

## **Professor Davide Calebiro, MD PhD DSc FRCP**

Davide Calebiro is Chair of Molecular Endocrinology, Wellcome Trust Senior Research Fellow and Head of the Department of Metabolism and Systems Science (MSS) at the University of Birmingham. He is also Co-Director of the Centre of Membrane Proteins and Receptors (COMPARE), a joint interdisciplinary research centre of Universities of Birmingham and Nottingham.

Davide studied Medicine in Milan and Stockholm, and obtained a PhD in Molecular Medicine and a Clinical Specialisation in Endocrinology and Metabolic Disease from the University of Milan. Between 2009 and 2017, he was a Group Leader at the Institute of Pharmacology and Toxicology and Rudolf Virchow Center of the University of Würzburg, Germany.

He leads an interdisciplinary research team comprising biologists, chemists, physicists, engineers and computer scientists focusing on the basic mechanisms of G protein-coupled receptor (GPCR) signalling and their involvement in endocrine, metabolic and cardiovascular diseases. To study GPCR signalling, they develop and use innovative optical methods based on FRET, BRET and single-molecule microscopy, which allow them to directly observe signalling events in living cells and tissues with unprecedented spatiotemporal resolution.

Using single-molecule microscopy and other innovative approaches, Davide's team have revealed several important mechanisms that allow GPCRs to produce efficient and specific biological responses. Above all, his work has uncovered a whole new paradigm of 'endosomal' GPCR signalling, which has changed the previously widely accepted textbook knowledge of GPCRs as cell-surface receptors and holds promise for the development of novel pharmacological therapies (e.g. biased GPCR agonists for the therapy of diabetes).

Davide's work has been published in prestigious scientific journals such as *Nature*, *Cell*, *New England Journal of Medicine*, *Journal of Clinical Investigation*, *PLoS Biology*, *PNAS*, *Nature Communications* and *Science Advances*, attracting several prizes and awards. He has served on multiple panels and committees, including the ENDO Annual Meeting Steering Committee and the MRC Molecular & Cellular Medicine Board.