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The xyloglucans : are they new elicitors of *Arabidopsis thaliana* immunity ?

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Damaged-Associated Molecular Patterns (DAMPs) are endogenous molecules released from the plant cell wall after wounding by pathogens. DAMPs are recognized by Pattern-Recognition Receptors (PRRs) that play a key role in plant immunity by mediating defense responses.

The plant cell wall-derived oligogalacturonides (OG) are well characterized DAMPs that elicit plant immune responses such as MAPK activation, $[Ca^{2+}]_{cyt}$ variations, H_2O_2 production, defense-related gene expression and enhanced resistance against *Botrytis cinerea*. Our study focused on a new polysaccharide component of the plant cell wall called xyloglucans (Xh) and compared the immune events triggered by OG and Xh in *Arabidopsis thaliana*. Our results indicated that Xh can be considered as new elicitors as they induced MAPK activation, the expression of defense-related genes, callose deposition and triggered immunity against *B. cinerea*. By using a genetic approach, our data indicated that the Xh-triggered immunity against *B. cinerea* requires the phytoalexin and jasmonic acid-dependent pathways.

The subsequent work will consist in the identification of the corresponding Xh receptor using a genome-wide association study. The long term objective of this project is to promote elicitors as an alternative strategy to pesticides.

Key words: Xyloglucans, DAMPs, Immunity, Signaling, *A. thaliana*.