

Postdoctoral position in Biochemistry/Molecular Biology "Regulation of microbial ribonucleotide reductases"

Organisms store their genetic information in DNA and the enzyme ribonucleotide reductase (RNR) catalyzes the reaction that provides new DNA building blocks and is essential in all free-living organisms. RNRs are therefore important targets in anti-microbial and anti-cancer therapeutic research. We investigate the transcriptional and allosteric regulation of RNRs in different bacteria to understand these intricate mechanisms, their evolution and how they can be used to combat bacterial infections.

The postdoctoral project includes expression and purification of recombinant, oligomeric proteins, biophysical and biochemical characterization and structure determination (collaboration).

We employ biochemical and biophysical methods as well as bioinformatics. We collaborate with research groups in Sweden and abroad and complement the biochemistry with structural studies, mainly cryo-EM and X-ray crystallography. The collaborative project therefore will offer an excellent opportunity for training in a wide-range of advanced methods and technologies.

OBS: Discovering the mechanism of action of the proteins of interest requires mainly biochemical work, complemented with structure determination, when applicable.

Stockholm University, situated in the beautiful capital of Sweden, is one of the 200 highest-ranked universities in the world according to several well-established university ranking tables. Department of Biochemistry and Biophysics (DBB) is the largest biochemistry department in Sweden and embraces the Science for Life Laboratory - a national resource of unique cutting-edge technologies and expertise, e.g. the cryo-EM national facility.

Qualifications

The candidate shall have a PhD (not older than 6 years) in Biochemistry, Molecular Biology or related sciences, preferentially with focus on transcription factors and/or oligomeric proteins. We seek highly motivated candidates with knowledge in protein chemistry, experience with bacterial expression systems, protein purification and biochemical characterization. Our key methods include microscale thermophoresis (MST), isothermal titration calorimetry (ITC), analytical SEC, and enzyme activity assays. Familiarity with structural biology is an advantage. Candidates should be proficient in spoken and written English and have documented capability of good teamwork. The candidate should have the capacity to push the research forward, ability to plan, perform and analyse the experiments, as well as come up with new ideas and novel research directions. Personal qualities will be taken into account.

Time span

The postdoctoral position initially is a one-year full-time position financed via a tax-free scholarship of 25000 SEK/month from Carl Trygger's Foundation, with a possibility to be prolonged for one more year. Starting date is open for discussions, though ideally the successful candidate should start as soon as possible.

Additional information

Dr. Inna Rozman Grinberg, Prof. Britt-Marie Sjöberg

Application

Please send your application to inna.rozman@dbb.su.se

Applications should include all of the following items in one merged pdf file:

- i) a cover letter of 1 page stating your motives for applying
- ii) curriculum vitae
- iii) full publication list
- iv) contact information to two or three references (your PhD or post-doc supervisors)
- v) a copy of the PhD certificate and/or other relevant degree certificates