

PRESS RELEASE

Prof. Dr. Hans-Werner Müller researches the regeneration of the central nervous system

**Prize of the Klüh Foundation is awarded to researchers
of the Heinrich-Heine-Universitätsklinikum**

Düsseldorf, 04 May 2017 – the promotional award 2017 of the Klüh Foundation for the Promotion of Innovation in Science and Research, including prize money of 25,000 Euro, this year goes to Prof. Dr. Hans-Werner Müller, Head of Molecular Neurobiology at the Heinrich-Heine-Universitätsklinikum. This is to support the physician in his research on the regeneration capacity of the central nervous system.

By awarding the prize money, the jury of the Klüh Foundation acknowledges the achievements of the Düsseldorf-based researcher to date. Through the development of new therapies for the treatment of severe spinal cord injuries in animal models, Professor Müller has created what is now a patented method to facilitate the regeneration of nerve fibres.

Based on this, the Düsseldorf-based physician and his team have developed further new therapy strategies using stem cells, biomaterials and microsystem technology, which have been used in rodents and have led to significant improvements. A previously unattained functional recovery has been achieved with the use of a biochemical gel-like polymer.

Together with the Institute for Microsystem Technology at the Hamburg University of Technology, the Düsseldorfers have also developed a new kind of microconnector which serves to reconnect severed spinal cord stumps. The researcher: “The use of this tissue-compatible mechanical microsystem stabilises the spinal cord tissue and supports the regeneration of nerve fibre bundles and the formation of new blood vessels in the long term.”

The regeneration result thus achieved has so far not been achieved with other methods in animal experiments with a complete paraplegia.

Due to the extreme complexity of the chemical and cellular damage processes in spinal cord injuries, scientists and clinicians believe that only the combination of complementary therapeutic measures can lead to a successful cure.

The studies and findings on experimental strategies on the topic of spinal cord injury and paraplegia are, says Professor Müller, “growing exponentially worldwide and lead to eight to nine new specialist articles every day.” This data flood can no longer be grasped by anyone, he says. Therefore, the Düsseldorf-based researcher has initiated the first knowledge database which, with the help of automated methods of information technology and artificial intelligence, extracts the scientific findings from the specialist articles and evaluates them on the basis of objective criteria. The non-profit “Zentrum für Neuronale Regeneration (CNR e.V.)” founded in 2008 as a result is a supra-regional interdisciplinary project, which, alongside neuroscientists, also involves computer scientists, linguists and experts in machine learning. The Federal Ministry of Education and Research funds the centre to the tune of one million Euros. If successful, the project will serve as a blueprint for the development of similar knowledge banks for other so far incurable diseases.

About the Klüh Foundation for the Promotion of Innovation in Science and Research:

In the last 30 years, the Klüh Foundation has awarded prizes of around EUR 730,000 and thus supported a broad range of medical research. As a rule, the previous promotional awards were presented for medical research without public funding. The founder of the foundation is Josef Klüh, sole owner of the internationally active multiservice provider Klüh Service Management GmbH.

About Klüh Service Management:

Klüh Service Management GmbH is a global multi-service provider. Founded in 1911, the company has decades of experience in the area of infrastructural services and offers service packages with a high level of vertical integration. Alongside cleaning, its fields of activity cover hospital services, catering, building management, security and personnel services and airport services. With around 49,000 employees across eight nations, the company achieves sales of over 770 million Euro (2016).