



Joint Postdoc in Computational Biology between the Marquardt and Sandelin labs in Copenhagen

Computational Biology of Non-coding Transcription Dynamics

4 MAY 2016

You will unlock synergy effects between the Sandelin lab at the Department of Biology/BRIC (<http://people.binf.ku.dk/albin>)¹⁻⁴, and the Marquardt lab located at Copenhagen Plant Science Centre (CPSC) (<http://cpsc.ku.dk/meet-the-scientists-page/sebastian-marquardts-group>)⁵⁻⁸. We are interested in the biological implications and molecular mechanisms of transcribing abundant non-coding genomic sequences into mysterious long non-coding RNA (lncRNA).

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REF: ASM

The Marquardt lab is generating high-resolution maps of nascent RNA Polymerase Pol II (Pol II) transcription in plants to characterize rapid response characteristics of lncRNA during environmental change. Local differences in Pol II transcription speed are likely central to these response kinetics yet we understand little about the interplay between transcriptional plasticity and local Pol II speed control. You will develop and implement bioinformatic approaches to detect and quantify local differences in nascent Pol II transcription dynamics (Pol II pause sites). Bioinformatics support is provided by the Sandelin lab, experimental expertise by the Marquardt lab. A main focus will be on identifying plant genomic regions with dynamic non-coding transcription as a function of the cellular environment. You will push the boundaries of current knowledge and are expected to drive this project into the most promising directions. Your project will inform experiments of our labs and collaborators. As our new colleague with computational background, you will stimulate productive interactions with existing lab members.

Use the KU job portal to apply: <http://employment.ku.dk/faculty/?show=823162>

The position is funded for 3 years. Earliest starting date 15th July 2016.

Application deadline: 30th May 2016.

Literature of host labs related to the project:

- (1) Arner et al. **Science**. 2015
- (2) Andersson et al., **Nature**. 2014
- (3) Ntini et al., **NSMB**. 2013
- (4) Forrest et al., **Nature**. 2014
- (5) **Marquardt** et al. **Cell**. 2014
- (6) **Marquardt** et al. **Mol Cell**. 2014
- (7) *Liu, ***Marquardt**, et al. **Science**. 2010 * Joint first authors
- (8) Hazelbaker, **Marquardt**, et al. **Mol Cell**. 2013

