In vitro Cytotoxic Activity of *Salsola oppositifolia* Desf. (Amaranthaceae) in a Panel of Tumour Cell Lines

Rosa Tundis*, Monica R. Loizzo, Marco Bonesi, Federica Menichini, Giancarlo A. Statti, and Francesco Menichini

Department of Pharmaceutical Sciences, Faculty of Pharmacy, Nutrition and Health Sciences, University of Calabria, I-87030 Rende (CS), Italy. Fax: +39 984 493298.
E-mail: tundis@unical.it

* Author for correspondence and reprint requests

Z. Naturforsch. **63c**, 347–354 (2008); received October 8/November 26, 2007

The aim of the present study was to evaluate for the first time the *in vitro* cytotoxic activity of fractions and isolated flavonols from *Salsola oppositifolia* Desf. (Amaranthaceae). The *n*-hexane fraction demonstrated an effective cytotoxic activity on the large lung carcinoma and amelanotic melanoma cell lines with IC_{50} values of 19.1 μg/ml and 24.4 μg/ml, respectively. Also the dichloromethane fraction exhibited cytotoxic activity against COR-L23 (IC_{50} 30.4 μg/ml) and C32 (IC_{50} 33.2 μg/ml) cells, while the EtOAc fraction demonstrated a selective cytotoxic activity against MCF-7 cells (IC_{50} 67.9 μg/ml). The major active constituents of this fraction were isorhamnetin-3-*O*-glucoside (**1**) and isorhamnetin-3-*O*-rutinoside (**2**), which showed an interesting activity against the cell line MCF-7 with IC_{50} values of 18.2 and 25.2 μg/ml, respectively. Compound **2** exhibited a strong activity against the hormone-dependent prostate carcinoma LNCaP cell line with an IC_{50} of 20.5 μg/ml. Constituents of *S. oppositifolia* were identified by GC-MS and NMR analyses.

Key words: Salsola oppositifolia Desf., Cytotoxicity, Tumour Cells, Flavonols