

Sunday **October 8, 2017** **Day 1****4:00-6:00PM****Registration****6:00-7:00PM****Dinner****7:00-9:10PM****Session I**

Chair

Michael Graner, University of Colorado Denver

7:00-7:10PM

Michael Graner, co-organizer, ASEM2016
Opening Remarks

7:10-8:10PM

*Takahiro Ochiya, National Cancer Center, Japan*Abstract #

(1)

Extracellular vesicles as a novel therapeutic target for cancer metastasis

8:10-8:40PM

Christie D. Fowler, UC Irvine

(2)

Extracellular microRNAs released during nicotine self-administration

8:40-9:10PM

Janos Zemleni, U Nebraska

(3)

Delivery and alterations of microbial signals by bovine milk exosomes in non-bovine species

9:10-11:00PM**Welcome Reception****Monday****October 9, 2017****Day 2****8:30AM-12:00PM****Session II**

Chair

*Christie Fowler, UC Irvine*Abstract #

8:30-8:50AM

Tom Gingeras, CSHL

(4)

Tailoring of Extracellular RNAs

8:50-9:10AM

Harmeet Malhi, Mayo Clinic

(5)

STARD11-mediated ceramide transport is necessary for release of lipotoxic extracellular vesicles

9:10-9:30AM

Rienk Nieuwland, AMC Amsterdam, The Netherlands

(6)

Prediction of venous thromboembolism in cancer patients

9:30-9:50AM

Shilpa Buch, U. Nebraska

(7)

Exosomal miRNA-mediated loss of pericyte coverage at the blood-brain barrier: Implications for morphine-mediated potentiation of neurodegeneration

9:50-10:10AM *Chulhee Choi, KAIST Daejeon, Korea* (8)

Engineered exosomes loaded with super repressor I κ B, a potent inhibitor of NF- κ B pathway, for treatment of septic shock syndrome

10:10-10:30AM Break Monday AM Oct. 9

10:30-10:45AM *Florencia Menay, Buenos Aires University, Argentina* (9)

Exosomes isolated from ascites of T-cell lymphoma-bearing mice induce a tumor-specific immune response

10:45-11:00AM *Jing-Hung Wang, Stanford University* (10)

High affinity anti-HER2 scFv-directed extracellular vesicle-mediated mRNA-based gene delivery inhibits growth of HER2-overexpressing human breast tumor xenografts by prodrug activation

11:00-11:15AM *Masamitsu Kanada, Michigan State University* (11)

Microvesicle-mediated delivery of minicircle DNA encoding prodrug-converting enzymes for cancer therapy

11:15-11:30AM *Joshua Hood, University of Louisville* (12)

Cyclical Electrical Field Flow Fractionation of Melanoma Exosomes

11:30-11:45AM *Biao Lu, Santa Clara University* (13)

Sequential deletion of CD63 reveals critical domains for exosome targeting and surface engineering

11:45AM-12:00PM *Indrani Das, Harvard* (14)

"Exosomal microRNA-124a: Novel Translational Reactive Astrocyte Repair *in vitro*"
Winning Project of the 2017 Regeneron Science Talent Search

12:00-1:00PM Lunch

1:00PM-4:30PM Session III Monday PM Oct 9Chair *Harmeet Malhi, Mayo Clinic*

- | | | <u>Abstract #</u> |
|---|---|-------------------|
| 1:00-1:15PM | <i>Swetha Srinivasan, Abbvie</i> | (15) |
| Utilizing extracellular vesicles from patient plasma to identify biomarkers of autoimmune disease | | |
| 1:15-1:30PM | <i>Gareth Willis, Harvard Medical School</i> | (16) |
| Mesenchymal stem/Stromal Cell Exosomes Ameliorate Experimental Bronchopulmonary Dysplasia and Restore Lung Function through Macrophage Immunomodulation | | |
| 1:30-1:45PM | <i>Travis Antes, Cedars Sinai Medical Center</i> | (17) |
| New targeting methods that manipulate the surface of EVs for enhanced tissue delivery | | |
| 1:45-2:00PM | <i>Victoria Marsh Durban, ReNeuron</i> | (18) |
| Neural Stem Cell-derived exosomes induce senescence and apoptosis in cancer cell lines | | |
| 2:00-2:15PM | <i>Jan Lötvall, U. of Gothenburg, Sweden & Codiak</i> | (19) |
| Regenerative Properties of Exosomes Derived from Mesenchymal Stem Cells | | |

