

Agenda

Day 1 - June 7, 2016

7:30am-8:00am	Registration
8:00-8:10am	<i>Welcome</i> Dr Gary Gibbons, Director, NHLBI
8:10-8:15am	<i>Workshop Introduction</i> Dr Keith Hoots, Director, DBDR
8:15-8:20am	<i>Goals and Objectives</i> Dr Margaret Ochocinska, Program Director, DBDR
8:20-8:40am	Keynote: MRI-guided FUS to Open the Blood Brain Barrier in the Treatment of Brain Tumors Dr Todd Mainprize, Sunnybrook Health Sciences Center
Blood Sciences Session I Chair: Dr Berislav Zlokovic, USC	
8:40-9:00am	<i>The Blood Brain Barrier and Neurodegeneration</i> Dr Berislav Zlokovic, University of Southern California
9:00-9:20am	<i>Microfluidics for Blood Research: from disease simulation to patient-specific phenotyping to diagnostics</i> Dr Scott Diamond, Penn Center for Molecular Discovery
9:20-9:40am	<i>Microparticles Impact Coagulation after Traumatic Brain Injury</i> Dr Michael Goodman, University of Cincinnati
9:40-10:00am	<i>Fibrinogen in neurological diseases: mechanisms, imaging, therapeutics</i> Dr Katerina Akassoglou, UCSF School of Medicine
10:00-10:20am	<i>Exosomes in Glioma: their potential as carriers of information between the tumor and immune cells</i> Dr Theresa Whiteside, University of Pittsburgh
10:20-10:35am	Break
Blood Sciences Session II Chair: Dr A Tamara Crowder, Combat Casualty Care Research Program, DoD	
10:35-10:55am	<i>Monitoring the Central Nervous System through Peripheral Biofluids</i> Dr Kendall Jensen , TGen Center for Noninvasive Diagnostics
10:55-11:15am	<i>Challenging Assumptions about the Blood-Brain Barrier: implications for detection of biomarkers of brain injury in blood</i> Dr Alex Valdka, Virginia Commonwealth University
11:15-11:35am	<i>Post-traumatic Cerebral Blood Flow, Autoregulation, and the Neurovascular Unit</i> Dr Don Marion, Defense and Veterans Brain Injury Center
11:35-11:55am	<i>Employing Transporters at Blood-Brain Interfaces to Regulate the Brain's Metabolomic and Pharmacologic Microenvironment</i> Dr Robert Clark, University of Pittsburgh
11:55am-12:55pm	Lunch Break

Day 1 - June 7, 2016 continued...

Exosome Therapeutics Session	
Chair: Dr Richard Kraig, University of Chicago Medical Center	
12:55-1:15pm	<i>In Vivo Tracking of Dendritic Cell Exosomes Delivered to Brain</i> Dr Richard Kraig, University of Chicago Medical Center
1:15-1:35pm	<i>Exosomes as Therapeutic RNAs Delivery Vesicles</i> Dr Anastasia Khvorova, University of Massachusetts Medical School
1:35-1:55pm	<i>Exosome-like Nanoparticles Delivering Therapeutic Agents Through an Intranasal Route Inhibit Brain Tumor Progression</i> Dr Huang Ge Zhang, University of Louisville
1:55-2:15pm	<i>Plasma Exosomes Enriched for Neuronal Origin: a source of biomarkers for neurodegenerative and neuroinflammatory diseases</i> Dr Dimitrios Kapogiannis, National Institute of Aging/NIH
2:15-2:35pm	<i>HER2-targeted Extracellular Vesicles Delivery of Therapeutic mRNA for Enzyme Prodrug Therapy</i> Dr AC Matin, Stanford University
2:35-2:50pm	Break
2:50-4:30pm	Open Microphone Discussion and Panel - Blood Brain Interface I
4:30-5:00pm	Wrap-up
5:00pm	Adjourn

Day 2 – June 8, 2016

7:30am-8:00am	Registration
8:00-8:20am	Keynote: From Blood–Brain Barrier to Blood–Brain Interface: new opportunities for CNS drug delivery Dr William Banks, University of Washington
Next Generation <i>in vitro</i> BBB Models Session	
Chair: Dr Peter Searson, Johns Hopkins School of Medicine	
8:20-8:40am	<i>Assessing the Feasibility of an <i>in vitro</i> Neurovascular Unit</i> Dr Peter Searson, Johns Hopkins School of Medicine
8:40-9:00am	<i>NeuroVascular Unit (NVU) on a Chip: new direction in blood-brain barrier modeling and perfusion</i> Dr Jackelyn Brown, Vanderbilt University
9:00-9:20am	<i>Modeling and Targeting the Blood-Brain Barrier in Health and Disease</i> Dr Eric Shusta, University of Wisconsin
9:20-9:40am	<i>Developing Tridimensional Models of the Human Cerebral Cortex <i>in vitro</i></i> Dr Sergiu Pasca, Stanford University
9:40-10:00am	<i>Revealing the Transport Mechanisms, Kinetics, and Energetics of Drugs Diffusing through Membranes of the Blood-Brain Barrier</i> Dr Martin Ulmschneider, Johns Hopkins University
10:00-10:15am	Break

Day 2 – June 8, 2016 continued...

Blood Brain Barrier Delivery and Targeting Chair: Dr Julia Ljubimova, Cedars-Sinai Medical Center	
10:15-10:35am	<i>Overcoming Blood-Brain Barrier for Precise Diagnosis, Targeting and Treatment of Primary and Metastatic Brain Tumors</i> Dr Julia Ljubimova, Cedars-Sinai Medical Center
10:35-10:55am	<i>Nanotechnology Takes Aim at the Blood-Brain Barrier</i> Dr Efstathios Karathanasis, Case Western Reserve University
10:55-11:15am	<i>Spherical Nucleic Acids for the Precision Treatment of Malignant Glioma</i> Dr Alexander Stegh, Northwestern University
11:15-11:35am	<i>Three Examples where Utilizing the Blood-Brain Barrier is Changing Medical Care: osmotic blood-brain barrier disruption, iron oxide nanoparticles, and chemoprotective thiols</i> Dr Edward Neuwelt, Oregon Health & Science University and the Portland Veterans Affairs Medical Center
11:35-11:55am	<i>Drug and Gene Delivery to the Brain</i> Dr Justin Hanes, Johns Hopkins University
11:55-1:15pm	Open Microphone Discussion and Panel - Blood Brain Interface II
1:15-1:30pm	Wrap-up and Next Steps
1:30pm	Adjourn Workshop