

Learning & Improve Professional Skills (LIPS) Track - Session 5

Translational Molecular Imaging & Therapy + Radiopharmaceutical Sciences Committee

Monday, October 17, 08:00-09:30

Session Title

Challenging Situations in TMI&T

Chairpersons

Pedro Fragoso Costa (Essen, Germany)

Sofia Carrilho Vaz (Lisbon, Portugal)

Programme

08:00 - 08:20 **Tessa Buckle** (Leiden, Netherlands): Technology vs Clinical Needs - What Drives Translational Research?

08:20 - 08:40 **Petra Kolenc** (Ljubljana, Slovenia): Regulatory Hurdles and Directions Along the Translational Pipeline

08:40 - 09:00 **Wolfgang Fendler** (Essen, Germany): Ownership of Clinical Studies - What is the Role of Nuclear Medicine?

09:00 - 09:20 **Thomas Wendler** (Munich, Germany): Building a Business Case

09:20 - 09:30 Discussion

Educational Objectives

1. Describe the current technological developments that are involved in translation of basic science into clinical research
2. Understand the current clinical landscape and identify opportunities that will allow the translation of basic science into clinical research
3. Describe the steps involved in regulation of medical products
4. Understand the role that nuclear medicine may play in the context of clinical research
5. Describe the fundamental concepts of a business case in translational research

Summary

Translational research is shaping the landscape of the medical field, by integrating basic scientific findings in a timely and effective manner into clinical routine. The field of nuclear medicine has always been supported by researchers of various backgrounds, bundling their respective expertise and thus making nuclear medicine a robust and innovative medical specialty that is able to provide precision medical tools for many patients.

However, before these diagnostic or therapeutic agents can find their application in the clinical domain, translational scientists need to perform a long and strenuous cascade of chemical and radiochemical optimizations as well as extensive in vitro and in vivo testing to ensure both targeting efficiency and

therapeutic efficacy, and to characterize potential adverse effects. And although these processes have many quality checkpoints, many of these agents never find the light of clinics.

This session will focus different steps of translational research, and address current challenges and fundamental processes. Starting from the main motivation for translating devices and agents from basic research to the clinical field, we will address the binary relationship between technological advances and clinical needs. On a second talk, the regulatory aspects of implementation of investigational agents and devices will be explored, giving insight into the possible challenges that this may pose to basic research scientists. On a further talk, we will expose the role of nuclear medicine in actual multicenter trials and how the specialty is changing the landscape of patient care. Finally, we will introduce basic business plan notions in the form of some success cases in the recent story of nuclear medicine.

Key Words

Innovation, Image-Guided Surgery, Preclinical Imaging, Molecular Imaging, Translational Sciences, Instrumentation and Methodologies, Clinical Research

NB: This session won't be interactive.