

Juan Pedro Bolaños's group studies the molecular mechanisms that regulate brain energy function and their impact on individual behavior, with a special emphasis on neurological and psychotic disorders. They identified that a glycolysis-promoting protein is highly stable in astrocytes, explaining their glycolytic nature. However, in neurons, this protein is degraded by the ubiquitin-proteasome pathway, explaining the poor utilization of glucose by these cells. Increased levels of this protein in neurons cause cognitive impairment and metabolic syndrome, making it a metabolic therapeutic target for these disorders. They have also characterized the structural conformation of the mitochondrial respiratory chain in neurons and astrocytes, which has served to clarify some aspects of mitochondria in the central nervous system that explain specific behaviors at the organismal level and that are not always explained by the bioenergetic function of mitochondria. Bolaños has been Coordinator of the Biomedicine-Nervous System Diseases Area of the National Research Agency and President of the European Society for Neurochemistry, he is Senior Editor of the scientific journal *Journal of Neurochemistry* and has directed several scientific courses and international and national conferences, for example the 39th Congress of the Spanish Society of Biochemistry and Molecular Biology (2016) and the First Severo Ochoa Conference (2023).