

# Program Kloster Seeon Angiogenesis 2012

**Saturday, September 15, 2012**

15:00 **Welcome and Introduction**

Ralf Adams

15:15 – 19:15	<b>Session 1</b>
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## **MAKING AND SHAPING VESSELS**

Discussion leaders: Ralf Adams, Anne Eichmann

15:15 **KEYNOTE:** **Eli Keshet** (University of Jerusalem, Israel)  
Perfusion-independent vascular functions in adult organs

16:00 **Christiana Ruhrberg** (University College London, UK)  
Distinguishing neuropilin signalling in angiogenesis, arteriogenesis and vascular permeability

16:30 **BLITZ:** **Catherine Monnot** (CIRB - College de France, Paris, France)  
Transglutaminase 2 regulates VEGF-induced sprouting angiogenesis.

16:45 **BLITZ:** **Yosuke Mukoyama** (National Heart, Lung, and Blood Institute, Bethesda, USA)  
Coordinated patterning mechanisms of blood vessels and peripheral nerves

17:00 *Coffee break*

17:30 **BLITZ:** **Andreas Fischer** (German Cancer Research Center, Heidelberg, Germany)  
SYNJ2BP is a novel modulator of DLL4-Notch signaling during angiogenesis

17:45 **BLITZ:** **Sara De Val** (Ludwig Institute of Cancer Research, Oxford, UK)  
Transcriptional control of genes within the Notch and VEGF signalling pathways during vessel growth

18:00 **BLITZ:** **Koichi Nishiyama** (The University of Tokyo, Tokyo, Japan)  
Cell-based mechanisms behind angiogenic morphogenesis: analysis using both experimental and computational approaches

18:15 **Chenghua Gu** (Harvard Medical School, Boston, USA)  
Molecular mechanisms of the traditional axon guidance molecules' function in angiogenesis

18:45 **Didier Stainier** (Max Planck Institute Bad Nauheim, Germany)  
Endothelial cell specialization in zebrafish

19:30 *Dinner*

**Sunday, September 16, 2012**

**08:30 – 12:00 Session 2**

**REGULATION OF SPROUTING AND ANGIOGENIC GROWTH**

Discussion leaders: Lena Claesson-Welsh, Michael Detmar

- 08:30 **Holger Gerhardt** (Cancer Research UK, London, UK)  
Branch, expand or regress? Endothelial cell dynamics regulating vascular patterning
- 09:00 **Peter Carmeliet** (VIB, Leuven, Belgium)  
Targeting endothelial metabolism: Principles and strategies
- 09:30 **BLITZ:** **Shane Herbert** (University of Manchester, UK)  
H2.0-like homeobox-1 determines endothelial stalk versus tip cell potential during sprouting angiogenesis
- 09:45 **BLITZ:** **Suk-Won Jin** (Yale University, New Haven, USA)  
BMP2 signaling in endothelial cells is regulated by Dab2 mediated endocytosis
- 10:00 **BLITZ:** **Masanori Nakayama** (Max Planck Institute Muenster, Germany)  
Spatial regulation of VEGF receptor endocytosis in angiogenesis
- 10:15 *Coffee Break*
- 10:45 **BLITZ:** **Jens Kroll** (Heidelberg University, Germany)  
Metabolic regulation of pathophysiological blood vessel development in zebrafish
- 11:00 **Amparo Acker-Palmer** (University of Frankfurt, Germany)  
Neuronal cues regulating angiogenesis and therapy resistance
- 11:30 **Nathan Lawson** (University of Massachusetts, Worcester, USA)  
Plasticity and control of artery identity during vascular development
- 12:00 *Group photo*
- 12:30 *Lunch*

**13:30 – 15:30 Poster Session I**

**15:30 – 16:30 Session 3**

**ANGIOGENIC GROWTH FACTORS AND SIGNALING**

Discussion leaders: Eckhard Lammert

- 15:30 **Gou Young Koh** (KAIST, Daejeon, Korea)  
Organotypic angiogenesis and vascular remodeling
- 16:00 **Tatiana V. Byzova** (Cleveland Clinic Foundation, Cleveland, USA)  
Mechanisms of oxidative stress-induced angiogenesis

