

# Postdoc in computational genomics and transcriptional regulatory variation

The Andersson lab, in the Bioinformatics Centre in the Section for Computational and RNA Biology, is looking to recruit a highly motivated and talented postdoctoral researcher to join our group working on computational biology with a strong focus on enhancers and transcriptional regulation. The position will be funded by a grant from the Danish Council for Independent Research. The successful candidate is expected to start in September 2016 or shortly thereafter.

## Context

The lab of Robin Andersson focuses on genomics and computational/statistical modeling of transcriptional regulation based on large-scale sequencing data, including experimental data generated from within the lab. We aim to characterize and better understand the architectures and complexities of transcriptional regulation (see e.g. Andersson et al. 2014, Nature, <http://dx.doi.org/10.1038/nature12787>) and gain insights into the mechanisms of regulation. We further focus on the fundamental properties of enhancers and promoters (see e.g. Andersson et al. 2015, Trends Genet, <http://dx.doi.org/10.1016/j.tig.2015.05.007>) as well as the biogenesis and characteristics of enhancer RNAs (see e.g. Andersson et al. 2014, Nat Comms, <http://dx.doi.org/10.1038/ncomms6336>). The group is also active in the international FANTOM consortium and is part of the FANTOM6 project (<http://fantom.gsc.riken.jp/6/>). For more information, see <http://anderssonlab.org>.

## Project

The correct function of regulatory elements and their interplay are essential for the precisely coordinated transcriptional activities within a cell. Disrupted regulatory activities may therefore have detrimental effects leading to disease. However, most variants have no or an only weakly associated trait and, in general, the impact of genetic variants on regulation is not well understood. Therefore, using our established accurate transcription-based method to assess activities of regulatory elements and the associations between them, we aim to systematically characterize human regulatory variation and its consequences. We further aim to infer models describing the function of a regulatory element and its importance, and thus the impact on regulation upon disruption.

## Qualifications

We are seeking a highly motivated individual with a PhD in Bioinformatics, Computational Biology or in a related quantitative discipline, with a substantial publication record in high-quality international journals focused on the analysis of genomics data. Experiences with DNA or RNA sequencing data, genotyping data, statistical genetics, computational modeling, machine learning and/or statistical learning techniques are considered a major plus. Importantly, the candidate should have a strong interest in transcription and transcriptional regulation.

Specifically, the candidate should meet the following requirements:

- A PhD in Bioinformatics, Computational Biology, or in a related quantitative field to be able to quickly acquire Bioinformatics computational skills
- Strong documented experience in analyzing high-throughput sequencing data
- Strong programming and data analytical skills
- Fluent English

The following are not required but considered a plus:

- Documented expertise in statistical learning and/or machine learning techniques
- Documented experience in the analysis of functional genetic variation

The University wishes our staff to reflect the diversity of society and thus welcomes applications from all qualified candidates regardless of personal background.

### **Place of employment**

The Andersson lab is based in a highly collaborative environment in the Bioinformatics Centre in the Section for Computational and RNA Biology, which is currently composed of 11 strong research groups. The Department of Biology is located at the Biocenter in central Copenhagen, Denmark. Read more about the Andersson lab at <http://anderssonlab.org>.

### **Procedures and shortlisting**

After the expiry of the deadline for applications, the authorized recruitment manager selects applicants for assessment on the advice of the Interview Committee. All applicants are then immediately notified whether an expert assessment committee has passed their application for assessment. Selected applicants are notified of the composition of the committee and each applicant has the opportunity to comment on the part of the

assessment that relates to the applicant himself/herself. The final selection of successful candidates will be made by the Head of Department, based on the recommendations of the assessment committee.

Questions can be sent to Assistant Professor Robin Andersson, [robin@binf.ku.dk](mailto:robin@binf.ku.dk)

### **Terms of salary and employment**

Duration is 2 years with the possibility of 1-year extension. Salary, pension and terms of employment will be in accordance with the agreement between the Ministry of Finance and The Academics Central organization. The position is covered by the Memorandum on Job Structure for Academic Staff. Terms of appointment and payment accord to the agreement between the Ministry of Finance and The Danish Confederation of Professional Associations on Academics in the State. Currently, the monthly salary starts at 32.350 DKK/ ~4.300 Euro plus pension. Depending on qualifications, a higher salary may be negotiated. Non-Danish and Danish applicants may be eligible for tax reductions, if they hold a PhD degree and have not lived in Denmark the last 10 years.

Starting time is tentatively September-October 2016.

### **Application**

1. The application must include the following documents/attachments – all in PDF format:
2. A cover letter, including a brief synopsis on research experience and results (max two pages).
3. Curriculum vitae, including education, work/research experience, language skills and other skills relevant for the position as well as the names and contact details of two references (max two pages).
4. List of publications.
5. A certified/signed copy of a) PhD certificate and b) Master of Science certificate. If the PhD is not completed, a written statement from the supervisor will do.

The application, in English, must be submitted electronically by clicking APPLY NOW online at <http://employment.ku.dk/faculty/?show=836852>

**Deadline for application is July 31 2016.**