

Postdoctoral Position in Computational Biology of Gene Regulatory Networks and Epigenetics

100% (available immediately, up to 5 years)

This position is part of a **5-year ERC funded research project** aiming to get fundamental insights into how signaling inputs orchestrate changes in chromatin and transcriptional activity of targets in gene regulatory networks (GRNs) that control progenitor/stem cell proliferation and fates during organogenesis. The position is available in the Developmental Genetics Group at the Department Biomedicine of the University of Basel, Switzerland (<http://www.devgenbasel.com/>).

Tasks

1. Computational analysis of large-scale biological datasets that include comparative transcriptome analyses (RNA-Seq) and their integration with chromatin and epigenetic datasets (ChIP-Seq, 4C, Hi-Seq, ATAC-Seq).
2. Analysis and functional interpretation of the datasets generated (de novo motif discovery, pathway analyses) in close interaction with experimentalists in the group.
3. In silico simulations and analyses of GRNs. A fascinating aspect of our research is to understand how these robust GRNs were altered during vertebrate limb evolution and diversification. Part of this research will be done together with collaborating groups.

Profile

We are looking for a highly motivated candidate with a PhD in a quantitative field such as computational biology, statistics, mathematics or closely related field. Experience in the in-depth analysis of high-throughput sequencing datasets, statistical knowledge and programming skills in R/Bioconductor and basic knowledge of UNIX-like operating systems are necessary. The successful candidate must have an excellent publication record from their PhD research. In addition, she/he must demonstrate ambition to have a real impact by creating synergies in collaborating with experimentalists and developing his/her own research within the ERC funded project.

We offer

The Developmental Genetics group has a longstanding interest and track record in analyzing the self-regulatory signaling systems that control key processes using developing vertebrate limbs as a paradigm to study organogenesis and evolutionary diversification. We exploit a variety of state-of-the art technologies for our research and have established the necessary collaborative network to successfully combine experimental with *in silico* research. The applicant will profit from the excellent bioinformatics and computational biology environment at the University of Basel (<http://scicore.unibas.ch/>) and ETH Systems Biology Department.

Submission of Applications and further Information

For informal inquiries please contact Prof. Rolf Zeller (rolf.zeller@unibas.ch) and/or PD Dr. Aimée Zuniga (aimee.zuniga@unibas.ch). Applicants should send a CV with complete publication list, grades of master and PhD, motivation letter, research interests and the names and addresses of three referees as one single PDF file directly to rolf.zeller@unibas.ch and/or aimee.zuniga@unibas.ch. Interviews will start ASAP and continue until the position is filled.