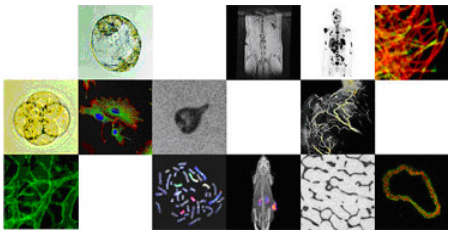
Molecular Medicine
Postgraduate School



AMIE
Applied Molecular Imaging Erasmus MC

PerkinElmer
For the Better

Programme Translational Imaging Workshop by AMIE
'From mouse to man'

vs v website 181112

Tuesday 20, Wednesday 21, Thursday 22 and Friday 23 November, 2018
(Friday 23 long practicals)

The programme *Applied Molecular Imaging at Erasmus MC (AMIE)*, organised together with the *Optical Imaging Centre (OIC) of Erasmus MC* provides a platform for scientists interested in imaging technology and molecular imaging in general.

The aim of this 4-day workshop is to give a broad introduction into preclinical and translational Molecular Imaging techniques and their applications in biology and medicine. This workshop is designed for PhD students and researchers in one of the Erasmus Postgraduate Schools; PhD students and researchers from other universities are also welcome. This workshop is being organized for the 11th time, following upon nine very successful workshops from 2008 till 2015.

The speakers from the Erasmus MC, the Leiden University Medical Centre (LUMC) and the Technical University Delft (TU Delft) have great expertise in animal and molecular imaging. The workshop will cover a wide array of imaging technologies, including:

- Optical imaging
- X-Ray Computed Tomography (CT)
- Magnetic resonance imaging (MRI)
- (Multimodality) Radionuclide imaging: PET and SPECT
- Photo Acoustics
- Ultrasound imaging
- Hyperpolarized MRI
- Photo dynamic diagnostics and therapy (PDT)
- Image Analysis
- Clinical applications

Several applications in translational research will be discussed, such as multi-modality detection, imaging of cancer, and imaging of vascular diseases. In addition to the lectures presented in the programme, practical demonstrations on the different imaging devices will be given in the newly realized Animal Imaging Facility, the AMIE Facility, designed to facilitate multi-modal animal imaging. SPECT/CT (U-SPECT/CT, NanoSPECT/CT), PET (Inveon), CT (Skyscan), optical (ICIS), and MRI (7T GE/Varian) imaging equipment are housed in a single complex.

On Friday, we offer the opportunity to the participants to do a long practical session during a full day. Limited admittance: first come, first serve.

The total number of participants in the course is limited to 50; the total number of participants in the demonstrations, lab visits and practical sessions on Friday is limited to 40. The latter are based on 'first come, first serve'. Tuition is €550 (including coffee, tea and lunches and a drink); however, most participants are expected to qualify for a (partial) scholarship. See the last page for details.

The workshop counts for **1,25 ECTS** credit points, including all lab visits, practical sessions and self study; **1,00 ECTS** without the practical session on Friday.

The location of the workshop is room Ae 4.06 (Erasmus MC). All lunches, coffee, tea and a drink are included.
Registration via the Website of MolMed: www.molmed.nl.

If you have any questions, please contact Frank van Vliet: +31 (0)10 704 3518 or + 31 (0)6 5474 6408 or Sharesma Ghiraw: +31 (0)10 703 8053 / molmed@erasmusmc.nl.

The organizing committee,

Monique Bernsen
Jeroen Essers
Joost Haeck
Marion de Jong
Klazina Kooiman
Gertjan Kremers
Clemens Löwik
Frank van Vliet

Tuesday November 20th; room Ae 4.06			
Time	**Speaker**	**Title**	**Key words**
09:00-09:30	*Registration*		
	Moderator: Monique Bernsen		
09:30-09:35	Monique Bernsen, Dept. of Nuclear Medicine&Radiology, Erasmus MC	Welcome and short introduction to the Translational Imaging Workshop	Applied Molecular Imaging at the Erasmus MC (AMIE)
09:35-10:05	Marlies Goorden, TU Delft	PET & SPECT imaging	*Tutorial:* Instrumentation
10:05-10:50	Yann Seimbille, Dept. of Nuclear Medicine&Radiology, Erasmus MC	Radiochemistry	*Tutorial:* Tracer, labeling, cyclotron, generator
10:50-11:00	*Coffee break*		
11:00-12:00	Louise van der Weerd, LUMC	Introduction to MRI and applications	Tutorial: physics, instrumentation, and applications
12:00-13:00	*Lunch break*		
	Moderator: Klazina Kooiman		
13:00-13:45	Marcel van Straten, Dept. Radiology & Nuclear Medicine Erasmus MC *OK 8/10*	X-Ray CT: Computed Tomography	Tutorial: physics, instrumentation, and applications
13:45-14:30	Laura Mezzanotte, Dept. of Radiology	Bioluminescence; New approaches and imaging	*Applications: BLI, activatable probes.*

