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- *Prof. Dr. rer. nat. Lothar Schad*
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- *Prof. Dr. med. Rolf-Detlef Treede*
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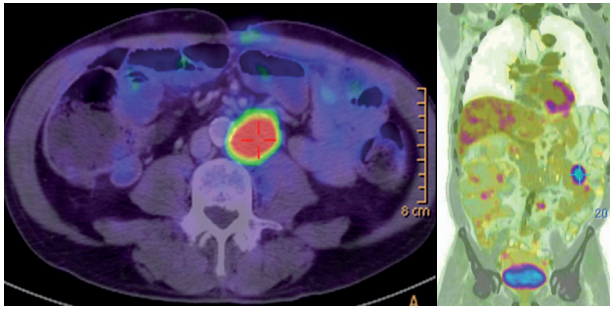

Saturday, 28. March 2009

University Medical Center, Mannheim
Lecture hall H07 (ZMF Haus 42, Ebene 1)

UMM
UNIVERSITÄTSMEDIZIN MANNHEIM

In Cooperation with:
Akademie für Fort- und Weiterbildung in der Radiologie

IKRN Institut für Klinische Radiologie und Nuklearmedizin

Invitation:

Over the past decades, advancements in imaging technology have substantially broadened the range of imaging procedures. Current techniques provide improved resolution and more detailed images of organs and tissues than previously. With CT, ultrasound and MRI it has become possible to provide important structural and anatomic information. These techniques enable the radiologist to differentiate malignant from benign lesions, rule out the possibility of metastatic spread and assist in accurately staging the patient and performing biopsies. During the past 20 years there has been a rapid development of basic molecular techniques. These advancements have allowed scientists to explore and sequence human genes, elucidate molecular pathways, automate DNA sequencing, determine protein specific causes of disease, develop transgenic animal models, and use cell lines to test drugs and therapies.

Molecular imaging allows visualization of physiology, cellular and molecular processes in living tissue. These newly developed techniques allow visualization and quantification of clinically relevant physiologic variables such as blood flow, oxygen consumption, glucose metabolism, proliferative activity, and tissue hypoxia in living cells. Molecular imaging can identify important and key molecular structures and receptors that cover the surface of tumors. To facilitate the development of molecular imaging technologies there have been developments in image enhancement agents, imaging probes, and imaging ligands. In imaging, animal models of cancer are making it possible to perform certain kinds of studies that are difficult to perform in humans. Animal models will enable imaging technology improvements that then can eventually be applied for cancer patient care.

PET-CT is already a new clinical standard and has undergone remarkable improvements in terms of speed, spatial resolution and anatomic coverage. Additionally, first results are available for new hybrid systems uniting PET with unique advantages of magnetic resonance imaging. With this technology, it is possible to directly translate this molecular information into better clinical management of the patient.

Molecular imaging is a multidisciplinary enterprise and needs a multidisciplinary approach. The Institute of Clinical Radiology and Nuclear Medicine at the University Hospital Mannheim is pleased to invite you to the first meeting in “Molecular Imaging: Technical Advances and Translation to Clinical Practice” in March 2009. This symposium aims at addressing these important tasks and would like to welcome all who share our interest in the discovery and translation of new diagnostic and therapeutic approaches. We are pleased to offer you a very attractive and innovative program.

Prof. Dr. Stefan Schönberg PD Dr. Christian Fink Dr. Maliha Sadick

9.00 – 9.05 Introduction
Welcome of the vice dean of research,
Prof. Dr. med. Frederik Wenz, UMM

9.05 – 9.30 State-of-the-art lecture

Chairmen: *Prof. Dr. med. Stefan Schönberg, UMM*
Prof. Dr. Dr. h.c. Klaus van Ackern, UMM

9.05 – 9.25 Molecular Imaging in Oncology,
Prof. Dr. med. Fabian Kiessling, Aachen

9.25 – 9.30 DISCUSSION

9.30 – 10.30 Advances in molecular magnetic resonance imaging

Chairmen: *PD Dr. med. Henrik Michaely, UMM*
PD Dr. med. Bernd Taupitz, Berlin

9.30 – 9.45 Advances in ultra high-field spectroscopy,
Dr. med. Stefan Kirsch, UMM

9.45 – 10.05 Ultra high-field MRI. from morphology to meta-bolism, *Dr. med. Michael Bock, DKFZ*

10.05 – 10.20 Assessment of functional renal disorders with dynamic MRI and optical imaging,
Dr. med. Maliha Sadick, UMM

10.20 – 10.30 DISCUSSION

10.30 – 11.00 **Coffe break**

11.00 – 12.30 Advances in PET and PET-CT – Clinical innovation

Chairmen: *PD Dr. med. Christian Fink, UMM*
Prof. Dr. med. Rolf-Detlef Treede, UMM

11.00 – 11.20 Current clinical tracers for PET in oncology,
Dr. med. Dietmar Dinter, UMM

11.20 – 11.40 Design of new tracers for oncologic PET,
PD Dr. rer. nat. Bernd Neumaier, Köln

11.40 – 12.00 PET imaging of neurological disorders,
Prof. Dr. med. Mathias Schreckenberger, Mainz

12.00 – 12.20 Design of new tracers for neurodegenerative diseases, *Prof. Dr. med. Samuel Samnick, Würzburg*

12.20 – 12.30 DISCUSSION

12.30 – 13.30 **lunch – Visit of the center for medical research**

13.30– 14.30 Advances in PET and PET-CT – Technical innovation

Chairmen: *Prof. Dr. rer. nat.Gunnar Brix, Neuherberg*
Prof. Dr. rer. nat. Jürgen Hesser, UMM

13.30 – 13.50 PET-CT. from unclear to nuclear medicine,
PD. Dipl. Phys. Thomas Beyer, Zürich

13.50 – 14.05 MR-PET. a clinical perspective,
Prof. Dr. med. Heinz-Peter Schlemmer, Tübingen

14.05 – 14.20 New technical developments,
Prof. Dr. med. Bernd Pichler, Tübingen

14.20 – 14.30 DISCUSSION

14.30 – 15.10 Advances in probe design

Chairmen: *Prof. Dr. med. Norbert Gretz, UMM*
Dr. med. Maliha Sadick, UMM

14.30 – 14.45 Live cell tracking with new probes, *Prof. Dr. rer. nat. Mathias Hafner, Hochschule Mannheim*

14.45 – 15.05 Development of new targeted tracers for PET,
PD Dr. rer. nat. Gerald Reischl, Tübingen

15.05 – 15.15 Measurement of transcription factor activity in pancreatic carcinoma – potential targets for molecular imaging? *Dr. med. Hany Kayed, UMM*

15.15 – 15.25 DISCUSSION

15.25 – 15.30 SUMMARY
Prof. Dr. med. Stefan Schönberg, UMM

Registration and Information:

Scientific secretariat:

Renate Hubert
Institute of Clinical Radiology and Nuclear Medicine
University Medical Center Mannheim, University of Heidelberg
Theodor-Kutzer-Ufer 1-3, D-68167 Mannheim
Tel.: (+49) (+621) 383 - 2067
Fax: (+49) (+621) 383 - 3817
E-Mail: renate.hubert@rad.ma.uni-heidelberg.de

Registration fee: none

CME-Accreditation:

The symposium is CME accredited in cooperation with the board of German Board Radiologists and the Roentgen Ray Society for continuous medical education.