Agenda Draft

Day 1 - June 7, 2016

7:30am-8:00am	**Registration**
8:00-8:10am	*Welcome* **Dr Gary Gibbons, Director, NHLBI**
8:10-8:15am	*Workshop Introduction* **Dr Keith Hoots, Director, DBDR**
8:15-8:20am	*Goals and Objectives* **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	*The Blood Brain Barrier and Neurodegeneration* **Dr Berislav Zlokovic, University of Southern California**
9:00-9:20am	*Microfluidics for Blood Research: from disease simulation to patient-specific phenotyping to diagnostics* **Dr Scott Diamond, Penn Center for Molecular Discovery**
9:20-9:40am	*Microparticles Impact Coagulation after Traumatic Brain Injury* **Dr Michael Goodman, University of Cincinnati**
9:40-10:00am	*Fibrinogen in neurological diseases: mechanisms, imaging, therapeutics* **Dr Katerina Akassoglou, UCSF School of Medicine**
10:00-10:20am	*Exosomes in Glioma: their potential as carriers of information between the tumor and immune cells* **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	*Monitoring the Central Nervous System through Peripheral Biofluids* **Dr Kendall Jensen , TGen Center for Noninvasive Diagnostics**
10:55-11:15am	*Challenging Assumptions about the Blood-Brain Barrier: implications for detection of biomarkers of brain injury in blood* **Dr Alex Valdka, Virginia Commonwealth University**
11:15-11:35am	*Post-tramatic Cerebral Blood Flow, Autoregulation, and the Neurovascular Unit* **Dr Don Marion, Defense and Veterans Brain Injury Center**
11:35-11:55am	*Employing Transporters at Blood-Brain Interfaces to Regulate the Brain's Metabolomic and Pharmacologic Microenvironment* **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	*In Vivo Tracking of Dendritic Cell Exosomes Delivered to Brain* **Dr Richard Kraig, University of Chicago Medical Center**
1:15-1:35pm	*Exosomes as Therapeutic RNAs Delivery Vesicles* **Dr Anastasia Khvorova, University of Massachusetts Medical School**
1:35-1:55pm	*Exosome-like Nanoparticles Delivering Therapeutic Agents Through an Intranasal Route Inhibit Brain Tumor Progression* **Dr Huang Ge Zhang, University of Louisville**
1:55-2:15pm	*Plasma Exosomes Enriched for Neuronal Origin: a source of biomarkers for neurodegenerative and neuroinflammatory diseases* **Dr Dimitrios Kapogiannis, National Institute of Aging/NIH**
2:15-2:35pm	*HER2-targeted Extracellular Vesicles Delivery of Therapeutic mRNA for Enzyme Prodrug Therapy* **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 *in vitro* BBB Models Session **Chair: Dr Peter Searson, Johns Hopkins School of Medicine**	
8:20-8:40am	*Assessing the Feasibility of an in vitro Neurovascular Unit* **Dr Peter Searson, Johns Hopkins School of Medicine**
8:40-9:00am	*NeuroVascular Unit (NVU) on a Chip: new direction in blood-brain barrier modeling and perfusion* **Dr Jackelyn Brown, Vanderbilt University**
9:00-9:20am	*Modeling and Targeting the Blood-Brain Barrier in Health and Disease* **Dr Eric Shusta, University of Wisconsin**
9:20-9:40am	*Developing Tridimensional Models of the Human Cerebral Cortex in vitro* **Dr Sergiu Pasca, Stanford University**
9:40-10:00am	*Revealing the Transport Mechanisms, Kinetics, and Energetics of Drugs Diffusing through Membranes of the Blood-Brain Barrier* **Dr Martin Ulmschneider, Johns Hopkins University**
10:00-10:15am	**Break**

Day 2 – June 8, 2016 continued…

Blood Brain Targeting Session **Chair: Dr Julia Ljubimova, Cedars-Sinai Medical Center**	
10:15-10:35am	*Overcoming Blood-Brain Barrier for Precise Diagnosis, Targeting and Treatment of Primary and Metastatic Brain Tumors* **Dr Julia Ljubimova, Cedars-Sinai Medical Center**
10:35-10:55am	*Nanotechnology Takes Aim at the Blood-Brain Barrier* **Dr Efstathios Karathanasis, Case Western Reserve University**
10:55-11:15am	*Spherical Nucleic Acids for the Precision Treatment of Malignant Glioma* **Dr Alexander Stegh, Northwestern University**
11:15-11:35am	*Three Examples where Utilizing the Blood-Brain Barrier is Changing Medical Care: osmotic blood-brain barrier disruption, iron oxide nanoparticles, and chemoprotective thiols* **Dr Edward Neuwelt, Oregon Health & Science University and the Portland Veterans Affairs Medical Center**
11:35-11:55am	*Drug and Gene Delivery to the Brain* **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**