

**International Meeting of the German Society of Cell Biology (DGZ)
March 18 – 21, 2014, Regensburg**

Tuesday, March 18, 2014

Registration

09:00 – 12:00

Funding and Publishing

Chairs: Eugen Kerkhoff (Regensburg, Germany) and
Klemens Rottner (Bonn, Germany)

09:00 – 09:30

Astrid Klungen (DFG, Bonn, Germany)

09:30 – 10:00

András Badacsonyi (ERC, Brussels, Belgium)

10:00 – 10:30

Coffee Break

10:30 – 11:00

Bernd Pulverer (EMBO Journal, Heidelberg, Germany)

11:00 – 11:30

Anne Knowlton (Current Biology, Cambridge, USA)

11:30 – 12:00

Ian Mulvany (Elife, Cambridge, UK)

12:00 – 13:00

Break

13:00 – 15:00

Plenary Session PS1: Quantitative imaging of cell dynamics

Chair: Ivo Sbalzarini (Dresden, Germany)

13:00 – 13:30

Erik Meijering (Rotterdam, The Netherlands): Challenges in particle and cell tracking

13:30 – 14:00

Badrinath Roysam (Houston, USA): Computational sensing of cell & tissue changes from microscopy data

14:00 – 14:30

Robert F. Murphy (Pittsburgh, USA): Image-derived spatiotemporal models of subcellular organization, differentiation and perturbation

14:30 – 15:00

Ivo Sbalzarini (Dresden, Germany): Uniting image reconstruction and segmentation for fluorescence microscopy

15:00 – 15:30

Coffee Break

15:30 – 17:30

DGZ Awards Ceremony

Nikon Young Scientist Award of the DGZ

Hans Zempel (Bonn, Germany): Tau missorting is the primary mediator for A β -oligomer induced toxicity: Tau dependent microtubule loss via TTL6 and the microtubule severing protein spastin

Binder Innovation Prize

Robert Grosse (Marburg, Germany): Formin' nuclear actin filaments

Werner Risau Prize

Anjali Kusumbe (Muenster, Germany): Coupling of angiogenesis and osteogenesis by a specific vessel subtype in bone

ASCB Inaugural Kaluza Prize, sponsored by Beckman Coulter

Tina Han (San Francisco, USA): Phase transition of low complexity sequences in RNA granule formation

17:30 – 18:00 **Coffee Break**

18:00 – 19:00 **Carl Zeiss Lecture**

Ernst H.K. Stelzer (Frankfurt, Germany):
Shifting the paradigm in modern light microscopy
Light Sheet-based Fluorescence Microscopy (LSFM, SPIM, DSLM)

19:00 **Welcome Reception**

Wednesday, March 19, 2014

09:00 – 12:00 **Symposia 1 – 3**

09:00 – 12:00 **Symposium S1: Rho GTPase signalling in physiology and disease**
Chair: Cord Brakebusch (Copenhagen, Denmark)

09:00 – 09:30 Zhenbiao Yang (Riverside, USA): Rho GTPase signaling in plant cell polarity

09:30 – 10:00 Bernhard Nieswandt (Würzburg, Germany): Rho GTPases in platelets
production and function

10:00 – 10:15 Michael Krahn (Regensburg, Germany): New insights into the mechanisms
regulating apical-basal polarity in Drosophila epithelial cells (short talk)

10:15 – 10:45 **Coffee Break**

10:45 – 11:15 Scott Russo (New York, USA): Epigenetic regulation of RAC1 induces
synaptic remodeling in stress disorders and depression

11:15 – 11:45 Cord Brakebusch (Copenhagen, Denmark): N-WASP function in skin
inflammation

11:45 – 12:00 Anika Steffen (Bonn, Germany): Dissection of Rac functions in cell edge
protrusion, adhesion and migration (short talk)

09:00 – 12:00 **Symposium S2: Neuronal signalling and optogenetics**
Chair: Edward Ziff (New York, USA)

09:00 – 09:30 Andreas Reiner (Berkeley, USA): Optical control of neurotransmitter gated
glutamate receptors

