Teaching Session 6
Translational Molecular Imaging & Therapy + Drug Development + Radiopharmacy + Technologists Committee
Accessible on-demand at any time

Session Title
Animal Models - Technical Considerations and Recommendations

Chairperson
Latifa Rbah-Vidal (Nantes, France)

Programme
29 min  Christina Baun (Odense, Denmark): Animal models: general aspects
29 min  Magali Toussaint (Leipzig, Germany): Animal models for the evaluation of radiopharmaceuticals
29 min  Theresa Balber (Vienna, Austria): How to avoid errors in translation?
3 min   Session Summary by Chairperson

Educational Objectives
1. Address general aspects of preclinical models used in molecular imaging as well as in radiotherapy.
2. Describe the preclinical evaluation steps needed for new radiolabelled compounds evaluation.
3. Summarize relevant parameters to take into account to conduct appropriate preclinical studies.
4. Understand the importance of adequate interpretation of data to avoid errors in translation of preclinical outcomes.

Summary
As the nuclear medicine community strives to make the promise of personalised medicine a reality, it is more essential than ever to have highly relevant translational models to recapitulate human disease. Indeed, personalized medicine aims to identify the predictive factors of a disease at the patient level and animal models can be an essential element if they meet certain key criteria.

In addition of choosing the right animal model, the evaluation of potential new radiopharmaceuticals requires consideration of animal model-specific differences (in terms of target expression and distribution, physiology, pharmacokinetics...) that may predict differences between preclinical and clinical observations, as well as the design of imaging or therapy protocols that are representative of clinical protocols.

This teaching session will therefore, be an opportunity to discuss the optimisation of preclinical approaches in experimentations, data interpretation and reporting with the aim of improving the translational power of new radiopharmaceutical candidates.

Key Words
Animal models, translation, radiopharmaceuticals