

# **Cytotoxic Activity of Pisosterol, a Triterpene Isolated from *Pisolithus tinctorius* (Mich.: Pers.) Coker & Couch, 1928**

Raquel Carvalho Montenegro<sup>a</sup>, Paula C. Jimenez<sup>a</sup>, Rômulo Augusto Feio Farias<sup>a</sup>, Manoel Andrade-Neto<sup>b</sup>, Franciglauber Silva Bezerra<sup>b</sup>, Maria Elisabete A. Moraes<sup>a</sup>, Manoel Odorico de Moraes<sup>a</sup>, Cláudia Pessoa<sup>a</sup>, and Letícia V. Costa-Lotufo<sup>a,\*</sup>

<sup>a</sup> Department of Physiology and Pharmacology, School of Medicine, Federal University of Ceará, P. O. Box 3157, 60430-270 Fortaleza, Ceará, Brazil. Fax: #55852888333.

E-mail: lvcosta@secrel.com.br

<sup>b</sup> Department of Organic and Inorganic Chemistry, Federal University of Ceará, P. O. Box 12200, 60021-940, Fortaleza, Ceará, Brazil

\* Author for correspondence and reprint requests

Z. Naturforsch. **59c**, 519–522 (2004); January 30/April 6, 2004

*Pisolithus tinctorius* (Basidiomycete) is an ectomycorrhizal fungus found in the roots and soil surrounding of many species of eucalyptus and pine trees. The present work verified the cytotoxic potential of pisosterol, a triterpene isolated from *P. tinctorius* collected in the Northeast region of Brazil, on three different animal cell models: mouse erythrocytes, sea urchin embryos and tumor cells. Pisosterol lacked activity on mouse erythrocytes as well as on the development of sea urchin eggs, but strongly inhibited the growth of all seven tumor cell lines tested, especially the leukemia and melanoma cells (IC<sub>50</sub> of 1.55, 1.84 and 1.65 µg/ml for CEM, HL-60 and B16, respectively). The results found for pisosterol were compared with those of doxorubicin and etoposide.

*Key words:* *Pisolithus tinctorius*, Pisosterol, Cytotoxicity