Wednesday, October 17, 2018
(at Französische Friedrichstadtkirche, Gendarmenmarkt 5, 10117 Berlin, Germany)

Opening remarks

17:00	Registration
18:00	Introduction: **Miriam Goodman**
18:10	Welcome Lecture: **Robert Fettiplace, Kavli Prize Winner 2018**
19:10	Reception

Thursday, October 18, 2018
(at Max Delbrück Communications Center – MDC.C – House 83,
Robert-Rössle-Straße 10, 13125 Berlin, Germany)

Axon 1

08:00	Registration
	Session 1 | Chair: Gary Lewin
09:00	**Martin Göpfert,** University of Göttingen *Mechanosensitive channels for gravity sensing and hearing in flies*
09:25	Lightning talk: Jan Clemens, European Neuroscience Institute *Mean and Variance adaptation in the Drosophila Ear*
09:30	**Reza Sharif Naeini**, McGill University *TACAN is an Ion Channel Involved in Noxious Mechanosensation*
09:55	Lightning talk: Kara Marshall, Scripps Research Institute *Molecular Mechanisms of Stomach Stretch Sensing*
10:00	**Kristian Franze,** University of Cambridge *The role of mechanosensitive ion channels in vertebrate development*
10:25	Lightning talk: Nicole Scholz, Rudolf-Schönheimer-Institute of Biochemistry *GPCR-dependent modulation of ion channels*
10:30	Coffee Break

11:00	**Slav Bagriantsev,** Yale University *Mechano-gated ion channels in somatosensory neurons of tactile specialist birds (tent)*
11:25	Lightning talk: Yiquan Tang, MRC Laboratory of Molecular Biology *The evolutionarily conserved TMC-CIB channel complexes function as mechanosensors in Caenorhabditis elegans and mouse*
11:30	**Laura Bianchi,** University of Miami *Glial regulators of ionic homeostasis control mechanosensation in C. elegans*
11:55	Lightning talk: Fabian Passini, Department of Health Sciences and Technology - ETH Zurich *PIEZO1 Senses Mechanical Loading and Induces Nanomolar Calcium Signals in Tendon Cells*
12:00	**Jörg Grandl**, Duke University Medical Center *Transduction of Mechanical Stimuli by Piezo Ion Channels*
12:30	Lunch and Poster Session
	Session 2 | Chair: Martin Göpfert
14:00	**Miriam Goodman,** Stanford University *C.elegans sensory channels*
14:25	Lightning talk: Anthony Peng, University of Colorado Anschutz Is climbing and slipping the true model for myosin motor adaptation in mammalian hair cells?
14:30	**David Corey**, Harvard University *The mammalian hair cell channel*
14:55	**Jeffrey Holt**, Harvard University *The hair cell mechanotransduction channel*
15:20	Lightning talk: Eric Mulhall, Harvard Medical School *The Dynamic Strength of the Tip-Link Bond in Hair Cells*
15:25	Lightning talk: Philip Hehlert, Schwann-Schleiden Research Center *Mechano-gating properties of Drosophila NOMPC*

15:30	**Thomas Jentsch**, Leibniz Institute for Molecular Pharmacology *Properties and roles of volume-regulated LRRC8/VRAC anion channels*
15:55	**Ulrich Müller,** Johns Hopkins Baltimore *New molecular players in hair cell mechanotransduction*
16:20	Lightning talk: Frederick Schwaller, Max Delbrück Center for Molecular Medicine *Ush2A is a vibration sensor involved in touch*
16:25	**Elizabeth Haswell,** Washington University *Mechanosensitive Ion Channels in Green Organisms*
16:50	Lightning talk: Ivan Radin, Washington University, St. Louis *Evolution and adaptation of Piezo proteins in the green lineage*
16:55	Lightning talk: Manuela Schmidt, MPI of Experimental Medicine *Regulation of Piezo2 function – novel insights from its interactome*
17:05	Poster session
19:05	Free evening

Friday, October 19, 2018
(at Max Delbrück Communications Center – MDC.C – House 83,
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Axon 1