2:15-2:30PM Break

- | | | |
|--|--|------|
| 2:30-2:45PM | <i>Peter DeHoff, UCSD</i> | (20) |
| <i>Lack of Correlation Between Maternal Serum and Placental miRNA Expression</i> | | |
| 2:45-3:00PM | <i>Janice Braun, University of Calgary</i> | (21) |
| Understanding the CSP-EV export pathway | | |
| 3:00-3:20PM | <i>Carla Beckham, University of Rochester</i> | (22) |
| HOTAIR affects epithelial-to-mesenchyme transition and extracellular vesicle content and function | | |
| 3:20-3:40PM | <i>Suraj Bhat, UCLA</i> | (23) |
| The Small Heat Shock Protein α B-crystallin is Essential for Exosome Biogenesis in Human Retinal Pigment Epithelial Cells in Culture: A Specific Interaction with Rab GTPase27b | | |
| 3:40-4:00PM | <i>Siyang Zheng, Pennsylvania State University</i> | (24) |
| Rapid isolation of extracellular vesicles using lipid nanoprobe | | |

4:00-4:15PM *Ane Salvador, Massachusetts General Hospital* (25)
 MicroRNA-30d is a biomarker for heart failure and plays a functional role in cardiac remodeling

4:15-4:30PM *George Daaboul, nanoView Diagnostics* (26)
 High-Throughput Characterization of Single Exosomes and Extracellular Vesicles

4:30-6:00PM **Poster session A**

7:00PM-9:00PM **Session IV** **Monday Evening Oct 9**

Chair *Carla Beckham, University of Rochester*

Abstract #

7:00-7:30PM *Maxence Nachury, Stanford* (27)
 Molecular mechanisms and functional significance of extracellular vesicle secretion by primary cilia

7:30-8:00PM *Hiroshi Shiku, Mie University, Japan* (28)
 Activated CD8+ T cells interrupt tumor invasion and metastasis in exosome-dependent manners

8:00-8:30PM *Alissa Weaver, Vanderbilt University* (29)
 Role of cortical actin in MVB docking and secretion

8:30-9:00PM *Janusz Rak, McGill University* (30)
 Oncogenes as organizers of extracellular vesicle communication

9:00-9:15PM *Radhika Pochampally, University of Mississippi* (31)
 Polycomb group protein Suz12 is regulated by a novel miRNA-like small RNA

9:15-11:00PM **Reception/Poster session A**

Tuesday **October 10, 2017** **Day 3**

8:30AM-12:00PM **Session V**

Chair *Claudia Mongini, Buenos Aires University, Argentina*

Abstract #

Caris Discovery Lecture

8:30-9:30AM *Alain Brisson, University of Bordeaux France* (32)

Methods of imaging, quantification and isolation of exosomes/ EVs

9:30-9:50AM *In-San Kim, KIST Korea* (33)

Exosomes as a Carrier for Membrane Protein Therapeutics

9:50-10:10AM *Suresh Mathivanin, LaTrobe University, Australia* (34)

Exosomes from bovine milk reduces the tumor burden and attenuates cancer cachexia

10:10-10:30AM *Dirk Dittmer, UNC Chapel Hill* (35)

Exosomes from a virus-driven tumor exert paracrine effects leading to endothelial cell reprogramming

10:30-10:45AM Break Tuesday AM Oct. 10

10:45-11:00AM *Chun-Mei Hu, GRC Academica Sinica, Taiwan* (36)

