

## Postdoctoral Positions in the Laboratory for Engineering in Oncology

**Dept. of Biomedical Engineering / Masonic Cancer Center / UMN Physical Sciences in Oncology Center**

Motivated postdoctoral associates are sought to work on immune mechanobiology and immunotherapy with **Dr. Paolo Provenzano** at the University of Minnesota in Minneapolis, MN. Our laboratory is part of the UMN Physical Sciences in Oncology Center (PSOC) and Center for Multiparametric Imaging of Tumor Immune Microenvironments (C-MITIE) and studies the physical and molecular mechanisms driving cancer progression and resistance to therapeutic interventions, and develops cell-based therapies and therapeutic strategies to re-engineer the tumor microenvironment. We actively utilize quantitative cell biology, advanced optical imaging, cell and matrix mechanics, and genome engineering approaches in our interdisciplinary cancer research program (for example *Nature Communications* 12(2815), 2021; *Cancer Research* 79(2):372-386, 2019; *Nature Communications* 8:14923, 2017; *Cancer Cell*, 21(3), 418-429, 2012).

**We are recruiting for positions in *Immune mechanobiology and therapy* and *Advanced Optical Imaging of Immune Dynamics*.** These positions focus on elucidating the influence of the physical properties of the tumor microenvironment on the motility and function of engineered T cells, where we utilize genome engineering to develop new immune cell-based therapies. These projects interfaces strongly with optical imaging work (including multiphoton microscopy of live tumors) and quantitative analysis of cell dynamics and migration.

**Qualifications:** A Ph.D. in Biomedical Engineering or equivalent engineering field, Quantitative Cell Biology, or Physics/Biophysics and a demonstrated track record of productive research with 1<sup>st</sup> author publications is required. It is highly desirable that candidates be experienced in essential techniques such as tissue culture, infection of cells, IHC, IF, light microscopy, and analysis of cell behavior and/or advanced imaging.

**About the Provenzano lab:** We are an interdisciplinary cancer research laboratory fully equipped for cell and molecular biology work, experimental mechanics, advanced imaging, and computational analysis. In our lab we have a multiphoton laser-scanning microscope specially designed for intravital imaging experiments. Our laboratory is part of the Department of Biomedical Engineering (a top 20 ranked department), the Masonic Cancer Center (an NCI designated Comprehensive Cancer Center), and the UMN Physical Sciences in Oncology Center. The University of Minnesota is an outstanding research environment ranked 8<sup>th</sup> among public universities and 13<sup>th</sup> overall in research expenditures (NSF). We are located in the Minneapolis (the 16<sup>th</sup> largest metro area in the US). See [provenzanolab.umn.edu](http://provenzanolab.umn.edu) for additional information.

**To apply** send an email with the subject “post-doc application” to [provenzanolab@gmail.com](mailto:provenzanolab@gmail.com) and include an up to date CV, PDF copies of 1-2 of your lead-authored papers (submitted papers/papers in review are acceptable and will be kept confidential) and a brief statement of research interests and goals (2 page max) detailing why you are the right candidate for the position. Letters of reference may be requested at a later date.