CIBM Annual Symposium 2024

Forum Rolex Learning Center, EPFL, Lausanne Switzerland | 7th November 2024

20th Anniversary

RADIOLIGANDS R&D FOR TARGETED DIAGNOSTIC AND THERAPY

Olivia Bejuy[1,2], Dr Andrea Grotzky[2], Dr Frédéric Bois[2], Dr Didier J. Colin[2,3], Prof. Valentina Garibotto[1,2]

1. CIBM PET HUG UNIGE, University of Geneva   2. Nuclear Medicine and Molecular Imaging Division, Geneva University Hospitals   3. Preclinical Imaging Facility, University of Geneva

The Nuclear Medicine and Molecular Imaging group provides comprehensive range of workflow capacities to effectively transform your ideas into validated compounds for clinical applications. With state-of-the-art facilities including a cyclotron unit, a radiochemistry laboratory, a preclinical imaging platform and a clinical division, the group provides extensive support throughout the entire process from radiopharmaceutical development all the way to clinical use in patients.

RADIOCHEMISTRY → PRECLINICAL VALIDATION → REGULATORY AUTHORIZATION → CLINICAL USE

## PRECLINICAL IMAGING FACILITY PIPPA/CIBM PET HUG-UNIGE

The PIPPA/CIBM PET HUG-UNIGE facility proposes a wide range of clinically relevant preclinical applications in diverse fields to researchers of the University of Geneva and to external collaborators. Thanks to a wide range of imaging modalities dedicated to small animals (e.g. rodents, rabbits, eggs), we aim to support translational and preclinical research projects. Perfect bridge between bench and bedside, preclinical imaging has a strong 3Rs potential and allows to reduce the number of animals (longitudinal imaging, high translational power) with refined non-invasive protocols. Preclinical imaging is the state-of-the-art method to validate in vitro results and efficiently translate preclinical results into clinical settings.

