

## SEMINARIOS IRYCIS 2025

# Unmasking new roles of mitochondria in B cell function

Nuria Martínez Martín

Cáncer

13 MARZO 2025 10:00h

*Aula Maxi Lozano (Planta 7 Dcha) y on line (Zoom)*

After completing her B.S. in Biochemistry at the University of Valencia, she gained valuable experience in Dr. Alarcon's laboratory (2007-2011) and Dr. Batista's laboratory (2011-2017) as a PhD student and postdoctoral fellow, respectively. Her research focused on understanding the immune system. In 2018, she was appointed as a Ramón y Cajal Investigator and began her role as a principal investigator at the CBMSO-CSIC, leading a group focused on describing the role of mitochondrial metabolism in B cells and the adaptive immune response. Her recent work has uncovered the roles of mitochondria in activated B cells during the adaptive immune response, including their function as a power supplier (Mendoza et al, 2018) and as controllers of lysosome function (Iborra-Pernichi et al, 2024).

Some of her publications are:

1. Martinez-Martin, N. et al. A switch from canonical to noncanonical autophagy shapes B cell responses. *Science* 355, 641–647 (2017).
2. Martínez-Riaño, A. et al. Antigen phagocytosis by B cells is required for a potent humoral response. *Embo Rep* 19, (2018).
3. Tsui, C. et al. Protein Kinase C- $\beta$  Dictates B Cell Fate by Regulating Mitochondrial Remodeling, Metabolic Reprogramming, and Heme Biosynthesis. *Immunity* 48, 1144-1159.e5 (2018).
4. Mendoza, P. et al. R-Ras2 is required for germinal center formation to aid B cells during energetically demanding processes. *Sci Signal* 11, eaal1506 (2018).
5. Marta Iborra-Pernichi, et al Defective mitochondria remodelling in B cells leads to an aged immune response. Accepted in *Nature Communications*. (2024).