09:30 – 10:00 Jonathan Britt (Montreal, Canada): Neural mechanisms underlying behavioral
reinforcement in the basal ganglia

10:00 – 10:15 Pratibha Dhumale (Muenster, Germany): Different requirements for Sad
kinases in hippocampal and cortical neurons during the establishment of
neonatal polarity (short talk)

10:15 – 10:45 **Coffee Break**

10:45 – 11:00 Jing Jin (Muenster, Germany): Rassf5 and Ndr1/2 act in a novel pathway that
regulates neuronal polarity through Par3 (short talk)

11:00 – 11:30 Alexxai Kravitz (Bethesda, USA): Motion and emotion in the basal ganglia

11:30 – 12:00	Edward Ziff (New York, USA): Synaptic regulation in pain and reward
09:00 – 12:00	Symposium S3: Membrane transport Chair: Gerd Jürgens (Tübingen, Germany)
09:00 – 09:30	Scott D. Emr (Ithaca, USA): A ubiquitin-dependent protein quality control system at the plasma membrane
09:30 – 10:00	Victor Žárský (Prague, Czech Republic): Exocyst complex and logistics of endomembrane traffic in plants
10:00 – 10:15	Short talk speaker selected from the abstracts
10:15 – 10:45	Coffee Break
10:45 – 11:15	Gerd Jürgens (Tübingen, Germany): Plant cytokinesis - a tale of membrane traffic and fusion
11:15 – 11:45	Naoko Mizuno (Martinsried, Germany): Molecular mechanism of curvature formation by BAR proteins
11:45 – 12:00	Short talk speaker selected from the abstracts
12:00	Lunch
12:00 – 13:00	Lunch Symposium
	Carl Zeiss Microscopy GmbH
12:00 – 12:10	Jochen Tham, Carl Zeiss Microscopy, Jena: Welcome and Introduction
12:10 – 12:50	David W. Piston, Vanderbilt University, Nashville, USA: Improving the sensitivity and efficiency of fret measurements using lock-in and spectral detection
12:50 – 13:00	Discussion
13:00 – 14:00	DGZ Member Meeting
14:00 – 17:00	Symposia 4 – 6
14:00 – 17:00	Symposium S4: Multipotential cells in animals Chair: Elly Tanaka (Dresden, Germany)
14:00 – 14:30	Ian Chambers (Edinburgh, UK): Transcription factor control of transitions in pluripotent cell states
14:30 – 14:45	Short talk speaker selected from the abstracts
14:45 – 15:15	Keisuke Kaji (Edinburgh, UK): The roads to iPS cells
15:15 – 15:45	Coffee Break
15:45 – 16:15	Elly Tanaka (Dresden, Germany): Muscle dedifferentiation and satellite cell activation during salamander limb regeneration and its molecular control
16:15 – 16:30	Short talk speaker selected from the abstracts
16:30 – 17:00	Wieland Huttner (Dresden, Germany): The cell biology of stem and progenitor cells in the developing neocortex

