



## Evaluation of Uleine in Cellular Adhesion of Murine Melanoma (B16F-10) and Human Gastric Carcinoma Cells (KATO III and MKN)

Wesley M. SOUZA <sup>1</sup>, Lisienny C.T. REMPEL <sup>2</sup>, Rayana A.P. MACIEL <sup>2</sup>,  
Cid A.M. SANTOS <sup>3</sup> & Andréa E.M. STINGHEN <sup>2\*</sup>

<sup>1</sup> Laboratory of Clinical Bacteriology, Department of Medical Pathology, Federal University of Paraná, Av. Prof. Lothário Meissner, 632, Curitiba, PR, 80210-170, Brazil.

<sup>2</sup> Laboratory of Experimental Nephrology, Department of Basic Pathology, Federal University of Paraná, Centro Politécnico, Curitiba, PR, 80531-980, Brazil.

<sup>3</sup> Laboratory of Pharmacognosy, Department of Pharmacy, Federal University of Paraná, Av. Prof. Lothário Meissner, 632, Curitiba, PR, 80210-170, Brazil.

**SUMMARY.** *Himatanthus lancifolius* (Muell. Arg.) Woodson (Apocynaceae), popularly called *agoniada* and officially described in the Brazilian Pharmacopoeia I, grows as a native plant in different areas of Brazil. It is used in folk medicine to treat skin diseases, asthma, syphilis, and mainly to stimulate uterine contractions, helping conception and regularizing menstruation. This study evaluated the effect of uleine in cellular adhesion of murine melanoma cells and human gastric carcinoma cells. Uleine, an indole alkaloid, was previously isolated and chemically identified. Its effect on the *in vitro* adhesion of murine melanoma cells (B16F-10) and human gastric carcinoma cells (KATO III and MKN) was tested by optical absorbance at 545 nm in the presence or absence of extracellular matrix. The results showed that some concentrations of uleine stimulated cellular adhesion, and maximum activity was observed at 0.1 µg/mL to B16F-10 and 10<sup>-4</sup> µg/mL to MKN cells. To KATO III all concentrations tested (10<sup>-5</sup>-10 µg/mL) inhibited cellular adhesion with or without extracellular matrix. Based on the results obtained, uleine can inhibit the tumor cell migration by promoting cellular adhesion inhibition (possible anti-metastasis activity).

**KEY WORDS:** Antitumor agent, *Himatanthus lancifolius*, Indole alkaloid, Uleine.

\* Author to whom correspondence should be addressed. E-mail: andreastighen@ufpr.br