



## PRODUCTION OF PHYTOALEXINS - A POST-INFECTIONAL DEFENSE MECHANISM IN MULBERRY (*MORUS* SPP.)

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### ABSTRACT

Mulberry (*Morus* spp.) foliage is an exclusive source of nutrition for silkworms (*Bombyx mori* L.). The host plant is affected by many diseases that cause destruction of leaf tissue. Phytoalexins (PAs) produced in response to infection are known to impart resistance to the host. The current knowledge about PAs as one of the post-infectional defense mechanisms in mulberry and related plants, may help to secure the host plants from microbial attack. The PAs of mulberry consist of chemical compounds belonging to the class of benzofuran and stilbenes. Kuwanon C and ethyl  $\beta$  rescrylate were the antifungal compounds detected in mulberry roots, which completely inhibited the growth of pathogens- *Rosellinia necatrix* and *Helicobasidium mompa*. When mulberry was affected by 'dogare' and twig blight diseases, a few antimicrobial substances were identified as prenylflavon compounds viz., kuwanon C and E, morusin, albanin A~H and albafuran A~C in shoot epidermis. The cortex tissue produced moracin compounds A~Z, whereas, the xylem produced stilbene compounds viz., oxyresveratrol, 4'-prenyloxyresveratrol and moracin-M. Chalcomoracin, the benzofuran compound found in the mulberry leaves was observed to inhibit the growth of *Fusarium solani* f. sp. *mori*. This review provides an overview of phytoalexins in mulberry under pathogenecity.

**Key words:** Antifungal substances, moracin, mulberry, phytoalexin.