



GEORG-AUGUST-UNIVERSITÄT
GÖTTINGEN



האוניברסיטה העברית בירושלים
The Hebrew University of Jerusalem

Molecular Mechanisms in
Synaptic transmission, Sensory transduction
And Neurodegeneration
Program

Novel methodologies such as super-resolution microscopy, genetically-encoded fluorescent reporters and molecular manipulation of gene expression, have been combined in recent years to unravel the molecular basis underlying Synaptic transmission, Sensory transduction and Neurodegeneration. This workshop will bring together scientists from the Hebrew University of Jerusalem and from the University of Göttingen who share common interests in investigating the cellular and molecular mechanisms underlying these fields in neuroscience. This will create an excellent opportunity for the exchange of ideas and views between scientists that use different experimental approaches and animal models, promoting new collaborations and strengthening ongoing collaborations between these two Universities.

Speakers:

Göttingen: Hannelore Ehrenreich; Martin Göpfert; Paul Lingor; Ivan Manzini; Till Marquardt;
Tiago Outeiro; Silvio Rizzoli; Carolin Wichmann

Jerusalem: Yoram Ben Shaul; Alexander Binshtok; Ruth Gabizon; Sebastian Kadener;
Daniel Kaganovich; Baruch Minke; Itzhak Nussinovitch; Avi Priel; Ronit Sharon;
Yael Stern-Bach; Hermona Soreq; Millet Treinin

Organizers:

I. Nussinovitch (HUJI)

S. Rizzoli (UMG)

T. Outeiro (UMG)

October 28-29, 2014

"Tayarut" Hall, floor 0, Hadassah Hospital, Faculty of medicine, Ein Kerem campus
The Hebrew University of Jerusalem



Hadassah Medical Center



Tuesday October 28

08:45 Gathering

09:15 Welcome

Synaptic transmission

Chairs: Yael Stern-Bach and Carolin Wichmann

09:30 **Silvio Rizzoli** - *The Synapse nanomap*

10:00 **Carolin Wichmann** - *Dynamic vesicle pools at inner hair cell ribbon synapses*

10:30-11:00 Coffee break

11:00 **Yael Stern-Bach** - *AMPA receptor regulation by auxiliary proteins*

11:30 **Millet Treinin** - *RIC-3, a regulator of nicotinic acetylcholine receptor activity*

12:00 **Itzhak Nussinovitch** - *Multiple Ca^{2+} channel dependent components in GH secretion*

12:30-13:30 Lunch break

Sensory Transduction

Chairs: Yoram Ben-Shaul and Martin Göpfert

13:30 **Yoram Ben Shaul** - *Representation of physiological state, and state dependent representations in the vomeronasal system*

14:00 **Ivan Manzini** - *Structural, molecular and functional basics of an amphibian olfactory system*

14:30-14:45 Coffee Break

14:45 **Alexander Binshtok** - *Coding of Itch: Selective Silencing of Primary Afferents Reveals Two Distinct Itch-Specific Sensory Lines*

15:15 **Avi Priel** - *The activation mechanism of the pain receptor TRPV1*

15:45-16:15 Coffee break

16:15 **Sebastian Kadener** - *The circadian neuronal network provides robustness to the circadian system in response to molecular perturbations in *Drosophila**

16:45 **Martin Göpfert** - **Drosophila* hearing: mechanisms, genes*

17:15 **Baruch Minke** - *Functional cooperation between the IP_3 receptor and phospholipase C secures the high sensitivity to light of *Drosophila* photoreceptors in vivo*

18:00 Reception (buffet dinner)

Wednesday October 29

Neurodegenerative Diseases

Chairs: Daniel Kaganovich and Paul Lingor

9:00 **Tiago Outeiro** - *The role of posttranslational modifications in Parkinson's disease*

9:30 **Daniel Kaganovich** - *The intermediate filament Vimentin regulates cellular aging and rejuvenation*

10:00-10:30 Coffee break

10:30 **Paul Lingor** - *ROCKing Neurodegeneration: Rho kinase as a novel therapeutic target for ALS and PD*

11:00 **Ronit Sharon** - *The associations of alpha synuclein with membranes: A physiological activity and a tool for diagnosis of Parkinson's disease*

11:30 **Till Marquardt** - *Signaling complexes linking neurogenesis to functional diversification at the nervous system's final common path*

12:00-13:00 Lunch break

Chairs: Hermona Soreq and Hannelore Ehrenreich

13:00 **Ruth Gabizon** - *Unique features of genetic prion disease*

13:30 **Hannelore Ehrenreich**- *Circulating auto-antibodies directed against brain epitopes modulate brain functions*

14:00 **Hermona Soreq** - *MicroRNA regulators of cholinergic signaling in health and disease*

14:30 closing off