Pre-Congress Symposium 8 (Drug Development/Neuroimaging)
Saturday, October 21, 13.00-16.00

Session Title
The Contribution of Imaging in the Exploration of Autism

Chairs
Luc Zimmer (Lyon)
Antony Gee (London)

Programme

13:00 - 13:20	Frédérique Bonnet-Brihault (Tours): Needs in Biomarkers for Autism Spectrum Disorder
13:20 - 13:40	Monica Zilbovicius (Paris): Social Brain and Autism
13:40 - 14:00	Alessandra Retico (Pisa): What Can Bring MRI to Autism Exploration?
14:00 - 14:15	Discussion
14:15 - 14:45	**Coffee Break**
14:45 - 15:05	Jacqueline Borg (Stockholm): Neurotransmission Imaging in Autism
15:05 - 15:25	Antony Gee (London): New Targets and Future PET Radiotracers for Autism
15:25 - 15:45	Discussion

Educational Objectives
1. Know the main symptoms of autism spectrum disorders, the current pathophysiological hypotheses and available biomarkers;
2. Know the current state of brain imaging studies in autism spectrum disorders;
3. Understand the complementary of PET/SPECT and MRI imaging for the exploration of autism;
4. Identify the new targets and their possible application to PET imaging.

Summary
Searching for effective neuroimaging biomarkers is a challenging task in the research field of autism spectrum disorder (ASD). PET and MRI provides non-invasive and powerful tools for investigating changes in the structure, function, molecular targets, connectivity, and metabolism of the brain of children with ASD. Here, we review the more recent PET and MRI studies aiming to provide candidate biomarkers for the diagnosis of childhood ASD and for the understanding of pathophysiological mechanisms. After description of the diagnosis of ASD, the experts will explain how PET and MRI neuroimaging can help to explore new pathophysiological hypotheses and possible therapeutics by providing new biomarkers. Finally, a discussion will be opened about the current and future radiopharmaceuticals for the exploration of this neurodevelopmental disorder.