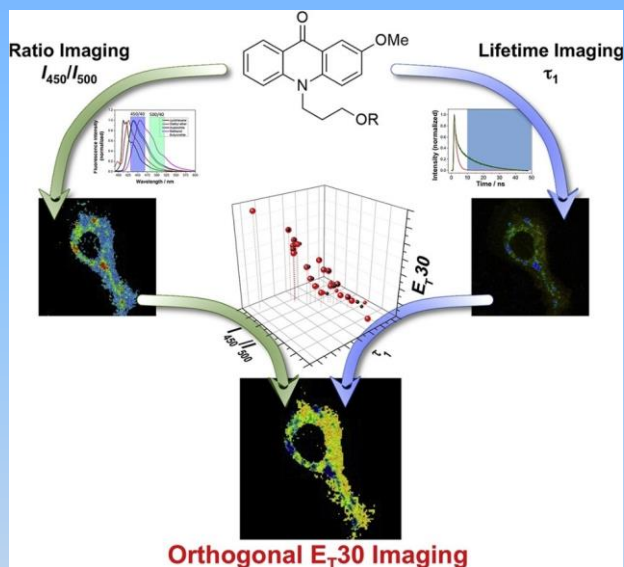


CONFERENCIA DEL PROGRAMA DE DOCTORADO EN QUÍMICA FINA

Sensores luminiscentes para aplicaciones biomédicas

Prof. Dr. Ángel Orte

Facultad de Farmacia, Universidad de Granada



17 de noviembre 2020, 12.00.

<https://ucordoba.webex.com/meet/secretaria.iunan>

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Ángel Orte earned a degree in Chemistry from the University of Córdoba, Spain (2000), and obtained his Ph.D. degree in ultrafast proton-transfer reactions from the University of Granada (UGR), Spain, in 2004. He spent four years as a Postdoctoral Research Assistant at the Department of Chemistry, University of Cambridge, UK, within the group of Professor David Klenerman. At the Klenerman group, he developed dual-color single-molecule fluorescence methodologies and employed them in the study of biophysical problems such as protein aggregation, protein folding, and protein–DNA interactions. In 2009, he returned to the Department of Physical Chemistry, Faculty of Pharmacy, UGR, to open up new single molecule fluorescence (SMF) research lines. In 2018, he was awarded a Full Professorship in Physical Chemistry at the Faculty of Pharmacy, UGR.

Dr. Orte is the head of the FQM-247 Fotoquímica y Fotobiología research group (<https://blogs.ugr.es/photochem/>; Twitter @PPhotobiology). The main research lines of the group lie in the application of spectroscopy and microscopy techniques, as well as advanced SMF techniques, to the design of fluorescent intracellular sensors and biophysical studies of biomedical relevance. In particular, Dr. Orte has developed methodologies of analysis of the early aggregates on pathway of amyloid aggregation at the molecular level (PNAS 2008). This was a seminal work that permitted a better understanding of the amyloid formation process, and contributed to many other subsequent studies of high impact (Cell 2012, Nature Struct. Mol. Biol. 2012, Sci. Rep. 2017). Importantly, the paper published in Cell (2012) has received the consideration of Highly-Cited Paper by the Web of Knowledge in 2018. The methodologies developed by Dr. Orte were also applied to other biophysical and biomedical problems, such as the conformational space of ubiquitin dimers (Nature 2012), the structure of the telomerase enzyme (Nature Chem. Biol. 2008, JACS 2010). Dr. Orte's research lines are also focused on the development of intracellular sensors and nanosensors, specifically designed to be quantitative in fluorescence lifetime imaging microscopy (FLIM) and time-gated imaging (ACS Nano 2013, Chem. Comm. 2015, Chem. Comm. 2019, Sensors Actuators B 2020...). These cutting-edge and multidisciplinary research lines are supported by the publication of 83 peer-reviewed papers in international journals. As principal investigator, Dr. Orte has been awarded several funded research grants in national and European competitive calls, as well as he has managed research and transfer contracts with charities and SMEs, adding up to >1.8 M€. He also holds a large network of collaborators including technological companies (Optoelectronica Italia SRL, DestiNA Genomics), and the Universities of Trento (Italy), K.U. Leuven (Belgium), Anhui Normal University (China), University of Pittsburgh (USA), Ichan Medical School at Mount Sinai (USA), and the University of Edinburgh (UK), among others.