Announcement of post-doc scholarship at the Department of Clinical Sciences, Epilepsy Center

CRISPR/Cas9 gene therapy against epileptogenesis
The project aims to develop a novel gene therapy approach against epileptogenesis by modulating the expression of endogenous genes, in particular GABA-A and CB1 receptors. This will be achieved by using a modified version of the CRISPR/Cas9 system, directed to the promoter regions of genes of interest to modulate gene expression in a controllable and reversible manner. The approach will be first tested in vitro, in primary neuronal cell cultures, and subsequently in living animals during the early stages of epileptogenesis. Results from this project will help identifying critical genes and periods during epileptogenesis, which could be targeted for the further development of clinical approaches against epilepsy.

The project involves the extensive use of molecular biology techniques, viral vectors, cell culture, in vivo EEG recordings, in vitro electrophysiology, immunohistochemistry and imaging, including confocal and STORM super-resolution microscopy.

The Epilepsy Center is located at the Biomedical Center in Lund and is part of a vibrant research community, with modern infrastructure and well-equipped facilities. The project is run close collaboration with other researchers at the Biomedical Center and provides good networking possibilities for researchers wanting to explore mechanisms of epileptogenesis and gene therapy.

Reference number: V 2018/838

Scholarship period: The scholarship covers a period of 6 months with possibility of prolongation up to a maximum of 24 months in total.

Preliminary start date: 2018-09-01

Supervisor/contact person: Marco Ledri, +46 738 023283 (mobile), +46 22 20551 (office), Marco.Ledri@med.lu.se

For more information on the project or the scholarship conditions, please contact the supervisor directly.

Qualifications:
- To be eligible for a post-doc scholarship at Lund University the recipient must hold a PhD degree within a relevant field. The PhD degree must not
be from Lund University. The PhD degree must not be older than three years. The applicant must not have been employed at Lund University in the past two years.

Applications are particularly encouraged by candidates with previous experience in the following techniques:
- *In vitro* electrophysiology in brain slices
- Molecular biology, including cloning, western blot and RT-PCR
- Cell culturing, especially isolation and maintenance of primary neuronal cultures from embryonic and/or postnatal cortex and hippocampus
- Immunohistochemistry and microscopy

Experience in viral vector production, *in vivo* EEG recordings and animal models of epilepsy are considered a bonus.

**Written application, including reference number, is to be sent via e-mail to the supervisor and must include the following:**
- CV
- Personal letter stating the reasons why the study suits the applicant (maximum one page)
- List of publications
- References (2)
- Copy of PhD Diploma

**Application deadline:** 2018-05-18

**Information regarding scholarships at Lund University**

- The scholarship sum is paid out quarterly
- A scholarship awarded will be reviewed every six months
- Scholarships are tax-exempt
- Scholarships do not give rise to sickness benefits, compensation from the Social Insurance Office or retirement pension.
- A scholarship holder cannot be hired after the scholarship period due to tax reasons.
- The scholarship follows the regulations laid down by the University Vice-Chancellor (LS 2010/68, A13).
- The scholarship is intended for the holder’s own education/professional development and does not constitute remuneration for work or other service that has been carried out or will be carried out on behalf of the University.
- The Scholarship holder is to be informed about the risk of possible retrospective taxation in Sweden in cases where the scholarships are administered and paid out by LU and the scholarship holder gains employment at LU shortly after the period of the scholarship.