Postdoctoral Fellow (3D genomics)

The Barthel laboratory is focused on unraveling the role of telomere dysfunction in glioma development and evolution. We employ computational biology, evolutionary genetics, functional genomics and molecular biology to map the ramifications of dysfunctional telomeres on glioma genomes. We are looking for a talented, passionate and highly motivated individual to study telomeric chromatin interactions in glioma cells.

Position Summary

Telomeres form long-range chromatin interactions with other elements of the genome, but it is unclear what purpose these interactions serve. It was shown that telomeric sequences repress the transcription of nearby genes in a phenomenon known as the "telomere position effect". Moreover, distal elements called "enhancers" can interact with a gene's proximal promoter to regulate its transcription. This project investigates whether telomeric chromatin interactions can interfere with enhancer-promoter interactions to play a hand in transcriptional regulation. The successful candidate will develop pipelines to analyze telomeric chromatin conformation capture (Telomere-C) data. They will work closely with bench scientists to optimize the Telomere-C protocol and identify optimal model systems to test for interactions in glioma cells. They will be involved in data analysis, interpretation and write manuscripts to describe their findings. They will lead their own project but will be a part of a team and help on other projects as well.

Career Development

We value our trainee's personal development and strive to unlock their full potential. Trainees are provided with ample opportunities for additional training in computational and cancer biology. Successful applicants are encouraged to attend scientific meetings and the lab will provide support for at least one scientific conference per year. While this position is not contingent upon securing additional funding, successful candidates will be supported and encouraged to apply for outside sources of funding. Candidates are welcomed to explore their own scientific interests into areas of research that fall within the general scope of the lab.

Education and Preferred Qualifications

The ideal candidate will have a PhD in a relevant field coupled with a track record of peer reviewed publications on chromosome conformation capture. Although this position is primarily on the dry lab side, having wet bench experience is considered a huge plus. The candidate should be comfortable with Unix-based computing environments and have experience with a dynamic programming language such as Python. Experience in pipeline development (Cromwell, Snakemake, Nextflow) is highly useful. Candidates from all backgrounds will be considered.

Location

We are located at the Translational Genomics Institute (TGen) set to the backdrop of the stunning Sonoran Desert. The successful candidate will be a part of the Cancer and Cell Biology Division at TGen and will have numerous opportunities to work with our partners around the globe.

Application

Please direct all questions to *barthel AT barthel-lab.com*. Application via our HR management system at *https://recruiting.paylocity.com/Recruiting/Jobs/Details/543312*. Attach a letter describing your research interests and motivation to join our group. Include an academic CV detailing your past research experience, publication track record and (conference) presentations. We will start reviewing applications immediately and until the position is filled.

For additional information, please see *www.barthel-lab.com*