UCL-MIRO NUCLEAR MEDICINE: CLINICAL RESEARCH

Clinical Research in Molecular Imaging in MIRO benefits from the considerable experience and expertise developed around the cyclotron in Louvain-la-Neuve. The main lines of research were applications of positron emission tomography (PET) in cardiology and neurology in the 80's, oncology in the 90's, and peptide receptor radionuclide therapy (PRRT) in the early 2000. Current research activities focus on both PET and SPECT imaging.

Research axes & Expertise

The Nuclear Medicine department is granted with the EANM accreditation for PET studies. It enables the department to participate in international multicentre studies from both industry and academic entities, on a daily basis. While the department has a clear background in PRRT research, dosimetry and 90-Yttrium (90Y) PET imaging are established and evolving competences acquired in these fields. The tremendous increase of applications of PET and SPECT in neurology for Alzheimer's disease (AD) constitutes a new and challenging field of research.

Application fields

FDG PET imaging allows diagnosis, staging, therapy evaluation, and recurrence detection in oncology. The department can perform several PET imaging procedures (flow, gating, static, delayed images) to evaluate the response to therapy and guide treatment adaptation, for use in several cancers (head and neck, lymphoma, colic cancer,…), in cardiology and neurology. New tracers for AD, PET applications of ^{90}Y imaging for labelled microspheres, dosimetric procedures for liver treatment, ^{11}C-acetate imaging are some of the research fields investigated.

Major projects/partnerships/collaborations

The department is in close contact with clinicians and radiation oncologists from all UCLouvain affiliated hospitals. Projects include FAZA hypoxia tumour evaluation, lymphoma therapy response, H&N squamous cell carcinoma, cardiologic research for coronary artery disease, neurological PET tracers for AD, and FDG tumour volume delineation for radiation oncology in lung cancer. Finally, there is an historical and ongoing collaboration with Erasmus MC Rotterdam Nuclear Medicine department for PRRT.

Key figures

- 7 trained and experienced nuclear medicine physicians, including 5 MD-PhDs
- 2 Gemini PET-CT cameras on 2 sites
- 8 SPECT cameras including 3 SPECT-CT cameras
- cGMP radiopharmacy

Contact

- Prof. François Jamar, francois.jamar@uclouvain.be
  Phone: +32 2 764 2580
- Prof. Thierry Vander Borght, thierry.vanderborght@uclouvain.be
  Phone: +32 81 423400