



NIH Extracellular RNA Communication Consortium 9th Investigators' Meeting November 6-7, 2017



Hilton Washington DC/Rockville Hotel & Executive Meeting Center
Plaza Ballroom†, 1750 Rockville Pike, Rockville, MD 20852

Monday, November 6th, 2017

Welcome and Registration

8:15 a.m. Registration opens
9:15 a.m. Opening Remarks

Session I: Extracellular Vesicle Biogenesis and Function

Session Chairs: Drs. Nihal Altan-Bonnet & Xandra Breakefield

9:30 a.m. HIV-1 Latency: The Relationship between Virus, Exosomes, and TAR-gag, a Novel HIV-1 RNA. Robert Barclay
9:45 a.m. Inter-Organismal Vesicular Transmission of Enteric Viruses Marianita Santiana
10:00 a.m. CD63, MHC class 1, and CD47 identify subsets of extracellular vesicles containing distinct populations of non-coding and microRNA Sukhbir Kaur
10:15 a.m. The RNA binding protein HuR regulates extracellular vesicle secretion in colorectal cancer Daniel A. Dixon
10:30 a.m. Oncogene Regulated Production and Release of Vesicles and Extracellular RNAs Seda Kilinc Avsarglu

10:45 a.m. **Discussion: Cargo Sorting**

11:30 a.m. **Lunch* and DMRR Workshop**

1:00pm **Special Presentation:** Methodologies to Standardize Flow Cytometric Measurement of Extracellular Vesicles and Quantitatively Measure Extracellular RNA Erica Stein

Session II: exRNA and Extracellular Vesicle Standards and Resources

Session Chairs: Drs. Kendall Jensen & Hameeda Sultana

1:30 p.m. Definition of serum ribonucleoprotein composition and its regulation and function Klaas Max
1:45 p.m. Comparison of different technical platforms for circulating miRNA profiling Vasily Aushev
2:00 p.m. Full-coverage landscape of extracellular coding and non-coding RNA released by human glioma stem cells Anna M. Krichevsky
2:15 p.m. The exRNA Atlas resource provides insights into exRNA biology through cross-study analysis of exRNA profiles Aleksandar Milosavljevic
2:30 p.m. exRpt: the extracellular RNA-Seq processing pipeline of the ERCC Joel Rozowsky
2:45 p.m. **Break**

Session III: Research, Diagnosis and Biomarkers

Session Chairs: Drs. Leonora Balaj & Tomer Cooks

3:00 p.m. Extracellular vesicle microRNA signatures reveal tissue heterogeneity in defined glioblastoma subtypes Agnieszka Bronisz
3:15 p.m. MicroRNA Biomarkers for Alzheimer's Disease in Human Cerebrospinal Fluid Julie Saugstad
3:30 p.m. The bioavailability and distribution of exosomes and their RNA cargos from bovine and porcine milk in mice Janos Zempleni
3:45 p.m. Extracellular RNA profiles with human age Nicole Noren Hooten
3:00 p.m. Plasma-based detection of the mutant IDH1.R132H in glioma patients Leonora Balaj
4:15 p.m. **Break**

4:30 p.m.-6:30 p.m. **Poster Session and Networking (Foyer)**

*Attendees will be responsible for their own meals and/or refreshments. The government neither provides nor reimburses the cost of food and beverage.

† Unless otherwise noted, all talks will be held in the Plaza Ballroom.



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Tuesday, November 7th, 2017

Special Session: Navigating Regulatory Submissions

9:30 a.m.	Regulatory Considerations for <i>In Vitro</i> Diagnostics	Aaron Schetter
10:00 a.m.	Regulatory Considerations for Biologics	Malcolm Moos

Session IV: Therapeutic Uses of exRNA and Extracellular Vesicles

Session Chairs: Drs. Ana Robles & Tom Schmittgen

10:30 a.m.	Anti-HER2 scFv-directed extracellular vesicle-mediated mRNA-based gene delivery arrests growth of HER2-positive human breast tumor xenografts by prodrug activation	A.C. Marin
10:45 a.m.	Modified Extracellular Vesicles Improves Host Immune Response in Colorectal Cancer	Subbaya Subramanian
11:00 a.m.	Optimizing exosome production and intracerebroventricular delivery to brain	Reka A. Haraszti
11:15 a.m.	Tissue Regeneration by Exosome Engineering	James D. Bryers
11:30 a.m.	N6-Methyladenosine (m6A) RNA Modifications Mediate the Beneficial Function of Human CD34+ Stem Cell-Derived Exosomes to Repair the Failing Heart	Susmita Sahoo

11:45 a.m. **Lunch* and Networking**

Session V: Cutting-Edge Technologies

Session Chairs: Drs. Dolores Di Vizio & Jennifer Jones

1:15 p.m.	Quantification and characterization of low-abundance exosomes and RNA biomarkers with Interferometric Reflectance Imaging	Derin Sevenler
1:30 p.m.	Role of Red Blood Cell derived extracellular vesicles in cardiac remodeling after myocardial infarction in a transgenic murine model	Saumya Das
1:45 p.m.	Microfluidic Isolation and Molecular Profiling of Tumor-specific Extracellular Vesicles	Berent Aldikacti
2:00 p.m.	Sequencing exosomal mRNA and lncRNA across human biofluids coupled with targeted enrichment of exosomal sub-populations reveals novel biomarkers	Robert Kitchen
2:15 p.m.	Evaluating functional delivery of cargo in extracellular vesicles	Meadhbh Brennan
2:30 p.m.	Break	

Session VI: Discussions Not to Miss – Future Directions of Research

Session Chairs: Drs. Louise Laurent & Aleksandar Milosavljevic

2:45 p.m.	Technological Challenges & Opportunities	Jennifer Jones & Mark Ansel
3:10 p.m.	Critical Questions in EV Biology	Alissa Weaver & Mike McManus
3:35 p.m.	The Future of Clinical Applications of EVs/exRNAs	Tushar Patel & Saumya Das
4:00 p.m.	Open Discussion	

5:00 p.m. Closing Remarks

5:15 p.m. Meeting Adjourns

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