

13th WPI IIS Seminar

“Imaging inhibition with voltage sensitive dyes”

Fast synaptic inhibition in the central nervous system is mediated by a very diverse population of GABAergic interneurons. These interneurons can be categorized into different groups. Among the key grouping criteria are the axonal arborisation and the location of their synaptic contacts on their target neurons. We are interested in understanding the functional consequences of these structural differences between interneuron types. To directly investigate the impact of GABA(A) receptor opening on dendritic signal integration we introduced voltage-sensitive dye imaging to the study of inhibitory synaptic transmission. We have found that this does not disturb the physiological chloride homeostasis and allows a high resolution view of dendritic synaptic integration. We are currently combining voltage-sensitive dye imaging with optogenetic methods to further improve the method.



Speaker: Prof. Dr. Kaspar Vogt

*Neuroscience Network Basel,
The University of Basel, Switzerland*

Date: Thursday, March 28th, 2013

Time: 16:00-17:00

**Venue: Room #402, 4F, Health and Medical Science
Innovation Laboratory, University of Tsukuba**



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