

Instituto de Biología Funcional y Genómica

Programa de Seminarios Externos

"Dionisio Martín Zanca"

2023 - 2024

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Exploiting divergent biology of two fission yeasts to understand membrane function

Martes **30** *Enero* **2024**

Hora: 12:30 pm

Lugar: Salón de actos del IBFG

Web: <https://ibfg.usal-csic.es/semext.php>

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Abstract

*Biological membranes are semi-permeable lipid barriers delimiting cells and subcellular compartments. By recruiting and scaffolding specific proteins and protein complexes, membranes also serve as platforms for cellular communication, signalling and metabolism. The specific features of the membrane depend on its lipid composition. I will present our recent work aimed at understanding how lipid metabolism impacts on membrane function and cellular physiology using comparative and synthetic approaches in two related fission yeast species with different lifestyles. Briefly, we show that a popular model system *Schizosaccharomyces pombe* and its less known relative *Schizosaccharomyces japonicus* exhibit strikingly different membrane lipid composition and provide the mechanistic explanation for this divergence. I will further argue that these differences in lipid metabolism may be at root of the profound changes to cellular physiology that occurred in the evolution of the fission yeast clade.*