

AGENDA

Wednesday, Nov 16

7:00-8:00AM **Registration**
LANAI

7:30-8:00AM **Breakfast with Coffee & Tea**
LANAI

8:00-8:30AM **Introductions**
Edit Buzas, ISEV President
Randy Carney, ISEVxTECH Chair
WAIKIKI BALLROOM

8:30-10:00AM **Presentations**
Moderator: Randy Carney (UC Davis, USA)
8:30AM MISEV2022 and EV-TRACK
Ken Witwer (Johns Hopkins, USA), Josh Welsh (NIH, USA), and An Hendrix (Ghent University, Belgium)
9:00AM ISEV Rigor Task Forces
Rienk Nieuwland (Amsterdam UMC, The Netherlands)
9:15AM Single-molecule assay for the biophysical characterization of EVs
Tijana Jovanovic-Talisman (City of Hope, USA)
9:40AM Light Scattering-Based Analytics of EVs: A powerful set of techniques -- but with great power comes great caution
Wyatt Vreeland (NIST, USA)
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10:00-10:30AM **Coffee & Tea Break**
LANAI

10:30-11:30AM **Presentations**
Moderator: Ken Witwer (Johns Hopkins, USA)
10:30AM Bulk to single vesicles characterization
Juan Falcon (CIC bioGUNE, Spain)
10:50AM Asymmetric depth filtration: A versatile and scalable method for high-yield isolation of EVs with low contamination
Mikhail Skilar (University of Utah, USA)
11:10AM From Labeling, Dosage, Size to Biodistribution and Function of EVs
Charles Pin-Kuang Lai (Academia Sinica, Taiwan)
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11:30AM-12:30PM **Panel Session**
Moderator: Randy Carney (UC Davis, USA)
Topic: Establishing an EV core facility
Paolo Neviani (Children's Hospital Los Angeles, USA)
Olesia Golobova (Johns Hopkins Medical Institute, USA)
Vera Tang (University of Ottawa, Canada)
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12:30-2:00PM **Lunch (on your own)**

2:00-5:00PM **Hands-on tech demos (Session 1)**
To access schedule, use the QR code below
KONA MOKU BALLROOM

5:00-6:30PM **Poster Session A (with snacks and drinks)**
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Hands-on tech demos

← Sign up here

<https://tinyurl.com/ISEVxTechDemos>



Thursday, Nov 17

Theme: EV production & engineering

7:30-8:00AM **Breakfast with Coffee & Tea**
LANAI

8:00-9:00AM **Keynote Speaker**
A versatile toolbox for a comprehensive view on extracellular vesicles
An Hendrix (Ghent University, Belgium)
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9:00-10:00AM **Presentations**
Moderator: Cherie Blenkiron (Univ. of Auckland, NZ)
9:15AM Production of immunomodulatory EVs from hMSCs using a hollow-fibre bioreactor system under varying flow rates and seeding densities.
Paul Cahill (Dublin City University, Ireland)
9:30AM Scalable production of human induced pluripotent stem cell-derived EVs in stirred-tank bioreactors
Ana Filipa Louro (IBET, Portugal)
9:45AM Comparative analysis of TFF and UC, both combined with subsequent SEC, for the isolation of small EVs
Andreas Möller (QIMR Berghofer, Australia)
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10:00-10:30AM **Coffee & Tea Break**
LANAI

