

PET BASICS-course

Dates: 8–10.4.2013

Place: SH-auditorium (Building 11A, 1st floor) and New Auditorium of T Hospital (Building 18, 1st floor), Turku University Hospital, Kiinamyllynkatu 11, Turku

Organiser: Turku PET Centre

Language: English

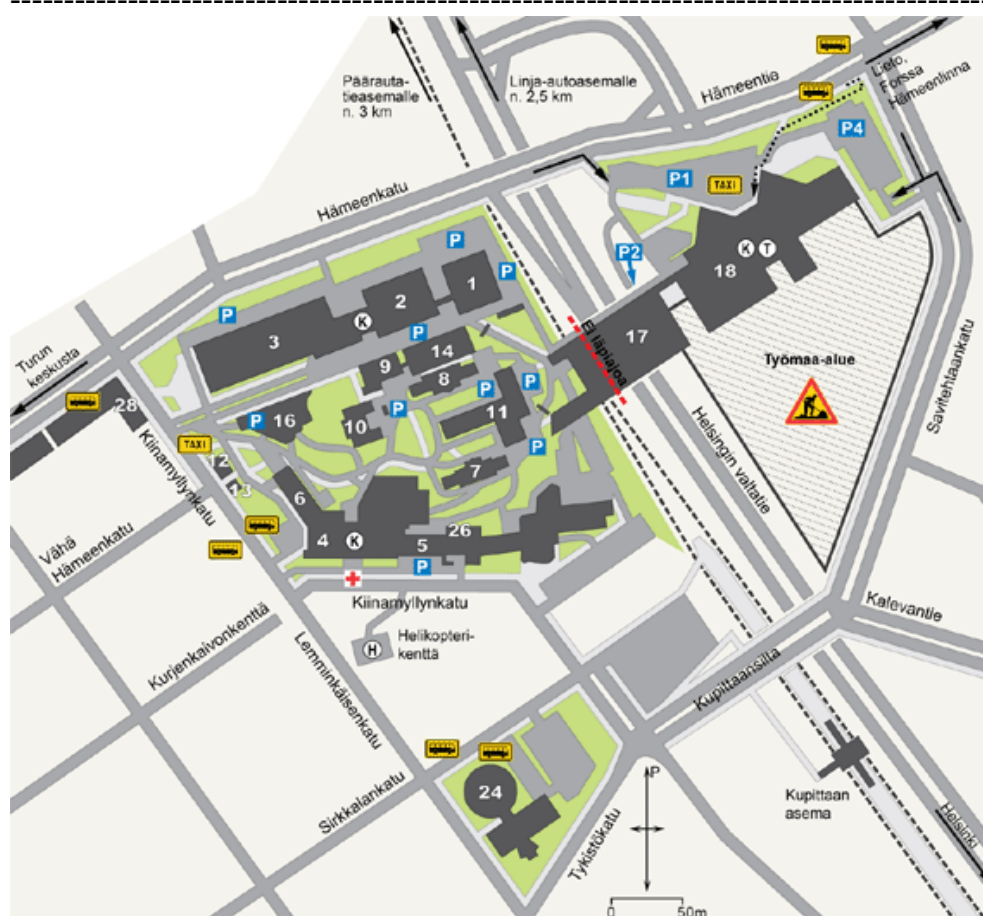
Target attendees: Physicians, scientists, PhD students, all interested in PET

Course is free of charge and worth of 2.0 credits for PhD degree and 22 h for MD specialist's degree.

Positron emission tomography (PET) is non-invasive and quantitative imaging modality using molecules labelled with positron-emitting radioisotopes in tracer quantities (i.e. without pharmacological effect) to visualize and measure rates of biochemical processes (e.g. enzyme reactions, ligand-receptor interactions, cellular metabolism, cell proliferation, gene expression) in tissues of living subjects. Therefore, PET is an important tool to elucidate mechanisms associated with diseases and drug actions. The course aims to provide students with a broad and general introduction to the PET imaging. The main purpose of this course is to enable students to understand the interdisciplinary nature of PET imaging. After the course one should have basic knowledge of the PET imaging field of its physics, radiochemistry, and data analysis, research and clinical applications.

Please **register latest March 25, 2013** to Mirja Jyrkinen, mirja.jyrkinen@tyks.fi, fax 02-2318191

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SH-auditorium: building 11A; New Auditorium of T Hospital: building 18; PET Centre: building 14.

Monday 8.4.2013New Auditorium of T Hospital (Building 18, 1st floor)

8.30–9.00	Anne Roivainen	Opening the course and introduction of Turku PET Centre
9.00–9.30	Mika Teräs	Radiation physics and safety
9.30–10.00	Olof Solin	Production of PET radionuclides
10.00–10.30	Olof Solin	Short history of radiochemistry
10.30–11.00	Semi Helin	¹¹ C radiochemistry
	<i>Lunch</i>	
12.00–12.20	Hannu Sipilä	¹⁵ O radiochemistry
12.20–12.50	Sarita Forsback	¹⁸ F radiochemistry
12.50–13.20	Cheng-Bin Yim	⁶⁸ Ga and ⁶⁴ Cu radiochemistry
	<i>Coffee break</i>	
13.40–14.10	Riikka Kivelä	Radiopharmacy and GMP guidelines for PET
14.10–14.40	Mika Teräs	PET instrumentation
14.40–15.10	Uygar Tuna	Image acquisition and reconstruction
15.10–16.00	<i>Visit to cyclotron and radiochemistry laboratory, PET Centre (building 14)</i>	

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Tuesday 9.4.2013SH-auditorium (Building 11A, 1st floor)

8.30–9.00	Tove Grönroos	Small animal imaging and pre-clinical evaluation of PET tracers
9.00–9.30	Anne Roivainen	Radiometabolism and quantification
9.30–10.00	Jarkko Johansson	Quantification of PET
10.00–10.30	Jussi Hirvonen	SPM analysis and normalization of brain PET images
10.30–11.00	Sergey Nesterov	Demonstration of PET image analysis
	<i>Lunch</i>	
12.00–12.30	Sami Kajander	Multimodality imaging using CT, MRI and PET
12.30–13.00	Kari Kalliokoski	Imaging of exercise responses with PET
13.00–13.30	Jussi Hirvonen	Neurotransmitter systems studied with PET
	<i>Coffee break</i>	
13.50–14.20	Juha Rinne	PET in clinical neurology
14.20–14.50	Merja Haaparanta-Solin	Neuroimaging of small animals with PET
15.15–16.00	<i>Visit to preclinical laboratories, BioCity, Tykistökatu 6</i>	

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Wednesday 10.4.2013New Auditorium of T Hospital (Building 18, 1st floor)

9.00–9.30	Juhani Knuuti	PET in clinical cardiology
9.30–10.00	Antti Saraste	Pre-clinical cardiovascular research
10.00–11.00	Pirjo Nuutila	PET in clinical endocrinology and metabolic research
	<i>Lunch</i>	
12.00–13.00	Jukka Kemppainen	PET in cancer diagnosis and therapy
13.00–13.30	Heikki Minn	Oncological research
	<i>Coffee break</i>	
13.50–14.20	Marko Seppänen	PET imaging of infection/inflammation
14.20–14.50	Anne Roivainen	Preclinical inflammation research
14.50–15.00	Anne Roivainen	Closing words
15.00–16.00	<i>Visit to PET scanners and clinical chemistry laboratory, PET Centre (building 14)</i>	