

The PhD project "Enhancing radiotherapy efficacy by leveraging monocyte-derived interferon" is funded by the MSCA Doctoral Network "Innovative Radiation Therapy for Brain Tumours" (InnovaRTBRAIN). The aim of InnovaRTBRAIN is to develop next-generation radiotherapy strategies for glioblastoma.

Project description: This project focuses on the manipulation of monocyte-driven interferon responses to improve radiotherapy-induced anti-tumour immunity, using in vitro and in vivo work in animal models. Specific details will be disclosed to applicants selected for an online interview.

Candidate profile: MSc in Immunology, Immuno-oncology, or a related field in Biology. Interest in immunotherapy. Experience in flow cytometry and animal experiments would be a plus.

Main Host Institution: Elodie Segura lab, Institut Necker-Enfants Malades (INSERM U1151) in Paris, France. The PhD student will be enrolled at Université Paris Cité. The Institut Necker Enfants Malades (INEM) is a leading biomedical research institute located on the historic Necker campus in central Paris. INEM brings together over 300 researchers, clinicians and support staff across six main research areas, including immunity, metabolism, regeneration, and gene regulation. With access to advanced core facilities, INEM offers an exceptional environment for basic and translational research at the interface between biology and medicine.

Planned secondments: University of Santiago de Compostela, Spain (1st year and 2nd, 3 months each) to learn about the biology and physics aspects of mini-bean radiotherapy. Mannheim Hospital, Germany (2nd year, 2 weeks) to learn about clinical radiotherapy treatments and Batea Oncology, Spain (2nd year, 2 weeks) to learn about brain treatments from an industrial perspective. Planned collaboration with Université d'Angers, France.

InnovaRTBRAIN program: Doctoral candidates will be part of a multidisciplinary environment spanning physics, biology, immunology, engineering and clinical translation. Doctoral Fellows will also benefit from international academic partnerships and connections with private-sector partners. A programme focused on soft skills will be proposed to Doctoral Fellows, addressing topics such as scientific writing, project management, Ethics and Research integrity.

PhD start date : November 1st, 2026

Contract duration : 36 months

Requirements

Education Level : Master Degree or equivalent

Candidate profile: MSc in Immunology, Immuno-oncology, or a related field in Biology. Interest in immunotherapy. Experience in flow cytometry and animal experiments would be a plus.

Candidates should be proficient in English (spoken and written). Curiosity and team spirit are essential.

Eligibility: The candidate must have spent less than 12 months in France during the last 36 months preceding the start of the PhD.

Selection process

Please send your CV, a brief cover letter, and the contact details for at least two references to [elodie.segura \(at\) inserm.fr](mailto:elodie.segura@inserm.fr)

- A detailed CV of maximum 3 pages, including:
- Contact details (email address and phone number),
- Education and degrees,
- Professional background,
- Distinctions,
- Current country of residence,
- If applicable: A listing of the 5 most relevant publications, with a single-sentence statement detailing their relevance to the selected project,
- A list of technical and scientific skills, as well as any other activity demonstrating impact (such as outreach, training, scientific communications, and general public engagement activities...),
- A short description of the performed academic and/or industrial internships,
- This CV must clearly state where the applicants worked or studied / and or resided for the preceding three years.

- A personal statement (max 2 pages) detailing general motivation to participate in the programme, professional objectives of the applicant, career development objectives.
- The contact details of two academic or industrial referees (name, title, affiliation, e-mail, and telephone number) who are willing to provide, upon request, detailed recommendation letters about the applicant.

Selected candidates will be invited for an online interview. Candidates will be notified around mid-June.