Session 3 | Kate Poole

09:00	**Paul Heppenstall,** EMBL Monterotondo *Manipulating sensory transduction with genetic tools in mice*
09:25	**Kate Poole,** University of New South Wales *Chondrocyte mechanotransduction*
09:50	Lightning talk: Michael Dudek, University of Manchester *The Trpv4 channel is involved in setting the pace of the circadian clock in cartilage and intervertebral discs*
09:55	**Anthony Ricci,** Stanford University The emerging role of the lipid bilayer in regulating hair cell mechanotransduction
10:20	Lightning talk: Chonglin Guan, University of Göttingen *Myosin–dependent mechanosensory adaptation in Drosophila*
10:25	Coffee Break
11:00	**Eric Honore,** CNRS Nice *Piezos roles in regulating vascular tone*
11:25	Lightning talk: Zhongjie Ye, Scuola Internazionale Superiore di Studi Avanzati *Unfolding of mechanosensitive channels Piezo1 and Piezo2*
11:30	**Valeria Vásquez**, University of Tennessee *Fine-tuning ion channel gating with dietary fatty acids*
11:55	Lightning talk: Sylvia Fechner, Stanford University, School of Medicine *Composition of native met channels responsible for gentle touch sensation*

12:00	**Medha Pathak,** University of California, Irvine *Piezo1 activation gains traction*
12:25	Lightning talk: Angela Schlegel, Washington University, Saint Louis *Channel Behavior of the Mechanosensitive Ion Channel MscS-Like 1 is Modulated by Charged Pore-Lining and Soluble Domain Cys Residues*
12:30	Lunch and Poster Session
	Session 4 | Chair: Lily Jan
14:30	**Gary Lewin,** MDC Berlin *Tethers in sensory transduction: man and mouse*
14:55	Lightning talk: Johannes Elferich, Oregon Health and Science University *Structure of the PCDH15/LHFPL5 complex at the lower insertion point of the mammalian hair cell tip link*
15:00	**Steve Brohawn**, University of California, Berkeley *Mechanosensitive Potassium Channel Structure and Function*
15:25	Lightning talk: Jerome Lacroix, Western University of Health Sciences *Identification of the Binding Site of a Piezo1-Selective Small Molecule Agonist*
15:30	Coffee Break
16:00	**Merritt Maduke,** Stanford University *Mechanosensitive channels in ultrasonic neuromodulation*
16:25	Lightning talk: Christopher Cunningham, Johns Hopkins University *Transmembrane-O-methyltransferase (TOMT) regulates localization of TMC proteins to stereocilia in cochlear hair cells*
16:30	**Ardem Patapoutian,** HHMI Scripps Research Institute *Piezo ion channel structure and function*
16:55	Lightning talk: Daniel Tracey; Indiana University *Proprioceptive neurons in larvae of Drosophila melanogaster show direction selective responses that require the mechanosensory channel TMC*

Saturday, October 20, 2018
(at Max Delbrück Communications Center – MDC.C – House 83,
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Axon 1

Session 5 | Chair: Miriam Goodman

09:30	**Boris Martinac,** University of New South Wales *Bacterial mechanotransduction channels*
09:55	Lightning talk: Allen Liu, University of Michigan *Mechanogenetics: Repurposing bacterial mechanosensitive channel MscL in mammalian cells*
10:00	**Carsten Grashoff,** MPI for Biochemistry *Piconewton-sensitive biosensors to investigate molecular forces in cells*
10:25	Lightning talk: Sarah Clark, Oregon Health and Science University *Strategies for structural and compositional analysis of the hair cell mechanotransduction complex*
10:30	Coffee Break
11:00	**Yuh Nung Jan,** University of California, San Francisco *Structure of drosophila mechanotransduction TRP channels*
11:25	Lightning talk: Oscar Sanchez Carranza, Max Delbrück Center for Molecular Medicine *Voltage-gating of mechanosensitive Piezo channels*
11:30	**Bailong Xiao,** School of Pharmaceutical Sciences, Tsinghua University *Structure and function of PIEZO proteins*
11:55	Lightning talk: Anders Enjin, Lund University *Humidity sensing in insects*
12:00	Lunch and Poster Session
14:00	**Stefan Lechner,** University of Heidelberg *Sensory transduction regulation*
14:25	Closing remarks, Farewell
15:00	End of Conference