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## *Mycotypha africana* in low-level athermic ELF magnetic fields

### Changes in growth parameters \*

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#### Abstract

The influence of low-level athermic magnetic fields on germination of the dimorphic fungus *Mycotypha africana* was investigated. A carrier frequency of 150 MHz was chosen for most experiments, modulated by low frequencies between 0.8 and 50 Hz. Magnetic flux densities varied between 0 and 1.20 nT. For a clear separation between magnetic and electric fields, a resonator tuned to form a standing wave of the chosen carrier frequency was used and the Petri dishes with cell cultures were placed in the appropriate positions. At some combinations of frequency and magnetic flux density stimulation of germination up to 30% was observed, while at other combinations inhibition was observed. Window effects in the frequency and flux density thus seem to govern the response to field exposure.

#### INTRODUCTION

With the increasing public interest in the possible impacts of electromagnetic fields on man and the environment, a continuously growing number of papers have appeared concerning such interactions on all biological levels of complexity: from simple biochemical reactions over micro-organisms, tissue cultures, tissues, nerves, lower animals up to mammals and man. The results are often inconsistent; their discussion in the scientific community is controversial. The lack of an accepted theory for interactions, the often neglected constant magnetic field of the earth,

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