

Tuesday, 20<sup>th</sup> March, 12.00 pm, Seminar Room

*Host: Dr. Jordi Llop*

## **Optimizing the use of molecular imaging in early drug development**

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Early drug development considers closely the paradigm for securing later success as defined in the Three Pillars of Drug Development: drug access to target tissue, target engagement and demonstration of downstream pharmacology.

These important aspects may be evaluated in pre-clinical settings with options to access target tissue and potentials for cellular assays, but is in general less obvious in humans.

Here Molecular Imaging may give attractive opportunities with options to record the drug distribution, target expression and drug interaction and assessment of tissue cellular responses in quantitative terms and regionally in healthy and disease tissue.

This presentation will highlight options and limitations in the use of Molecular Imaging to record bio-distribution of drugs under development in human settings, including the application of microdosing.

The important opportunities of evaluation of target engagement and dose dependence and the use of adaptive dose finding designs will be covered, including the importance of PKPD-modeling.

Finally, the presentation will cover the use of imaging in recording tissue response to treatment in the early phases of clinical trials.

The presentation seeks to engage scientists in academia and pharma to consider novel and more flexible but data driven approaches to the development of new therapeutics.