SERVICES PROVIDED

- Support in study design, grant writing, animal authorisation application & paper publication.
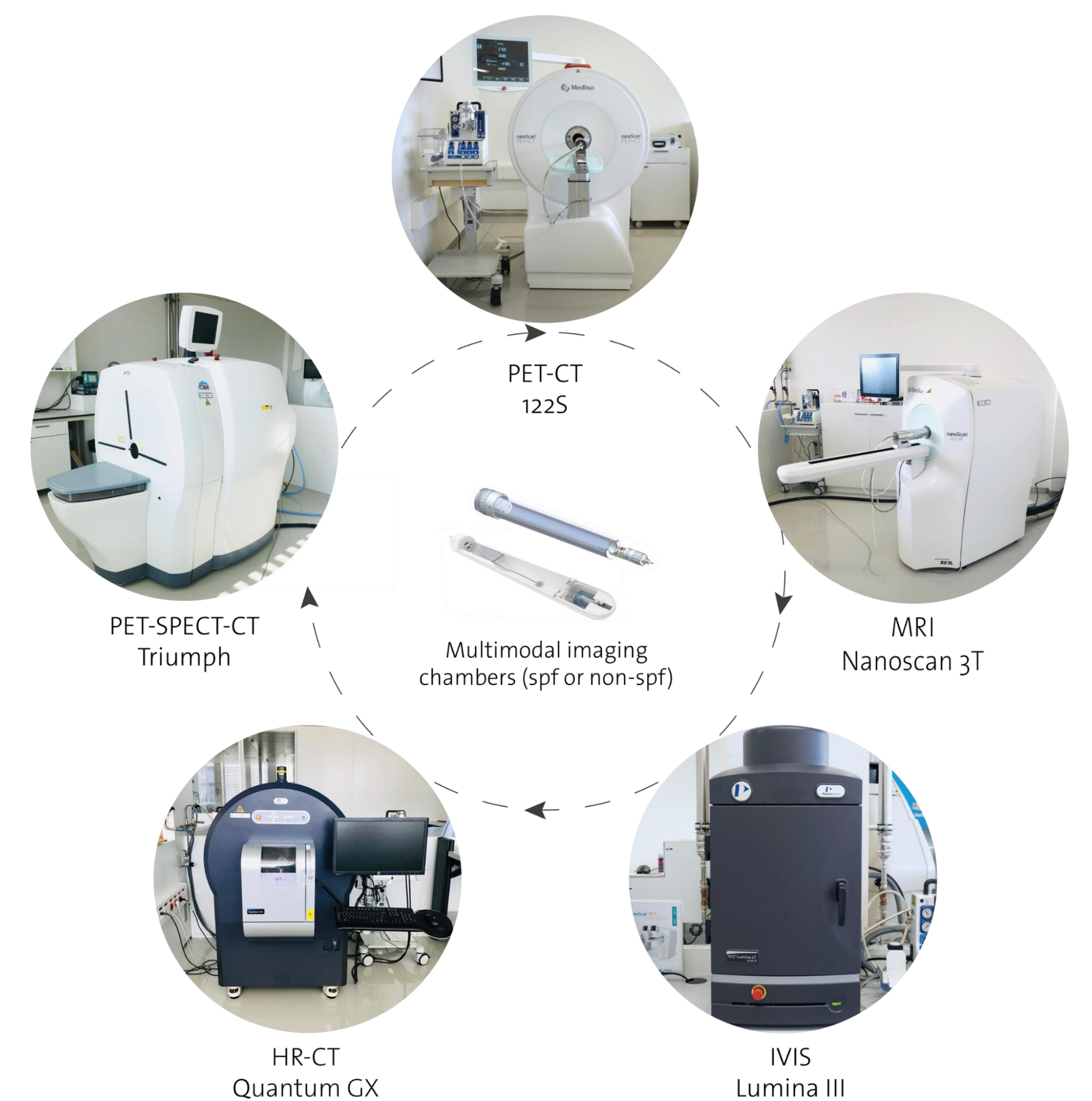- Multimodal image acquisition & analysis
