

ABSTRACT

Chemical Investigation of *Psychotria bahiensis*, and *Psychotria uliginosa*
from Trinidad

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Psychotria (syn *Cephaelis*) species from the plant family Rubiaceae, are known for their hallucinogenic monoterpene alkaloids. In this thesis, two local species, *Psychotria bahiensis* and *Psychotria uliginosa*, were investigated.

Novel epimers bahienoside A (**CXXVI**) and bahienoside B (**CXXV**) were obtained from *Psychotria bahiensis*, along with the known compounds 5 α -carboxystrictosidine (**XIII**), angustine (**XIV**), strictosamide (**XV**), and (*E*)- and (*Z*)-vallesiachotamine (**XVI**, **XVII**). The C-3 configurations of B43 and B51 were deduced by comparison of the spectral data obtained for the compounds with those published for similar compounds whose configurations at C-3 are known.

A brine shrimp bioassay-guided fractionation of the crude extract of *Psychotria uliginosa* yielded known bioactive compounds: benz[*g*]isoquinoline-5,10-dione (**CIV**), 1-hydroxybenzoisochromanquinone (**CIII**), 9-hydroxy-4,7-megastigmadiene-3-one (**CXXVII**) and blumenol A (**CXXVIII**).

The structures of the compounds were elucidated using a combination of IR and UV-vis spectroscopy, mass spectrometry and 1D and 2D NMR experiments viz. ^1H , ^{13}C , COSY, HSQC, HMBC, HMQC, TOCSY and DEPT.

Keywords: Jennifer H. A. Paul, *Psychotria bahiensis*, *Psychotria uliginosa*, bahienoside A, bahienoside B, indole monoterpeneoids, alkaloids

I thank the Almighty God for sustenance, guidance and

I am indebted to the members of staff at the Department of Chemistry, The University of the West Indies, St. Augustine campus for the role they played in my educational development. To the lecturers, office and ancillary staff I express my gratitude for the assistance rendered in many ways.

I also appreciate the assistance of Mr. Johnson and the staff of the National Herbarium at UWI, St. Augustine in collecting and identifying the plants.

I am grateful to Professor W. F. Reynolds of the University of Toronto for providing spectral data and for guidance in structure elucidation. To Dr. A. Young also of the University of Toronto, for mass spectral data and for guidance in data interpretation and to Dr. Z. Imam of the Central Drug Research Institute, Lucknow, India for the CO spectrum.

I owe thanks to the following institutions for financial assistance during this project: