Postdoctoral Candidate in Preclinical Imaging / Preclinical Pharmacology – Cancer Research

The Molecular Imaging and Theranostic Strategies Laboratory (IMoST-UMR1240), attached to the French National Institute of Health and Medical Research (INSERM), and located in Clermont-Ferrand (France), is seeking a postdoctoral candidate with an excellent track record for a grant application to the Fondation ARC (French Association for Cancer Research) postdoctoral fellowship 2026 autumn call. **Deadline for receiving applications is April 1st 2026.** Starting position for grantees will be March-April 2027. PhD candidates are welcome to apply but they must obtain their PhD degree by the end of 2026. Fellowship is for a duration of 24 to 36 months. Application process is opened worldwide (visa restrictions may apply). French candidates residing and working outside Clermont-Ferrand are eligible.

About the host institution: INSERM is a French Public Science Institute, ranking as the 6th worldwide institution in the field of biomedical research and human health. INSERM is composed of 278 research units and 34 clinical investigation centers across France, additionally to 66 laboratories worldwide (North America, Europe, Asia), encompassing a total of about 15,000 researchers and staff. The postdoctoral fellow will be hosted at the IMoST laboratory (UMR1240) of INSERM, located in the city of Clermont-Ferrand in France. IMoST is specialized in the development of novel medicines and radiotracers for imaging and therapy of cancers (breast, melanoma, chondrosarcoma, pancreas, etc.). With a multidisciplinary team composed of synthetic chemists, radiochemists, analytics, cell and molecular biologists, pharmacologists and clinicians, IMoST is one of the four French laboratories covering all aspects from the synthesis of novel radiotracers and their preclinical evaluation (*in vitro*/ *in vivo*) to their clinical transfer into humans. The postdoctoral fellow is thereby joining a highly stimulating multidisciplinary environment with a great opportunity to gain knowledge and training in a broad area of expertise. The successful candidate will join the project led by Dr. Aurelie Rondon, working on the engineering of novel radiolabeled peptide drugs for theranostic applications in advanced solid cancers.

Project's description: Peptide radionuclide therapy (PRT) face a growing interest since the past few years, after the FDA/EMA approval of two groundbreaking radiolabeled peptides: Lutathera ([^{177}Lu]Lu-DOTATATE) and Pluvicto ([^{177}Lu]Lu-vivipotide tetraxetan), for gastroenteropancreatic neuroendocrine tumors and castration resistant prostate cancer, respectively. Our team is currently working on the design of novel peptides with intrinsic antitumor properties, intended to be functionalized with gamma, beta or alpha radionuclides, with the aim of achieving a theranostic application on advanced pancreatic and colorectal cancers. The postdoctoral candidate would work on the preclinical evaluation of the best peptide "hits" through pharmacokinetic (PK) and pharmacodynamic (PD) studies on murine models of orthotopic pancreatic cancer and disseminated peritoneal carcinomatosis of pancreas or colonic origins. The candidate will be expected to conduct *in vivo* experiments in

mice, from tumor implantation to *ex vivo* tumor analysis (IHC, WB), to study the biological effect of modified peptides on cell proliferation, angiogenesis, and apoptosis. Tumor growth will be monitored using bioluminescence imaging (IVIS).

The first-round of peptide selection will be performed using near-infrared fluorescence imaging (IVIS). Peptide radiolabeling will then be carried out by our radiochemistry team. The candidate will conduct biodistribution and dosimetry studies using *in vivo* longitudinal imaging (SPECT-CT or PET-CT) followed by quantification and *ex vivo* analysis of organs before evaluating the peptides' ability to potentiate PRT. The project aims at identifying at least one "lead" exhibiting strong antitumor activity and PRT potentiation for translation into first-in-human clinical studies.

Applicant's desired background:

- Significant hands-on experience (at least 2 years) with mice models.
- Expertise with tumor models (*in vitro* and *in vivo*).
- Previous experience in performing *in vivo* imaging techniques (bioluminescence, fluorescence and/or PET, SPECT).
- Experience with handling radiolabeled compounds would be an asset but is not mandatory. The candidate will be fully-trained by our CRP staff concerning radioactive material handling, good laboratory practices, and radioprotection.
- Experience with tissue and sample analysis (Western-blot, IHC, ELISA, IF, etc.) is desired but not mandatory.
- Proficiency to design and conduct experiments.
- Proficiency in data analysis, including statistical analysis.
- Team working and interest for multidisciplinary research. The candidate will be integrated into a young and dynamic team, composed of people with diverse expertise working in close collaboration. Project meetings and lab meetings are being held frequently.
- Fluency in French is **not** required. However, the candidate will be offered the possibility to take French courses at the University of Clermont Auvergne if they wish.

Project's duration: 24 to 36 months. The subsidies will depend on the candidate's experience.

Application process: Please send your curriculum along with the name and contact information of at least two referees to Aurelie Rondon (aurelie.rondon@inserm.fr) **before April 1st 2026**. Interviews will be held remotely using Teams. The application process may be closed earlier if a candidate meets the required criteria.