

Educational workshop of selected topics on molecular imaging - How does it work and what is new?

Programme

Thursday, May 7, 2009

13:00 – 13:15 hrs **Welcome**
Prof. Milan Hájek, Prague/CZ

13:15 – 15:00 hrs **Session 1**
Novel Imaging Technologies
Introduction and chair: Dr. Wilfried Reichardt, Freiburg/DE

Molecular imaging by using of MR
Dr. Wilfried Reichardt, Freiburg/DE

Detection and quantification of Langerhans islets
Dr. Daniel Jirák, Prague/CZ

Studies of intervertebrate disc by gagCEST, DQF and other MRI methods
Prof. Gil Navon, Tel Aviv/IL

**Fusion of optical, nuclear and structural whole-body small animal imaging:
Software development towards evaluation of cell therapy**
Dr. Boudewijn Lelieveldt, Leiden/NL

Detection and quantification of labelled cells in vitro
Dr. Jolanda de Vries, Nijmegen/NL

Imaging of de novo brain tissue formation
Prof. Mike Modo, London/UK

Discussion, exchange of experiences and news

15:00 – 15:15 hrs **Break**

15:15 – 16:45 hrs **Session 2**
Novel Imaging Reporters Probes
Introduction and chair: Prof. Silvio Aime, Torino/IT

Probes for Cellular Imaging: where we stand and where to go
Prof. Silvio Aime, Torino/IT

Synthesis and characterisation of iron oxide nanoparticles for molecular imaging
Dr. Jean-Luc Bridot, Mons/BE

Influence of ferritin and maghemite particles on water relaxation
Dr. Yves Gossuin, Mons/BE

Gd-lipid nanoparticles as intra-cellular imaging probe
Dr. Monique Bernsen, Rotterdam/NL

Paramagnetic CEST agents in Molecular Imaging
Dr. Daniela Dellicastelli, Torino/IT

Discussion, exchange of experiences and news

Friday, May 8, 2009

09:00 – 10:30 hrs

Session 3

Novel Tools for Cell Labelling

Introduction and chair: Prof. Michal Neeman, Rehovot/IL

Novel tools for cell labelling

Prof. Michal Neeman, Rehovot/IL

Methods of cell labelling

Prof. Eva Syková, Prague/CZ

Can magnetic targeting of magnetically labelled circulating cells optimise intramyocardial cell engraftment?

Prof. Olivier Clément, Paris/FR

19F labelling and imaging of neural stem cells

Dr. Bhavana Solanky, London/UK

Cell specific MR imaging of stem cells

Dr. Chantal Brüggemann, Cologne/DE

New exciting approach to label T-cells by membrane bound luciferase

Prof. Clemens Löwik, Leiden/NL

Discussion, exchange of experiences and news

10:30 – 10:45 hrs

Break

10:45 – 12:30 hrs

Session 4

Preclinical Validation

Introduction and chair: Dr. Monique Bernsen, Rotterdam/NL

In vivo cell tracking: Where do we stand?

Dr. Monique Bernsen, Rotterdam/NL

Optical MI - how it works.

Prof. Clemens Löwik, Leiden/NL; Prof. Peter Friedl, Nijmegen/NL

In vivo stem cell tracking in the myocardium of small laboratory animals:

Feasibility and acquisition strategies on clinical Magnetic Resonance Imaging (MRI) systems

Dr. Piotr Wielopolski, Rotterdam/NL

3D optical imaging for endogenous cell migration after stroke

Dr. Tracy Farr, Cologne/DE

Following lymphocytes migration to lymph nodes

Dr. Tatiana Gorletta, Milano/IT

2-photon microscopy and the analysis of cell death in tumour draining lymph nodes

Prof. Sébastien Amigorena, Paris/FR

Discussion, exchange of experiences and news

12:30 – 13:30 hrs

Lunch

13:30 – 15:00 hrs

Session 5

Translation towards Clinical Applications

Introduction and chair: Dr. Jolanda de Vries, Nijmegen/NL

Visualisation of dendritic cells and their effects in cancer patients

Dr. Jolanda de Vries, Nijmegen/NL

In vivo Targeting of Dendritic Cells to Lymphoid Organs via RNA transfection of

E/L-Selectin Homing Receptor: preclinical and first clinical results

Prof. Eckhart Kämpgen, Erlangen/DE

In vivo model of orthotopic cancer growth and therapy-induced regression

Prof. Peter Friedl, Nijmegen/NL

Cell transplantation – current status of pancreatic islets and beta cell transplantation

Prof. Frantisek Saudek, Prague/CZ

Discussion, exchange of experiences and news

15:00 hrs

Wrap-up and closing

Prof. Milan Hájek, Prague/CZ