

Barcelona, Spain

Annual Congress of the
European Association of Nuclear Medicine

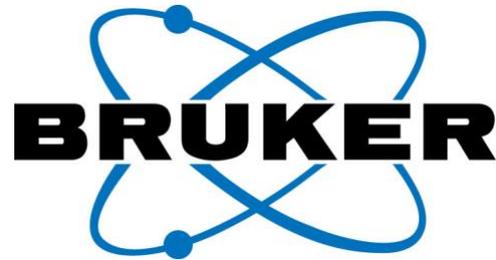
October 12 – 16, 2019
Barcelona, Spain

Satellite Symposium

BRUKER

Sunday, October 13, 13:00-14:30

Lecture Hall 116, Level P1



Session Title

The Continued Value of Hybrid Imaging in Nuclear Molecular Research

Chairperson:

Dr. Geoffrey Warnock – PMOD Technologies

Dr. Michael Heidenreich – Bruker Nuclear Molecular Imaging

Programme

13:00-13:10 **Welcome & Introduction**

Dr. Wulf-Ingo Jung – President Bruker BioSpin PCI

Dr. Michael Heidenreich - Head of Nuclear Molecular Imaging, Bruker BioSpin PCI

13:10 – 13:30 **Molecular Imaging with μ PET/SPECT/CT : An essential tool for clinical translation**

Dr. David Viertl and Prof. John O. Prior, Nuclear Medicine and Molecular Imaging, Lausanne University Hospital, Switzerland

Abstract: Among all the imaging modalities for small-animal preclinical studies, PET and SPECT have unbeaten sensitivity and ability to produce quantitative images with no limit of depth with high spatial and dynamic resolutions. The microPET/SPECT/CT systems have become important research and preclinical tools to characterize and follow-up of healthy or pathological processes in oncology or cardiology for example. Moreover, microPET/SPECT/CT can be used in a "bench-to-bedside" approach and a reverse "bedside-to-bench" one, because clinical protocols can also be applied to mouse models with novel research questions. In this presentation, we aim to show the broad range of applications that microPET/SPECT/CT systems have and specifically their use on the translational research done at the Department of Nuclear Medicine and Molecular Imaging of the Lausanne University Hospital

Barcelona, Spain

Annual Congress of the
European Association of Nuclear Medicine

October 12 – 16, 2019
Barcelona, Spain

13:35 – 13:55 **Recent experiences with small-bore simultaneous PET/MR**

Peter Caravan, PhD – Harvard Medical School and Martinos Center for Biomedical Imaging

Abstract: Simultaneous PET/MR imaging offers numerous advantages compared to either modality executed alone or in sequence. We have had over 10 years experience in using large bore PET/MR systems at our institution but have only recently begun using a small-bore system. This presentation will describe our recent experiences in small animal imaging applications with simultaneous PET-MR. Specifically, applications in multiparametric imaging of thrombosis, stroke, and fibrosis will be discussed. Another application enabled by PET/MR is that of dual modality molecular probes. This application demonstrates how PET/MR can be used to assess the fate of MRI contrast agents as well as quantitative imaging of pH enabled by this new technology.

14:00 – 14:20 **Looking on the bright side of the brain – Integration of molecular quantification and functional neuroimaging**

Prof. Rupert Lanzenberger, MD PD - Head of Neuroimaging Labs, Medical University of Vienna

Abstract: Multimodal neuroimaging with PET/MR hybrid systems provide a unique tool to investigate both complex functional and molecular changes in the human brain in vivo. New analyses approaches support the integration of quantitative data regarding receptors, transporters and enzymes with functional data as brain activation patterns and brain connectivity measured by resting-state functional MRI. Neuropharmacological challenges are highly potent research approaches to link dynamic patterns of different imaging modalities.