

PRECLINICAL IMAGING IN SMALL LABORATORY ANIMALS

The German Society of Nuclear Medicine (DGN), in cooperation with the Academy of Molecular Imaging (AMI) and the European Society for Molecular Imaging (ESMI), have established a curriculum for Preclinical Molecular Imaging. The objective is to train scientists and technologists in preclinical molecular imaging covering current technologies available to monitor rodents in vivo. The curriculum covers basic and advanced theory, including kinetic modelling and quantitative image analysis as well as basic and advanced imaging practice and animal handling. The curriculum is subdivided into 4 modules. Upon successful completion, the attendee will receive a certificate of attendance.

The curriculum is organised by the DGN Committee „Molecular Imaging in Preclinical Research“ under the auspices of Prof. Dr. Bernd Pichler, Tübingen. Modules I & II will be offered during future DGN congresses as well as during events of AMI and ESMI. Practical training (Module III) will be offered by various imaging labs.

The participants can choose the order in which they complete the modules. You can attend Module IV this year, and Modules I&II and/or III the following year(s).

The curriculum targets the following groups:

- * Biologists
- * Physicians
- * Physicist
- * Chemists
- * Biochemists
- * Technologists

Written Examinations after Modules I&II and Module IV

“Basic Certificate in Preclinical Imaging”
after Completion of Modules I&II and III

“Advanced Certificate in Preclinical Imaging”
after Completion of Module IV

Costs: Module I & II: 140 EUR
Module III: 700 EUR
Module IV: 500 EUR

Module I:
Animal Use & Care (3 hours)

Module II:
Non-Invasive Small Animal Imaging (7 hours)

Module III:
Specific In-Depth Practical Training (5 days)

Module IV:
Quantitative Image Analysis & Application
Specific Imaging (4 days)

For more information about topics and dates of the modules of the curriculum, visit the DGN Homepage:

[www.nuklearmedizin.de/Leistungen und Informationen/Qualifizierung und Weiterbildung/Workshop „Preclinical Imaging“](http://www.nuklearmedizin.de/Leistungen%20und%20Informationen/Qualifizierung%20und%20Weiterbildung/Workshop%20„Preclinical%20Imaging“)

Module IV:

Quantitative Image Analysis & Application
Specific Imaging

Venue: Festival Centre Bregenz
Platz der Wiener Symphoniker 1
A – 6900 Bregenz
Room Bodensee

Date: Monday, April 11 to Thursday, April 14, 2011

Registration fee: 500 EUR

Scientific Organisation:

DGN Committee
„Molecular Imaging in Preclinical Research“
Chair: Prof. Dr. Bernd Pichler, Tübingen

Information/Organisation:

vokativ GmbH
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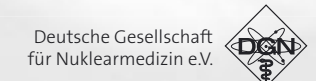
Preclinical Imaging in Small Laboratory Animals

Module IV:

QUANTITATIVE IMAGE ANALYSIS
& APPLICATION SPECIFIC IMAGING

APRIL 11-14, 2011
FESTIVAL CENTRE BREGENZ
ROOM BODENSEE

Part of the



Partners



Monday, April 11

Topic: Radiochemistry and biomarkers

9:00-9:45 a.m.

Radioisotopes for imaging applications: Physical properties
H.H. Coenen

9:45-10:30 a.m.

Radiopharmaceutical chemistry with halogen isotopes
J. Ermert

10:30-10:45 a.m.

Coffee break

10:45-11:30 a.m.

Chemistry aspects related to labeling approaches with metal radionuclides
H.-J. Pietzsch

11:30 a.m.-12:15 p.m.

PET and SPECT labeling of peptides, proteins and antibodies
R. Haubner

12:15-1:15 p.m.

Lunch break

1:15-2:45 p.m.

Radiopharmaceuticals (F-18, C-11)
S. Ametamey

2:45-3:00 p.m.

Coffee break

3:00-3:45 p.m.

Quality control
R. Haubner

3:45-5:15 p.m.

Biomarkers for MR
N.N.

Tuesday, April 12

Topic: Radiochemistry and biomarkers

8:00-9:00 a.m.

Biomarkers for optical imaging and ultrasound
N.N.

9:00-9:45 a.m.

Physiological and pharmacological aspects of radiotracer distribution in brain imaging studies
P.J. Riss

9:45-10:30 a.m.

Optimization of radiolabelled peptides demonstrated on RGD peptides
R. Haubner

10:30-10:45 a.m.

Coffee break

10:45-11:30 a.m.

Radiopeptides, examples
J. Notni and M. Schottelius

11:30 a.m.-12:15 p.m.

Quirks and Tweaks
O. Prante and H.J. Wester

12:15-1:15 p.m.

Lunch break

Topic: Quantitative image analysis and kinetic modelling I

1:15-4:30 p.m.

Speakers: J. van den Hoff and R. Buchert

- Topics:
- PET measurement process
 - image reconstruction, calibration
 - quantitation errors
 - ROI- and pixel-based evaluation
 - mathematical tools
 - tracer kinetic modelling (introduction): compartment models, input/response function

2:45-3:00 p.m.

Coffee break

Wednesday, April 13, 8:30-4:30 p.m.

Topic: Quantitative image analysis and kinetic modelling II

Speakers: J. van den Hoff and R. Buchert

- Topics:
- tracer kinetic modelling (cont'd): perfusion, reversible and irreversible binding, reference tissue models, parametric maps
 - Michaelis-Menten (rate constants vs MM parameters)
 - sensitivity analysis
 - model comparison (Akaike, F-test)
 - statistical maps

10:30-10:45 a.m.

Coffee break

12:15-1:15 p.m.

Lunch break

2:45-3:00 p.m.

Coffee break

Thursday, April 14

Topic: Disease specific imaging

8:00-8:45 a.m.

Disease specific imaging: Oncology - I
F. Kießling

8:45-9:15 a.m.

Disease specific imaging: Oncology - II
W. Weber

9:15-10:00 a.m.

Disease specific imaging: Cardiology
M. Schäfers

10:00-10:45 a.m.

Disease specific imaging: Neurology
P.T. Meier

10:45-11:00 a.m.

Coffee break

11:00-11:30 a.m.

Written exam



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