The role of pancreatic cancer-derived exosomes in cancer-mediated cachexia

11:00-11:15AM *David Lubman, University of Michigan* (37)

Proteomic Analysis of Exosomes from Patient Serum Samples

11:15-11:30AM *Alexander Pfeifer, University of Bonn, Germany* (38)

Exosomal miRNAs as potential biomarkers for energy expenditure by human brown adipose tissue

11:30-11:45AM *Antonio De Maio, UCSD* (39)

Isolation and glycoprotein characterization of human urine extracellular vesicles

11:45AM-12:00PM *Victoria Portnoy, SBI* (40)

Fluorescent NTA for Next-Gen, Highly Accurate Quantitation of Extracellular Vesicles

12:00-1:00PM Lunch

1:00PM-4:00PM Break

4:00-6:00PM Poster session B

6:00-7:00PM Dinner

7:00PM-9:00PM Session VI Tuesday Evening Oct. 10

Chair Louise Laurent, UCSD

Abstract #

7:00-7:20PM *Michiel Pegtel, VU University, The Netherlands* (41)

Quantifying MVB-PM fusion in single living cells to unravel exosomes release dynamics

- 7:20-7:40PM *Morayma, Temoche-Diaz, UC Berkeley* (42)
Mechanisms of small RNA sorting into extracellular vesicles secreted by human breast cancer cells
- 7:40-8:00PM *Imre Mager, University of Oxford* (43)
RNA Binding Proteins and Small RNA Transcriptome of Extracellular Vesicles
- 8:00-8:20PM *Ken Witwer, Johns Hopkins University* (44)
Detection and Characterization of Large Oncosomes in Thyroid Cancer
- 8:20-8:40PM *Huiping Liu, Northwestern University* (45)
Unveiling the role of exosomes in breast cancer development
- 8:40-9:00PM *Muller Fabbri, Children's Hospital Los Angeles* (46)
Role of NK-derived exosomal microRNAs in cancer therapy and immunoescape
- 9:00-9:20PM *Michael Olin, University of Minnesota* (47)
Tumor derived Extracellular Vesicles Modulate CD200-induced Immunosuppression

9:00-11:00PM Reception/Poster session B

Wednesday

October 11, 2017

Day 4

8:30AM-12:00PM Session VII

Chair

Robert Raffai, UCSF

Abstract #

- 8:30-8:50AM *Ivan Vechetti, University of Kentucky* (48)
Exercise-induced exosomal myomiR regulation of adipocyte metabolism
- 8:50-9:10AM *Andries Zijlstra, Vanderbilt University* (49)
EVs in Tumor Cell Invasion, Dissemination and Metastatic Success
- 9:10-9:30AM *Rachel DeRita, Thomas Jefferson University* (50)
The Role of Exosomal $\beta 1$ Integrin/Src pathway in the Radiation Therapy Response
- 9:30-9:50AM *Andrew Hill, LaTrobe University, Australia* (51)
The role of extracellular vesicles in neurodegenerative diseases

9:50-10:10AM *Kristopher Genschmer, Univ. of Alabama, Birmingham* (52)
Exosomes from activated human neutrophils contain active neutrophil elastase that can degrade lung extracellular matrix.

10:10-10:30AM Break Wednesday AM Oct. 11

10:30-10:45AM *Randy Carney, UC Davis* (53)
Vibrational spectroscopy as a tool for fingerprinting tumor exosomes

10:45-11:00AM *John Lewis, University of Alberta Canada* (54)
Extracellular vesicle blood fingerprinting to distinguish between patients with indolent and aggressive prostate cancer at diagnosis

11:00-11:15AM *Andrew Hoffman, Tufts University* (55)
Wharton's Jelly mesenchymal stem cells exert TGF-B1 and monocyte dependent T cell suppression through extracellular vesicles

11:15-11:30AM *Vasily Chernyshev, Skoltech & MIPT, Russia* (56)
Can size exclusion chromatography become a standard technique for extracellular vesicle isolation?

