Postdoctoral Associate in Advanced Imaging in Cancer Research
University of Illinois Urbana-Champaign

Job Title	Postdoctoral Associate in Advanced Imaging in Cancer Research
Department	Department of Bioengineering
Institution	University of Illinois Urbana-Champaign Urbana, Illinois
Date Posted	Jul. 11, 2025
Application Deadline	Open until filled
Position Start Date	Available Immediately
Job Categories	Post-Doc
Academic Field(s)	Physics - Atomic/Molecular/Optical/Plasma Chemistry - Physical Biology - Molecular Biology - Computational Biology - Cell Biology
Apply By Email	

Job Description

The Biomedical Optical Imaging Laboratory located at the Beckman Institute for Advanced Science and Technology and the University of Illinois Urbana-Champaign invites applications for a postdoctoral associate to drive our research on how chromatin organization and epigenetic regulation influence cancer therapy resistance. Our group pioneers and integrates super-resolution microscopy, highly multiplexed fluorescence imaging, and quantitative phase imaging to investigate morphodynamic and molecular changes that underlie treatment failure and cancer progression.

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You will join a multidisciplinary team of engineers and data scientists advancing our unique state-of-the-art imaging technology and computational pipelines. Some recent representative publications include:

An Omni-Mesoscope for multiscale high-throughput quantitative phase imaging of cellular dynamics and high-content molecular characterization | Science Advances

Multimodal whole slide image processing pipeline for quantitative mapping of tissue architecture and tissue microenvironment | npj Imaging

Super-resolution imaging reveals the evolution of higher-order chromatin folding in early carcinogenesis | Nature Communications

Responsibilities

- Design and execute imaging experiments in 2D and 3D cultures and tissue sections to map chromatin architecture and epigenetic marks in cancer cells with therapeutic resistance.
- Develop or adapt multiplexed fluorescence staining protocols and quantitative phase imaging workflows.
- Apply rigorous quantitative image analysis to gain biological insights.
- Prepare manuscripts, present findings at conferences, and help mentor junior trainees.

Qualifications

- Ph.D. in biophysics, chemistry, bioengineering, molecular biology, or a related discipline.
- Demonstrated proficiency in multiplexed fluorescence staining/imaging, 2D and 3D cell culture, spatial biology and core molecular biology techniques.
- Strong quantitative skills for image analysis (e.g., Python, MATLAB, ImageJ/Fiji).
- Publication record reflecting creativity, independence, scientific rigor and attention to experimental detail.
- Highly desirable: hands-on experience with super-resolution or expansion microscopy, tissue clearing, chromatin biology, or epigenetics.

The interested candidates can learn more by visiting our website: https://yangliulab.github.io/index.html , and send a cover letter outlining their research experience and interests and a CV to Prof. Yang Liu by email (liuy46@illinois.edu). Review of applications will begin immediately and continue until the position is filled.

We look forward to welcoming a motivated colleague who shares our vision of linking advanced optical

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imaging to transformative insights in cancer biology.

EEO/AA Policy

The University of Illinois is an Equal Opportunity Employer. We appreciate and welcome the diverse experiences and perspectives candidates bring.

Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact Yang Liu
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Contact E-mail liuy46@illinois.edu