

Hormonemate, a New Cytotoxic and Apoptosis-Inducing Compound from the Endophytic Fungus *Hormonema dematioides*. I. Identification of the Producing Strain, and Isolation and Biological Properties of Hormonemate[§]

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In a search for new fungal compounds inducing apoptosis of the colon cancer derived cell line COLO-320, hormonemate (**1**) was purified from fermentations of an endophytic fungus isolated from living needles of a *Pinus* species. The producing strain was identified as *Hormonema dematioides* by microscopy and ITS rDNA sequence analysis. The structure of hormonemate was determined by spectroscopic methods. The compound exhibited cytotoxic effects against the human colon tumor cell lines COLO-320, DLD-1 and HT-29 as well as five other human cell lines (HL-60, JURKAT, HEP-G2, MCF-7, HeLa S3). It also induced apoptosis in COLO-320 cells as detected by a caspase-activity assay and morphological changes, and it triggered morphological and physiological differentiation of HL-60 cells into granulocytes, which subsequently died by apoptosis.

Key words: Hormonemate, Endophyte, *Hormonema dematioides*