- Training
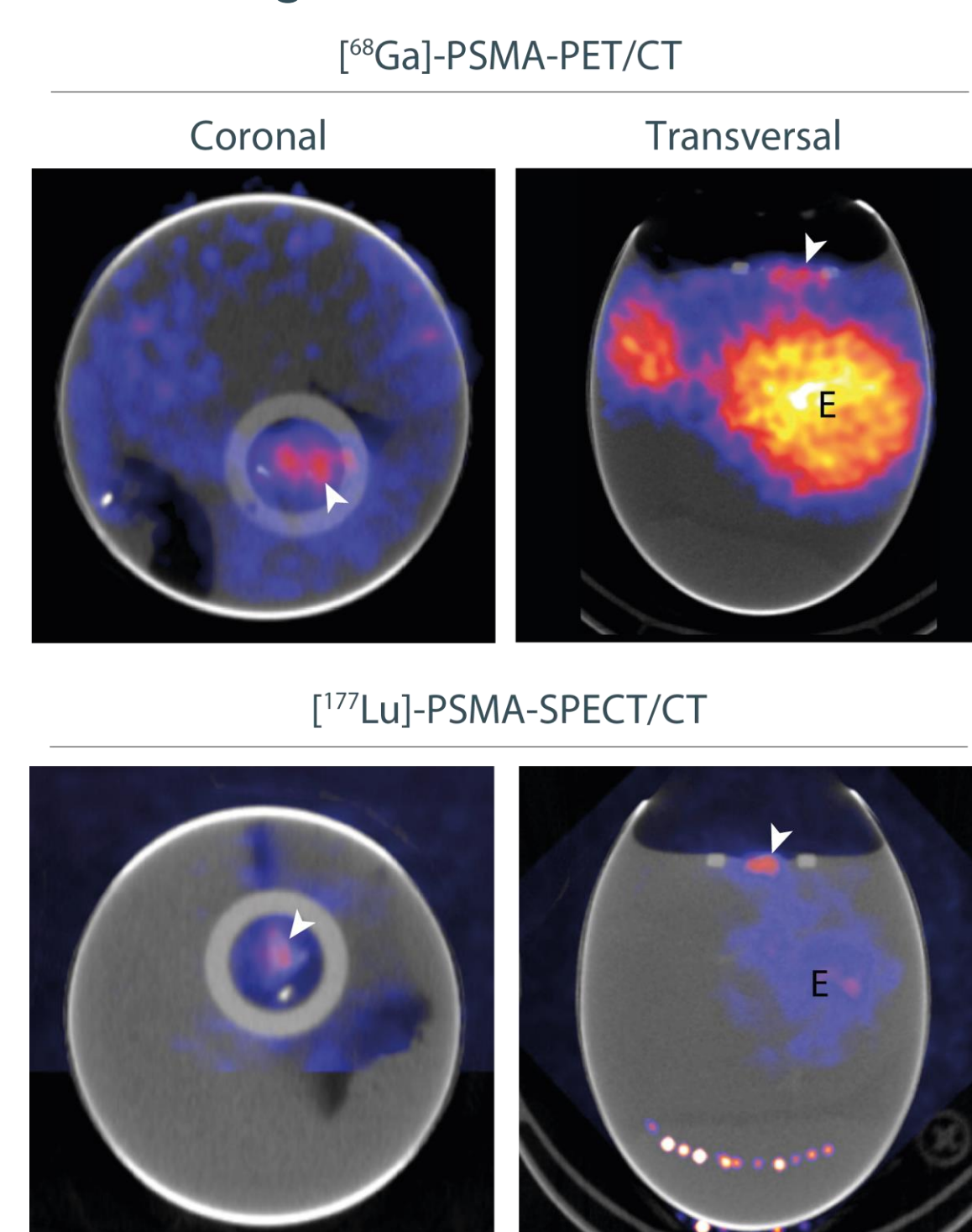
PET/SPECT/CT images of [68Ga]- and [177Lu]-PSMA biodistribution in a prostate cancer chicken chorioallantoic membrane (CAM) model. *O. Bejuy et al. CIBM PET HUG-UNIGE*
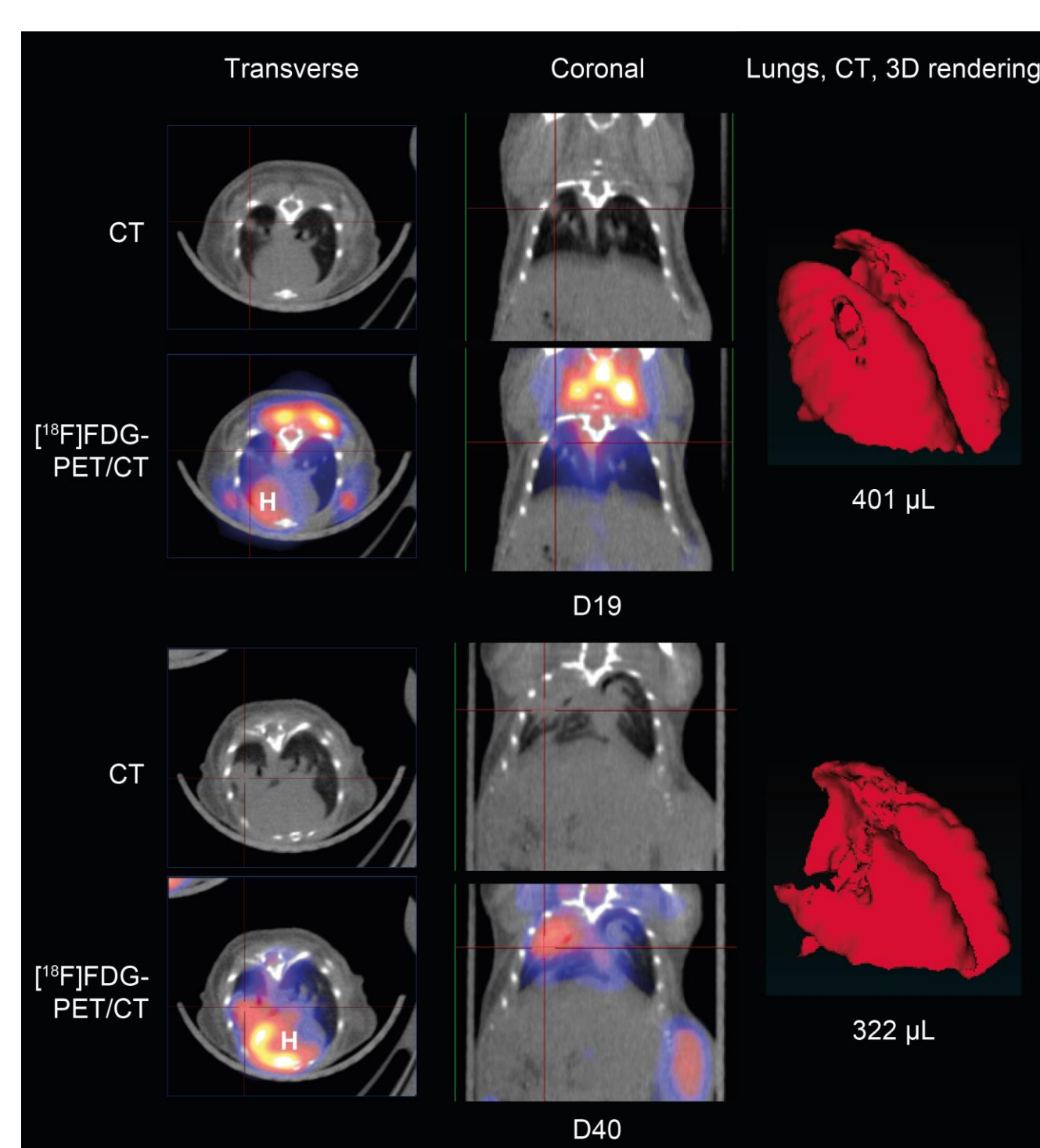
[18F]FDG-PET/CT images of a Malignant Pleural Mesothelioma Orthotopic Mouse Model. *O. Bejuy et al. CIBM PET HUG-UNIGE*
