

**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

8,45 - 9,00 Welcome

Shaurya Prakash, Metka Lenassi, Dolores Di Vizio

Session 1: EV heterogeneity: What are L-EVs and how do we study them?

Moderators: Metka Lenassi and Dolores Di Vizio

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**

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

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

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

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

Speaker 4: waiting for confirmation

Sponsor talk 1: TBD

10,10 - 10,30 Questions for all speakers

10,30 – 11,00 Coffee Break

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

Moderator: 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 Buzas**

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

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

Sharad Kumar (Asia): Ubiquitination-dependent regulation of EV biogenesis

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

Mona Batish (USA) Understanding the selection and sorting of RNA cargo into extracellular vesicles

Sponsor talk 2: TBD

12,10 - 12,30 Questions for all speakers

12,30 - 14,00 Light lunch

14,00 - 15,45 Parallel Roundtables related to Session 1 and Session 2.

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

16,00 - 16,30 Coffee Break

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

March 5th

Session 3: L-EV functions: What is the biological relevance of L-EVs?

Moderator: Charles Lai, TBD

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**

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

Taylon Silva (USA): 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 (USA): Isolation and characterization of large extracellular vesicles from HIV-1-infected T-cells

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

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

Sponsor talk 3: TBD

10,10- 10,30 Questions for all speakers

10,30 - 11,00 Coffee Break

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

Moderator: Shaurya Prakash, 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**

11,20 - 12,10 4 x 10' selected talks + 10' sponsor talk

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

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

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

Colin Hisey (USA): Light-induced extracellular vesicle adsorption

Sponsor talk: TBD

12,10 - 12,30 Questions for all speakers

12,30 - 14,00 Light lunch

14,00 - 15,45 Parallel Roundtables on Session 3 and Session 4

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

16,00 - 16,30 Coffee Break

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