

Five Post-Doc Fellowships (2 years) in Computational and Experimental Epigenetics

In unprecedented expansion of epigenetic research in Umeå University, the EpiCoN collaboration announces five postdoctoral fellowships in computational and experimental epigenetics. EpiCoN (Epigenetic Cooperation Norrland) is an initiative which carries out internationally competitive epigenetics research and aims to promote the public awareness of epigenetics in Northern Sweden. EpiCoN is a successful and highly interactive collaboration housed at the same location within Umeå University. We are looking for motivated scientists with experience in experimental and/or computational biology or with good knowledge of chromatin biochemistry.



The successful candidate will join one of the three EpiCoN member groups.

Group Jan Larsson: We focus on chromosome-wide targeting and regulatory mechanisms where our discovery that POF is involved in global regulation of chromosome 4 in *Drosophila* provided the first evidence of autosome specific chromosome-wide regulatory mechanisms. Our analysis is focused on four main questions: (1) the evolution and function of chromosome-wide targeting mechanisms (2) correct targeting of chromatin associated factors; (3) genome-wide fine-tuning of transcription output and (4) establishment and propagation of chromatin structure within and between chromosomes.

Group Yuri Schwartz: We aim to understand molecular mechanisms of epigenetic regulation by Polycomb and Trithorax proteins. We want to know how these proteins are targeted, how they repress transcription and what makes this regulatory system epigenetically stable yet developmentally plastic. We use a combination of genetic, biochemical, genomic and computational approaches. Our primary model systems are fruit fly *Drosophila melanogaster* and cultured human cells.

Group Per Stenberg: Our attention is on integrating data from a wide range of sources (e.g. ChIP-seq, RNA-seq, DNA-seq, Hi-C) in order to understand how chromatin modifiers are correctly targeted and to find the combinatorial events required for setting up the epigenetic memory. Although we generate genome wide data, we focus on computational, evolutionary and multivariate methods. In addition, we are interested in host/microbiome interactions.

Ideal candidates will have a Ph.D. in genetics, molecular biology, biochemistry or bioinformatics and knowledge in the field of epigenetics. Previous experience with either *Drosophila* genetics, human cell culture, genome-wide analysis or protein-complex

purification are a plus. Umeå University provides unique environment that fosters cutting edge life science research without the sacrifice of family and personal life. Within the campus area the largest indoor sport facility in Scandinavia are located and the surroundings of Umeå are ideal for both summer and winter outdoor activities.

Required qualifications:

- PhD degree in an appropriate area.
- Theoretical knowledge of genetics, epigenetics and molecular biology
- Documented experience in either Molecular genetics and/or Biochemistry and/or bioinformatics
- Proficiency in both written and spoken English

Salary: 23.000 SEK/month (tax-free stipend). Approximately 2.500 EUR.

The fellowship is for two years and starts 2015-08-15 or by appointment.

The stipend will also be covered by a health and accident insurance as well as group and individual insurance that Umeå University signs at *Kammarkollegiet*.

Application: Your complete application marked with reference number **FS 2.1.6-389-15**, should be sent to medel@diarie.umu.se and is to be received latest by 8th of May 2015.

The application should include:

- 1) Outline of a research question that you would like to answer being part of EpiCoN.
- 2) CV and list of publications.
- 3) Three of your best publications.
- 4) Contact details of two to three references.