

It's coming home: The SyncroPatch 384 is installed in Göttingen, the birthplace of patch clamp!

Munich, Germany, July 26th 2022: The SyncroPatch 384 has been installed at the Multiscale Bioimaging Cluster of Excellence (MBExC) at the University Medical Center Göttingen (UMG) to advance investigation into the electrical activity of isolated cardiomyocytes and neurons.

Scaling up patch clamp measurements

In the 1970's, Erwin Neher and Bert Sakmann developed the manual patch clamp technique from single cells with tight, gigaohm seals in Göttingen. The manual patch clamp technique is still used today, generating information-rich data about ion channels in cell membranes. Over the years, the technique has been automated in order to record from multiple cells simultaneously, vastly improving ease-of-use and increasing throughput. The SyncroPatch 384 is a high throughput automated patch clamp instrument for recording from up to 384 wells in parallel. The system is highly flexible and is ideal for drug screening in the pharma industry, and for complex biophysical studies in academic research.



Heads of the new electrophysiology and optogenetics platform Prof. Dr. Niels Voigt (pictured) and Dr. Thomas Mager explain more about how the SyncroPatch 384 will be used in the MBExC in this video.

Video credit: MBExC.

Automated patch clamp in academic research institutions

Nanion was founded as a spin-off from the University of Munich and still stays true to its academic roots, enjoying a close relationship with its academic customers and collaborators. Not only the smaller instruments for automated patch clamp, Port-a-Patch and Patchliner, have found their place as valuable tools in academic research institutes, also the SyncroPatch 384, along with its predecessors, the SyncroPatch 384PE and 384i, have proven invaluable to researchers in a number of prestigious academic institutions worldwide. From channelopathy research, through cardiac research, cell phenotyping and drug discovery, the SyncroPatch has become a powerful tool in academic science hubs worldwide, fulfilling all the needs of academic researchers. Nanion also continues to support research with its annual equipment grant awards, allowing research institutes to get their hands on the SyncroPatch 384, SURFE²R N1 or FLEXcyte 96 for a 6-9 month period.



Nanion is proud of its collaborations with academic partners, to develop its products and assays to satisfy all types of research.



Co-Founder and CEO of Nanion Technologies Dr. Niels Fertig is thrilled

to announce the installation at the Multiscale Bioimaging Cluster of Excellence (MBExC) in Göttingen, "We are delighted to

support the MBExC with our SyncroPatch 384. Our most powerful patch clamp platform will be put to great use in Göttingen and we are extremely excited about the interdisciplinary research that will be done by the leading scientists within the cluster. Nanion is honoured to be engaged in such cutting-edge research initiatives and we are strongly committed to supporting academic shared core facilities with our instrumentation worldwide. We have provided the MBExC a prototype, which is unique, as it combines automated electrophysiology with optogenetics. We look forward to working with Professor Niels Voigt and Dr. Thomas Mager to co-develop this and other tools to keep pushing the boundaries of innovation."

About Nanion Technologies

Nanion Technologies is a leading provider of instrumentation for ion channel drug discovery and screening. Founded in 2002, Nanion has grown over the last 20 years to a company with over 100 employees worldwide. With headquarters in Munich, Germany, Nanion has subsidiaries in the USA, Japan, China and Denmark, as well as distribution partners in seven other countries. Nanion's team has developed and successfully established four generations of automated patch clamp instruments for sophisticated and high throughput applications in ion channel research and drug discovery (Port-a-Patch, Patchliner and SyncroPatch product families). Further product lines are available for cell monitoring and cardiotoxicity screening (CardioExcyte 96/FLEXcyte 96), parallel bilayer recordings (Orbit family), and parallel membrane transporter protein recordings (SURFE²R).

For more information, please visit:

www.nanion.de



University Medical Center Göttingen and MBExC associated investigator Professor Niels Voigt,

"After many years of experience with manual patch-clamp, we were very curious about Nanion's

automated patch-clamp systems. I remember very well the first batch of cardiomyocytes we sent to Munich. One day later, we could not believe our eyes when we received the first ion current and action potential measurements. The same set of experiments would have taken us more than one year of intensive work. During the following months, together with Nanion's dedicated researchers, in particular senior scientist Dr. Markus Rapedius, we performed novel experiments on primary cardiomyocytes using the SyncroPatch. These experiments laid the foundation for our exciting future collaboration with Nanion and multiple new projects using this system under the umbrella of the MBExC. Obtaining a SyncroPatch in Göttingen was possible due to the ongoing efforts of the MBExC and we are also very grateful for their immense support."

For more information about our lab, please visit: www.molecular-pharmacology.de

About the MBExC Cluster of Excellence

The Göttingen Cluster of Excellence Multiscale Bioimaging: From Molecular Machines to Networks of Excitable Cells (MBExC)

has been funded since January 2019 in the framework of the Excellence Strategy of the German Federal and State Governments. Applying a unique and multiscale approach, MBExC investigates the disease-relevant functional units of electrically active cells of heart and brain, from the molecular to the organ level. The MBExC unites numerous partners from the university and non-university institutions in Göttingen. The overall goal: To understand the relationship between heart and brain diseases, to link basic and clinical research, and thus to develop new therapeutic and diagnostic approaches with social implications.

For more information, please visit:

www.mbexc.de