Chemical and Biological Investigation of *Araucaria heterophylla* Salisb. Resin

Essam Abdel-Sattar^{a,*}, Azza R. Abdel Monem^b, Shahira M. Ezzat^b, Ali M. El-Halawany^{b,c}, and Samar M. Mouneir^d

- ^a Department of Natural Products, Faculty of Pharmacy, King Abdulaziz University, Jeddah 21589, Kingdom of Saudi Arabia. Fax: +9 66-2-6 95 16 96.
- E-mail: abdelsattar@yahoo.com

 b Department of Pharmacognosy, Faculty of Pharmacy, Cairo University, Cairo 11562, Egypt
- Department of Metabolic Engineering, Institute of Natural Medicine, University of Toyama, Sugitani 2630, Japan
- d Department of Pharmacology, Faculty of Veterinary Medicine, Cairo University, Cairo 12211, Egypt
- * Author for correspondence and reprint requests

Z. Naturforsch. **64c**, 819–823 (2009); received May 1/June 8, 2009

Three labdane diterpenes, namely labda-8(17),14-diene, 13-epicupressic acid, and 13-*O*-acetyl-13-epicupressic acid, were isolated from the resin collected from stem exudates of *Araucaria heterophylla* Salisb. (Araucariaceae). The isolated compounds were identified using different spectroscopic methods (¹H NMR, ¹³C NMR, HMQC, HMBC and COSY). The resin extract showed antiulcerogenic activity against ethanol-induced stomach ulcers in Sprauge Dawely rats using ranitidine as standard. In addition, the resin and the isolated compounds showed variable cytotoxic activities against breast (MCF7) and colon (HCT116) cancer cell lines.

Key words: Araucaria heterophylla, Labdane Diterpenes, Antiulcerogenic and Cytotoxic Activities