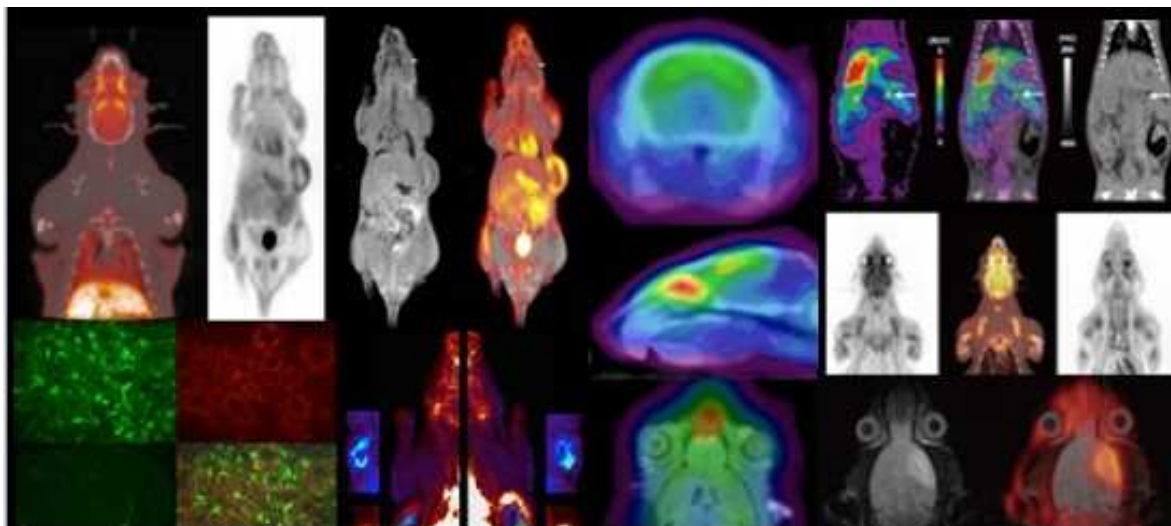




Medical Imaging Center for Translational Research(TMIC)

Osaka University
Graduate School of Medicine

*—Imaging the molecular pathogenesis of the disease
and the truth of life —*



Greetings

Medical Imaging Center for Translational Research Director

Jun Hatazawa

In 1990, the Radionuclide Experiment Facility was launched in Osaka University Graduate School of Medicine for biological and medical research. In 2010, Positron Emission Tomography (PET) Molecular Imaging Center was launched for further imaging experiments with cyclotron, radiopharmaceutical tracer synthesis system, animal PET/CT, and PET/MR camera.

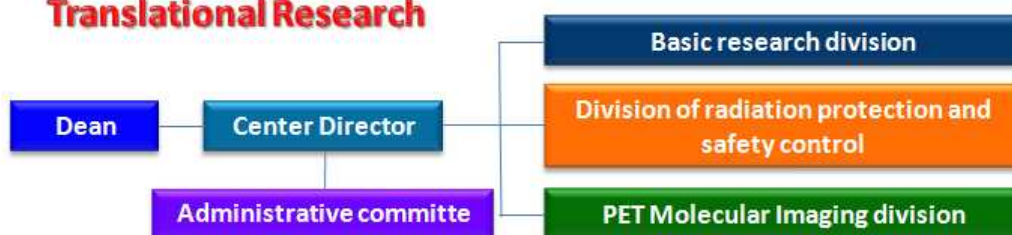
This year, the Radionuclide Experiment Facility and PET Molecular Imaging Center was combined and transformed to Medical Imaging Center for Translational Research (TMIC) which consists of three Divisions; Division of Basic Research, Division of Radiation Safety, and Division of PET Molecular Imaging. This Center is managed under the Good-Laboratory-Practice (GLP) level. A number of university, academic institution, industry/company are utilizing this center for their independent research projects. The effectiveness of myocardial sheets were proved on the molecular basis by means of PET. New molecular biomarker to test the effect anti-cancer drugs is being developed.

This Center is nominated as an official education/training platform of International Atomic Energy Agency (IAEA) to promote use of radionuclide for medicine. We are accepting researchers, physicians, nurses, technologists, and officers who are interested in nuclear medicine and molecular imaging around the world.

