

THE FIRST JOINT CONFERENCE ON EXTRACELLULAR VESICLES IN CANCER

Meeting Chairs: Dolores Di Vizio and Andries Zijlstra

2-4 August, 2019

Vanderbilt University

Nashville, TN



MRS METASTASIS
RESEARCH SOCIETY



INTERNATIONAL SOCIETY FOR
EXTRACELLULAR VESICLES



MRS-ISEV

Joint Conference on Extracellular Vesicles in Cancer

2-4 August 2019 | Vanderbilt University, Nashville, TN

Friday, August 2, 2019

8:00am Registration & Coffee

9:30am-10:45am *Opening Session*

Chairs: Dolores Di Vizio, Andries Zijlstra

9:30am Welcome
Andries Zijlstra (Vanderbilt University), **Dolores Di Vizio** (Cedars-Sinai Medical Center),
Kenneth Witwer (Johns Hopkins University)

10:00am Extracellular Vesicles in Cancer
Alissa Weaver (Vanderbilt University)

10:45am-11:45am *Challenges and Opportunities*

10:45am Microfluidic Blood Test for Brain Tumors: Tracking Tumor Extracellular Vesicles
Shannon Stott (Massachusetts General Hospital)

11:00am Membrane remodeling regulates hnRNP-mediated exosomal microRNA sorting
Michelle Hill (QIMR Berghofer Medical Research Institute)

11:15am An NCI Perspective on Extracellular Vesicle Research: Programs, Mechanisms, and Opportunities
Kevin Howcroft (NIH, NCI)

12:00pm Lunch Rand Dining Hall

1:30pm-6:00pm *Session #1: EV Biology: Biogenesis and Function in Cancer*

Chairs: Kenneth Witwer and Jennifer Jones

1:30pm Biogenesis and functions of different EV subtypes in cancer-immune system cross-talk
Clotilde Théry (Institut Curie/INSERM)

2:00pm Exosomes, Virus Mimicry, and Cancer
Andy Minn (University of Pennsylvania)

2:30pm Pancreatic cancer cell exosomes as tumor initiators in malignant cell transformation
Karoliina Stefanius (UT Southwestern Medical Center)

2:45pm Regulation of breast cancer progression by hypoxic exosomes
Irene Bertolini (The Wistar Institute)

- 3:00pm Rab13 regulates sEV secretion by mutant KRAS colorectal cancer cells
Scott Hinger (Vanderbilt University)
- 3:15pm Exosomes carrying NME1 could suppress motility and metastasis of breast cancer cells
Imran Khan (NIH / NCI)
- 3:30pm Coffee Break
- 4:00pm Extracellular transfer of miR-21 contributes to microglia reprogramming in intracranial glioma
Erik Abels (Massachusetts General Hospital)
- 4:30pm The multifaceted pro-metastatic function of EV-encapsulated miR-105
Emily Shizhen Wang (University of California, San Diego)
- 5:00pm Role of Exosomal Endoglin in Filopodia and Tumor Cell Motility
Caitlin McAtee (Vanderbilt University)
- 5:15pm Fusion of extracellular vesicles (EVs) and delivery of internal EV cargos to host cells is dependent upon circulating or endogenous viral envelope proteins
Zach Troyer (Case Western Reserve University)
- 5:30pm Exosomes as circulating biomarkers and mediators of the cross-talk of metastatic brain tumor cancer stem cells with microglia
Chaya Brodie (Bar-Ilan University and Henry Ford Hospital)
- 5:45pm A novel approach for liquid biopsy by using nuclear derived exosomes in ovarian cancer
Akira Yokoi (The University of Texas MD Anderson Cancer Center)
- 6:00pm Networking Event/Posters
- 8:00pm *Day concludes*

Saturday, August 3, 2019

8:00-11:45am ***Session #2: Clinical Context: EVs as mediators and Biomarkers of Cancer progression***

Chairs: Alissa Weaver and Takahiro Ochiya

- 8:00am Tumor exosomes and exomeres as potential biomarkers and targets
David Lyden (Weill Cornell Medical College)
- 8:30am Genes, Vesicles and the Web of Systemic Cancer
Janusz Rak (McGill University)
- 9:00am Extracellular vesicle Acid Ceramidase (ASAHI) as a biomarker for Bortezomib resistance in Multiple Myeloma
Ryan Bishop (Moffitt Cancer Research Center)
- 9:15am Extracellular vesicles from lymphatic exudative seroma as surrogate markers of melanoma residual Disease
Susana Garcia-Silva (Spanish National Cancer Research Centre)
- 9:30am Identification of extracellular vesicle (EV)-associated factors blunting immunosurveillance in melanoma
Severin Guette (University of Regensburg)
- 9:45am Coffee Break
- 10:00am Characterization and functional analysis of melanoma cell-derived exosomes in plasma of melanoma patients
Theresa Whiteside (University of Pittsburgh Cancer Institute)
- 10:30am Detection of EV-based signatures in prostate cancer using microflow cytometry and machine learning
John Lewis (University of Alberta)
- 11:00am Tissue stiffness modulates extracellular vesicle function in metastatic breast cancer
Alexandra Sneider (Johns Hopkins University)
- 11:15am Glioblastoma stem cell hierarchies and molecular subtypes regulate extracellular vesicle-mediated endothelial stimulation
Cristiana Spinelli (McGill University)
- 11:30am Differential secretion of miRNA serum small extracellular vesicles in pre-treatment stage IA non-small cell lung cancer cases relative to controls with benign neoplasia
Scott M. Langevin (University of Cincinnati)
- 11:45am ***Group photo***
- 12:00pm Lunch Rand Dining Hall
Meet the Editors- **Judy Quong** (Cancer Research), **Jan Lotvall** (Journal of Extracellular Vesicles), **Roger Colbran** (Journal of Biological Chemistry), **Ian Macara** (Journal of Cell Biology)

