

Joint Symposium 21

Drug Development + Physics Committee / Institute of Electrical and Electronics Engineers - Nuclear and Plasma Sciences Society (IEEE NPSS)

Friday, October 30, 09:00-10:30

Session Title

Total Body PET Imaging

Chairperson

Luc Zimmer (Lyon, France)

Programme

09:00 - 09:29 Dimitris Visvikis (Brest, France / IEEE NPSS): Opportunities and Challenges for Dynamic Imaging with Total Body PET

09:29 – 09:58 Ronald Boellaard (Amsterdam, Netherlands): New Opportunities and Clinical Investigations That a Total Body PET Can Offer

09:58 - 10:27 Hanne D. Hansen (Boston, United States of America): Applications for Exploring Serotonergic Receptors and Drugs in the Periphery and Central Nervous System

Educational Objectives

1. To learn about challenges and opportunities of total body PET/CT systems.
2. To gain knowledge on what total body PET/CT systems imaging involves what may be the main advantages in terms of image qualitative and quantitative accuracy and subsequently what clinical and research opportunities total body PET/CT systems may offer
3. To gain insight into serotonergic receptors and drugs action upon them in the peripheral and central nervous system

Summary

Total body PET/CT systems refer to a new development in PET/CT system design with extended axial field of view of 70 cm or more. These systems are based on existing PET detector technologies, but have an excellent sensitivity due to larger axial field of view and cover a large portion of the body. The improved sensitivity and large anatomical coverage offer unique new opportunities for research and clinical applications. In this lecture, opportunities and challenges of total body PET/CT imaging will be discussed. The presentation will also give an overview of the serotonergic imaging of the peripheral and central nervous system as well as an overview of how PET can be used in the drug development process.

Key Words

Total body PET/CT; sensitivity; axial field of view; new research opportunities; PET imaging; nuclear practices; serotonin