11:30-11:45AM *Ashley Russell, West Virginia University* (57)
TNF- α , exosomes, and microRNAs: Contributions to neuroinflammation

11:45AM-12:00PM *Heather O'Neill, Caris* (58)
Adaptive Dynamic Artificial Poly-ligand Targeting™ (ADAPT) identifies aptamers involved in exosome biogenesis that discriminate between two prostate cancer cell lines

12:00-1:00PM Lunch

1:00PM-4:25PM Session VIII Wednesday PM Oct. 11

Chair *Xandra Breakefield, MGH*

Abstract #

1:00-1:15PM *Shivani Sharma, UCLA* (59)
Exo-nano-metrics: nanoscale structure and bio-molecular heterogeneity of single vesicles

1:15-1:30PM *Ikuhiko Nakase, Osaka Prefecture University* (60)
Exosome-based intracellular delivery system using artificial leucine-zipper peptides for receptor recognition and activation

1:30-1:45PM *Chioma Okeoma, Stony Brook University* (61)
The intricacies of exosomes in varied biological systems

1:45-2:00PM *Jiacong Guo, University of Southern California* (62)
PRAS40 is a pivotal regulator during microenvironmental stress signaling to exosome-mediated secretion

2:00-2:15 *Pasquale Sansone, Cornell University Medical School* (63)
Packaging of DNA:RNA hybrids in extracellular vesicles and their horizontal transfer in cancer

2:15-2:30PM Break Wednesday PM Oct. 11

2:30-2:50PM *Dolores Di Vizio, Cedars Sinai Medical Center* (64)
Not all EVs are the Same: from Function to Biomarker

2:50-3:10PM *Marc Antonyak, Cornell University* (65)
Examining the roles of EVs in cancer progression

3:10-3:25PM *Bong Hwan Sung, Vanderbilt University* (66)
Chemotaxis and directionally persistent migration of cancer cells is promoted by exosome secretion

3:25-3:40PM *Elizabeth Hutchins, TGen* (67)
Profiling extracellular circular RNA expression in biofluids

3:40-3:55PM *Martin Schlumpberger, Qiagen* (68)
New Workflows Enabling Cancer RNA Biomarker Detection from Exosomes and other Extracellular Vesicles (EVs)

3:55-4:10PM *Ting-Wen Lo, University of Michigan* (69)
Microfluidic technologies for the isolation and characterization of circulating extracellular vesicles and evaluation of their functional role in amyotrophic lateral sclerosis

4:10-4:25 *Hui-Ling Chiang, Pennsylvania State University* (70)
Endocytosis and trafficking of exosomes to lysosomes

4:25-6:00PM Break
6:00-7:00PM Dinner

7:00PM-9:00PM Session IX Wednesday Evening Oct. 11Chair *Chioma Okeoma, Stony Brook University*Abstract #7:00-7:20PM *Xandra Breakefield, Massachusetts General Hospital* (71)
*Extracellular Vesicles as EVocators in Brain Tumors*7:20-7:40PM *Michael Graner, University of Colorado* (72)
*Glioma Extracellular Vesicles and Astrocytes: Conversion to the Dark Side*7:40-8:00PM *Robert Raffai, UCSF* (73)
*Cushioned–Density Gradient Ultracentrifugation (C–DGUC): a Refined and High Performance Method for the Isolation, Characterization & Use of Exosomes*8:00-8:20PM *Jennifer Jones, NCI/NIH* (74)
*Development of a Multiplex-To-Single Exosome Analysis (MT-SEA) Pipeline to Characterize Exosomes Associated with Tumor Progression and Responses to Treatment*8:20-8:40PM *Susanne Gabrielsson, Karolinska Institute, Sweden* (75)
*Exosomes as immunotherapy for cancer*8:40-9:00PM *Louise Laurent, UCSD* (76)
*Placenta-specific miRNAs are carried by a distinct population of EVs in maternal serum***9:00-11:00PM Reception****Thursday October 12, 2017 Day 5****9:00-12:00AM Session X**Chair *Raghu Kalluri, MD Anderson*Abstract #8:30-8:50AM *Raghu Kalluri, MD Anderson* (77)
*Exploiting exosomes for treatment of cancer*8:50-9:10AM *Prashanth Vallabhajosyula, University of Pennsylvania* (78)
*Exosomes in transplant tolerance and rejection*9:10-9:30AM *Fatah Kashanchi, George Mason University* (79)
Effect of exosomes on cART HIV-1 infected latent model