1:45pm-5:15pm ***Session #3: EV Methods and Technologies***

Chairs: Janusz Rak and Emily Shizhen Wang

- 1:45pm High-throughput EV protein profiling for cancer diagnostics and prognostics
Hakho Lee (Massachusetts General Hospital)
- 2:15pm New Tools for Profiling Tumor Extracellular Vesicles
Jennifer Jones (NIH/NCI)
- 2:45pm Genetic tools for isolating and auditing extracellular vesicles in murine cancer models
Andrew Dudley (University of Virginia)
- 3:00pm Multiplexed profiling of single EV analysis (SEA) technique
Ala Jo (Massachusetts General Hospital)
- 3:15pm Modelling tumor: spatial constraints as one of the key factors in EV research
Irina Nazarenko (Universitätsklinikum Freiburg)
- 3:30pm Studying mechanisms and dynamics of Extracellular Vesicle release and uptake in breast cancer cell models by lattice light sheet microscopy
Emanuele Cocucci (The Ohio State University)
- 4:00pm Single vesicle analysis of surface phenotype diversity in cell line-derived EVs
John Nolan (Scintillon Institute)
- 4:30pm Extravesicular Protein Profiling of Cancer Cell-Derived Exosome Subpopulations Using Antibody Microarrays
Molly Shen (McGill University)
- 4:45pm Combining Tumor Derived Extracellular Vesicle RNA, CA19-9, and cfDNA for Pancreatic Cancer Diagnosis and Staging
Zijian Yang (University of Pennsylvania)
- 5:00pm Nanomechanical mapping of single extracellular vesicles
Shivani Sharma (University of California Los Angeles)
- 5:15-6:30pm ***Panel Discussion: Extracellular Vesicles from Biology to Liquid Biopsies***
Kenneth Witwer (Johns Hopkins University), **David Lyden** (Weill Cornell Medical College), **Shannon Stott** (Massachusetts General Hospital), **Clotilde Théry** (Institut Curie/INSERM)
- 6:30pm Networking Event/Posters
- 9:00pm Day concludes

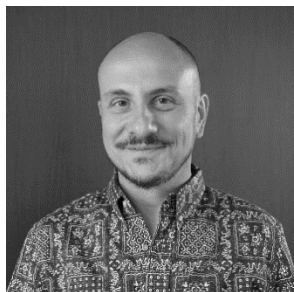
Sunday, August 4, 2019

9:00am-12:45am ***Session #4: Therapeutics***

Chairs: Jan Lötvall and Shannon Stott

- 9:00am Using tumor tissue extracellular vesicles for diagnostic and therapeutic purposes
Jan Lötvall (Massachusetts General Hospital)
- 9:30am Role of exosomal microRNAs in the biology of the tumor microenvironment
Muller Fabbri (University of Hawaii Cancer Center)
- 10:00am RNA Nanoparticles cooperated with Exosome as Efficient in vivo RNAi Delivery for Cancer Treatment
Zhenfeng Li (Ohio State University)
- 10:15am Tumor extracellular vesicles (EVs) create a pro-tumor, immunosuppressive microenvironment through CCL5 regulated EV programming of macrophages
Daniel Rabe (Massachusetts General Hospital)
- 10:30am Cancer cell derived extracellular vesicles display cancer associated glycans
Celso Reis (i3S/Ipatimup University of Porto)
- 10:45am Coffee Break
- 11:00am Tumor-Derived Extracellular Vesicles Require $\beta 1$ Integrins to Promote Anchorage-Independent Growth
Rachel DeRita (University of Pennsylvania)
- 11:30am Extracellular vesicles in cross-species communication, metastasis and cancer progression
Suresh Mathivanan (La Trobe University)
- 12:00pm Induction of macrophages using attenuated lung cancer cell-derived small extracellular vesicles
Joshua Hood (University of Louisville)
- 12:15pm Extracellular Vesicles Mediated Tumor-cell Intrinsic Immune Evasion in Colorectal Cancer
Subbaya Subramanian (University of Minnesota)
- 12:30pm Curcumin-loaded Exosomes Block Head and Neck Cancer Epithelial-to-Mesenchymal Transition
Saigopalakrishna Yerneni (Carnegie Mellon University)
- 12:45pm Closing Remarks
Dolores Di Vizio, Andries Zijlstra
- 1:00pm Lunch/Conclusion of Conference

