

Effect of certain oxidizing and reducing compounds on germination of *Neurospora* macroconidia

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Abstract

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As part of a long-range investigation of the interaction of ionizing radiation and visible light on *N. crassa* #38701 (Klein, R.M. and D.T. Klein, 1962. Amer. J. Bot. 49, in press) it became important to include a study of the effect of sulfhydryl (reducing) and peroxidative (oxidizing) compounds on germination and on photoreversal of X-ray damage. Of all compounds tested to date, only thiourea (1×10^{-2} M) significantly increased the percentage germination of macroconidia. Cysteine, ascorbic acid, BAL, mercaptoethylpropionic acid and mercaptoethylamine suppressed or inhibited germination at high concentrations and were without significant effect at lower concentrations. Hydrogen peroxide and tertiary butyl hydroperoxide inhibited germination at 0.5 M. The organic peroxide was between 10 and 50 times more "toxic" than was H_2O_2 for germination. ---Department of Microbiology and Immunology, Albert Einstein College of Medicine, New York. (This article is not to be cited in the literature without the author's permission).