9:30-9:50AM *David Meckes, Florida State University* (80)
Ceramide- and CD63-dependent trafficking of Epstein-Barr virus LMP1 to extracellular vesicles

9:50-10:10AM *Masafumi Ito, TMIG, Japan* (81)
(*Tokyo Metropolitan Institute of Gerontology*)
Promotion of angiogenesis by exosomes expressing carbonic anhydrase 9

10:10-10:30AM Break Thursday AM Oct. 12

10:30-10:50AM *Wei Seong Toh, National University (NUS), Singapore* (82)
Exosome-based cartilage regeneration therapy

10:50-11:10AM *Sang-Soo Lee, KAIST Korea* (83)
Multi-dimensional characterization of extracellular vesicles in ultra-centrifugal fractions

11:10-11:30AM *Pieter Vader, UMC Utrecht, The Netherlands* (84)
Improved isolation and hydrogel-based controlled release of cardiac progenitor cell-derived extracellular vesicles for cardiac repair

11:30-11:45AM *Jiujiu Yu, University of Nebraska* (85)
Inhibitory effects of ginger exosomes on NLRP3 inflammasome activation

11:45AM-12:00PM *Geoffrey de Couto, Cedars Sinai Medical Center* (86)
Macrophages preferentially endocytose systemically-delivered exosomes at steady state or during acute inflammation

12:00-1:00PM Lunch

1:00PM-4:00PM Session XI Thursday PM Oct. 12

Chair *Stephen Gould, Johns Hopkins University*

Abstract #

1:00-1:20PM *Jason Howitt, Florey Institute, Australia* (87)
Investigating the in vivo trafficking and function of exosomes

1:20-1:40PM *Richard Van Krieken, McMaster University Canada* (88)
SREBP-1 is a novel regulator of the T β RI through exosomal secretion

ASEMV2017	Asilomar, Pacific Grove, CA	11
1:40-2:00PM	<i>Mikhail Skliar, University of Utah</i>	(89)
Membrane Proteins Significantly Restrict Exosome Mobility		
2:00-2:20PM	<i>Julie Saugstad, Oregon Health & Science University</i>	(90)
MicroRNA Biomarkers for Alzheimer's Disease in Human Cerebrospinal Fluid		
2:20-2:40PM	Break	
2:40-3:00PM	<i>Francis Fordjour, Johns Hopkins University</i>	(91)
Exosome biogenesis in the absence of CD63, CD81, and CD9		
3:00-3:15PM	<i>Li Fang Yang, Eastern Virginia Medical School</i>	(92)
New Insights into Prostate Cancer Metastatic Biomarkers from Exosomal Proteome Analysis		
3:15-3:30PM	<i>Derek Russell, University of Alabama at Birmingham</i>	(93)
A passive mechanism of protein loading onto exosomes: the activated neutrophil exosome and neutrophil elastase		
3:30-3:45PM	<i>Robert Kitchen, Exosome Diagnostics</i>	(94)
Sequencing of exosomal mRNA and lncRNA across 4 biofluids reveals distinct abundance profiles and biomarker opportunities		
3:45-4:00PM	<i>Stephen J. Gould, Johns Hopkins University</i>	(95)
ExoMap-1 and exoMap-2 mice: models for studying tissue specific exosome biogenesis, composition, and trafficking in vivo		
4:00PM	Meeting Close	