Keynote Speakers



Muller Fabbri, MD, PhD
University of Hawaii Cancer Center

Muller Fabbri, MD, PhD is currently Associate Professor in the Cancer Biology Program at the University of Hawaii Cancer Center. He received his MD degree at the University of Pisa, Italy in 1997 and earned the graduation degree in Medicine and Surgery of the Sant'Anna School of Specialized Studies in Pisa, Italy. He earned a specialization in Medical Oncology at the University of Ferrara, Italy and subsequently a PhD in Molecular and Cellular Biotechnologies at the Second University of Naples, Italy. In 2003 he joined the Thomas Jefferson University in Philadelphia, PA as a post-doctoral researcher and transferred with the whole lab at the Ohio State University in Columbus, OH in 2004. In 2008 he became Research Scientist with Principal Investigator Status and in 2012 he was appointed Assistant Professor of Pediatrics and Molecular Microbiology & Immunology at Children's Hospital Los Angeles, University of Southern California in Los Angeles, CA, where he stayed until 2018, when he moved to his current position. His research focuses on the role of microRNAs (and other non-coding RNAs) in the biology of cancer and the tumor microenvironment, with a particular interest in the involvement of exosomes and other extracellular vesicles in the progression of cancer and the development of drug resistance. He has authored more than 90 publications and several book chapters. He has edited a volume on "Non-coding RNAs and Cancer" and is frequently invited to give seminars and lectures in national and international venues. He has contributed some of the most seminal discoveries on the role of microRNAs as regulators of the epigenetic machinery and provided the first evidence that microRNAs can function as agonists of cellular receptors.



Jennifer Jones, MD, PhD,
*National Cancer Institute
Center for Cancer Research*

Dr. Jones is an Investigator in Laboratory of Pathology at the National Cancer Institute. Her use of -omics approaches to study complex problems began early in her career as a graduate student and postdoctoral fellow, when she positionally cloned the TIM gene family and demonstrated the genetic association between TIMs and immune response profiles (McIntire et al., *Nature Immunology* 2001, and *Nature* 2003). Now as a practicing a radiation oncologist, her long term clinical goals are focused on developing immune-based therapies that synergize with radiation to produce optimal anti-tumor immune responses. The broader impact of her current work relates to her development of a new approach to precision medicine using EVs as nanoscale packets of information for real-time monitoring of treatment responses. To make EV analyses relevant for clinical studies, Dr. Jones is developing improved methods to characterize, sort, and perform functional studies of nanoparticles and has established a high throughput EV analysis pipeline and NCI's Translational Nanobiology Lab, with instrumentation for preparation, analysis, counting, and cytometric study of extracellular vesicles.



Hakho Lee, PhD
Mass General Hospital
Harvard Medical School

Dr. Lee is Associate Professor in Radiology at Harvard Medical School, Director of the Biomedical Engineering Program at the Center for Systems Biology, Massachusetts General Hospital (MGH), and Hostetter MGH Research Scholar. He received his Ph.D. in Physics from Harvard University and completed his postdoctoral training at MGH. Dr. Lee has extensive experience in nanomaterials, biophysics, microfluidics, and electrical engineering. His research focuses on developing novel biomedical sensors for clinical applications, for example, the world's smallest portable NMR device, integrated circuit (IC) chips for cancer cell detection, and a point-of-use device for allergen detection. Many of these systems have been translated clinical applications. Dr. Lee's group also pioneered new analytical technologies for EV characterization, including nPLEX (nanoplasmonic exosome), iMEX (integrated magneto-electrochemical exosome), iMER (integrated magnetic exosomal RNA), and SEA (single EV analyses).



Jan Lötvall, MD, PhD
University of Gothenburg

Jan Lötvall is Professor at the Institute of Medicine at Göteborg University since 2002 where he directs a research laboratory studying extracellular vesicles. He is a medical specialist in both Clinical Allergy and Clinical Pharmacology and has a long-term experience in translational studies in primarily inflammatory models, but also cancer. He was first elected President of the International Society of Extracellular Vesicles (ISEV, 2011-2016), a rapidly growing non-profit organisation in the field of exosomes, microvesicles and other extracellular vesicles (www.isev.org; >1000 members 2017). The research line focusing on extracellular vesicle biology has received extensive international recognition, as the lab was first to discover the ability of exosomes to shuttle RNA between cells in 2007. During the period of May 2016 to January 2018, JL served as Chief Scientist at Codiak BioSciences, a startup biotech company focusing on developing exosomes as a therapeutic platform. From January 2018, JL is currently having a sabbatical at Massachusetts General Hospital, working with Professor Xandra Breakefield (Harvard). Jan has been an editor of the open access journal *Respiratory Research* (IF 3.85) from April 2003 to August 2018, and was the founding editor of the journals “*Clinical and Translational Allergy*” (2011, IF 3.239) and *Journal of Extracellular Vesicles* (unofficial IF >10).



