

New Alliance

Start-up Company Genionics and Fischer Chemicals

Partnership – Fischer Chemicals announced a new distribution agent-relation with Genionics, a privately founded Swiss biotech company. Supported by their own logistics company Fischer Global Services, Fischer Chemicals is able to complete Genionics' portfolio with professional distribution throughout their existing channels.



Dr. Urs Thomet
CTO and principal
founder of Genionics

As a start-up company Genionics has to concentrate on their core business and therefore needs a strong partner to whom they can outsource the distribution and marketing activities. They have chosen Fischer Chemicals because their core business is the distribution and marketing of material for the pharmaceutical market. Genionics can make use of Fischer Chemicals' existing network and experiences and can accelerate the promotion and sales of their products. Another advantage of the cooperation is that both companies are located in Zurich, which is essential for building up a close relation. Especially during this starting period it is of high importance to have the possibilities to meet quickly and set further steps. The aim is that both companies will grow together in this interesting and growing market.

Genionics' focus is on the genetic diversity of ion channels. The company was established in 2007 with the mission of providing solutions for drug discovery and safety studies in the field of ion channel research. With most of its scientific research being joint public efforts, the development of commercially sold products to create the desired business volume is a part that is kept separate. This way, Genionics strives to be the trusted centre of excellence in ion



channel research within the shortest time possible.

To have the maximum use off all current research results, Genionics initiated a completely independent foundation that is building a database to put validated and reviewed results in a comprehensive and searchable framework. This channelopathy database is also meant to bridge the gap between basic research and physicians that are dealing with patients suffering from the various diseases in which ion channel functioning is involved.

Even though at first, it might not seem logical to transfer this immense knowledge out of the company the sheer amount of work required to reach the desired goal along with the rising costs would have been prohibitive for a young and privately founded company to accomplish. For Genionics, being at the forefront of ion channel research means having access to state of the art knowledge in the field.

Ultimately, this database is a high quality, fully searchable, non-redundant, curated database in a standard format which contains genotype, phenotype, sequence data, electrophysiological and biophysical properties as well as general information.

And as such, it will become a pivot in ion channel research and channelopathies.

Ion Channels as Important Drug Targets

A wide spectrum of physiological processes is controlled by ion channels. These complex assemblies of proteins in the membranes of cells establish and control voltage gradients by the flow of ions down their electrochemical gradients. Signals transmitted by nerve cells in the body rely on the precise functioning ion channels. The human genome project revealed some 340 different ion channels that are encoded in the human DNA.

The patch-clamp technique, invented by Erwin Neher and Bert Sakmann in 1976 (both awarded the Nobel Prize for their work in 1991), allowed for the first time the functional characterization of even a single of those pores. The more recent development of automated systems that are able to measure their functioning in large scale assays triggered a revolution in this field of drug discovery. Today, the specific characterization of a drug can be assayed in vitro and precise information

on cross-reactions between their targets can be gathered.

Channelopathies

Individual people differ from each other, for example in height or hair colour, and similarly they also have variations in their genetic sequences. This is also manifested in slight occasional variations in ion channel genes. Most of these sequence variations are too subtle to manifest, while others can result in severe (and sometimes catastrophic) consequences. Ion channels that are impaired by such specific variations (or mutations) result in a channelopathy, a condition where the functioning of a specific ion channel is altered or abolished in a patient. Prominent examples are cystic fibrosis, some form of epilepsy, long QT syndrome, myasthenia gravis and periodic paralysis. Most channelopathies occur rarely, but the sheer multitude of conditions arising from mutations in ion channel genes makes them a very significant class of diseases.

► www.genionics.ch
www.fischer-group.ch