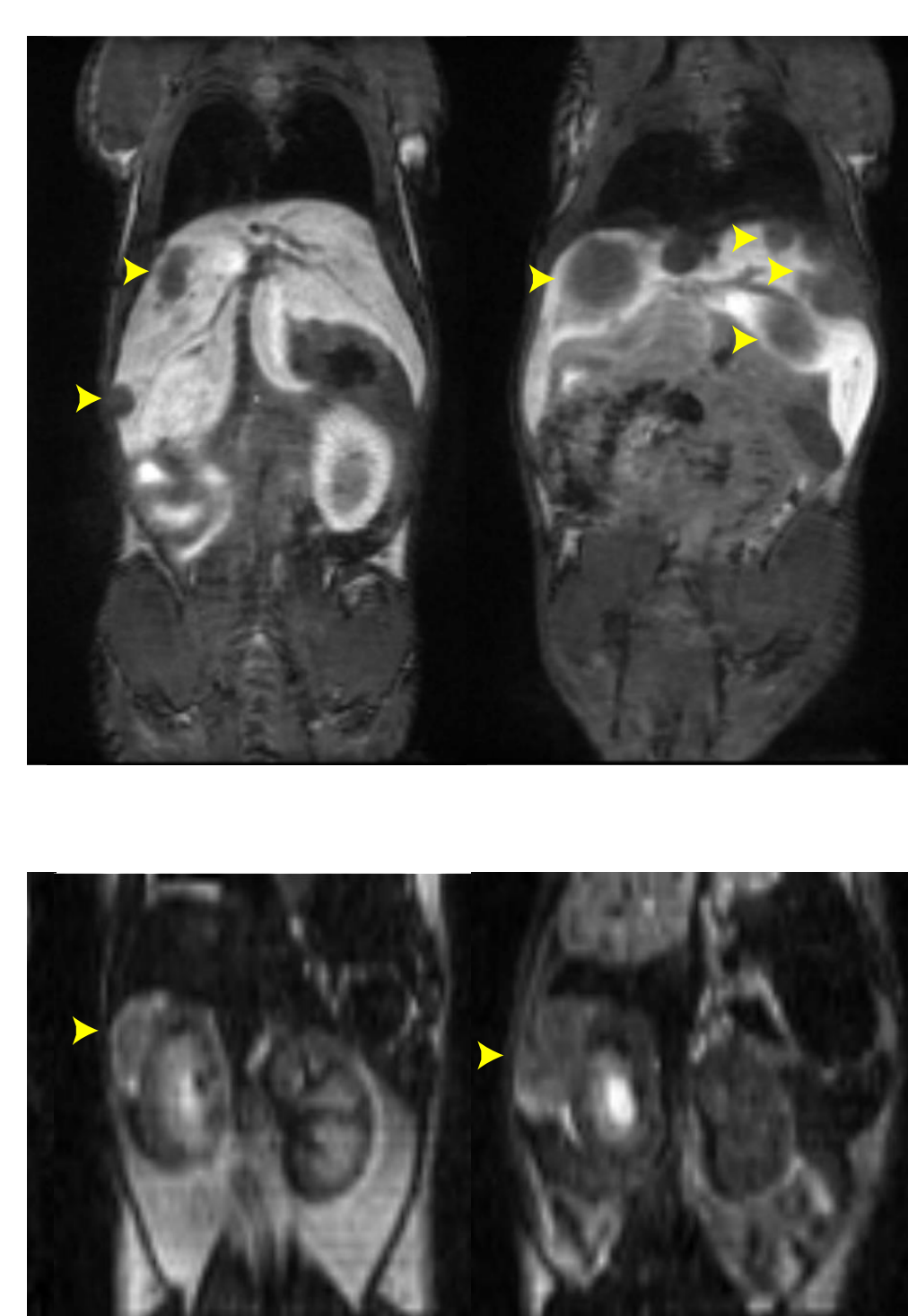
MRI images of liver tumours (up, *S. Lacotte et al., Prof. C. Toso*) and kidney tumours (down, *H. Poinot et al., Prof C. Bourquin*).