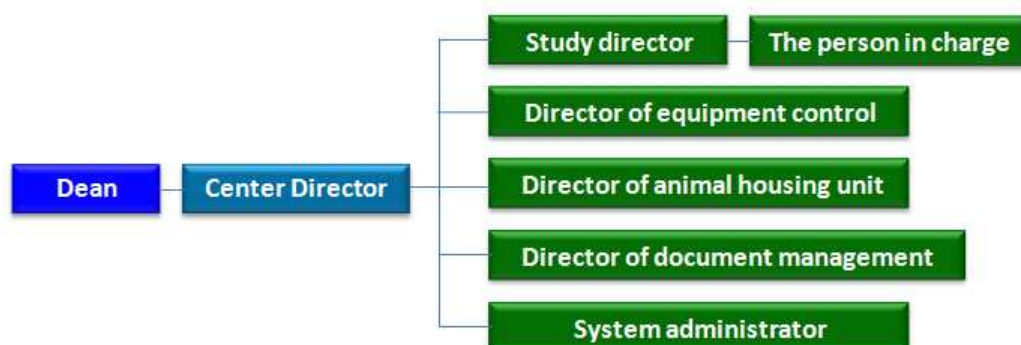
Translational research and imaging is one of the farthest frontier of medicine working together with nuclear physics, radiochemistry, radiopharmaceutical science, medical engineering, bioinformatics, computer science, and clinical medicine. I believe TMIC contributes to this field.

June 1st, 2016

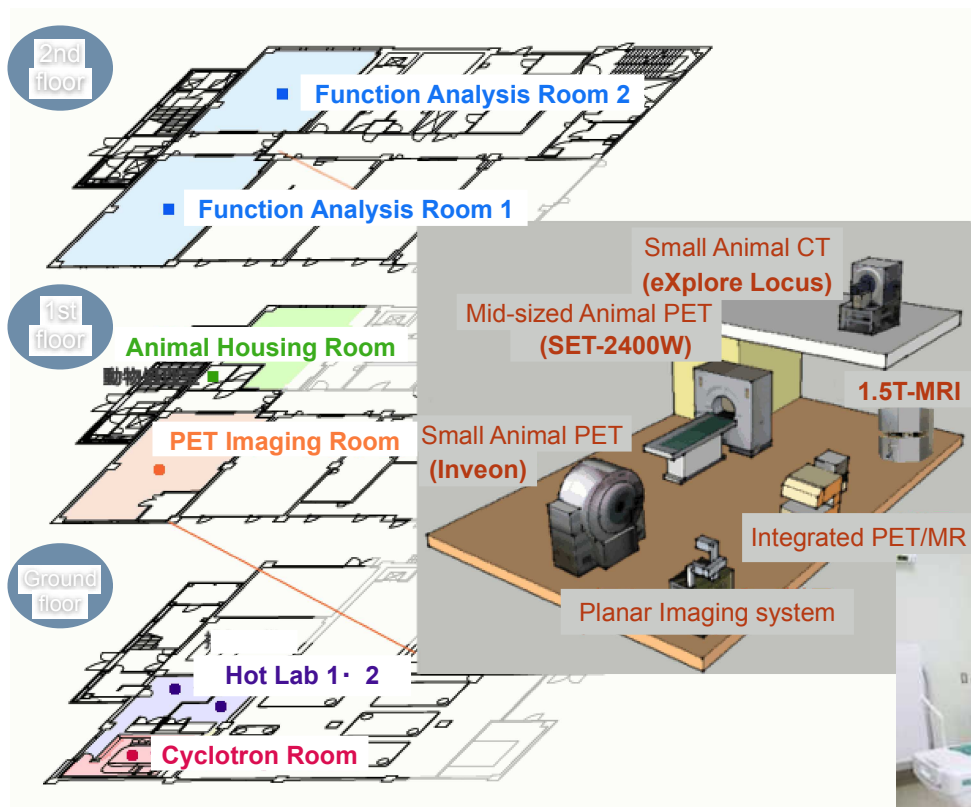
Organization of Medical Imaging Center for Translational Research



Organization of Reliability Standards



General Features (PET Molecular Imaging division)



Small Animal PET/CT



Medium to large animal PET scanner
SET2400W(SHIMAZU)

General Features (Basic research division)



Liquid scintillation
Counter AccuFlexLSC7400
(HITACHI Aloka)



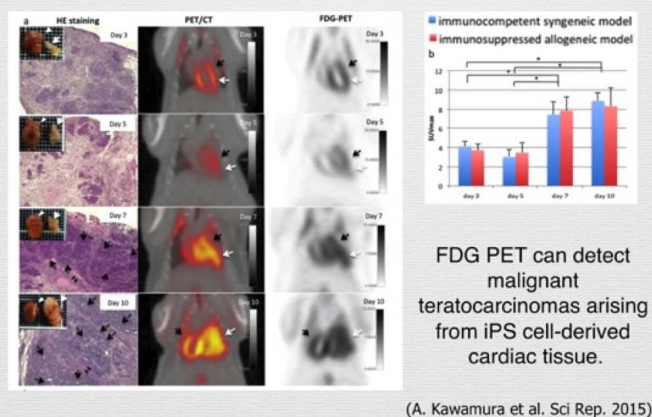
Gamma Cell
Gamma Cell40 (NORDION)

