

Extracellular small RNAs in host-bacteria interactions

Extracellular plant small RNAs (sRNAs) act as triggers of RNAi in interacting fungal and oomycetal pathogens. However, whether these extracellular RNA species direct gene silencing in plant-associated bacteria, which are thought to lack a canonical eukaryotic-like RNAi machinery, remains unknown. Here, I will present recent findings from the lab demonstrating the occurrence of a cross-kingdom RNAi phenomenon implicating the trafficking of sRNAs from plant cells towards bacterial cells. In particular, I will report on the vesicular and non-vesicular extracellular sRNAs that are causal for this gene regulatory process. Finally, I will touch upon approaches that are currently developed to translate these discoveries towards novel solutions to control bacterial infections in plants and mammals.

<https://www.ibens.bio.ens.psl.eu/spip.php?rubrique31>



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2001-2005: PhD at The Sainsbury Laboratory (TSL) studying flagellin-triggered signaling in Arabidopsis

Irene Manton Prize (from the Linnean Society of London)

2005-2009: Post-doc at IBMP, Strasbourg, France.

2010: Group leader at the Institut de Biologie de l'École normale supérieure (IBENS, Paris), as part of an ATIP-Avenir grant funded by the "Fondation Bettencourt Schueller"

2011: ERC StG Laureate

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HOST: Kriton Kalantidis



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13:00

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