PhD student position in Computational Structural Biology

Specifically Membrane Protein Sequence or Structure

Stockholm Bioinformatics Center
Dept. of Biochemistry & Biophysics at Stockholm University

Application closing date: June 14, 2004
Starting date: September to November 2004 (flexible)

Up to 30% of eukaryotic genomes code for proteins associated with cell membranes. They are particularly interesting in biochemistry, since they control important biological functions like ion balance and molecular transportation. Some estimates suggest, as much as 75% of proteins targeted by the pharmaceutical industry are membrane proteins. Despite this prevalence, very little is known about membrane protein structure, and they are scarce in the databases: Less than 1% of structures in the Protein Data Bank are membrane proteins. Improving our understanding of membrane protein structure and function is thus an extremely important research area.
The student will be able to influence her/his research project, and depending on interest it can be focused e.g. on bioinformatical methods to classify and predict membrane protein structure from sequence (using e.g. profile-profile alignments), structural modeling to predict sidechain/loop conformations and helix packing, or even physics-based simulation techniques to investigate how simple helices diffuse and interact in membranes on microsecond scale.

PhD students at the department are initially financed with "utbildningsbidrag" (currently 14.400/month), which will be converted to a salaried position during the final two years. The Stockholm University groups at SBC normally supplement this further, to make the starting income after tax roughly the same as for students at the Royal Institute of Technology.

The successful candidate is expected to possess a university degree in physics, chemistry, molecular biology, or other natural science area. Familiarity with biological questions, UNIX computer systems and programming are highly desirable. Submit your application in English or Swedish to Erik Lindahl, Stockholm Bioinformatics Center, SCFAB, Stockholm University, SE-106 91 Stockholm. Please include:

- An application letter stating your research interests (max 1 page)
- Brief CV (max 1 page)
- A copy or preprint of your diploma work ("exjobb")
- A transcript/summary of courses and grades in your undergraduate degree
- Name and contact info for at least one reference, or a letter of recommendation

For full consideration, applications must reach SBC on or before June 14. Applications by electronic mail are more than welcome, provided they are sent either as PDF documents (preferred) or in clear text. For more information about the group's research, suggested projects, and the PhD program at the department, contact Erik Lindahl: lindahl@csb.stanford.edu