The Service of Nuclear Medicine and Molecular Imaging of the Lausanne University Hospital is administratively attached to the Medical Radiology Department and performs diagnostic imaging and therapeutic use of nuclear medicine and molecular imaging.

### Staffing and Equipment

The Service is composed of three senior physicians (1 full-professor head of service, 1 associate professor in theragnostics, 1 senior physicians), 3 fellows and 3 residents, in addition to a staff of 15 technologists, 1 nurse, 1 clinical radiopharmacist, 1 medical physicist, and an administrative staff of 4 receptionists/secretaries. The service has a state-of-the-art TOF, 64-slice PET/CT, 1 quantitative SPECT/CT, 2 SPECT/CT and 1 gamma-camera. Close collaborations exist with the Services of Radiology and Radiation Oncology (contrast-enhanced CT studies, dedicated PET/CT for radiation planning. A new laboratory for radiopharmaceutical preparation has opened and comply with the cGRRP latest guidelines of the EANM and is undergoing a full cGMP certification. Ga-68 and Rb-82 generators are available for clinical and research purposes. Dedicated laboratories exist for translational research and access is planned to a microPET/SPECT/CT imaging facility.

### Clinical Activities

Each year, 8,500 studies are performed over the whole spectrum of nuclear medicine imaging and therapy. Diagnostic imaging is performed with PET/CT using F-18-based tracers (FDG, FET, FCH, FDOPA, two first-in-human Ga-68-based peptide imaging) and Rb-82. Over 250 therapies are performed yearly (tumoral/benign thyroid diseases, adult and pediatric I-131-MIBG and soon PRRT, as well as selective internal radiation therapies (SIRT) with Y-90-labelled microspheres.

### Research and Collaborations

The Service has many clinical protocols in oncology, neuro-oncology, cardiology, psychiatry, neurology and pediatric oncology. Novel collaborations exist in radiopharmaceuticals development for diagnosis (Annexin V, folate receptor, integrins, Ga-68 peptides) and therapy (Lu-177-peptides). Strong collaborations exist with the medical physicists of the Institute of Radiation Physics (IRA) for quantitative imaging and dosimetry. Academic collaborations exist with the Fred Hutchinson Cancer Research Center in Seattle, the Turku PET Center in Finland, the Swiss Federal Institute of Technology in Zurich and PSI Radiopharmacy, the Geneva University Hospital, the Swiss Institute for Bioinformatics and the Swiss Federal Institute of Technology in Lausanne (EPFL). Funding grants have been awarded at the international and national level (H2020, FP-7, SAKK Swiss Clinical Group for Oncological Research, Oncosuisse, CTI-KTI Commission for Innovation).

The Service of Nuclear Medicine and Molecular imaging is part of the founding institutions in the CERN-MEDICIS initiative (production of novel radioisotopes from ion beam line ISOLDE) and co-initiator of the H2020 MEDICIS-PROMED Marie-Curie Innovative Training Network (€3.9M) as well as the FP7 EndoTOFPET-US (€5.5M).
Department of Oncology, Swiss Cancer Center Lausanne – www.chuv.ch/oncology

The Department of Medical Oncology has 1’800 new patients and 25’000 outpatients visits per year. It comprises the Services of (1) Medical Oncology, (2) Hematology and (3) Radiation Oncology. It aims at clinical excellence, innovation, integration and education. The Swiss Cancer Center Lausanne was created in 2013 to respond to the challenge of improving the treatment of human cancer and will bring together fundamental translational, and clinical cancer researchers from the Swiss Federal Institute of Technology (EPFL), the University of Lausanne (UNIL), the the Swiss Institute of Bioinformatics (SIB), and the Lausanne University Hospitals (CHUV), along with the University Hospital of Geneva (HUG) and the University of Geneva (UNIGE), and other Swiss institutions. The agenda is to create a highly integrated, multidisciplinary, and collaborative cancer research community, aimed at solving urgent cancer problems and ultimately developing exceptional care and innovative solutions for our cancer patients.

