

IRP RESEARCH PROJECTS FUNDED IN 2023-25

IRP RESEARCH GRANTS - BASIC

Brüningk Sarah, ETH Zurich, Basel, Switzerland

In silico trials - a digital health solution to assess recovery from traumatic Spinal Cord Injury The plan is to develop an artificial intelligence tool that will analyse data from previous clinical trials and studies, bringing together the many variables that are documented. The new tool will enable researchers to enter the parameters of the trial they are proposing and receive good information on how to plan their trial. **CHF 149'000.- from 2023-25**

Grubb Matthew, King's College, London, United Kingdom

How does plasticity in excitatory interneurons influence functional recovery during neuronal regeneration? This research is addressed to the mechanisms of plasticity. Grubb wishes to work out the details of how the interneurons respond to regeneration, then use stimulation methods to activate specific types to work out best to get recovery. **CHF 150'000.- from 2023-25**

IRP RESEARCH GRANTS - CLINICAL

Courtine Grégoire, EPFL, Geneva, Switzerland

Reversing upper limb paralysis through brain-controlled electrical stimulation of the cervical Spinal Cord The current application is focused on restoring hand function to people injured at higher spinal levels who have some arm function but diminished hand function. Two patients have already received implants. The money from the grant will pay for at least a further three.

CHF 150'000.- from 2023-25

Monastyrskaya Katia, University of Bern, Bern, Switzerland

Effect of early treatment with Onabotulinumtoxin A on the bladder function of patients with acute Spinal Cord Injury in single cell resolution

The project addresses issues arising from the use of Botulinum toxin to paralyze the bladder to prevent unintended bladder emptying in Spinal Injury patients. The understanding from this project will hopefully lead to better bladder treatments. **CHF 150'000.- from 2023-25**

Walter Matthias, University of Basel, Basel, Switzerland

Identification, tracking and quantification of cardiac changes in the acute stages of Spinal Cord Injury The aim is to learn more about the changes in the cardiovascular system resulting from injury in the short and longer term. Little focus has been applied to the circulation so far. **CHF 148'223.- from 2023-25**

IRP POSTDOCTORAL FELLOWSHIP

Andrea Cimolato, ETH Zurich, Zurich, Switzerland

A telemonitoring tool to disentangle the physical and psychological nature of PAIN in Spinal Cord Injury patients The project revolves around better assessment of pain and will develop a tool, which can eventually be on a mobile phone, in which patients can enter all the parameters affecting their situation, allowing physicians to make a better assessment of how to treat them.

CHF 80'000.- from 2023-24

Scheuren Paulina, Balgrist University Hospital, Zurich, Switzerland and ICORD, Vancouver, Canada In-vivo evidence of neuroinflammation as a novel biomarker after Spinal Cord Injury The plan is to develop a new method for assessing inflammation after spinal injury and use the device in a series of patients, correlating temperatures and outcomes. This is likely to become a standard clinical method. CHF 80'000.- from 2023-24



International Foundation for Research in Paraplegia Fondation internationale pour la recherche en paraplégie Internationale Stiftung für Forschung in Paraplegie



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