



Measure More Membrane: Cells, Bilayers and Transporter Activity

Tuesday, February 14th, 2017, 12:30 – 2:00 P.M.

Dr. Andrea Brüggemann, Nanion Technologies

Dr. Niels Fertig, Nanion Technologies

Dr. Gerhard Baaken, Ionera

Dr. Ekaterina Zaitseva, Ionera

Dr. Maria Barthmes, Nanion Technologies

In this workshop we will showcase three versatile technologies: the *Port-a-Patch*, the world's smallest patch clamp rig, the *Orbit* product family, for parallel lipid bilayer recordings of reconstituted ion channels, and the *SURFE²R* product family, for label-free and direct measurements of transporter protein activity.

The *Port-a-Patch* is the smallest patch clamp rig in the world and supports high quality patch clamp recordings; accessible to electrophysiologists and non-electrophysiologists alike. Giga-seal recordings coupled with excellent voltage-clamp of the cellular membrane ensure high quality data. Versatile add-ons, such as internal perfusion, allow unprecedented experimental freedom, above and beyond the possibilities of conventional patch clamp.

The *Orbit 16* supports the parallel formation and recording from up to 16 lipid bilayers containing reconstituted ion channels or nanopores. Using Micro Electrode Cavity Array (MECA, Ionera) recording substrates, the bilayers are automatically formed by remotely actuated painting (Ionera-SPREAD), which will be demonstrated during this session. Based on the same principle, with the added possibility of active cooling and heating, the *Orbit mini* is a minimal footprint, turn-key system and allows 4 parallel lipid bilayer recordings.

SSM (solid supported membrane)-based electrophysiology is a technique whereby proteoliposomes, membrane vesicles, or membrane fragments containing the channel or transporter of interest are adsorbed to a lipid monolayer painted over a functionalized electrode. Automation of the SSM technology is accomplished by the *SURFE²R* product family and allows precise measurements and in-depth analysis of transporter and ion channel functions. Live experiments on the *SURFE²R* will be shown.

Join this workshop for live experiments and information about three outstanding platform families. Space is limited, please reserve yours by sending an email to info@nanion.de.