David Lyden, MD, PhD
Weill Cornell Medical Center

Dr. Lyden completed his M.D. at Brown University, Ph.D. at the University of Vermont, his residency in Pediatrics at Duke University Medical Center, and a fellowship in Pediatric Hematology/Oncology at Memorial Sloan Kettering Cancer Center. Currently, he is the Stavros S. Professor of Pediatrics and Cell and Developmental Biology at Weill Cornell Medicine. His early work resulted in several fundamental discoveries that involve the role of bone marrow-derived stem and progenitor cells in tumor vasculogenesis and in metastasis. He and

his colleagues made a pivotal discovery in the metastatic cascade which revealed that tumor-secreted factors induce the formation of microenvironments in distant organs that are conducive to tumor cell survival and outgrowth prior to their arrival at these sites putting forward the concept of the "pre-metastatic niche". They also found that tumor-secreted microvesicles, known as exosomes, initiate pre-metastatic niche formation through key proteins (i.e., oncoproteins, integrins) and nucleic acids in exosomes that support thrombosis generation and vascular leakiness. In addition, his team discovered double-stranded DNA by enzymatic methods and structural studies in tumor exosomes. Thus, exosomal molecules may serve as valuable biomarkers for detection of oncogenesis and metastatic progression. His work has engendered a new appreciation for how primary tumor cells dictate their own metastases by decoding how cancer-derived exosomes mediate intercellular communication. Most recently, Dr. Lyden has identified specific exosome subpopulations and discovered new subset of particles known as exomeres which collectively have distinct functional roles in the systemic effects of cancer.

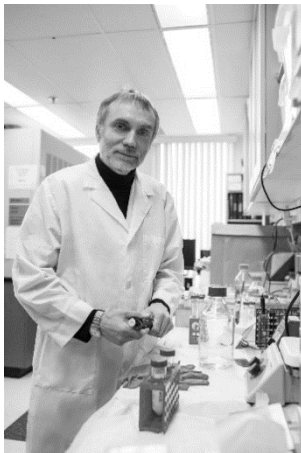


Andy Minn, MD, PhD
University of Pennsylvania

Dr. Minn is an Associate Professor in the Department of Radiation Oncology and Abramson Family Cancer Research Institute at the University of Pennsylvania. His laboratory is focused on understanding the role of pattern recognition receptors (PRR) and interferon (IFN) signaling pathways in cancer. These pathways are typically associated with pathogen infection;

however, in the context of cancer, endogenous nucleic acids can mimic viral infection. As a consequence, ensuing anti-viral signaling can orchestrate tumor progression, response to conventional therapies, response to immunotherapies, and influence the immune microenvironment. Moreover, these PRR/IFN pathways can be therapeutically exploited to modulate the immune system. One way is through activation of the DNA damage response. An overarching goal is to translate mechanistic findings to better inform the design of clinical trials.

Janusz Rak, MD, PhD
McGill University



Janusz Rak, MD, PhD trained in Poland, United States and Canada and is currently a Professor of Pediatrics, Experimental Medicine and Biochemistry at McGill University in Montreal, Canada. He is also a Principal Investigator at the Research Institute of the McGill University Health Centre and Jack Cole Chair in Pediatric Hematology/Oncology. His research interests in extracellular vesicles concentrate on their role in cancer, particularly as biomarkers and mediators of aberrant intercellular communication and vascular pathologies, such as angiogenesis and thrombosis. His laboratory investigates how extracellular vesicles and other mediators contribute to the onset, progression and dissemination of brain tumours and other

malignancies, including in children, and under the influence of disease-causing genetic and epigenetic oncogenic triggers. Dr. Rak published over 150 scientific papers and is currently

supported by grants from Canadian Institutes of Health Research, Canadian Cancer Society Research Institute and other agencies.



Clotilde Théry, PhD
Institut Curie

Dr. Clotilde Théry is an INSERM director of research (DR2) working at Institut Curie, where she heads a team created in 2007 within the "Immunity and Cancer" INSERM Unit U932, entitled "Extracellular Vesicles, Immune responses and Cancer". Since 1998, her scientific interests have focused on the study of exosomes (and more recently extracellular vesicles in general), secreted by immune and tumor cells, and their roles in communications between tumors and the immune system. Her goals are to understand the physiological functions of EV secretion during an in vivo immune response and during tumor growth, and her approach is to continuously go from basic cell biology questions on their modes of formation to application of this knowledge to in vivo situations. C. Théry is regularly invited to write reviews on the subject of exosomes, EVs, their immune functions and their biogenesis. She has organized several symposia and sessions dedicated to exosomes in international meetings, and in particular a first "International Workshop on Exosomes" in Institut Curie, in Paris, in 2011, which led to the creation of the International Society for Extracellular Vesicles (ISEV).