- 14:00 – 17:00** **Symposium S5: Genome stability and DNA repair**
Chair: M. Cristina Cardoso (Darmstadt, Germany)
- 14:00 – 14:30 John Diffley (London, UK): Mechanism and regulation of DNA replication origin firing in yeast
- 14:30 – 15:00 Holger Richly (Mainz, Germany): Epigenetic regulation of nucleotide excision repair
- 15:00 – 15:15 Alexander Rapp (Darmstadt, Germany): Combined genome-wide and 3D super-resolution nanoscopy analysis of the DNA damage response
- 15:15 – 15:45** **Coffee Break**
- 15:45 – 16:15 Jerome Dejardin (Montpellier, France): Analysis of pericentric chromatin reveals fundamental principles regulating mammalian constitutive heterochromatin
- 16:15 – 16:45 Charles Thomas (La Jolla, USA): LINE-1 retrotransposition in the brain and neurological disorders
- 16:45 – 17:00 Anne Ludwig (Darmstadt, Germany): Methyl-CpG binding domains proteins – guardians of the epigenome? (short talk)
- 14:00 – 17:00** **Symposium S6: Actin polymerization machines**
Chair: Jan Faix (Hannover, Germany)
- 14:00 – 14:30 Jan Faix (Hannover, Germany): Molecular analyses of actin polymerization machines
- 14:30 – 15:00 Laurent Blanchoin (Grenoble, France): Directed actin self assembly and motility
- 15:00 – 15:15 Sven Kenjiro Vogel (Martinsried, Germany): Myosin driven actin fragmentation and lipid/protein diffusion studied in a biomimetic actomyosin cortex (short talk)
- 15:15 – 15:45** **Coffee Break**
- 15:45 – 16:15 Roberto Dominguez (Philadelphia, USA): Leiomodin and Tropomodulin and their roles in Tropomyosin-dependent actin filament nucleation and pointed end capping
- 16:15 – 16:45 Rong Li (Kansas City, USA): The function of Arp2/3-based actin nucleation in cell motility and development
- 16:45 – 17:00 Anastasia Tatarnikova (Bonn, Germany): The Arp2/3 complex is required for *de novo* formation of dendritic branches (short talk)
- 17:00 – 19:00** **Poster Session 1**

Thursday, March 20, 2014

- 09:00 – 12:00** **Symposia 7 – 9**
- 09:00 – 12:00** **Symposium S7: Chromatin organization**
Chair: Gernot Längst (Regensburg, Germany)

- 09:00 – 09:15 Klaus Grasser (Regensburg, Germany): The transcript elongation factor SPT4/SPT5 is required for auxin-related gene expression in Arabidopsis (short talk)
- 09:15 – 09:45 Peter R. Cook (Oxford, UK): Transcription factories: genome organization and gene regulation
- 09:45 – 10:15 Antoine H.F.M. Peters (Basel, Switzerland): Epigenetic control of mammalian germ line and early embryonic development
- 10:15 – 10:45 Coffee Break**
- 10:45 – 11:00 Donald E. Olins (Portland, USA): Retrotransposon Alu is enriched in the Epichromatin of HL-60 cells (short talk)
- 11:00 – 11:30 Gernot Längst (Regensburg, Germany): Dynamic changes of chromatin structure by RNP complexes and remodeling enzymes
- 11:30 – 12:00 Toshio Tsukiyama (Seattle, USA): Regulation, functions and evolution of non-coding RNA
- 09:00 – 12:00 Symposium S8: Microtubule nucleation**
Chair: Jens Lüders (Barcelona, Spain)
- 09:00 – 09:30 Elmar Schiebel (Heidelberg, Germany): Cell-cycle dependent phosphorylation of yeast pericentrin regulates microtubule nucleation by controlling gamma-TuSC oligomerization
- 09:30 – 10:00 Jens Lüders (Barcelona, Spain): Microtubule nucleation during mitosis
- 10:00 – 10:15 Stefanie Redemann (Dresden, Germany): Three dimensional reconstruction of the *C. elegans* mitotic spindle (short talk)
- 10:15 – 10:45 Coffee Break**
- 10:45 – 11:15 Anne-Catherine Schmit (Strasbourg, France): The Arabidopsis GIP proteins at the interface between the nucleoplasm and the cytoplasm
- 11:15 – 11:30 Oliver Gruss (Heidelberg, Germany): The nucleoporin MEL-28 promotes RanGTP-dependent gamma-tubulin recruitment and microtubule nucleation in mitotic spindle formation (short talk)
- 11:30 – 11:45 Irene Meyer (Potsdam, Germany): Characterization of four novel core components of the Dictyostelium centrosome (short talk)
- 11:45 – 12:00 Aglaja Kopf (Klosterneuburg, Austria): The Microtubule Cytoskeleton and its associated factor GEF-H1 during dendritic cell migration (short talk)
- 09:00 – 12:00 Symposium S9: Germ lines and stem cells in plants**
Chair: Thomas Dresselhaus (Regensburg, Germany)
- 09:00 – 09:30 Thomas Dresselhaus (Regensburg, Germany): Peptide signaling during germline formation and double fertilization
- 09:30 – 10:00 David Twell (Leicester, UK): Patterning and control in plant male germline development
- 10:00 – 10:15 Said Hafidh (Prague, Czech Republic): In search of Ligands and receptors of the pollen tube; the missing link in pollen tube perception (short talk)
- 10:15 – 10:45 Coffee Break**

