



Centre for Integrative Biology - CIBIO

3-years Post-doc position: epigenetic reprogramming of enhancers during breast cancer progression

The project

The project is centered on determining the contribution of epigenetic reprogramming on the chromatin organization occurring during tumor progression and metastasis formation. The objective of this proposal is to define the contribution of oncogenic enhancers to functional heterogeneity of tumorigenic cells during basal-like breast cancer progression and metastasis formation. We specifically aim to establish whether the epigenetic modulation of oncogenic-specific enhancers may support the transition from alternative cellular stages, in response to environmental cues. By using cutting edge technologies in chromatin biology, the herein program aims to solve enhancer-centered chromatin domains to gain insights on epigenetic plasticity and its impact to predict the best therapeutic options at different stages of tumor progression. For a project based on multidisciplinary approaches, we are looking for a Post-Doc with a strong research background, experience in the chromatin field and a proven publication record.

The candidate

We are seeking highly motivated and enthusiastic candidates, willing to challenge an innovative project by adopting a pro-active attitude and an analytical approach. The candidate is requested to have experience on NGS techniques and their analysis to address chromatin changes in cancer cells. The candidate should have a strong interest in interdisciplinary collaboration. The post-doc will experience both wet-lab and computational work, supporting candidates in establishing a unique skill set that it would be required for future quantitative biology studies. Availability to learn methodologies based on using animal models is also requested. Given the international framework, the candidate should also have good communication skills in English, and a team-oriented working attitude.

Qualifications:

- A high level of motivation and interest.
- PhD in Biology, Biotechnology, Bioinformatics, Computational Biology or in a related field
- Prior research experience in chromatin biology, molecular biology, cancer biology (including a track record of peer-reviewed publications)
- Experience in genome-wide chromatin profiling and NGS data analysis
- Proficiency in scripting environments for statistics and data analysis, and/or able to quickly acquire Bioinformatics computational skills.
- Excellent communication skills and good team spirit with the ability to solve problems independently
- High level of English speaking and writing skills.
- International mobility will be considered a major plus.

The environment

The lab of Chromatin Biology and Epigenetics is interested in determining the contribution of epigenetic changes to stem cell function, both in physiological and pathological settings. In particular, we are investigating the contribution of epigenetic reprogramming in driving cell plasticity during tumor progression and metastasis. Within the international and vibrant context of the Center of Integrative Biology (CIBIO) in Trento, Postdoctoral researchers joining the lab gain access to the Institute's advanced research training and career development opportunities. CIBIO offers the possibility to work in a young, highly dynamic and stimulating research environment thanks to a streamlined organization, which can support researchers to readily adapt to new scientific challenges through cutting-edge research infrastructures. At CIBIO, research goals are pursued in the frame of an integrative view of basic biological processes and of their derangement in disease, whereby basic science co-exists with biomedical oriented translational approaches.

Qualified and interested candidates should submit their application including CV, a motivation letter describing how her/his background would best fit this position, and the contact information of at least two referees. Please send all documents to Dr. Alessio Zippo (alessio.zippo@unitn.it). Applications will be considered until the position is filled.