Dr. Alissa Weaver
Vanderbilt University School of Medicine

Dr. Alissa Weaver is Cornelius Vanderbilt Professor of Cell and Developmental Biology at Vanderbilt University School of Medicine and a Fellow of the American Association for the Advancement of Science. The overall goal of her research is to understand cellular and molecular mechanisms of tumor progression. The laboratory has a particular focus on the role of membrane trafficking and cytoskeletal rearrangements in promoting tumor invasion and metastasis. In the past 10 years, her work has focused on how secretion of exosomes promotes cancer cell invasion and motility and tumor aggressiveness. The laboratory is also studying fundamental questions in the extracellular vesicles (EVs) field, including how RNA and protein cargoes are sorted into EVs, how secretion of exosomes is controlled, and the impact of EVs on functions of recipient cells across a variety of biological contexts.

Poster Directory

Abstract Title	First Name	Last Name	Poster #	Poster Session #	Room
The role of RNA binding proteins and RNA base modifying enzymes in sorting of miRNAs to small extracellular vesicles	Jessica	Abner	1	Poster Session #1 (Friday)	Ballroom C
Immune cells and molecular mechanisms involved in extracellular vesicle induced neurotoxic cytokine production	Sara	Alhakeem	2	Poster Session #1 (Friday)	Ballroom C
Fatty acid composition of colon cancer cell lines (SW620, SW480) and their EVs	Monika	Baj-Krzyworzeka	3	Poster Session #1 (Friday)	Ballroom C
Molecular profiling and functional analysis of macrophage-derived tumor extracellular vesicles	Tim	Beltraminelli	4	Poster Session #1 (Friday)	Ballroom C
Extracellular vesicles secreted from braintropic cells display distinct interactions with brain endothelial cells	Sara	Busatto	5	Poster Session #1 (Friday)	Ballroom C
Role of Rab21 and Rab31 in Tetraspanin Protein Localization and Epstein-Barr Virus LMP1 Extracellular Vesicle Trafficking	Allaura	Cone	6	Poster Session #1 (Friday)	Ballroom C
The Role of SRSF1 in Exosome microRNA Enrichment in Human Cancer Cells	Wei-Qin	Ding	7	Poster Session #1 (Friday)	Ballroom C
Exosome secretion in stromal matrix organization	Merlyn	Emmanuel	8	Poster Session #1 (Friday)	Ballroom C
Prostate cancer-derived extracellular vesicles impair osteoblast activity	Giulia	Furesi	9	Poster Session #1 (Friday)	Ballroom C
Epstein-Barr virus LMP1 enhances trafficking of PDL-1 into Extracellular Vesicles	Monica Abou	Harb	10	Poster Session #1 (Friday)	Ballroom C
Visualising extracellular vesicle release from prostate cancer cells	Jessica	Heatlie	11	Poster Session #1 (Friday)	Ballroom C
Antitumor effects of the Secretion Modification Region (SMR) Peptide: It blocks tumor extracellular vesicle (EV) release and induces complement-mediated cytotoxicity	Ming-Bo	Huang	12	Poster Session #1 (Friday)	Ballroom C
Characterizing murine osteosarcoma cell line derived exosome	Shan	Huang	13	Poster Session #1 (Friday)	Ballroom C
Quantitative comparison between small and large extracellular vesicles (EVs) reveals enrichment of adhesion proteins in small Evs	Lizandra	Jimenez	14	Poster Session #1 (Friday)	Ballroom C

Abstract Title	First Name	Last Name	Poster #	Poster Session #	Room
CD47 interactions with the exportin-1 pathway in T cells regulate nuclear export and selective targeting of microRNAs to extracellular vesicles	Sukhbir	Kaur	15	Poster Session #1 (Friday)	Ballroom C
Harnessing Cancer Extracellular Vesicle Biogenesis Controls Cancer Extravasation and Metastatic Efficiency	Yohan	Kim	16	Poster Session #1 (Friday)	Ballroom C
Pediatric ependymoma exosomes harbor proteins important for hypoxia resistance	Kendra	Maass	18	Poster Session #1 (Friday)	Ballroom C
The role of breast cancer molecular subtype in modifying the lung microenvironment for metastasis	Braeden	Medeiros	19	Poster Session #1 (Friday)	Ballroom C
Characterization of ncRNAs associated with Extracellular Vesicles and their role in intercellular communication	Joseph	Mills	20	Poster Session #1 (Friday)	Ballroom C
Epstein-Barr Virus LMP1 Alters the Cargo and Function of Extracellular Vesicles through Carboxyl Terminal Activating Region (CTAR)-Mediated Signaling	Dingani	Nkosi	21	Poster Session #1 (Friday)	Ballroom C
Designing Inhibitors of Exosomal Uptake by Tumor Cells	Josiah	Ochieng	22	Poster Session #1 (Friday)	Ballroom C
Role of exosomes in the development of dendritic filopodia, spines and synapses	Mikin	Patel	23	Poster Session #1 (Friday)	Ballroom C
Breast Cancer Cell-derived Exosomes Induce Angiogenesis and Facilitate Cancer Cell Extravasation in a 3D Organotypic Lung Microenvironment Model	Suzanne	Ponik	24	Poster Session #1 (Friday)	Ballroom C
Studies on breast cancer derived extracellular vesicle biogenesis in the light of new treatment strategies	Dagmar	Quandt	25	Poster Session #1 (Friday)	Ballroom C
HNSCC SEVs drive tumor angiogenesis via ephrin reverse signaling	Shinya	Sato	26	Poster Session #1 (Friday)	Board of Trust
Shed microvesicles derived from MDCK cells following HRAS-induced EMT contribute to fibroblast invasion capability	Adnan	Shafiq	27	Poster Session #1 (Friday)	Board of Trust
Impact of membrane proteins on retardation of exosome mobility and their entrapment by the microenvironment	Mikhail	Skliar	28	Poster Session #1 (Friday)	Board of Trust
Lung cancer exosomes induce barrier impairment, permeability, and epithelial-to-mesenchymal transition in a 16-day mature bronchial epithelium	Ikjot Singh	Sohal	29	Poster Session #1 (Friday)	Board of Trust
Perforin-induced extracellular vesicle burst causes adenosine release leading to impaired perforin secretion in cytotoxic T lymphocytes	Hiroko	Tadokoro	30	Poster Session #1 (Friday)	Board of Trust

