molecular imaging Summer School

info@molimg.gr

12-16 Sept. 2005

Organized by:

MOLECULAR-IMAGING Integrated Project
DiMI Network of Excellence and **EMIL** Network of Excellence

MolecularImaging Integrated Project
Coordinator: ***Eleftherios N. Economou*** *(FORTH)*

http://www.molimg.gr
Integrated Technologies for in-vivo molecular imaging

EMIL Network of Excellence
Coordinator: ***Bertrand Tavitian*** *(CEA – SHFJ)*

http://www.emilnet.org
European Molecular Imaging Laboratories

DiMI Network of Excellence
Coordinator: ***Andreas Jacobs*** *(U. of Cologne)*

http://www.diagnostic-molecular-imaging.org
An European Network of Excellence for the development of new molecular imaging strategies aiming to improve the diagnostic and therapy of human diseases.

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Objective

The objective of this summer school is to bring together experts in all aspects related to molecular imaging and offer them the possibility to establish common grounds and enough common background to enhance the interaction between the different disciplines involved. To that end, both participants and lecturers will cover the whole spectrum of disciplines involved in molecular imaging, i.e. those devoted to the development of novel imaging systems, those devoted to probe development and those that make use of molecular imaging approaches to answer specific questions in biology and medicine. This will be achieved through short lectures that will be addressed to a general and non-specialized audience in order to promote discussion related to how and in what manner could different problems in biology and medicine be addressed.

Participation

Early stage and experienced researchers of all disciplines are invited to participate.

Duration

The summer school will start on the **morning of Monday the 12th of September 2005 and will end in the evening of Friday the 16th**. We recommend participants to schedule their arrival for the 11th and departure for the 17th of September.

Location

The school will be held in Kolympari, Chania, Crete, where accommodation will be arranged for the nights of the 11th through the 16th of September.

Registration

Please register as soon as possible, since only a limited number of participants will be accepted. **The deadline for registration is the 31st of May 2005**. You may register at: http://www.molimg.gr/mischool05/mischool05_reg.htm

Accommodation Fees

- In a **single room**, per person per day: **105 Euro**
- In a **double room**, per person per day: **80 Euro**

These prices include accommodation (rooms with private bathroom each, most with air-conditioning and sea-view), full board (breakfast, lunch and dinner - the two latter according to Cretan cuisine and accompanied with local wine and fruit or other dessert), and two coffee/tea-breaks.

More Info

For more information please check:
http://www.molimg.gr/mischool05.htm
or email: info@molimg.gr

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List of Lectures and Speakers

PRINCIPLES OF IMAGING

- *Multidimensional Fluorescence Imaging*, **Paul French** (Imperial College London)
- *Tomographic Approaches in Microscopy*, **James Sharpe** (HGU-MRC)
- *Whole Animal Optical Imaging*, **Vasilis Ntziachristos** (CMIR – MGH)
- *Nuclear imaging (PET/SPECT)*, **Bertrand Tavitian** (CEA - SHFJ)
- *Magnetic Resonance Imaging*, **Robert Müller** (U. of Mons-Hainaut)
- *Ultrasound Imaging*, **Pascal Laugier** (CNRS)
- *High Resolution X-ray micro-CT : biomedical applications*, **Nora de Clerck** (U. Antwerp)
- *Principles of Light Propagation*, **Remi Carminati** (École Central Paris)
- *Principles of Scanning Force Microscopy*, **Juan Jose Saenz** (Univ. Autónoma de Madrid)
- *Principles of FRET*, **Dorus Gadella** (U. of Amsterdam)
- *Intravital Microscopy*, **Jens Stein** (Univ. of Bern)
- *Optical Microscopy*, **Mark Neil** (Imperial College London)
- *Photobleaching Approaches (FRAP, FLIP)*, **Maria Carmo-Fonseca** (IMM, Univ. Lisbon)

INTRODUCTION TO BIOLOGY

- *Developmental biology*, **Miguel Torres** (CNB – CSIC)
- *Cellular Imaging*, **Dorus Gadella** (U. of Amsterdam)
- *Imaging the Central Nervous System*, **Annemie van der Linden** (U. of Antwerp)
- *Imaging DNA-protein complexes and molecular mechanisms*, **Claire Wyman** (Erasmus Med. Center Rotterdam)
- *Optical imaging of endogenous transcriptional regulation*, **Harald Carlson** (U. of Oslo)
- *Applications of Molecular Imaging: visualization of microtubule dynamics in mouse testis in health and disease,* **Neils Galjart** (Erasmus University)
- *Construction of animal models for imaging*, **Nicole Déglon** (CEA)
- *Imaging Nuclear Complexes*, **Udo Spöri** (Kirchhoff Institute of Physics)

- *Imaging and manipulating gene expression in the brain*, **Dusan Bartsch** (C. Inst. of Mental Health)

To be Confirmed:
- *title to be announced*, **Keith Roberts** (John Innes Centre)
- *Radionuclide Imaging in Atherscleros*is, **Michael Schäfers** (U. of Münster)

PROBE DESIGN

- *Probe Design and Fluorescent Biosensors*, **Carsten Schultz** (EMBL)
- *Short-lived positron-emitting radiotracers,* **Frédéric Dollé** (CEA)
- *Fluorescent Proteins*, **Konstantin Lukyanov** (IBCH – Moscow)
- *New Magnetic Probes*, **Silvio Aime** (U. of Torino)

MEDICAL APPLICATIONS

- *Gene Therapy*, **Andreas Jacobs** (U. of Cologne)
- *Drug Development*, **Bertrand Tavitian** (CEA - SHFJ)
- *Optical imaging for experimental tumor detection*, **Clemens Lowik** (Leiden University)
- *Optical Methods in Breast Cancer*, **Christoph Bremer** (Univ. of Münster)