e.IP - Innovation Through Partnership

Researching and tinkering all alone is a thing of the past. Today, companies, institutes and scientists combine their expertise and achievements. Such partnerships drive research, advance new developments and yield economic power. The Electrophysiology Innovation Partnership (e.IP e.V.) has shown how this is accomplished – at least in Baden-Württemberg and especially when it concerns electrophysiology.

This partnership aims towards innovative development and the producing of products in electrophysiology. The central focus is on new electrophysiological technologies designed to find active substances and to advance basic research. For this purpose, partners offer their strengths and expertise in the service of science and application. Individual partners have been successfully working together for years on the production, distribution and application of electrophysiological products. In 2001, a stronger and more effective cooperation was obtained with the creation of this non-profit association.

The partners in the e.IP

Multi Channel Systems MCS GmbH, Reutlingen: The company is a specialist in the development and production of electrophysiological measuring instruments and technical accessories. It supplies the research and pharmaceutical industries with intelligent and innovative products, which are continually under development. Examples include the Roboocyte®, a fully automated Xenopus oocyte screening system, and measuring instruments for cell and tissue recordings from microelectrode arrays (MEA).

NMI Natural and Medical Sciences Institute at the University of Tübingen, Reutlingen: Contract research, services and product development are the domain of this "non-profit" organisation. For electrophysiological applications, work is being done on microelectrode technologies as well as solutions and services for conventional and automated electrophysiology.

Department of Neurobiology and Biophysics at the University of Freiburg: Electrical brain activity is the focus of Freiburg's electrophysiologists. In this regard, they develop and refine multielectrode measurements (in vivo and in vitro) for data collection and computer-assisted analytical methods (multiple single-neuron recordings, real-time optical imaging, neural network modelling).

npi electronic GmbH, Tamm: The company develops electronic instruments for physiological and pharmaceutical research. The company has been successfully active on the international market for 20 years. The product line includes iontophoresis systems, patch clamp amplifiers, oocyte amplifiers, perfusion systems, micromanipulators, specialised software, etc.

Cytocentrics CCS AG, Reutlingen: The flagship of this NMI spin-off, founded in 2001, is the CytoPatch™ developed for automated patch clamping. Detailed information regarding this successful concept and the decisive ideas behind it is provided by the Cytocentrics company portrait found in the link list of this month's major topics.

Come together – a focal point of the association's work

An intense exchange of knowledge promotes research and the partners of e.IP are organising expert events to accomplish that. In March 2004, the e.IP organised for the first time a workshop within the scope of the annual conference of the German Society of Physiology. Besides survey lectures, discussions took place regarding the state of technology in automated patch clamping (APC) and microelectrode arrays (MEA) as well as in 2-electrode recordings in oocytes. The workshop attracted much interest and showed that the new methods are accepted and can be discussed critically, yet with interest.

The latest development is the e.IP's first international symposium at the Neuroscience Meeting in San Diego (in cooperation with ALA Scientific Instruments, New York). The central focus was on microelectrode techniques applicable in neuroscientific research.

As for the home country… in the spring of 2005, a one-day workshop regarding "electrophysiology in industrial drug research" is planned for the STERN BioRegion. The workshop is an opportunity for scientists and users alike to discuss promising concepts. The aim is to avoid developing beyond the market and to deliver techniques and methods that conform to the needs of users.

Distributing centre for know-how

The most important medium of e.IP as communication platform and information base is its homepage. It depicts an excellently organised and structured portal for electrophysiology. The vantage point and target audience are international. It provides basic knowledge and background information regarding the partners'

products which play an important role. An additional focus is the expansion of a discussion forum on current topics in electrophysiology. Well-sorted link lists, a job exchange and current news complete the offer.

Promotion of young scientists

A lack of new researchers is problematic in large parts of biophysics and physiology, which traditionally provide important stimuli for electrophysiology. The e.IP aims to change this by exciting and winning students and young scientists to careers in electrophysiology. The events and partner network are hence used in a directed way in order to arrange internships and research trips. The results prove that the e.IP is moving in the right direction with this strategy. Several graduates were able to find placements at the NMI and Cytocentrics due to their contact to the Advanced Technical College of Vienna, Austria.

In addition, the research and application topics are also of interest to "non-biologists". The combination of microsystems technology and automation, for example, creates interesting possibilities for engineers. In this area, the association is also focusing on young scientist marketing.

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