Acetylcholinesterase Inhibitory Activity of Uleine from *Himatanthus lancifolius*

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Z. Naturforsch. **65 c**, 440–444 (2010); received December 18, 2009/March 10, 2010

Application of acetylcholinesterase (AChE) inhibitors is the primary treatment for Alzheimer's disease. Alkaloids, such as physostigmine, galanthamine, and huperzine A, play an important role as AChE inhibitors. The aim of this work was to evaluate *Himatanthus lancifolius* (Muell. Arg.) Woodson, a Brazilian species of Apocynaceae, and its main indole alkaloid uleine, in order to identify new AChE inhibitors. The plant fluid extract, fractions, and uleine were tested for AChE inhibitory activity using Ellman's colorimetric method for thin-layer chromatography (TLC), 96-well microplates, and also Marston's TLC colorimetric method. Both TLC assays showed similar results. At 5 mg/mL, the fluid extract inhibited the AChE enzyme by (50.71 ± 8.2)%. The ethyl acetate fraction exhibited the highest level of AChE inhibition, followed by the dichloromethane fraction. The isolated alkaloid uleine displayed an IC_{50} value of 0.45 μM.

Key words: Acetylcholinesterase Inhibitors, Apocynaceae, *Himatanthus lancifolius*, Uleine