Subject: Postdoc opportunity: Modeling the Evolutionary Ecology of Cancer

The Adler lab at the University of Utah is seeking two postdoctoral research fellows for a project focused on building and testing data-driven models of dynamics of cancer cell interactions in systems ranging from the laboratory to patients. This is a three year position with a possibility of further funding.

The postdoctoral researcher will build on previous collaborative work (Griffiths et al. Nature Cancer 2021; doi.org/10.1038/s43018-021-00215-7) that uses a comprehensive modeling approach to quantify the evolution of resistance, and work in review that uses experiments and models to investigate interactions between resistant and sensitive cancer cells (www.biorxiv.org/content/10.1101/2021.02.01.429214v3.full). Specifically, the researcher will work with our team to model rich datasets of high-resolution genomic and growth data and then use these models to design new experiments and ultimately new treatments. We particularly seek candidates with interdisciplinary experience including mathematics and ecology or evolutionary biology.

The postdoctoral researchers will be advised by Dr. Fred Adler (Mathematics, Ecology, Immunology, Oncology, University of Utah), who is a leader in the development of modeling methods that link across biological disciplines. Dr. Andrea Bild, a systems biology expert, will provide experimental and patient level resources for model development. In addition, a broad array of collaborators will provide access to expertise, resources, and mentoring in fields ranging from mathematics, data science and bioinformatics to genetics, oncology, and immunology.

Required Qualifications

We seek highly motivated, creative scientists driven to collaborate with a highly interdisciplinary group and uncover the ecological principles of cancer. Applicants should have strong written and oral communication skills, and have a PhD in a quantitative science (applied mathematics, computational biology, statistics or related disciplines) or life science with strong focus on mathematical modeling, computation or data analysis, ideally with experience in linking genetic data with evolutionary mechanisms.

How to Apply

Please submit a single PDF document containing (1) cover letter highlighting experience with quantitative methods for understanding biological data, and including the names and contact information of three references, (2) curriculum vitae, (3) two representative papers, by email to adler@math.utah.edu with the subject line POSTDOC APPLICATION.