PET-CT 122S
MRI Nanoscan 3T
PET-SPECT-CT Triumph
Multimodal imaging chambers (spf or non-spf)
HR-CT Quantum GX
IVIS Lumina III

WEBSITES: cibm.ch, unige.ch/medicine/pippa
CONTACT INFORMATION: Prof. Valentina Garibotto, valentina.garibotto@hcuge.ch - Prof. Éric Alléman, eric.allemann@unige.ch - Olivia Bejuy, olivia.bejuy@unige.ch - Dr Didier Colin, didier.colin@unige.ch

NUCLEAR MEDICINE DIVISION

The Nuclear Medicine Division features a cyclotron/radiopharmacy lab with comprehensive capabilities in the production of PET and SPECT radiopharmaceuticals, including radioactivity generation, molecule radiolabeling, and formulation of patient-ready doses. A range of target-specific radioactive probes is available for various cancers. Equipped with two human PET and two human SPECT cameras and a dedicated image analysis platform, the division excels in clinical diagnostics and radioligand therapy (RLT). These services effectively bridge research and clinical practice, enhancing diagnostic and therapeutic applications in nuclear medicine.

Cyclotron/Radiopharmacy lab

From the initial generation of radioactivity using a medical cyclotron to the radiolabeling of molecules and the formulation of doses ready for patient use.
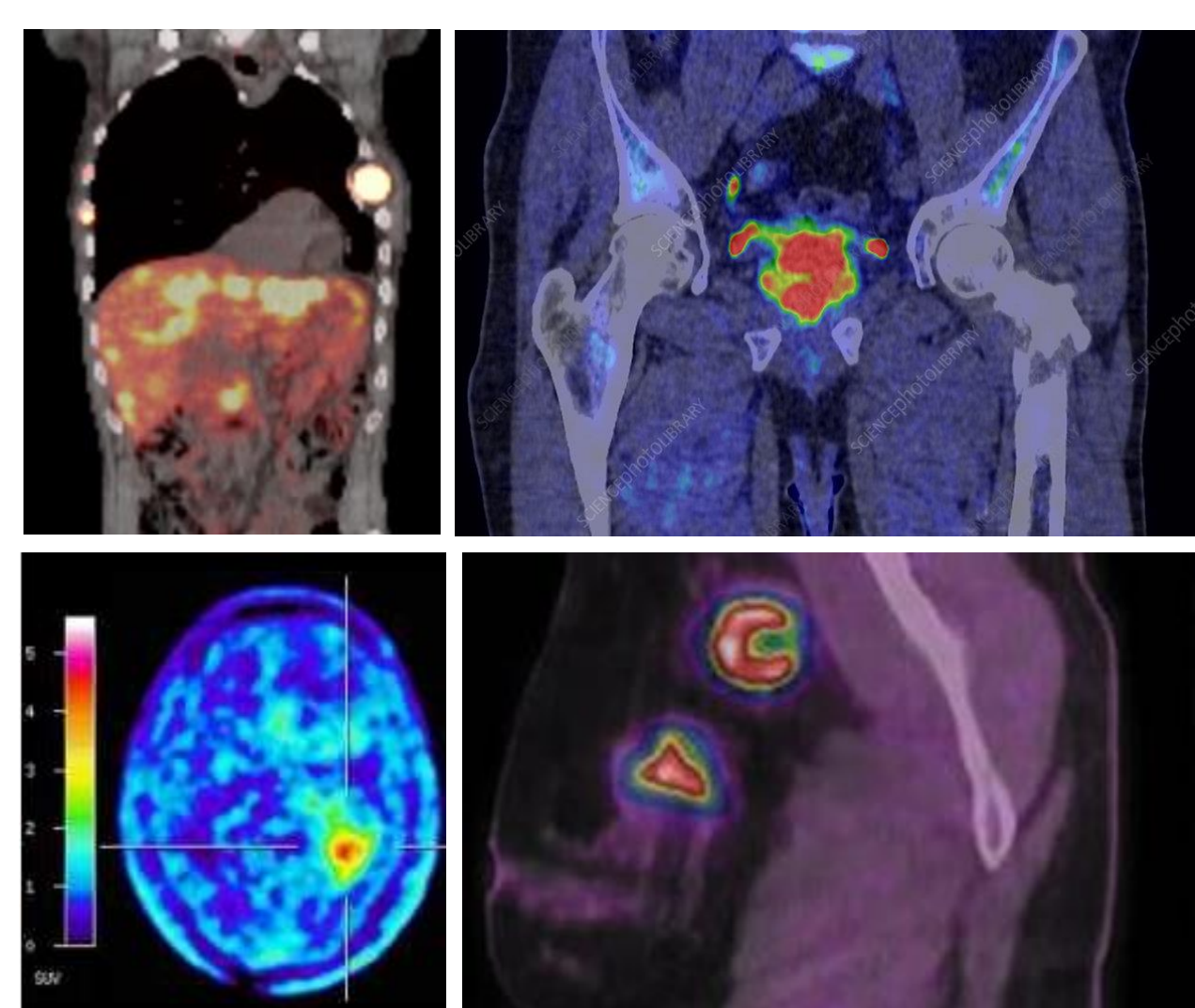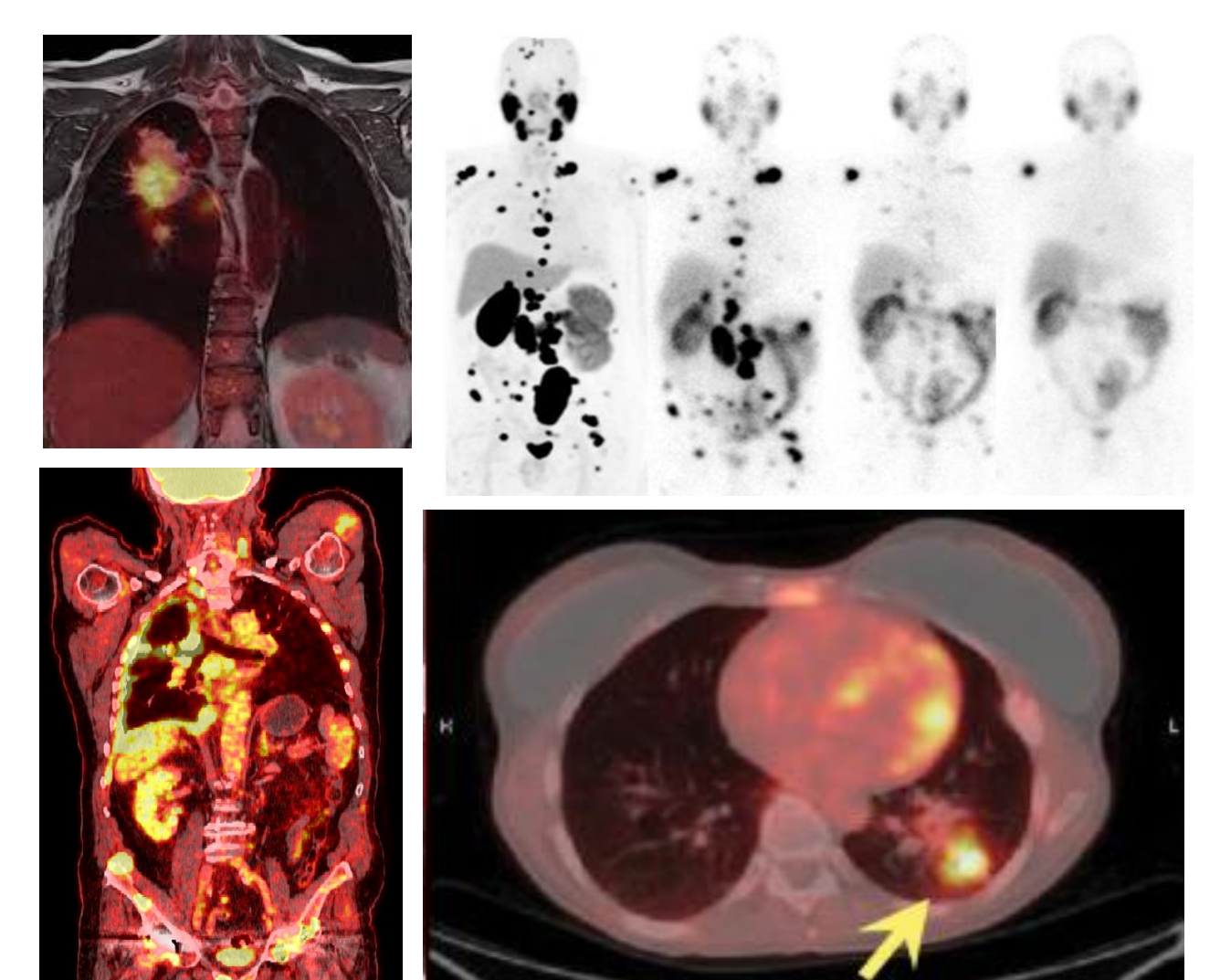
Target-specific radioactive probes

Access to target-specific radioactive probes for various cancers, including prostate (PSMA), breast (HER2), and neuroendocrine tumors (somatostatin).

Imaging facility

Technical platform composed of two PET cameras and two SPECT cameras, with a dedicated image analysis facility.

Diagnostic/radioligand therapy

Expertise in image analysis in the clinical setting, with a growing emphasis on treatment of patients with radioligand therapy (RLT).

CONTACT INFORMATION: Pre. Valentina Garibotto, valentina.garibotto@hcuge.ch - Dr Frédéric Bois, frederic.bois@hcuge.ch - Dr Andrea Grotzky, andrea.grotzky@hcuge.ch

HUG Hôpitaux Universitaires Genève   UNIVERSITÉ DE GENÈVE   Plateforme d'Imagerie Préclinique du Petit Animal (PIPPA)