

Program Kloster Seeon Angiogenesis Meeting

Saturday, September 17, 2016

15:00 **Welcome and Introduction**
Eckhard Lammert (chair 2016) & Susan Quaggin (chair 2018)

15:15 – 19:30	Session 1
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BASIC VASCULAR DEVELOPMENT

Discussion leader: Holger Gerhardt (Berlin, Germany)

- 15:15 **KEYNOTE: Markus Affolter** (Basel, Switzerland)
From cells to networks: Cell behaviour in angiogenesis
- 16:00 **Friedemann Kiefer** (Muenster, Germany)
Mechanisms of lymphatic vessel morphogenesis - chemokine-mediated modulation of tyrosine kinase receptor signaling
- 16:30 **Victoria Bautch** (Chapel Hill, NC, USA)
The emerging role of BMP signaling in blood vessel morphogenesis
- 17:00 *Coffee break*
- 17:30 **Taija Mäkinen** (Uppsala, Sweden)
Heterogeneity in the lymphatic vasculature and its origin
- 18:00 **BLITZ: Eloi Montanez** (Munich, Germany)
Role of parvins during vascularization of the central nervous system
- 18:15 **Guillermo Oliver** (Chicago, IL, USA)
Molecular mechanisms regulating lymphatic fate
- 18:45 **BLITZ: Natasha Harvey** (Adelaide, Australia)
Defining the mechanisms by which GATA2 programs lymphatic vessel valve morphogenesis
- 19:00 **Stefan Schulte-Merker** (Muenster, Germany)
Genetic control of lymphatic vessel formation in zebrafish and mice
- 19:45 *Dinner*

Sunday, September 18, 2016

08:45 – 12:00	Session 2
	VASCULAR AND METABOLIC SIGNALING PATHWAYS Discussion leader: Christiana Ruhrberg (London, UK)
08:45	Lena Claesson-Welsh (Uppsala, Sweden) Outstanding questions in regulation of vascular permeability
09:15 BLITZ:	Mirko Schmidt (Mainz, Germany) Neurovascular EGFL7 regulates subventricular neural stem cells, neurogenesis and olfactory perception
09:30 BLITZ:	Carmen Ruiz de Almodovar (Heidelberg, Germany) Neuro-vascular communication is essential for proper spinal cord vascularization
09:45	Ralf Adams (Muenster, Germany) Organ-specific blood vessel morphogenesis
10:15	<i>Coffee break</i>
10:45	Peter Carmeliet (Leuven, Belgium) Angiogenesis revisited: Role and (therapeutic) implications of endothelial metabolism
11:15	Kari Alitalo (Helsinki, Finland) Pathways of vasculoprotection
11:45	<i>Group photo</i>
12:15	<i>Lunch</i>
13:30 – 15:30	Poster Session I
15:30 – 17:30	Session 3
	MECHANICAL SIGNALS IN VASCULAR BIOLOGY Discussion leader: Tatiana Petrova (Lausanne, Switzerland)
15:30	Martin Schwartz (New Haven, CT, USA) Endothelial fluid shear stress responses in vascular remodeling and atherosclerosis
16:00 BLITZ:	Naoki Mochizuki (Suita, Japan) Visualizing mural cell coverage of vascular endothelial cells during zebrafish angiogenesis
16:15	Mark Kahn (Philadelphia, PA, USA) Regulation of valve formation by hemodynamic forces
16:45 BLITZ:	Masanori Nakayama (<i>Bad Nauheim, Germany</i>) Antagonism between PAR-3/aPKC and aPKC/GSK3 β complexes controls endothelial polarization in the planar axis toward flow
17:00	Michael Simons (New Haven, CT, USA) Metabolic controls of lymphatic development
17:45 – 22:00	<i>Social event</i>

Monday, September 19, 2016

08:30 – 12:00 **Session 4**

ORGAN-SPECIFIC VASCULAR REMODELING

Discussion leader: Ondine Cleaver (Dallas, TX, USA)

