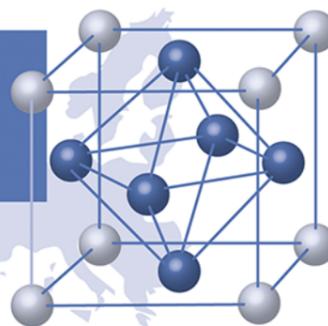


**ICCRAM Scientific Conference Series on
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“Transmembrane anion transporters: From the laboratory to applications in biomedicine”

Anion transport across cellular membranes is usually promoted by membrane bound proteins and misregulation of these mechanisms is implicated in various severe conditions. In this regard, the development of simple molecules able to facilitate anion transport across lipid bilayers is of particular interest. We have investigated the structure activity relationships governing the activity of these molecules in order to understand the key parameters involved in their design. The disturbed homeostasis and pH deregulation induced by facilitated anion transport result in the cytotoxicity shown by some of these compounds, suggesting that development of new anion transporters could lead to novel chemotherapeutic agents. On the other hand, controlled anion transport mimicking the function of natural transmembrane proteins could be useful in the treatment of diseases such as cystic fibrosis and others related to the malfunction of natural anion transport systems. Working along these lines we have explored the biological activity of both natural and synthetic anionophores and our latest results in this area will be presented.

Dr. Roberto Quesada

Universidad de Burgos

Roberto Quesada studied chemistry at Universidad de Oviedo, where he achieved the PhD degree in 2002 with a thesis supervised by professors Javier Ruiz and Victor Riera. After postdoctoral stays at Trinity College Dublin (Ireland) and the University of Southampton (UK), in 2006 he obtained a Juan de la Cierva grant in the Universidad Autonoma of Madrid to work with the group of Prof. Pilar Prados. In 2008 he joined Universidad de Burgos as a Ramon y Cajal researcher. Since 2012 he is Professor in the Department of Chemistry of this University. His research interests are focused on molecular recognition processes and supramolecular chemistry applied in biomedicine. He is coauthor of about 50 scientific papers and is the principal investigator in six competitive research projects with an overall budget of more than 1 million euros.

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