

Title Inhibition of *Penicillium digitatum* and *Penicillium italicum* in vitro and in planta with Panomycocin, a novel exo- β -1,3-glucanase isolated from *Pichia anomala* NCYC 434

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Abstract

Panomycocin, a novel exo-beta 1,3 glucanase, was tested as an antifungal agent against green and blue mold diseases, the most important causes of post harvest decay in citrus fruits. All tested isolates of *Penicillium digitatum* and *Penicillium italicum* were susceptible to panomycocin in vitro. Effective panomycocin concentrations for 50% growth inhibition (MIC-2) for *P. digitatum* and *P. italicum* were 2 and 1 $\mu\text{g ml}^{-1}$, respectively. Complete (MIC-0) growth inhibition of all isolates observed at a panomycocin concentration of 16 $\mu\text{g ml}^{-1}$. Treatment of spores with panomycocin at values lower than the MIC-0 led to slower germ tube elongation and mycelium growth. In tests on fruit, panomycocin at concentrations equal to in vitro MIC-0 value protected lemon fruit from decay.

<http://www.springerlink.com/content/6k4250628143n28k/fulltext.pdf>