Massachusetts General Hospital
Founding Member, Mass General Brigham

HARVARD MEDICAL SCHOOL
TEACHING HOSPITAL

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OPEN POSTDOCTORAL FELLOW POSITION

Bertolet Lab, Division of Physics, Department of Radiation Oncology, Mass General Hospital and Harvard Medical School

We are excited to announce an open position for a postdoctoral fellow with a keen interest in computational modeling, radiation response in tumors and its application to the novel field of radiopharmaceutical therapy. Our laboratory, situated within the vibrant ecosystem of the Mass General Hospital and Harvard Medical School in Boston, MA, is at the forefront of radiation therapy and biology modeling.

Application Process:

Submit your CV to Dr. Alejandro Bertolet, Ph.D., at **abertoletreina@mgh.harvard.edu** and optionally to Dr. Carlos Huesa-Berral, Ph.D. at **chuesaberral@mgh.harvard.edu**. **Two** letters of reference are also expected from your previous supervisors, mentors or colleagues.

Desired Expertise:

Ideally, the candidate should have knowledge or experience in **at least two** (or more) of the following areas:

- Programming skills, particularly in Python and/or C/C++
- Monte Carlo simulations of radiation transport
- Basic knowledge of radiation biology
- Experience with medical imaging processing
- Collaborative spirit and willingness to learn interdisciplinary sciences

Candidates with similar but not explicit expertise in these areas are also encouraged to apply.

Project Overview:

The selected candidate will work on developing computational models to simulate the behavior of tumors and organs under exposure to ionizing radiation, particularly with radionuclides. This project includes modeling how tumor subcomponents behave and interact, based on a stochastic (i.e., Monte Carlo) approach, with a **strong** programming/coding component. The candidate is expected to develop original and in-house tools rather than using other available options. Please check our website at **https://bertoletlab.mgh.harvard.edu** for more details on our lab and ongoing projects.

Importantly, our lab thrives on collaboration. We work closely within a larger research structure, partnering with other labs within the Dr. Harald Paganetti research structure (see **https://paganetti-lab.mgh.harvard.edu**). Our present and future projects include a variety of exciting topics in radiation therapy and radiation biology, such as experimental and computational dosimetry for proton FLASH radiotherapy, artificial intelligence applied to radiotherapy, and computational modeling of multiple aspects involved in cancer care. A special collaborative spirit and involvement in these areas is expected from the selected candidate.

What we value:

- **Diversity**. We highly value diversity and inclusivity as a means to ensure novel and multifaceted ideas. Women, international and minority candidates are encouraged to apply.
- **Collaboration**. Applicants should enjoy and promote collaboration with the rest of our team.
- **Innovation**. Our lab offers a stimulating environment with multiple projects. We encourage innovative thinking and the exploration of new methodologies.
- **Forward-Thinking**. Proactive, visionary candidates seeking to develop modular and flexible tools that can serve as a foundation for future research are highly valued.

Dates:
The selected candidate is expected to start this position as soon as possible.

Join us in our mission to push the boundaries of radiation therapy and cancer care modeling. We look forward to welcoming a new member to our dynamic team!