

## Postdoctoral fellow – Mitochondria, integrated stress response, metastatic cancer

The Caino lab in the Department of Pharmacology has an opening for a full-time Postdoctoral Fellow to join our team researching the **impact of organelle dynamics, key signaling pathways activated in metastatic cancer, and cancer metabolism in cancer progression.**

*Available projects* include studies on the role of mitochondria shape, number and subcellular distribution in tumor cell invasion and metastatic dissemination (see Caino et al, PNAS 2015 Jul 14;112(28):8638-43; Caino et al, Nat Commun. 2016 Dec 19;7:13730). The goal of this research is to understand the mechanism by which mitochondria are transported to subcellular localizations, as well as consequences of mitochondrial mislocalization in disease contexts.

Alternatively, the postdoctoral fellow may work on understanding the role of the Integrated Stress response (ISR) as a sensor of mitochondrial homeostasis and target for metastatic disease. See recent publications from our lab: Furnish et al, Mol Cancer Res. 2022 Jan 6. doi: 10.1158/1541-7786; Ghosh et al, PNAS. 2022 Feb 22;119(8):e2115624119). The goal of this research is to explore targeting of ISR components in preventing or eliminating metastatic disease.

Research will involve biochemistry, molecular biology and cellular biology experimental procedures, high-throughput loss-of-function screenings and work with animal models of cancer and metastatic dissemination. For additional information about the laboratory or to see recent publications, visit <https://www.cainolab.org>. Applications will be reviewed immediately and the search will remain open until the positions are filled. Interested applicants may also send an email to [cecilia.caino@cuanschultz.edu](mailto:cecilia.caino@cuanschultz.edu) for more information.

Postdocs will be expected to plan and execute independent research, write and submit fellowship applications (if applicable), assist in the writing and publication of experimental results, and contribute positively towards the atmosphere and culture of the lab.

***Areas of Responsibility / Scope of Research:*** The postdoc will utilize tissue culture and cell biology techniques in the research, including cellular survival and proliferation assays, mitochondrial function and dynamics assays, gene knockdown methods (CRISPR, shRNA), and cellular behavior assays (migration and invasion); molecular approaches will include gene expression by quantitative-PCR and protein assays such as Western blots and immunoprecipitation. In addition, the postdoc will use small animal models of prostate and breast cancer. Work with mice (breeding, injection of tumor cells, survival surgery, drug delivery, imaging and necropsy) will be performed.

The postdoc will also play a role in training undergraduate and graduate students and professional research assistants in the laboratory. The successful candidate is expected to be highly motivated, have ample scientific curiosity, have strong interpersonal skills, and be able to contribute in a positive manner to the collegial atmosphere of the laboratory and the department. The candidate will be expected to direct independent research, mentor more junior lab members, and apply for independent fellowship funding.

### ***Qualifications:***

- Recent graduation from PhD or PhD/MD program in Molecular Biology, Cellular Biology, Cancer Biology or related fields
- Excellent communication skills in English
- Peer-reviewed publications in internationally recognized journals
- Extensive knowledge of molecular biology, immunofluorescence, microscopy, and mammalian cell culture

Desired or preferred:

- Proven experience and familiarity with experimental animal models of cancer (mice)
- Proven ability to work independently within a research lab

- Experience supervising undergraduate and graduate students

**Salary & Benefits:** Salary range is commensurate with skills and experience and adheres to current NIH guidelines for Postdoctoral Stipends.

**Application:** Applicants may apply directly to [cecilia.caino@cuanschutz.edu](mailto:cecilia.caino@cuanschutz.edu) .

Required application materials:

- A letter of application which specifically addresses the job requirements and outlines qualifications
- A current CV
- The names, addresses, daytime telephone numbers and e-mail addresses for three professional references, either attached to your resume/CV or uploaded as a separate document