



*Institute & Graduate School
of Biomembranes* **IB**



Venue:

**De Leeuwenbergh
Servaasbolwerk 1a,
3512 NK Utrecht,
The Netherlands**

Day of the IB Graduate Students 2016

Thursday, November 3rd

- 09.00 *Arrival & Coffee / Tea*
- 09:15 **Opening by IB Director Bernd Helms**
- 09:20 **Marjolein Mijnders** *(Cellular Protein Chemistry, UU, Braakman)*
Folding and domain assembly of the cystic fibrosis-related ABC transporter CFTR
- 09:40 **Yifei Lang** *(Virology, UU, De Groot)*
Betacoronavirus adaptation to humans involved progressive loss of hemagglutinin-esterase lectin activity
- 10:00 **Sabine Oppedijk** *(Membrane Biochemistry & Biophysics, UU, Breukink)*
How to specifically tackle Staphylococci; lessons learned so far from the mode of action of an antimicrobial peptide.
- 10.20 **Marcia Ferraz** *(Biochemistry & Cell Biology, UU, Gadella)*
Use of 3-D printing technology to create an in vitro bovine oviduct
- 10:40 *Coffee / Tea*
- 11:00 **Hongbo Guo** *(Virology, UU, de Haan)*
Studying Influenza A virus-receptor interactions using biolayer interferometry
- 11:20 **Aike Jeucken** *(Biochemistry & Cell Biology, UU, Helms)*
Introduction of lipid droplet organelles in E. coli
- 11.40 **Qingyang Liu** *(Cell Biology, UU, Akhmanova)*
Flavoprotein monooxygenase MICAL3 interacts with centralspindlin and regulates cytokinesis
- 12.00 *Lunch*
- 13.00 **Luca Ferrari** *(Cellular Protein Chemistry, UU, Rudiger)*
Does size matter? Tau oligomers derail neurons
- 13.20 **Wentao Li** *(Virology, UU, Bosch)*
Virus-receptor interactions of a pathogenic porcine coronavirus
- 13.40 **Anne Janssen** *(Cell Biology, UU, Kapitein)*
Studying autophagy using inducible protein clusters
- 14:10 **Workshops for PhDs/ IB staff member meeting**
- 15:10 *Coffee / Tea*
- 15:30 **Winner of the IB Publication Prize 2016**
- 16:15 *Drinks*
- 17.15 *Welcome reception at Sonnenborgh followed by Diner/Party for ALL IB members & registered participants*



Institute & Graduate School **IB**
of Biomembranes

IB Conference on Biomembranes 2016
Friday, November 4th

- 09.00** *Arrival, Coffee / Tea*
- 09.15** **Opening by IB Director Bernd Helms**
- 09.20** **Margaret Robinson (University of Cambridge, UK)** host Rabouille
Making Vesicles
- 10.10** **Christian Eggeling (University of Oxford, GB)** host Killian
Super-resolution optical microscopy studies of membrane bioactivity – potentials and limitations
- 11.00** *Coffee / Tea*
- 11.25** **Paul Saftig (Kiel University, Germany)** host Klumperman
Lysosomal membrane proteins and their roles in health and disease
- 12.15** *Lunch*
- 13.20** **Susan Buchanan (NIH, Bethesda, USA)** host Tommassen
Structural insight into the biogenesis of beta-barrel membrane proteins
- 14.10** **Tamas Balla (NIH, Bethesda, USA)** host Strating
Phosphatidylinositol 4-kinases. Emerging players in cellular lipid metabolism
- 15.00** *Coffee / Tea*
- 15.25** **2016 van Deenen medalist Winner** host Helms
Nobel laureate James Rothman (Yale School of Medicine, USA)
Membrane Fusion in the Cell and How it is Harnessed for Neurotransmission
- 16.15** *Closing & Drinks*



Workshops IB conference 2016

T. Balla

Challenges in deciphering the lipid landscape in intact mammalian cells

Yeun Ju Kim, Maria-Luisa, Guzman-Hernandez, Eva Wisniewski, **Tamas Balla** (2015) Phosphatidylinositol-Phosphatidic Acid Exchange by Nir2 at ER-PM Contact Sites maintains Phosphoinositide Signaling Competence. *Dev Cell* 33, 549–561

Mira Sohn, Pavlina Ivanova, H. Alex Brown, Daniel J. Toth, Peter Varnai, Yeun Ju Kim, and **Tamas Balla** (2016). Lenz-Majewski mutations in *PTDSS1* affect phosphatidylinositol 4-phosphate metabolism at ER-PM and ER-Golgi junctions. *PNAS* 19;113(16):4314-9

Margaret Robinson

How can we study the function and the evolution of the membrane trafficking machinery?

Robinson, M. (2015). Forty Years of Clathrin-coated Vesicles. *Traffic*. 16, 1210-1238

Jennifer Hirst, Alexander Schlacht, John P Norcott, David Traynor, Gareth Bloomfield, Robin Antrobus, Robert R Kay, Joel B Dacks, **Margaret S Robinson** (2014) Characterization of TSET, an ancient and widespread membrane trafficking complex. *eLife*, 3:e02866

Jennifer Hirst, Georg H.H. Borner, Robin Antrobus, Andrew A. Peden, Nicola A. Hodson, Daniela A. Sahlender, and **Margaret S. Robinson** (2012) Distinct and Overlapping Roles for AP-1 and GGAs Revealed by the “Knocksideways” System. *Current Biology* 22, 1711–1716,

Susan Buchanan

Membrane protein crystallization: detergents, bicelles, and lipidic cubic phase

Fairman, J.W., Dautin, N., Wojtowicz, D., Liu, W., Noinaj, N., Barnard, T.J., Przytycka, T., Cherezov, V. & **Buchanan, S.K.** (2012). Crystal structures of the outer membrane domain of Intimin and Invasin from enterohemorrhagic *E. coli* and enteropathogenic *Yersinia pseudotuberculosis*. *Structure* 20, 1233-1243.

Ujwal, R. and Abramson, J. (2012). High-throughput crystallization of membrane proteins using the lipidic bicelle method. *J. Vis. Exp.* (JoVE), <http://www.jove.com/video/3383>

Noinaj, N., Mayclin, S., Stanley, A.M., Jao, C.C. & **Buchanan, S.K.** (2016). From constructs to crystals: towards structure determination of β -barrel outer membrane proteins. *J. Vis. Exp.* (JoVE), <http://www.jove.com/video/53245>.

Paul Saftig

Zunke F, Andresen L, Wessler S, Groth J, Arnold P, Rothaug M, Mazzulli JR, Krainc D, Blanz J, **Saftig P**, Schwake M. (2016). Characterization of the complex formed by β -glucocerebrosidase and the lysosomal integral membrane protein type-2. *PNAS* 113 | no. 14 | 3791–3796

Neculai D, Schwake M, Ravichandran M, Zunke F, Collins RF, Peters J, Neculai M, Plumb J, Loppnau P, Pizarro JC, Seitova A, Trimble WS, **Saftig P**, Grinstein S, Dhe-Paganon S (2013). Structure of LIMP-2 provides functional insights with implications for SR-BI and CD36. *Nature* 504, 172-176

C. Eggeling

Super-resolution optical microscopy studies of membrane bioactivity – potentials and limitations

Route Leeuwenbergh-Sonnenborgh

