Postdoctoral positions in Spatial Single-Cell Biology and Functional Genomics in Breast cancer

About us

The Dries lab is a young and dynamic research group at Boston University Medical Center (BMC) in the department of Hematology and Medical Oncology and Computational Biomedicine, also affiliated with the Center of Regenerative Medicine (CReM). The lab is establishing a unique research program that couples advanced genomic technologies with the implementation of novel multi-cellular breast cancer models. The lab is particularly focused on studying how breast cancer development and progression is steered by the tumor microenvironment. More specifically we study how cell-to-cell communication is spatially organized, how different cell types within the tumor microenvironment affect the sensitivity of tumor cells to targeted therapy or how they confer resistance through promoting cellular plasticity. Finally, we aim to leverage this information to identify and target novel vulnerabilities in breast cancer cells and their supporting environment.

Candidate profiles

We are seeking multiple new lab members with a passion for science and interested in conducting high impact and clinically important breast cancer research. All positions detailed below offer a potential mix of experimental wet lab experience and computational analysis and the ideal candidates are enthusiastic about exploring and combining both. However, the exact balance of the two can be tailored to a candidate's unique interests and skill set and expert advice and personal guidance is available.

<u>Resolving cellular and spatial transcriptional heterogeneity within breast cancer</u>

For this project we look for a candidate who is familiar with or highly interested in:

- Establishing spatial single-cell technologies
- Develop and/or apply novel spatial analyses methods
- Imaging
- Dissecting mechanisms of cell to cell communication
- Single-cell experiments and analysis

<u>Exploring the role of the tumor microenvironment towards cancer cell sensitivity and resistance to therapy</u>

For this project we look for a candidate who is familiar with or highly interested in:

- Transcription and DNA replication
- Epigenetics and chromatin organization
- Working with multi-cellular breast cancer models

Requirements

Experience in one or more of the following qualities is considered a plus:

- PhD in computational biology, genomics, molecular biology or a relevant field or expertise
- Experience with generating and/or analyzing next-generation sequencing datasets
- Experience with programming (such as R, Bash, Python), data analyses and visualization
- Fluency in Unix, standard bioinformatic tools, and comfortable applying statistical methods
- Good communication skills and proficiency in English (both with respect to presentation and writing skills)
- Self-motivated and excited to work in an interactive, diverse and international research environment, ability to work independently and as part of a team

Our offer

We offer you a cutting-edge, interdisciplinary research project using data from state-of-the-art multi-omics technologies in a fruitful, collaborative research environment. Boston University Medical Center pursuits to deliver exceptional care without exception, which guides our beliefs, behaviors, and decision making along the way. In the same spirit, we strive for gender and diversity equality and highly encourage applications from underrepresented backgrounds. The position is available immediately and funding is available for at least two years.

Contact

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Application

Please send your full application as a PDF to rdries@bu.edu application should include a cover letter, detailed CV, a description of research experience and interests (1-2 pages max) and contact details for at least two references. Please also indicate a preferred starting date.