**17:15 – 22:30 Social event**

## Monday, September 17, 2012

### 08:30 – 12:15 **Session 4**

#### **REGULATION OF VESSEL MATURATION, ORGANIZATION AND FUNCTION**

Discussion leaders: Luisa Iruela-Arispe, Richard Lang

- 08:30 **Christer Betsholtz** (Karolinska University, Stockholm, Sweden)  
The sphingosine-1-phosphate receptor S1PR1 restricts sprouting angiogenesis by regulating the interplay between VE-cadherin and VEGFR2
- 09:00 **Rong Wang** (University of California, San Francisco, USA)  
Constitutively active Notch4 elicits brain arteriovenous malformations through capillary enlargement
- 09:30 **Kari Alitalo** (University of Helsinki, Finland)  
Therapeutic potential of Angiopoietins and Tie receptors
- 10:00 **BLITZ:** **Ferdinand le Noble** (Max Delbrueck Center, Berlin, Germany)  
Dll4-Notch signaling modulates arteriogenesis and functional recovery in arterial occlusion models in mice
- 10:15 *Coffee break*
- 10:45 **BLITZ:** **Michael Potente** (Center for Molecular Medicine, Frankfurt, Germany)  
FOXO1 regulates quiescence and metabolic homeostasis of the vascular endothelium
- 11:00 **BLITZ:** **Christian Lange** (VIB and Katholieke Universiteit Leuven, Belgium)  
Defining the functional role of blood vessels as a component of the neural stem cell niche
- 11:15 **Taija Makinen** (Cancer Research UK, London, UK)  
Regulation of lymphatic vascular morphogenesis
- 11:45 **Dietmar Vestweber** (MPI Muenster, Germany)  
VE-cadherin and the regulation of endothelial junctions
- 12:30 *Lunch*

### 13:30 – 17:15 **Session 5**

#### **TUBULOGENESIS, REMODELING AND PRUNING**

Discussion leaders: Tatiana Petrova, Nathan Lawson

- 13:30 **Markus Affolter** (University of Basel, Switzerland)  
Cell behavior in angiogenesis
- 14:00 **Richard Lang** (Cincinnati Children's Hospital Medical Center, USA)  
Light dependent vascular development in the eye
- 14:30 **BLITZ:** **Qi Chen** (Shanghai Institutes for Biological Sciences, China)  
Haemodynamics-driven developmental pruning of brain vasculature in zebrafish.
- 14:45 **BLITZ:** **Arndt Siekmann** (Max Planck Institute Muenster, Germany)  
The role of Notch signaling and blood flow during vascular remodeling

- 15:00 **BLITZ:** **Stefania Nicoli** (Yale University, New Haven, USA)  
miRNA regulation of neurovascular permeability (Blood Brain Barrier) during Zebrafish development.
- 15:15 *Coffee break*
- 15:45 **BLITZ:** **Salim Abdelilah-Seyfried** (Max Delbrueck Center, Berlin, Germany)  
Cerebral cavernous malformations proteins in cardiac morphogenesis
- 16:00 **BLITZ:** **Akiyoshi Uemura** (Kobe University, Japan)  
RhoJ regulates endocytic trafficking of VEGFR2 and PlexinD1 in endothelial cells
- 16:15 **Weilan Ye** (Genentech, Inc., USA)  
RASIP1 regulates sub-junctional actin organization and vascular stability
- 16:45 **Luisa Iruela-Arispe** (University of California Los Angeles, USA)  
Identification of causative genetic mutations underlying vascular tumors

17:30 – 19:30	<b>Poster Session II</b>
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19:30 *Dinner*

**Tuesday, September 18, 2012**

8:30 – 12:00	<b>Session 6</b>
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**ANGIOGENESIS AND LYMPHANGIOGENESIS**

Discussion leaders: Eli Keshet, Hellmut Augustin

- 08:30 **Susan Quaggin** (SLRI Toronto, Canada)  
VEGF and the vasculature – New twists in the story
- 09:00 **Tatiana Petrova** (University of Lausanne, Switzerland)  
Biomechanical and transcriptional regulation of lymphatic vascular remodeling
- 09:30 **Lena Claesson-Welsh** (Uppsala University, Sweden)  
VEGFR2 activity at endothelial cell junctions
- 10:00 *Coffee break*
- 10:30 **BLITZ:** **Lieve Umans** (KU Leuven University, Leuven, Belgium)  
Stalk cell phenotype depends on integration of Notch and Smad1/5 signaling
- 10:45 **BLITZ:** **Florian Limbourg** (Hannover Medical School, Hannover, Germany)  
Angiocrine signaling regulated by Notch maintains adult cardiac homeostasis and function
- 11:00 **Stefan Schulte-Merker** (Hubrecht Institute, Utrecht, The Netherlands)  
Of mice and men (and fish) – lymphangiogenesis in the vertebrate embryo
- 11:30 **Eckhard Lammert** (University of Düsseldorf, Germany)  
Regulation of mechanotransduction in lymphatic endothelial cells

**End of meeting**

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