Abstract Title	First Name	Last Name	Poster #	Poster Session #	Room
The downstream effects of pharmacological inhibitors on Epstein-Barr virus LMP1-mediated enhancement of extracellular vesicle production	Caitlin	Tweedie	31	Poster Session #1 (Friday)	Board of Trust
Extracellular vesicles derived from prostate cancer cells accelerate the progression of bone metastasis	Fumihiko	Urabe	32	Poster Session #1 (Friday)	Board of Trust
Rab27a is a versatile actor in glioma: effects on exosome release, cell viability and survival	Thomas	van Solinge	33	Poster Session #1 (Friday)	Board of Trust
Uptake of non-small cell lung cancer derived exosomes by normal bronchial epithelial cells drives invasion	Zulaida Soto	Vargas	34	Poster Session #1 (Friday)	Board of Trust
Extracellular vesicles from colorectal cancer patients as an inducer of myeloid-derived suppressor cells	Jarek	Baran	35	Poster Session #1 (Friday)	Board of Trust
Breast adipose tissue extracellular vesicles from obese women increase proliferation of ER+ breast cancer cells	Alberto	Benito-Martin	36	Poster Session #1 (Friday)	Board of Trust
Human Derived Extracellular Vesicles In Treating and Prognosticating The Progression of Leukemia	Theo	Borgovan	37	Poster Session #1 (Friday)	Board of Trust
Towards Exploitation of Exosomes in a Liquid Biopsy as Biomarkers for Early Cancer Detection	Pernille	Böttger	38	Poster Session #1 (Friday)	Board of Trust
Characterisation and next-generation sequencing-based miRNA expression analysis of chronic lymphocytic leukaemia extracellular vesicles (EVs)	Kieran	Brennan	39	Poster Session #1 (Friday)	Board of Trust
Monitoring of imatinib (IM) resistance by microRNAs (miRNAs) in gastrointestinal stromal tumors (GISTs) - an in vitro and liquid biopsy approach	Maria Laura	Centomo	40	Poster Session #1 (Friday)	Board of Trust
Circulating EVs and EV-piRNA in colorectal cancer	Kirsty	Danielson	41	Poster Session #1 (Friday)	Board of Trust
To identify the role of Exosomal STAT3 in Tumor Progression and Metastasis in ovarian cancer	Kalpna Deepa Priya	Dorayappan	42	Poster Session #1 (Friday)	Board of Trust
Extracellular vesicles for early detection and optimized therapy in kidney cancer patients	Dirk	Himbert	43	Poster Session #1 (Friday)	Board of Trust
Identification of differentially expressed murine transcripts upon tail vein injection of metastatic cancer cell-derived exosomes	Timothy	Holzer	44	Poster Session #1 (Friday)	Board of Trust
MicroRNA expression and editing from urinary extracellular vesicles of prostate cancer patients	Anson	Ku	45	Poster Session #1 (Friday)	Board of Trust
TGF-β-rich tumor-derived exosomes emerge as putative non-invasive biomarkers in head and neck cancer	Nils	Ludwig	46	Poster Session #1 (Friday)	Board of Trust

