**Project:**

Mounting evidence supports a link between chronic inflammation and neuropsychiatric disorders such as major depressive disorder. Interleukin 17 (IL-17) is a pro-inflammatory cytokine that mediates responses to pathogens or tissue damage. Its functions in the immune system are under intense scrutiny, as it drives pathogenesis in autoimmune diseases. By contrast, little is known about IL-17’s role in the nervous system. We recently discovered that IL-17 can act like a neuromodulator in the Caenorhabditis elegans nervous system, changing the gain of a defined circuit. We highlighted part of a signal transduction mechanism mediating these neural effects of IL-17, but the fundamental mechanisms remain unclear. This project aims to elucidate how IL-17 exerts effects on circuit function, using both C. elegans and cultured mammalian neurons. The project will combine genetics, biochemistry, neural imaging, and RNA profiling of single cells.

**Personal specifications and key responsibilities:**

The candidate shall have sufficient training in molecular biology or in related topics, be able to plan the work and objectives independently (with limited supervision from the group leader), to identify, develop, modify and apply cutting-edge techniques to achieve the goals of the project. The candidate shall also be able to communicate with other members in the lab, and present scientific work at seminars and international conference in English.

**Funding Notes:**

This is a 2-year (up to 5 years) training and development position for a postdoctoral scientist who is recently completed their doctoral studies. The position will be funded by European Research Council (ERC starting grant) and Wallenberg Center for Molecular Medicine.

Reference:

Chen C, Itakura E, Nelson GM, Sheng M, Laurent P, Fenk LA, et al. IL-17 is a neuromodulator of Caenorhabditis elegans sensory responses. Nature. 2017. doi: 10.1038/nature20818. PubMed PMID: 28099418.

**Salary:**

First two years with stipend SEK 23 000/month, and the salary will be SEK 34500-35500/month from the third year.

**More information:**

http://www.wcmm.umu.se/gruppledare/gruppledare#Changchun

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