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(54) Title: PAP MUTANTS THAT EXHIBIT ANTI-VIRAL AND/OR ANTI-FUNGAL ACTIVITY IN PLANTS			
(57) Abstract Disclosed are PAP mutants having reduced phytotoxicity compared to wild-type PAP, and which confer broad spectrum resistance to viruses and/or fungi in plants. One group of PAP mutants is characterized by at least one amino acid substitution in the N-terminus of mature PAP, such as the Glycine 75 residue or the Glutamic acid 97 residue; two groups of additional PAP mutants are characterized by truncations in the N-terminal region of mature PAP and truncations or amino acid substitutions in the C-terminal region of mature PAP, respectively; and a further group is enzymatically inactive which still exhibit anti-fungal properties. Also disclosed are DNA molecules encoding the PAP mutants, mutant PAP DNA constructs, and transgenic seed and plants containing the DNAs. Further disclosed are methods for identifying PAP mutants having reduced phytotoxicity, as well as isolated and purified PAP mutants identified by the method.			