

Effects of Antifungal Compounds on Conidial Germination and on the Induction of Appressorium Formation of *Magnaporthe grisea*[§]

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Appressorium formation in germinating conidia of *Magnaporthe grisea* was induced on a hydrophilic (noninductive) surface by antifungal compounds. Respiratory inhibitors or uncoupling agents such as strobilurins, antimycin A, myxothiazol, rotenone, pterulone A, and oligomycin A were particularly effective whereas sodium cyanide had no effect. Cyclosporin A was effective only at high concentrations. These differentiation-inducing effects were only observed at subfungicidal concentrations at which more than 50% of the germinating conidia formed appressoria. Cycloheximide, nystatin, amphotericin B, and papulacandin A did not induce appressoria. Different strains of *M. grisea* displayed the same overall response to the inhibitors, varying merely in the percentage of appressoria formed. A combination of the respiratory inhibitors with 2-phenyl-4H-1-benzopyran-4-one (flavone), diphenyleneiodonium (DPI), or salicylhydroxamic acid (SHAM), compounds which interfere with the cyanide-resistant respiration, resulted in a higher sensitivity of the strains towards the respiratory inhibitors, but had no effect on appressorium formation.