

Blood Brain Barrier

Session 1 MODELING OF THE BBB

WEDNESDAY 12/8/2010, 7:30 PM

E. Shusta / M. Jacobson

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
1	Shusta	Human blood-brain barrier endothelial cells derived from pluripotent stem cells	25
2	Agalliu	Development of genetic methods to image dynamic structural and functional changes in the mammalian blood brain barrier in health and disease	15
3	Paolinelli	Wnt signaling in the development of BBB models <i>in vitro</i>	15
4	McDannold	Targeted blood-brain barrier disruption in nonhuman primates using focused ultrasound and microbubbles	15
5	Jacobson	Predicting small molecule permeation across the blood-brain barrier	25
6	Yu	Inverse relationship between affinity and brain uptake of receptor-mediated transcytosis targeting antibodies	15
7	Movila	Imaging <i>Borrelia</i> in a murine model	15

Session 2 MODEL ORGANISMS FOR BBB ANALYSIS

THURSDAY 12/9/2010, 9:00 AM

I. Blasig / H. Gelbard

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
8	Blasig	Establishment of a neuroepithelial barrier by claudin-5a is essential for zebrafish brain ventricular lumen expansion	25
9	Kanda	A genetic approach for the organization and function of the blood-brain barrier in <i>Drosophila</i> .	15
10	Taylor	Developing transgenic zebrafish for high-throughput genetic and small molecule screening of the blood-brain and blood-CSF barriers	15
11	Li	The cAMP effector PKA mediates GPCR signaling in blood-brain barrier development in <i>Drosophila</i>	15
12	Gelbard	Development of centrally acting novel kinase inhibitors for neuroAIDS	25
13	Banerjee	Group B <i>Streptococcus</i> exploits integrin machinery for activation of neutrophil signaling pathways and efficient blood-brain barrier penetration	15
14	Eliceiri	Ecr4 gene in the central nervous system—A role for augurin in neuroprogenitor cell growth and CSF hydrodynamics	15

Session 3 POSTER SESSION

THURSDAY 12/9/2010, 3:00 PM

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
15	Daneman	Transcriptional profiling of the blood-brain barrier	
16	Daneman	Pericytes regulate blood-brain barrier formation during embryogenesis	

17	Dauwalder	<i>moody</i> signaling in the blood brain barrier is required for <i>Drosophila</i> male courtship behavior
18	Karabacak	Molecular imaging of drug penetrance through the blood-brain barrier using MALDI mass spectrometry
19	Man	Chemokine receptor modulation during leukocyte transmigration across a blood-brain barrier model <i>in vitro</i> —Effect of shear forces
20	Mishra	Transcriptome analysis of the ependymal barrier during murine neurocysticercosis
21	Napoli	RAF/MEK/ERK signalling controls peripheral nerve regeneration switching Schwann cell state <i>in vivo</i>
22	Ramirez	Tight junction complex modification at the blood-brain barrier in TBI—Mechanisms of injury
23	Rengarajan	Mechanisms of endothelial barrier penetration by <i>Listeria monocytogenes</i>
24	Stridh	Expression of Toll-like receptors in the choroid plexus after neonatal hypoxia-ischemia in mice
25	Tharakan	Brain microvascular endothelial cell hyperpermeability induced by caspase-3 activation

Session 4 CELLULAR AND MOLECULAR REGULATION OF THE BBB

THURSDAY 12/9/2010, 7:30 PM

E. Dejana / A. Reijerkerk

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
	Dejana	No abstract	25
26	Mäe	Pericytes are important for the blood-brain barrier integrity in vivo	15
27	Liebner	Regulation of endothelial barrier maintenance at the blood-brain barrier	15
28	Stonestreet	Ontogeny and the effects of exogenous and endogenous glucocorticoids on the blood-brain barrier of sheep	15
29	Reijerkerk	microRNAs control brain endothelial cell barrier function	25
30	Lopez-Ramirez	Role of microRNAs in inflammation at the blood brain barrier	15
31	Zhou	Monoclonal antibody binding to unique structures (loops D and F) of BACE1 inhibits β -secretase activity in vivo	15

Session 5 ANGIOGENESIS AND BBB DEVELOPMENT

FRIDAY 12/10/2010, 9:00 AM

N. Saunders / C. Gu

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
32	Saunders	How well is the internal environment of the brain controlled in the embryo?	25
33	Tam	Molecular mechanisms of CNS angiogenesis and barrierogenesis	15
34	Liddelow	Macromolecular transfer across the blood-CSF interface	15
35	Arnold	Loss of $\alpha V\beta 8$ -mediated TGF β activation, and subsequent loss of TGF β signaling in endothelial cells or pericytes, causes vascular dysplasia and germinal matrix hemorrhage in mice	15
36	Gu	Vascular patterning and blood-brain barrier formation during development	25
37	McCarty	Analysis of integrin-mediated adhesion and signaling pathways in neurovascular biology	15

38 Murphy Notch gene can convert veins to arteries and sustain conduit vessel structure in mice 15

Session 6 DISEASE STATES OF THE BBB

FRIDAY 12/10/2010, 2:00 PM

K. Akassoglou / A. Flugel

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
39	Akassoglou	Fibrinogen in neuroinflammatory disease	25
40	Vexler	Paracellular diffusion and tight junctions are better preserved after neonatal than after adult acute stroke	15
41	Jacob	Expression of the multi-drug resistant efflux transporter P-glycoprotein increases in spinal cord astrocytes throughout disease progression in the ALS mouse	15
42	Cardoso	Impairment of BBB by exposure to neurotoxins—Effects of LPS and unconjugated bilirubin on rat brain microvascular endothelial cells	15
	Flugel	No abstract	25
43	Terrando	Tumor necrosis factor- α triggers a cytokine cascade yielding postoperative cognitive decline	15
44	Mishra	Gene expression analyses of pial vessels of the blood brain barrier during murine neurocysticercosis	15
45	Fu	Enhancement of blood brain barrier (BBB) is the most important factor in preventing animals from developing rabies	15

Session 7 MECHANISMS OF BBB CROSSING

SATURDAY 12/11/2010, 9:00 AM

B. Engelhardt / X. Nassif

<u>#</u>	<u>Iname</u>	<u>Title</u>	<u>Talk Length</u>
46	Engelhardt	The blood-brain and the blood-cerebrospinal fluid barriers provide different molecular cues for T cell entry into the CNS	25
47	Campbell	Localised, inducible and size-selective modulation of neuronal barriers—An AAV approach	15
48	Hasko	A novel cannabinoid receptor-2 agonist attenuates leukocyte-endothelial interactions and blood-brain barrier (BBB) dysfunction under systemic inflammatory conditions	15
49	Brankatschk	Lipoprotein particles cross the blood brain barrier in Drosophila	15
50	Nassif	<i>Neisseria meningitidis</i> , a bacterial pathogen, crosses the blood brain barrier by hijacking the b2-adrenoceptor-b-arrestin pathway	25
51	Zhang	Diagnostic ultrasound and SonoVue open the blood-brain barrier and its effect on cognitive function.	15
52	DeSalvo	Physiology-based screens for small molecules that alter metabolism and target drug permeation into the brain	15