- 08:30 **Kristy Red-Horse** (Stanford, CA, USA)
Interrogating cell fate changes during sinus venosus sprouting angiogenesis
- 09:00 **BLITZ:** **Jörg Heineke** (Hannover, Germany)
The Endothelial Transcription Factor GATA2 prevents the development of heart failure during cardiac pressure overload through regulation of two secreted long non-coding RNAs
- 09:15 **Didier Stainier** (Bad Nauheim, Germany)
Cloche is a bHLH-PAS transcription factor that drives endothelial and hematopoietic specification
- 09:45 *Coffee break*
- 10:15 **Hellmut Augustin** (Heidelberg, Germany)
Epigenetic regulation of vascular maturation
- 10:45 **BLITZ:** **Quenten Schwarz** (Adelaide, Australia)
Novel angiocrine factors orchestrating craniaofacial development
- 11:00 **Vijay Shah** (Rochester, MN, USA)
Regulation of Pericyte Activation in the Hepatic Sinusoids
- 11:30 **Shahin Rafii** (New York, NY, USA)
Specification of organotypic functional endothelial cells by ETS and Sox factors for tissue regeneration
- 12:15 *Lunch*

13:30 – 17:00 **Session 5**

PATHOLOGICAL VASCULAR REMODELING

Discussion leader: Klaus Preissner (Giessen, Germany)

- 13:30 **Susan Quaggin** (Chicago, IL, USA)
High 'TEK' solutions for diabetic complications
- 14:00 **BLITZ:** **Kaska Koltowska (St Lucia, Australia)**
Identification of novel role for mafba as a downstream effector of Vegfc signalling during lymphangiogenesis in zebrafish
- 14:15 **Anne Eichmann** (New Haven, CT, USA)
Vascular mispatterning and disease
- 14:45 *Coffee break*
- 15:15 **Andreas Fischer** (Heidelberg, Germany)
Perfusion-independent functions of endothelial cells in tumors
- 15:45 **BLITZ:** **Boris Strilic** (Bad Nauheim, Germany)
Tumor cell-induced endothelial cell necroptosis via death receptor 6 promotes metastasis

- 16:00 **Christer Betsholtz** (Uppsala, Sweden)
Defining pericytes by single cell RNASeq
- 16:30 **Paul Riley** (Oxford, UK)
Developmental programming of the cardiac lymphatics towards immunomodulation and improved heart repair

17:00 – 19:00	Poster Session II
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19:00 *Dinner*

Tuesday, September 20, 2016

8:30 – 11:45	Session 6
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TRANSLATIONAL VASCULAR BIOLOGY

Discussion leader: Donald McDonald (San Francisco, CA, USA)

- 08:30 **Michael Detmar** (Zurich, Switzerland)
An important role of lymphatic vessels in tumor progression and inflammation
- 09:00 **BLITZ:** **Kevin Walsh** (South San Francisco, CA, USA)
Metabolic alterations induced by VEGF blockade promotes anti-tumor immune responses
- 09:15 **BLITZ:** **Ferdinand Le Noble** (Karlsruhe, Germany)
Neuronal Flt1 controls spinal cord vascularization involving venular endothelium with high angiogenic potential
- 09:30 **Melody Swartz** (Chicago, IL, USA)
Immunomodulatory roles of lymphangiogenesis and translational implications
- 10:00 *Coffee break*
- 10:30 **BLITZ:** **Joyce Bischoff** (Boston, MA, USA)
GNAQ p.R183Q mutation disrupts endothelial behavior in capillary malformations
- 10:45 **Tatiana Petrova** (Lausanne, Switzerland)
Mechanisms of lymphatic vessel specialization
- 11:15 **Kairbaan Hodivala-Dilke** (London, UK)
Novel dual-action combination therapy enhances angiogenesis whilst reducing tumor growth and spread
- 11:45 **Final announcements**
Susan Quaggin & Eckhard Lammert

END OF MEETING

- 12:00 *Lunch*
- 13:00 *Departure of shuttle buses*