

Tithoniaquinone A and Tithoniamide B: A New Anthraquinone and a New Ceramide from Leaves of *Tithonia diversifolia*

Meffo Yemele Bouberte^a, Karsten Krohn^b, Hidayat Hussain^b, Etienne Dongo^a, Barbara Schulz^c, and Qunxiu Hu^c

^a Department of Organic Chemistry, Faculty of Science, Yaounde University I, P.O. Box 812, Yaounde, Cameroon

^b Department of Chemistry, University of Paderborn, Warburger Straße 100, D-33098 Paderborn, Germany

^c Institute of Microbiology, Technical University of Braunschweig, D-38106 Braunschweig, Germany

Reprint requests to Prof. Karsten Krohn. Fax: (+49)-5251-603245.

E-mail: karsten.krohn@uni-paderborn.de

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Dedicated to Prof. Wittko Francke on the occasion of his 65th birthday

From the leaves of *Tithonia diversifolia*, four compounds were isolated and identified. Two of them, the anthraquinone tithoniaquinone A (**1**) with an unusual substitution pattern on the anthraquinone skeleton, and the ceramide, named tithoniamide B (**2a**), are reported for the first time as natural products. Their structures were determined by comprehensive analyses of their 1D and 2D NMR and electron impact (EI) mass spectral data. The remaining two known compounds were identified as psoralen and *l*-quebrachitol. Preliminary studies showed that tithoniaquinone A (**1**) is strongly antibacterial and antifungal against Gram-positive *Bacillus megaterium* and *Microbotryum violaceum*, respectively, while psoralen has strong algicidal, fungicidal, and antibacterial activities.

Key words: Anthraquinone, *Tithonia diversiflora*, Ceramide