

Deciphering the fungal immune system

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Abstract

Non-self discrimination is a fundamental biological process defining a variety of biotic interactions. Immune-related cell death plays a key role in containing pathogen infections both in plants and animals and is integral to the immune system. In Fungi, regulated cell death can represent a defence mechanism preventing the spread of mycoviruses and limiting conspecific mycoparasitism. Molecular characterization of some fungal cell death determinants has unveiled evolutionary parallels with mammalian immune-related genes and pathways. Such findings have led us to propose that fungi dispose with yet to be fully described immune system, which mediates organismal defence and broadly fungal biotic interactions. Focusing on the discovered evolutionary parallels in immune-related cell death between fungi and other eukaryotic kingdoms, I will highlight the emerging paradigm of fungal immunity.

About the presenter

I am a fungal geneticist with an interest in the evolution of regulated cell death in the context of innate immunity. I obtained my PhD from University of Bordeaux in 2013 and worked as post-doc at University of California, at Berkeley. My work has contributed to the field of comparative immunology uncovering molecular players and pathways controlling fungal non-self discrimination.