

Shaurya Prakash, Metka Lenassi, Dolores Di Vizio

Session 1: *EV heterogeneity: What are L-EVs and how do we study them?* (Ballroom BC)

Moderators: Dolores Di Vizio and Edit Buzás

In this session and during the related roundtable, a special focus will be given to L-EV definition, their biophysical properties, as well as EV isolation methods (population selection/enrichment) (for proposed research questions).

9,00 - 9,20 **Introductory talk by Ivan Poon:** The first L-EVs: apoptotic bodies

9,20 - 10,10 4 x 10' selected talks + 10' sponsor talk:

Lorenzo Messa: Circulating large extracellular vesicles are a source of biomarkers in the plasma of patients with metastatic prostate cancer

Filippo Maltoni: Large and small extracellular vesicles from plasma of patients with Hairy cell leukemia reveal a specific signature related to disease aggressiveness

Xilal Rima: EVs in situ profiling of single extracellular vesicle and particle heterogeneity

Guoqiang Wang: Large vesicle extrusion and transfer in a living nervous system

Sponsor talk: Particle-Matrix Ltd.

10,10 - 10,30 Questions for all speakers

10,30 – 11,00 Coffee Break (Ballroom Foyer)

Session 2: *L-EV Biogenesis: how are L-EVs formed and what is the process of cargo selection and packaging of L-EVs?* (Ballroom BC)

Moderators: Shannon Stott and Mona Batish

In this session and during the related roundtable, a special focus will be given to study focused on the biogenesis and cargo selection of L-EVs. This session will also include discussions on the location of the cargo (inside, outside) on single EVs.

11,00 - 11,20 **Introductory talk by Edit Buzás**: Introduction to LEV biogenesis: knowns and unknowns

11,20 - 12,10 4 x 10' selected talks:

Yosuke Tanaka: PI3K/Rab signaling regionally and conditionally regulates Shh-EV biogenesis that properly patterns digits

Sharad Kumar: Ubiquitination-dependent regulation of EV biogenesis

Ann Wehman: Contractile actomyosin rings and large EV biogenesis in *C. elegans*

Mona Batish: Understanding the selection and sorting of RNA cargo into extracellular vesicles

12,10 - 12,30 Questions for all speakers

12,30 - 14,00 Light lunch (Ballroom Foyer)

14,00 - 15,45 Parallel Roundtables related to Session 1 and Session 2. (Ballroom BC and A)

15,45 - 16,00 WrapUp (written notes) by the moderators of each session.

16,00 - 16,30 Coffee Break (Ballroom Foyer)

16,30 - 17,00 Plenary highlights from roundtable 1 (10' from the moderators and 20' discussion with the audience)

17,00 - 17,30 Plenary highlights from roundtable 2 (10' from the moderators and 20' discussion with the audience)

18,00 - 20,00 Social Dinner (Pavillion)

March 5th

8,30 - 9,00 Breakfast (Ballroom Foyer)

Session 3: *L-EV functions: What is the biological relevance of L-EVs?* (Ballroom BC)

Moderators: *Charles Lai and Jennifer Jones*

In this session and during the related roundtable, a special focus will be given to the known and predicted functions of L-EVs and their biological and clinical relevance including their well known roles in Cancer and less well studied roles in other diseases.

9,00 - 9,20 **Introductory talk by Emanuele Cocucci**: TBD

9,20 - 10,10 4 x 10' selected talks + 10' sponsor talk

Taylor Silva: Activation of nucleic acid sensors by large oncosomes induce type I IFN inflammation in mesenchymal stem cells that triggers an immunosuppressive phenotype in neutrophils

Yuriy Kim: Isolation and characterization of large extracellular vesicles from HIV-1-infected T-cells

Said Omar: Umbilical cord blood-derived large and small extracellular vesicles have similar efficacy in ameliorating hyperoxia induced lung epithelial cells injury

Charles Lai: Reappraisal of cancer extracellular vesicles & therapeutic implications: big and small EVs

Sponsor talk Izon: Scaling EV Isolation for the Clinic: Customized Workflows for EV Diagnostics

10,10- 10,30 Questions for all speakers

10,30 - 11,00 **Coffee Break** (Ballroom Foyer)

Session 4: L-EV Technology & Current Obstacles: Where we are and what needs to be done to better study and understand L-EVs? (Ballroom BC)

Moderators: Shaurya Prakash and Eduardo Reategui

In this session and during the related roundtable, a special focus will be given to new technologies for capture, imaging and characterization of L-EVs

11,00 - 11,20 **Introductory talk by Shannon Stott**: Recent Advances in Large EV Isolation and Opportunities for Innovation

11,20 - 12,10 4 x 10' selected talks

Premanshu Singh: Microfluidics-based technology for mechanical property estimation of large EVs

Hyungsoon Im: Plasmon-enhanced multiplexed analysis of single extracellular vesicles

Jennifer Jones: Radiation associated small and large EV repertoires as biomarkers and biomediators- comparison of cell culture vs clinical sample sources and processing

Colin Hisey: Light-induced extracellular vesicle adsorption

12,10 - 12,30 Questions for all speakers

12,30 - 14,00 **Light lunch** (Ballroom Foyer)

14,00 - 15,45 **Parallel Roundtables on Session 3 and Session 4** (Ballroom BC and A)

15,45 - 16,00 **WrapUp** (written notes) by the moderators of each session.

16,00 - 16,30 **Coffee Break** (Ballroom Foyer)

16,30 - 17,00 **Plenary highlights from roundtable 3** (10' from the moderators and 20' discussion with the audience)

17,00 - 17,30 **Plenary highlights from roundtable 4** (10' from the moderators and 20' discussion with the audience)

17,30 - 18,00 **Closing Remarks, Future plans, Outlook**