



FONDAZIONE
EDMUND MACH
dal 1874

12/03/2026

h. 11:00 - 12:00

Room 6302 - PRC

Fondazione Edmund Mach

SEMINAR

Poplar becomes popular: Discovery of a biosynthetic new route to salicylic acid from studies of defensive poplar phenolics



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Dr. Constabel's research is aimed at understanding how trees use biochemistry to adapt to a stressful terrestrial environment. His research focusses on tannins and other phenolic secondary metabolites; compounds found in high quantities in trees and woody plants. The long-term aim of this work is to understand the biosynthesis, regulation, and functions of phenolic compounds in trees by using *Populus* (poplars and aspens) as a model system.

Recent research on the salicinoid phenolic glycosides of poplar has led his group to discover new enzymes required for salicylic acid biosynthesis in plants. This work completes the biosynthetic pathway to salicylic acid from phenylalanine, which has evaded elucidation until recently as it is not found in *Arabidopsis* and other Brassicaceae. The new pathway appears to be found in all other plant families, however, suggesting it is an ancestral salicylic acid pathway in land plants