Image scanner
Typhoon FLA7000(G&E)

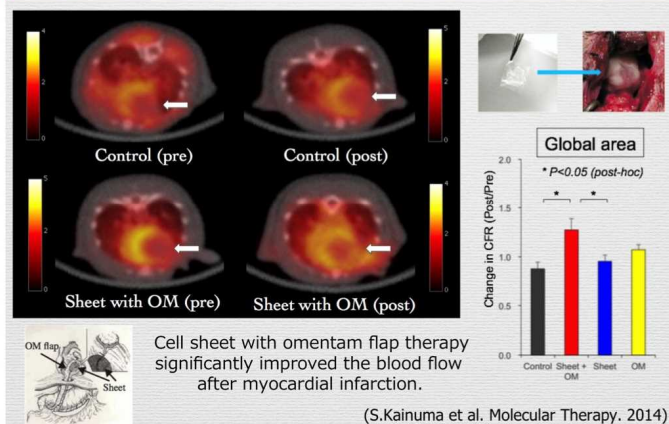


Experimental Images in PET Molecular Imaging division

Mouse ^{18}F -FDG PET: iPS cell sheet

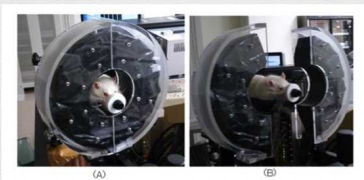


Myocardial Perfusion PET : ^{13}N - NH_3



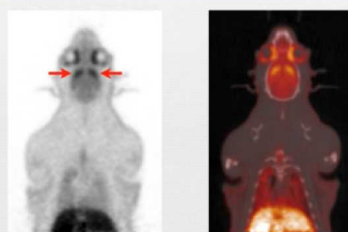
Development of PET detector

Development of an Open-close PET system.



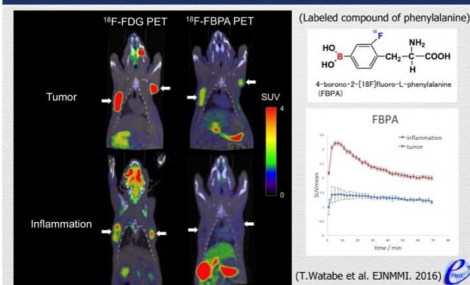
(S. Yamamoto et al. Rev Sci Instrum. 2015)

Dopamine-D2 Receptor PET

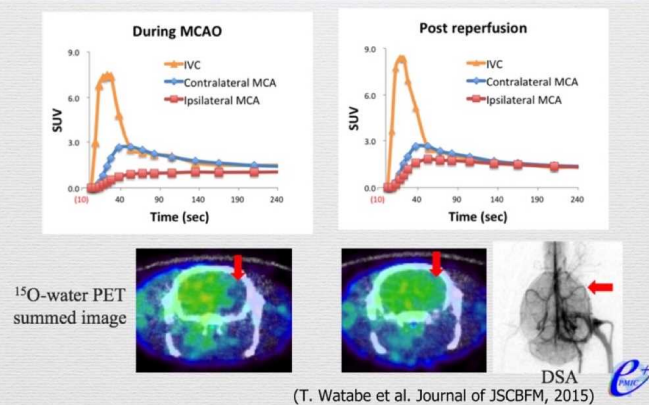


^{11}C -Raclopride PET/CT (coronal): Normal

Amino acid tracer: ^{18}F -FBPA

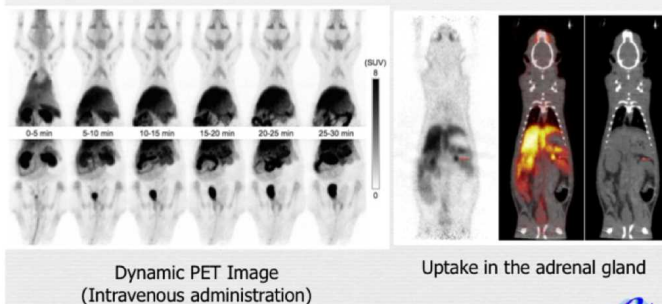


Rat MCA Occlusion Model



Micro-dose PET

Whole-body distribution of ^{11}C -Donepezil in Rat



Detailed information is uploaded on the center website. (<http://www.pet.med.osaka-u.ac.jp>)

< Contact >

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