



ORGANISED BY:



Salicylic Acid Biosynthesis and Signaling in Plants



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ROOM297, SCIENCE CENTRE, CUHK

ABSTRACT:

Salicylic acid (SA) is a key defense hormone required for both local and systemic immunity in plants. SA is perceived by two classes of receptors, NPR1 and NPR3/NPR4, which function in two parallel pathways to regulate SA-induced defense gene expression. Perception of SA by NPR1 and NPR4 is required for activation of N-hydroxyphenylacetic acid biosynthesis, which is essential for inducing systemic acquired resistance. Our previous study showed that pathogen-induced SA is produced via the decay of Isochorismate-9-glutamate, which is formed by conjugating glutamate to isochorismic acid by *avrPphB* Susceptible 3 (PBS3) in *Arabidopsis*. However, how SA is biosynthesized in plant families outside Brassicaceae was unknown. Recently we discovered that SA is produced from benzoyl-CoA in three steps using benzyl benzoate and benzyl salicylate as intermediates in a wide range of plants. How this pathway is regulated during plant defense remains to be determined in the future.

SPEAKER:

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