UNIVERSITÄT BERN

PhD position in Developmental Systems Biology

Two PhD positions in **Developmental Systems Biology** are available in the group of Prof. Benjamin Towbin at the Institute of Cell Biology (ICB), **University of Bern** (http://www.towbinlab.org). The PhD student will be part of an interdisciplinary project at the intersection of developmental biology, systems biology, and genetics. The project will combine computational and experimental approaches using *C. elegans*.

Project description

Correctly sized body parts are crucial for organismal function. For example, overgrowth of cardiac muscle is a prevalent cause of heart failure. The growth of different cells and organs must therefore be tightly coordinated during development. How growth signals are propagated from cell to cell, and how organs integrate combinatorial signals from different tissues is a fundamental, yet poorly understood question of high biomedical relevance.

Building on our recent work (Stojanovski et al., 2022 & 2023, *Nature Communications*), the project will address how the molecular regulation in individual cells controls the complex orchestration of growth at an organismal scale. The project will use cutting-edge technology in quantitative live imaging, proteomics, functional genomics, and/or computational approaches. *C. elegans* is ideal for such an integrated organismal approach, due to its genetic tractability, small size (1mm), short generation time (3d) and short lifespan (3wks).

Your profile

For this interdisciplinary project, we look for enthusiastic candidates with a MSc degree in biology, bioengineering, bioinformatics, or related fields. We also encourage physicists and computational scientists with a strong interest in learning wet lab biology to apply. Foremost, candidates require enthusiasm for cross-disciplinary research and pro-activity in learning new skills.

We offer

The successful candidate will join a young, collaborative, and international environment, and contribute to a new line of research in Developmental Systems Biology. The ICB provides state-of-the-art infrastructure for the planned research, including advanced live microscopy and computational infrastructure for image processing and bioinformatics. The PhD student will be a member of the Graduate School for Cellular and Biomedical Sciences (GCB), providing a mentorship scheme, and access to specialized courses, and international workshops and conferences. As the capital of Switzerland, Bern provides a high standard of living and is located one hour from major alpine resorts. The position is offered for 4 years with a generous salary meeting the guidelines of the Swiss National Science Foundation.

Application

Please, send a single PDF named LastName_FirstName_PhD.pdf with the following documents by email to Prof. Benjamin Towbin:

1. Motivation letter explaining why you want to join our lab, what you know, and what you want to learn.
2. Detailed CV
3. A short summary (half a page) of your MSc research
4. Contact information for 2-3 academic references

5. Copies of University transcripts

Applications will be evaluated starting 1.1.2024 on a rolling basis until both positions are filled. We will announce on our webpage (http://www.towbinlab.org) once the positions have been filled. The start date is flexible at any month in 2024.

Contact and further information: benjamin.towbin@unibe.ch
http://www.towbinlab.org, http://www.izb.unibe.ch