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POST TRANSCRIPTIONAL CONTROL OF PLANT PECTIN METHYLESTERASES EXPRESSED DURING *BOTRYTIS CINEREA* INFECTION

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Arabidopsis Pectin Methylsterases (PMEs) specifically expressed during *B. cinerea* belongs to the ProPMEs subgroup. These ProPME members have, in addition to the PME domain, a Pro domain located at N-terminus of the ProPME gene. The cleavage of Pro-domain and PME-domain at a conserved Processing Motif (PM) by subtilisin-like serine proteases (SBTs) was proposed to be required to activate secreted PMEs in the apoplast. In addition to SBT, PME activity is post- transcriptionally regulated by secreted proteinaceous PME Inhibitors (PMEI). PMEI are expressed by plants during infection to inhibit endogenous enzymes to protect cell wall integrity for immunity against necrotrophic pathogens. Sequence similarities between the Pro-domains with PMEIs indicate their evolutionary relationships with a possible role of

Pro-domain in auto-inhibitory activity against the PME protein. *A. B. cinerea* induced proPME and both Pro and PME-domains were independently expressed in *Pichia pastoris* and purified to homogeneity. The activity of the purified ProPME, Pro-domain and PME-domain was biochemically determined. The possible inhibitory activity of Pro-domain against defence-related PMEs is explored.

Biography

Daniela Bellincampi is expertise in the field of plant science and she works as a professor at Sapienza University of Rome, Italy.

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