Postdoc position in bioinformatics: Gene regulatory network inference of RNA binding proteins

The goal of the project is to discover new regulatory mechanisms that control the repertoire of RNA binding proteins (RBPs). This is a collaborative project between professors Erik Sonnhammer and Claudia Kutter, both at SciLifeLab in Stockholm, Sweden.

SciLifeLab is a national center for large-scale life science research with an advanced technological infrastructure. At SciLifeLab, multidisciplinary research is conducted based on DNA sequencing, gene expression analysis, proteomics, bioinformatics, biostatistics and systems biology. Bioinformatics and systems biology are central activities within the center.

The Sonnhammer group has extensive experience in inferring gene regulatory networks (GRNs) and has developed several new algorithms to improve the reliability of the GRNs inferred from perturbations. The Kutter lab has a research focus on RNA binding proteins and their bound RNAs, especially lncRNAs. The project aims to infer a reliable GRN from shRNA-RNAseq perturbation data from ENCODE data and in-house data from the Kutter lab. The GRN will be analyzed for regulatory links in relation to known functions and lncRNA binding and subjected to experimental validation of the scientifically most valuable links.

The project involves programming, data analysis, benchmarking, and modelling, as well as application of the developed methods to experimental data generated by the project. The successful candidate should be highly motivated and have a Ph.D. in bioinformatics or related field, and good knowledge of molecular biology. Alternatively, a Ph.D. in molecular biology or related field and 2 years of postdoctoral experience in bioinformatics research and programming, documented by scientific publications. Demonstrable familiarity with sequence and molecular data analysis techniques is essential. Excellent skills in computer programming (primarily Matlab, Python, R), UNIX, and knowledge of biological database systems are necessary merits.

To apply, send your CV, a cover letter, and the email address of 2 references to Erik.Sonnhammer@scilifelab.se. The position is fully funded for 2 years of full-time study and offers a competitive salary and excellent computational resources. For further information about the research project, contact Erik.Sonnhammer@scilifelab.se or Claudia.Kutter@scilifelab.se. See http://sonnhammer.org and https://ki.se/en/mtc/claudia-kutter-group