	& Nuclear Medicine, Erasmus MC	tools	
14:30-14:40	*Coffee break*		
14:40-15:20	Clemens Löwik, Dept. of Radiology & Nuclear Medicine, Erasmus MC	Fluorescence; New approaches and imaging tools	*Applications:* Fluorescence Image Guided Surgery(FIGS); Combination Therapy with Immuno Therapy; transgene mouse models
15:20-16:00	Hans Bosch, Biomedical Engi-neering, Cardiology, Erasmus MC	Ultrasound imaging	*Tutorial:* Physics, instrumentation, and applications
16:00–16:40	Klazina Kooiman, Biomedical Eng., Cardiology,Erasmus MC	Contrast enhanced ultrasound imaging	Tutorial: Physics, instrumentation, and applications
16:40 - …	***Welcome drinks for all participants and speakers, offered by the Postgraduate School Molecular Medicine***		

Wednesday, November 21st; room Ae 4.06			
Time	**Speaker**	**Title**	**Key words**
	Moderator: Jeroen Essers		
09:15-09:55	Timo ten Hagen, Surgical Oncology, Erasmus MC	Intravital Imaging; targeted nanocarriers for imaging and therapy	*Applications:* intravital microscopy, cancer, confocal, intratumoral, multifunctional lipid-nanocarriers, inflammation
09:55-10:35	Sophinese Iskander-Rizk, Dept. of Biomedical Engineering/ Cardi-ology, Erasmus	Physics of photoacoustic imaging	Acoustic vs. optical resolution, endogenous vs. exogenous contrast, microvessels and flow, oxygen saturation, tissue spectroscopy
10:35-10:50	*Coffee break*		
10:50-11:30	*(T.b.d.),* Biomedical Imaging group Rotterdam, Depts. of Radiology & Medical Informatics, Erasmus MC	Image Analysis	Applications: Quantitative image analysis; Multimodal image analysis; Image registration
11:30-12:10	Frans Meijers, Dept.Animal Facility Erasmus MC (EDC)	Animal facilities and animal imaging; animal models	*Applications*
12:10-13:00	*Lunch break*		
12:10-13:00	Short visits to the CAVE (3-D) in 3 groups (A. Koning, via corridor Ee 15.28-15.42)		
Session 1; 13:00-14:00	Group1	CT - Optical Imaging	
	Group2	SPECT-PET	
	Group3	Ultrasound	
	Group4	MRI	
Session 2; 14:00-15:00	Group1	MRI	
	Group2	CT - Optical Imaging	
	Group3	SPECT-PET	
	Group4	Ultrasound	
Session 3; 15:00 – 16:00	Group1	Ultrasound	
	Group2	MRI	
	Group3	CT - Optical Imaging	

	Group4	SPECT-PET
Session 4; 16:00 – 17:00	Group1	SPECT-PET
	Group2	Ultrasound
	Group3	MRI
	Group4	CT - Optical Imaging

Thursday, November 22nd; room Ae 4.06			
	Moderator Edwin Oei		
Time	**Speaker**	**Title**	**Introduction or application; Key words**

10:00 – 17:00

ACE molecular and cellular imaging presents:

Translational imaging symposium

In association with OIC and AMIE.

Speakers tbd

Friday, November 23rd			
	Moderator: Marion de Jong, Dept. of Nuclear Medicine, Erasmus MC		
Time	**Speaker**	**Title**	**Application**
09:00-12:00	Coordination: Jeroen Essers	Demonstration with experiments for admitted applicants. *First come, first serve-basis. Please subscribe during the workshop.*	SPECT-MRI ½ day CT–Optical imaging ½ day Ultrasound (**Ee 23.16**) ½ day *All depending on demand & availability*
12:00	*Lunch break*		
13:00–14:00	**'Quiz master': Joost Haeck, Erasmus MC**		

Attendance fees

Course tuition for non-commercial participants is **€ 550**. Discounts are handled as followed:

- Participants from the postgraduate school MolMed get a discount of **100%** (tuition = **€0**).
- PhD students and Master's students, regardless of institution, get a discount of **50%** (tuition = **€275**).
- Master's students who are paying the fee from their personal budget get a discount of **75%** (tuition = **€137,50**).
- For Research Master's students for whom the program is paying the fee, the tuition is €100/ECTS so €100,- or €125,-.

participant category	discount	tuition
Full-tuition, non-commercial	0%	€ 550
Members of MolMed	100%	€ 0
PhD students, Master's students (regardless of institute)	50%	€ 275
Master's students paying the tuition from their personal budget	75%	€ 137,50

The course is considered an entirety, and participants are encouraged to attend all parts of the course. No discounts are given for participants who chose not to participate in a portion of the course. If these financial requirements pose a problem, please contact Frank van Vliet, managing director of the Erasmus Postgraduate School Mol Med, at: f.vanvliet@erasmusmc.nl.

Invoices

Fees should only be paid after receipt of an INVOICE. Shortly after your registration you will receive the INVOICE by mail. Payment should be transferred together with the invoice number noted. Late registrations may also pay in cash upon arrival.

Cancellations

Cancellation is possible up to one week before the start of the Course. Later cancellation will not be accepted, but you are allowed to send a substitute.

Commercial participants & sponsors

Companies are invited to inquire about commercial participant tuition fees and about sponsoring.