10:45 – 11:15	Thomas Laux (Freiburg, Germany): Stem cell regulation in plants
11:15 – 11:45	Renze Heidstra (Wageningen, The Netherlands): Patterning and maintenance of the Arabidopsis root stem cell niche
11:45 – 12:00	Philipp Denninger (Heidelberg, Germany): Specific calcium signatures triggered by cell-cell interaction during double fertilization of Arabidopsis (short talk)
12:00	Lunch
13:00 – 15:00	Poster Session 2
15:00 – 18:00	Plenary Session PS2: Cell adhesion and signalling Chairs: Susanne Grässel (Regensburg, Germany) and Reinhard Fässler (Martinsried, Germany)
15:00 – 15:30	Sara Wickström (Cologne, Germany): Cytoskeletal regulation of cell fate decisions
15:30 – 16:00	Charles Streuli (Manchester, UK): Deconstructing adhesion complexes: how integrins control different phenotypes
16:00 – 16:30	Nick Brown (Cambridge, UK): Dialogue between cell adhesion and the cytoskeleton in morphogenesis
16:30 – 17:00	Coffee Break
17:00 – 17:30	Gregory Giannone (Bordeaux, France): Deciphering the regulation of integrin activation at the nanoscale
17:30 – 18:00	Daniel Müller (Zurich, Switzerland): Deciphering molecular mechanisms guiding cell shape in mitosis
18:00 – 18:15	Break
18:15 – 19:15	Frontiers in Science Lecture Gene Myers (Dresden, Germany): Light-Based Systems Biology
19:15	Dancing party with DJ Bene Delmann <i>Drinks are to be paid individually!</i>

Friday, March 21, 2014

09:00 – 12:00	Plenary Session PS3: RNA Biology Chair: Gunter Meister (Regensburg, Germany)
09:00 – 09:30	René Ketting (Mainz, Germany): Transgenerational effects of small RNAs
09:30 – 10:00	Olivier Voinnet (Zurich, Switzerland): RNA silencing in plants and animals
10:00 – 10:30	Gunter Meister (Regensburg, Germany): Regulation of microRNA biogenesis and function
10:30 – 11:00	Coffee Break

11:00 – 11:30	Andrea Ventura (New York, USA): Dissecting the many roles of Oncomir-1 in development and disease
11:30 – 12:00	Maite Huarte (Pamplona, Spain): Epigenetic control of cancer pathways by lncRNAs
12:00	Lunch
13:00 – 13:15	DGZ Award Ceremony
	Walther Flemming Medal Thomas Wollert (Martinsried, Germany): Molecular mechanism of autophagic scaffold assembly and disassembly
13:15 – 13:30	Poster Award Ceremony
13:30 – 16:30	Plenary Session PS4: Cell biology of metastasis Chair: Christoph Klein (Regensburg, Germany)
13:30 – 14:00	Christoph Klein (Regensburg, Germany): Molecular profiling of metastatic precursor cells
14:00 – 14:30	Peter Friedl (Nijmegen, The Netherlands): Tissue niches for cancer cell invasion in vivo
14:30 – 15:00	Ben Z. Stanger (Philadelphia, USA): Functionally dissecting the microenvironment in pancreatic cancer
15:00 – 15:30	Coffee Break
15:30 – 16:00	Cyrus Ghajar (Seattle, USA): Regulation of breast tumor dormancy by the perivascular niche
16:00 – 16:30	David Lyden (New York, USA): Tumor exosomes initiate pre-metastatic niche formation and organotropism
16:30 – 16:45	Concluding Remarks