10:30-11:30AM **Presentations**
Moderator: Tijana Jovanovic-Talisman (City of Hope, USA)
10:30AM Development of size-selective capture and release nanopocket membranes for the isolation of EVs
Thomas Gaborik (Rochester Institute of Technology, USA)
10:45AM Characterizing ATP1A3 as a novel target for isolating neuron-specific EVs from human brain and CSF
Yang You (Mayo Clinic Florida, USA)
11:00AM EV-AAVs as a novel gene delivery vector to the heart: new assessments for EV-AAV/free AAV separation
Sabrina La Salvia (Mount Sinai, USA)
11:15AM Developing engineered Extracellular vesicles (eEVs) as a targeted delivery screening platform
Masako Harada (Michigan State University, USA)
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11:30AM-12:30PM **Panel Session**
Moderator: Cherie Blenkiron (Univ. of Auckland, NZ)
Topic: EV Isolation and Production Technologies
An Hendrix (Ghent University, Belgium)
Rienk Nieuwland (Amsterdam UMC, The Netherlands)
Paul Cahill (Dublin City University, Ireland)
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12:30-2:00PM **Lunch (on your own)**

2:00-5:00PM **Hands-on tech demos (Session 2)**
To access schedule, use the QR code below
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5:00-6:30PM **Poster Session B (with snacks and drinks)**
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6:30-10:00PM **Networking event**
QUEENSBREAK POOL DECK *Feel free to wear your best Hawaiian attire!*

Friday, Nov 18

Theme: EV analysis & standardization

7:30-8:00AM **Breakfast with Coffee & Tea**
LANAI

8:00-9:00AM **Keynote Speaker**
Digital flow cytometry for single EV-analysis
Daniel Chiu (University of Washington, USA)
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9:00-10:00AM **Presentations**
Moderator: Shannon Stott (Mass General Hospital, USA)
9:15AM Correlative light and electron microscopy (CLEM) in EV research
Kirsi Rilla (University of Eastern Finland)
9:30AM Combined fluorescence and atomic force microscopy for multiparametric profiling of single EVs
Sara Cavallaro (Massachusetts General Hospital, USA)
9:45AM On-Chip Multimodal NanobioAnalytical Platform for biophysical analysis of EVs
Wilfrid Boireau (FEMTO-ST Institute, France)
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10:00-10:30AM **Coffee & Tea Break**
LANAI

10:30-11:30AM **Presentations**
Moderator: Michael Pfaffl (Tech. Univ. of Munich, Germany)
10:30AM EV Fingerprinting: Resolving EV heterogeneity using multi-parametric flow cytometry
Andres Zijlstra (GeneTech, USA)
10:45AM Femtosecond laser-fabricated nanoplasmonic sensors and deep learning label-free classification of EVs
Collin Hisey (The Ohio State University, USA)
11:00AM "EV painting" as novel synthetic biology approach to identify EV target cells in vivo
Ferdinando Pucci (Oregon Health & Science University, USA)
11:15AM Development and utilization of an exosome and cargo tracking mouse
János Zempleni (University of Nebraska-Lincoln, USA)
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11:30AM-12:30PM **Panel Session**
Moderator: Shannon Stott (Mass General Hospital, USA)
Topic: EV Analysis – the old and the new
Daniel Chiu (University of Washington, USA)
Randy Carney (UC Davis, USA)
Josh Welsh (NIH, USA)
Juan Falcon (CIC bioGUNE, Spain)
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12:30-2:00PM **Lunch (on your own)**

2:00-3:00PM **Presentations**
Moderator: Vera Tang (University of Ottawa, Canada)
2:00PM miREV: an online database and meta-analysis tool to identify stable reference miRNA signatures
Michael Pfaffl (Technical University of Munich, Germany)
2:15PM Metrological flow cytometry for traceable determination of RL and size of single EVs and ref materials
Martine Kuiper (Amsterdam UMC/VSL, The Netherlands)
2:45PM French Interlaboratory study for standardization in EVs metrology
Celine Elie-Caille (FEMTO-ST Institute, France)
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3:00-4:30PM **Special Panel Session**
Results of the sponsor tech EV reference material shoot-out study
Josh Welsh (NIH, USA)
Vera Tang (University of Ottawa, Canada)
Topic: Data concordance in EV research
Panel members TBD
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4:30-5:00PM **Awards and Meeting Close**
Cherie Blenkiron, ISEVxTech Deputy Chair
Metka Lenassi, ISEV Chair of Science/Meetings
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