

ISEV Workshop

# QuantitatEVs: multiscale analyses, from bulk to single vesicle

Trento & Milano, Italy  
January 31<sup>st</sup> to February 3<sup>rd</sup> 2023



## PROGRAM

### January 31st – TRENTO

**8,00 - 8,30 Registration**

**8,30 - 9,00 Welcome**

**Session 1: *Impact of pre-analytical steps on downstream data generation. Importance of knowing the boundaries and the constraints.***

In this session and during the related roundtable, a special focus will be given to EV isolation methods (population selection/enrichment) comparative data; nucleic acid extraction/processing methods and library preparation procedures for omics data generation; protein sample preparation for proteomics analysis; need for/lack of clean reference datasets.

9,00 - 9,20 Lecture from invited speaker

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

10,10 - 10,30 Questions for all speakers

**10,30 – 11,00 Coffee Break**

**Session 2: *EV omics data analysis: which quantitative approaches can we adopt from the canonical cell data analysis field into the EV field in terms of computational biology and bioinformatics?***

In this session and during the related roundtable, a special focus will be given to proteomics (specific/corona EV-proteins), transcriptomics, genomics (inner/corona EV-DNA), lipidomics, metabolomics and glycomics strategies, differentiating whether or not tissue specific EV enrichment is applied prior to data generation.

11,00 - 11,20 Lecture from invited speaker

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

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**

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

**16,30 - 17,00 Plenary highlights from roundtable 2 (10' from the moderators and 20' discussion with the audience)**

### **February 1st – TRENTO**

#### ***Session 3: EV omics data analysis: which topics require the development from scratch of novel and EV tailored approaches.***

In this session and during the related roundtable, a special focus will be given to single cell versus single EV data analysis; deconvolution approaches for EV populations in biofluids; how to distinguish functional from non-functional EV components (from both cell cultures and biofluids); integration of different omics.

9,00 - 9,20 Lecture from invited speaker

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

10,10- 10,30 Questions for all speakers

#### **10,30 - 11,00 Coffee Break**

#### ***Session 4: Single EV Characterization***

In this session and during the related roundtable, a special focus will be given to label based and label free single EV technologies (opportunities and pitfalls of labelling); shedding light on protein corona dynamics at the single EV level; the need for reference materials for measurements, including biological vs synthetic options.

11,00 - 11,20 Lecture from invited speaker

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

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**

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

**16,30 - 17,00 Plenary highlights from roundtable 4 (10' from the moderators and 20' discussion with the audience)**

#### **19,30 - 23,30 Social Dinner**

### **February 2nd – TRENTO**

#### ***Session 5. Which is the contribution of bulk versus single EV analysis for biomarker validation.***

In this session and during the related roundtable, a special focus will be given to validation assays for computationally generated data, biological models for biomarker validation (eg. mouse models, organoids, etc); the role of single EV in respect to bulk analysis in real life/diagnostic implications.

9,00 - 9,20 Lecture from invited speaker

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

10,10 - 10,30 Questions for all speakers

**10,30 - 11,00 Coffee Break**

**11,00 - 12,45 Roundtable on Session 5**

**12,45 - 13,00 Wrap-up (written notes) by the moderators.**

**13,00 - 14,00 Light lunch**

**14,00- 14,30 Highlights from roundtable 5 (10' from the moderators and 20' discussion with the audience)**

**14,30 – 15,00 Closing remarks.**

**17,00 Departure by bus from Trento to Milan.**

### **February 3rd – MILANO**

#### **Satellite event: Next generation EVs.**

The satellite event aims at discussing the future of the EV field through the eyes of the new generation of scientists. Vision and successful stories of both academics and industry players will be inspirational to seize opportunities and trends over the next decades.

**09:45 – 10:00:** Welcome and introduction

#### **Keynote lecture 1:**

**10:00 - 10:30** Talk tentative title: “EVs: to the next decade and beyond”

An academic speaker challenged to envision the EV field in 10/20 years.

#### **Young Investigator Symposium**

##### **Session 1: talks from selected abstracts (10 min + 5 min Q&A)**

**10:30 - 10:45** – Talk 1

**10:45 - 11:00** – Talk 2

**11:00 - 11:15** – Talk 3

**11:15 -12:00: Coffee break**

#### **Keynote lecture 2:**

**12:00-12:30** Talk tentative title: “EV Trends and future opportunities: an industry perspective”

##### **Session 2: talks from selected abstracts\* (10 min + 5 min Q&A)**

**12:30 - 12:45** - Talk 4

**12:45 - 13:00** - Talk 5

**13:00 - 13:15** - Talk 6

**13:15 - 13:30** - Talk 7

**13:30 - 14:45 light lunch**

##### **Session 3: talks from selected abstracts\* (10 min + 5 min Q&A)**

**14:45 - 15:00** - Talk 8

**15:00 - 15:15** - Talk 9

**15:15 - 15:30** - Talk 10

**Closing session: stories of success in the EV field** (15 min + 5 min Q&A)

**15:30 - 15:50:** Talk from a startup speaker

**15:50 - 16:10:** Talk from a startup speaker

**16:10 - 16:30** Closing remarks and award ceremony (Best Young Investigator Symposium Talk).