Lausanne Branch of the Ludwig Institute for Cancer Research (LICR) – www.unil.ch/licr/

The Lausanne branch of the LICR was created in June 2015 and is part of the prestigious Ludwig Institute for Cancer research, an international collaborative network of acclaimed scientists pioneering cancer research for more than 40 years with generous investments totaling more than $2,500 millions since 1971. The Lausanne Branch will primarily focus on applied cancer immunology and the design of novel molecular and cell-based immunotherapies. It will also develop technologies enabling the efficient, safe application of those therapies to as many patients as possible.

The vision is to cultivate a blend of academic and entrepreneurial cultures. Ludwig Lausanne will initially establish a world-class scientific team through the creation of the Ludwig Human Tumor Immunology Discovery Engine in close connection with the CHUV. Researchers there will focus on studying the human tumor microenvironment, dissecting the cellular and molecular determinants of immune responses to human tumors and developing new molecular and cell-based approaches to cancer immunotherapy.

PRESENTATION OF THE NEW POSITION OF ASSOCIATE PROFESSOR OR ASSISTANT PROFESSOR TENURE TRACK TOWARDS A POSITION OF ASSOCIATE PROFESSOR IN RADIOPHARMACEUTICAL SCIENCES AFFILIATED TO THE LAUSANNE BRANCH OF THE LUDWIG INSTITUTE OF CANCER RESEARCH (LICR)

As such, radioimmunotherapy and radioisotope-based therapy is a streamline research topic between the Department of Oncology, the LICR, and the Service of Nuclear Medicine and Molecular Imaging. The aim of the position is to develop a competitive, world-class translational research program in radiopharmaceutical sciences, centered on radiopharmaceuticals for diagnosis and therapy in a theragnostic approach. The appointed scientist will be part of a multidisciplinary team of scientists and physician-scientists to develop translational applications of radiopharmaceuticals for oncological diseases.

The position is in the Nuclear Medicine and Molecular Imaging Department of the Lausanne University Hospital (1,400 beds) and attached to the Department of Oncology with affiliation to the Lausanne Branch of LICR. The position comes with 1 financed postdoctoral fellow and 1 PhD student, plus project-related support for material and supplies. A radiopharmaceutical laboratory (cGMP) for manufacturing diagnostic and therapeutic compounds exists with a research laboratory with microPET/SPECT/CT scanner and a
A dedicated animal facility. A mono-dose, microfluidics-based research cyclotron (O-15, N-13, C-11, and F-18) is expected to start in 2017.

The position is full-time and permanent as associate professor and if successful tenure track from assistant professor. A Ph.D. title in radiopharmaceutical sciences, nuclear pharmacy, radiopharmacy or equivalent is required and experience in cGMP facilities, antibodies/fragments radiolabelling and radiometal chelation/conjugation, and knowledge of Zr-89 or alpha emitters would be of advantage. Moreover, experience in directing MSc/PhD theses and teaching at the postgraduate levels is requested. This may include teaching a 10-h class to the scientist community. Ease in communication is needed, with fluency in English, and working knowledge in French or willingness to acquire it.

**Organigram of the Service of Nuclear Medicine and Molecular Imaging**

The position and associated 2.0 FTE (in red) are attached to the Service of Nuclear Medicine, where the candidate will be heading the **Translational Research Unit in Radiopharmaceuticals Sciences**, thus assuring coherence and feasibility of the research projects from the preclinical phase up to the clinical phase and in patient care. The affiliation to the LICR@UNIL (Lausanne Branch of the LICR, in orange) will insure accessibility to the LICR network and protected molecules and antibodies, as well as the close relation to the Department of Oncology will accessibility of oncology patients to clinical trials. The other existing research personal of the Service (in green) will be also attached to this unit (µPET/CT imaging and clinical research, as well as the upcoming LOTUS research cyclotron).