A highly innovative system, called long axial field of view (LAFOV) PET/CT, has become available and is the ideal medical imaging modality to study diseases and molecular processes at the whole body/systems biology level with multiple radiotracers. Studying diseases and diagnosing patients using PET/CT imaging should use a whole body/systems biology approach, i.e., a comprehensive whole body characterisation of disease, and it should be longitudinal and should use multiple radiotracers. However, LAFOV PET/CT is so new that we lack the necessary tools, methodologies, imaging procedures and skilled scientists to effectively address key applications in patient care and research. With the **PREFERENCE** project we aim to develop innovative LAFOV PET/Ct methodologies to perform and support ground-breaking new clinical research.

PREFERENCE will train the next generation of researchers specialized in LAFOV PET/CT who will capitalize on the new clinical and research opportunities of the LAFOV PET/CT system. By performing research in both academia and industrial groups, researchers within **PREFERENCE** receive training in a unique combination of (soft) skills across disciplines and sectors. **PREFERENCE** will develop new LAFOV PET/CT methodologies, and perform LAFOV PET/CT clinical studies across disease areas to obtain novel biological insights. This project was selected by the EU as worthy of funding under the HE Marie Sklodowska Curie Action. The consortium consists of 12 academic partners with a strong expertise in quantitative (LAFOV) PET/CT imaging as well as industrial partners developing imaging equipment or providing multi-center image analysis solutions and services.

PhD PROJECT. LAFOV PET/CT Dosi-SIRT (DC15).

HOST INSTITUTION. Université de Bretagne Occidentale de Brest (Brest UBO)

The Université de Bretagne Occidentale (UBO) of Brest is a comprehensive University based in Brittany (France), offering more than 250 degree programs in the fields of science, humanities, technology, medicine and law, to 23,000 students, among which 9% are international (representing 100 nationalities). More than 150 PhD theses are defended each year. Doctoral Candidate (DC) will be affiliated to UMR 1304-GETBO (Western Brittany Thrombosis group), a joint research unit whose main research domain is the identification of cellular and molecular mechanisms involved in venous thromboembolism, including a dedicated research axis on cancer-associated thrombosis. GETBO encompasses 45 researchers (including clinical researchers) and 20 engineers and technicians. GETBO has an organizational infrastructure (Clinical Investigation Center) to perform prospective trial. DC will conduct his research in the Molecular Imaging and Theranostics department of Brest University Hospital (BUH). The department has its own radiopharmaceutical laboratory with expertise in development and use of novel radiotracers for research, a wide range of equipment (4 SPECT/CT, 1 CZT, 3 PET/CT including a Siemens Biograph Vision QUADRA LAFOV system), and a monthly access to a PET/MR system in Nantes. It has a long-standing strategic partnership with Siemens for the clinical application of its new generation of instruments and tools. The team is internationally well known for their clinical researches on functional imaging in cancer and cardiovascular diseases. The multi-disciplinary team of the department consists of 14 nuclear medicine physicians, 2 radiopharmacists and 3 physicists. The department collaborates closely with several clinical departments at the BUH, including oncology, radiotherapy, gastroenterology, and pulmonology.

DESCRIPTION OF THE ADVERTISED POSITION (DC 15)

This is a 3 years fulltime position as a Doctoral Candidate (DC) under the auspice of the MSCA DN program. The successful candidate will develop innovative quantitative imaging methodologies for ultra-low-count LAFOV PET/CT to improve dosimetry in selective internal radiotherapy (SIRT) using 90Y microspheres in the treatment of hepatocellular carcinoma, including cases with portal vein thrombosis. The research will focus on optimizing quantitative PET imaging at very low activity levels, validating novel PET-based pre- and post-therapeutic dosimetry workflows using dedicated and anthropomorphic phantoms, and comparing these approaches with current SPECT-based clinical practice. The candidate will investigate the impact of LAFOV PET/CT on activity planning, dose estimation, and treatment evaluation, contributing to more accurate and personalized SIRT procedures. Within the course of this project, 1 month secondments are planned to: i) the UMCG in Groningen to work on low count studies using long lived isotopes and/or low yield isotopes and apply these for radionuclide dosimetry; ii) the AUMC in Amsterdam to evaluate optimal imaging procedures and image reconstruction methods for ultra-low count studies; iii) the CMINDS (Collective Minds Radiology) to learn to setup image databases and centralized analysis for multicenter studies. Further, the project may include short-term visits to different PREFERENCE partners for data and software exchange.

PREFERENCE is supported by the European Union's Horizon Europe research and Innovation programme under the Marie Skłodowska-Curie grant agreement No 101307478.

GENERAL ELIGIBILITY CRITERIA

Mobility Rule: The fellow may not have resided in the country where the research training activities take place for more than 12 months in the 3 years immediately prior to the recruitment date (and not have carried out their main activity (work, studies, etc.) in that country)

Doctoral candidate: The fellow must be — at the date of recruitment — an '**doctoral candidate**' (i.e. not have a doctoral degree).

Candidates from Russia, Belarus and occupied territories in Ukraine are also not eligible.

SPECIAL REQUIREMENTS

- Successfully completed studies in Physics, Biomedical Engineering, Computer Science or alike (MSc degree or equivalent)
- Very good command of the English language (additional skills in Dutch will be of benefit)
- Good communication skills (a pre-requisite for cooperating in a multi-disciplinary environment)
- Willingness to travel and flexibility
- Technical skills will be of benefit
- Prior experience with medical imaging data will be of benefit
- Appropriate physical condition to work in a radiation protection control area

RECRUITMENT PROCESS:

After assessing compliance with the mobility rule and eligibility for the position based on your CV and motivation letter you might be invited for several online or in-person interviews. Selection of the candidates and invitation for the interviews will be done by the local (host) supervisory team. These interviews will be performed by the local (host) supervisory team as well as an international scientific mentor from the network and, possibly, one of the scientific advisors. Information on your application will be shared with the coordinator of the consortium for centralized coordination and registration of the recruitment process. Information on the exact employment conditions will be provided by the host institution and can also be found on their job announcement board, information on salary (gross and net salary, social security benefits etc) will be communicated during the interview and upon appointment by the host institution.

You will be appointed as fulltime PhD candidate for 3-4 years depending on the hosting institution. Successful candidates will receive a salary in accordance with the Marie Skłodowska-Curie Actions, that includes a gross living allowance of €4.010/month (correction factor to be applied per country), a monthly mobility allowance of €710 and depending on your familiar status, a family monthly allowance of €660. Please note that these amounts include taxes and compulsory employer contributions that will be deducted to make the net salary. The exact net salary will be confirmed upon appointment.

FURTHER INFORAMTION:

PREFERENCE: https://preference-consortium.eu/

PREFERENCE is supported by the European Union's Horizon Europe research and Innovation programme under the Marie Skłodowska-Curie grant agreement No 101307478.

Full applications should include

- A motivation letter
- A Europass CV (https://europass.cedefop.europa.eu/documents/curriculum-vitae)
- Copies of your relevant certificates
- Contact details of two references

Applications should be submitted online at the official job portal of the host institution by 1 October 2026.
In case of any procedural questions, please contact: preference@amsterdamumc.nl

PREFERENCE is supported by the European Union's Horizon Europe research and Innovation programme under the Marie Skłodowska-Curie grant agreement No 101307478.