Abstract Title	First Name	Last Name	Poster #	Poster Session #	Room
3D Cell Culture Model for Discovery of Cancer-Specific EV Biomarkers and Clinical Validation in Patient Plasma	Christopher	Millan	47	Poster Session #1 (Friday)	Board of Trust
Breast adipose-derived extracellular vesicles from overweight and obese women increase the migration of MDA-MB-231 breast cancer cells	Paul	Paik	48	Poster Session #1 (Friday)	Board of Trust
Translating an EV- MicroFlow Assay from the Lab to the Clinic: A Real-World Experience in Progress	Desmond	Pink	49	Poster Session #1 (Friday)	Board of Trust
Wnt signaling inducing activity in ascites is associated with small extracellular vesicles and predicts poor outcome in ovarian cancer	Vendula	Pospíchalová	50	Poster Session #1 (Friday)	Board of Trust
Extracellular vesicle and AGO2-associated miR-210-3p as a marker of hypoxia in thyroid cancer	Bonita	Powell	51	Poster Session #1 (Friday)	Board of Trust
Exosomes from breast cancer patients express Tn antigen	Martin	Rabassa	52	Poster Session #1 (Friday)	Board of Trust
Discovery and Utility of Biomarkers in Liquid Biopsy for Early Detection of Breast Cancer	Tang-Long	Shen	3	Poster Session #2 (Saturday)	Ballroom C
Extracellular vesicles induce radioresistance in neuroblastoma cell line in culture	Flavia	Tortolici	6	Poster Session #2 (Saturday)	Ballroom C
Proteomic analysis of small extracellular vesicles derived from ovarian cancer cell lines and ovarian tissue explants	Camille V.	Trinidad	7	Poster Session #2 (Saturday)	Ballroom C
The release of exosomal NKG2D ligands in melanoma is downmodulated by BRAF inhibition	Mar	Valés-Gómez	8	Poster Session #2 (Saturday)	Ballroom C
Characterization of extracellular vesicles from cultured explants of canine osteosarcoma and normal bone	Alicia	Viloria-Petit	9	Poster Session #2 (Saturday)	Ballroom C
Polysialylated Prostate Extracellular Vesicles as Biomarkers in Prostate Cancer Risk Stratification and Prognostication	Karla	Williams	11	Poster Session #2 (Saturday)	Ballroom C
Extracellular vesicles spread disease phenotype to intact cells in tuberous sclerosis complex	Fahad	Zadjali	12	Poster Session #2 (Saturday)	Ballroom C
Prostate-derived microRNAs in Circulating Exosomes of Prostate Cancer Patients	Morgan	Zenner	13	Poster Session #2 (Saturday)	Ballroom C
Tumour-derived extracellular vesicles containing microRNA-125b as activators of cancer-associated fibroblasts in breast cancer	Daniel Xin	Zhang	14	Poster Session #2 (Saturday)	Ballroom C
Rapid isolation of extracellular vesicles from plasma by double-filtration	Vasiliy S.	Chernyshev	15	Poster Session #2 (Saturday)	Ballroom C

Abstract Title	First Name	Last Name	Poster #	Poster Session #	Room
Fabrication and Characterization of Tethered Bilayer Lipid Membranes (tBLMs): Influence of Tether Density on Structural Properties	Minsub	Chung	16	Poster Session #2 (Saturday)	Ballroom C
Tangential flow microfluidics for the capture and release of nanoparticles and extracellular vesicles on conventional and ultrathin membranes	Mehdi	Dehghani	17	Poster Session #2 (Saturday)	Ballroom C
The Importance of Orthogonal Techniques in EV Quantification	Jean-Luc	Fraikin	18	Poster Session #2 (Saturday)	Ballroom C
Tetraspanin-specific sub-100 nm vesicles in the EV cellular response to impaired mitochondria	Jean-Luc	Fraikin	19	Poster Session #2 (Saturday)	Ballroom C
A positive sensor circuit for in vivo detection of small RNA activity	Hannah	Gruner	20	Poster Session #2 (Saturday)	Ballroom C
Rapid Human Urinary and Plasma Exosomes Isolation and Quantification through a Hydrophobic Interaction Chromatography Method on Polyester Capillary-channeled Polymer Fiber Phase	Sisi	Huang	21	Poster Session #2 (Saturday)	Ballroom C
Continuous Separation of Extracellular Vesicles by Electroosmotic Flow and Pillar Array on a Chip	Noritada	Kaji	22	Poster Session #2 (Saturday)	Ballroom C
Ovarian Cancer Biomarker Detection through the Isolation and Imaging of Tumor-Derived Exosomes using a C-CP Fiber Spin-Down Approach	Kaylan	Kelsey	23	Poster Session #2 (Saturday)	Ballroom C
Quantitative imaging and phenotyping of EVs with 20-nm resolution	Pradeep	Kumar	24	Poster Session #2 (Saturday)	Ballroom C
Isolation of extracellular vesicles from renal cyst fluid: challenges and solutions	Prashant	Kumar	25	Poster Session #2 (Saturday)	Ballroom C
Comparison of extracellular vesicle isolation methods for quantitative protein analyses	Huiyan	Li	26	Poster Session #2 (Saturday)	Board of Trust
Flow Exosometry: Characterization of Extracellular Vesicles by Flow Cytometry	Selma	Maacha	27	Poster Session #2 (Saturday)	Board of Trust
Technical evaluations of a single-particle interferometric reflectance imaging sensor (SP-IRIS)/fluorescence detection platform	Emily R.	Mallick	28	Poster Session #2 (Saturday)	Board of Trust
Localized Surface Plasmonic Biosensing and isolation of Extracellular Vesicles in a microfluidic chip (lab-on-a-chip) and its validation through Droplet Digital PCR	Muthukumaran	Packirisamy	29	Poster Session #2 (Saturday)	Board of Trust
Localized Surface Plasmonic Biosensing and isolation of Exosomes in a microfluidic chip (lab-on-a-chip) and its validation through Droplet Digital PCR	Shanmugasundaram	Pakkiriswami	30	Poster Session #2 (Saturday)	Board of Trust

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Development of an automated, high-precision, standardizable extracellular vesicle isolation platform for clinical studies.	Anoop	Pal	31	Poster Session #2 (Saturday)	Board of Trust
Comprehensive Coverage of Exosome Purification and Exosomal RNA Isolation from Different Types of Liquid Biopsies	Basiten	Paré	32	Poster Session #2 (Saturday)	Board of Trust
Development and characterization of exosomes standards from cancer cell lines	Siddhartha	Paul	33	Poster Session #2 (Saturday)	Board of Trust
Immunophenotyping extracellular vesicles using the CellStream® Flow Cytometer	Haley	Pugsley	34	Poster Session #2 (Saturday)	Board of Trust
Genetic Validation of Physical Modeling of Nano-Bio Interactions between Extracellular Vesicles and Different Morphologies of Gold Nano Particles	Duraichelvan	Raju	35	Poster Session #2 (Saturday)	Board of Trust
Multiplexed Electrochemiluminescent Immunoassays for Characterizing Intact Extracellular Vesicles	David	Routenberg	36	Poster Session #2 (Saturday)	Board of Trust
Establishment of a 3D heterotypic spheroid model for studying extracellular vesicle-mediated communication between stromal and prostate cancer cells.	Krizia	Sagini	37	Poster Session #2 (Saturday)	Board of Trust
Identification of Mammaglobin-A Breast Derived Evs in Breast Cancer Patient Plasma Using Nanoscale Flow Cytometry	Nikki	Salmond	38	Poster Session #2 (Saturday)	Board of Trust
A Pancreatic Cancer Screening Assay Developed on the ExoView™ Platform	Veronica	Sanchez	39	Poster Session #2 (Saturday)	Board of Trust
Development and immuno-capture of extracellular vesicles expressing fluorescently-tagged CD9 and CD81	Tyler	Slonecki	40	Poster Session #2 (Saturday)	Board of Trust
PENPPA: qPCR based Extracellular vesicle Nucleic acid and Protein Profiling Assay	Li	Sun	41	Poster Session #2 (Saturday)	Board of Trust
pHluo_M153R-CD63, a bright, versatile live cell reporter of exosome secretion and uptake, reveals pathfinding behavior of migrating cells	Bong Hwan	Sung	42	Poster Session #2 (Saturday)	Board of Trust
Determining the Logistics of Patient Sample Handling for Clinical Test SOPs	Michael	Wong	43	Poster Session #2 (Saturday)	Board of Trust
Versatile Isolation of cfDNA, EVs and EV Associated DNA Reveal Importance of Liquid Biopsy Sample Selection	Fangting	Wu	44	Poster Session #2 (Saturday)	Board of Trust
Use of high-capacity membranes for simple, rapid exosome isolations with high yield and purity	Yi	Zhao	45	Poster Session #2 (Saturday)	Board of Trust
Modification of extracellular vesicles of mesenchymal stem cells to increase uptake efficiency and miRNA delivery	Artūrs	Ābols	46	Poster Session #2 (Saturday)	Board of Trust

Abstract Title	First Name	Last Name	Poster #	Poster Session #	Room
A hybrid nanoconstruct of extracellular vesicles and zinc oxide nanoparticles to fight cancer cells	Marta	Canta	47	Poster Session #2 (Saturday)	Board of Trust
In vivo screen for extracellular vesicles that promote retinal regeneration in zebrafish and mice	Edward	Levine	48	Poster Session #2 (Saturday)	Board of Trust
3D printing Extracellular vesicle-based Biomimetic Tumor Models for Personalized Medicine	Saigopalakrishna	Yerneni	49	Poster Session #2 (Saturday)	Board of Trust
Engineered exosomes with elevation of miR-214 enhance anti-ovarian cancer effects of carboplatin	Yi	Zhang	50	Poster Session #2 (Saturday)	Board of Trust
Extracellular vesicles as nanoparticle-based efficient delivery system for small therapeutic RNAs	Petro	Zhupanyin	51	Poster Session #2 (Saturday)	Board of Trust
EV isolation and high-sensitivity glycomic and proteomic profiling of EV isolates	Alexander	Ivanov	52	Poster Session #2 (Saturday)	Board of Trust
Evaluation of a novel microfluidic EV-isolation device	Richard	Zieren	53	Poster Session #2 (Saturday)	Board of Trust

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