STUDY ON INDOLE ALKALOIDAL COMPONENTS FROM *RAUVOLFIA* AND *HUNTERIA* PLANTS (APOCYNACEAE) IN THAILAND

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ABSTRACT

Thirteen indole alkaloids were isolated from the leaves of *Rauvolfia sumatrana* Jack. They are harman, 11-methoxystrictamine, β-carboline, perakine, tetraphyllicine, flexicorine, lanceomigine cabufiline, peraksine, rausutrine, 10-hydroxystrictamine, rausutranine and compactinervine. Among them, 11-methoxystrictamine was obtained in the highest quantity while compactinervine was obtained in the lowest quantity. 11-Methoxystrictamine, rausutrine and rausutranine are new alkaloids. Rausutrine and rausutranine are the first finding of bisindole alkaloids, of which their structures consist of akuamilan-type and iminoquinone-type congeners. Full assignments in ^{13}C-NMR of flexicorine and cabufiline were conducted basing on HH-COSY, PROESY and HMBC experiments, as well as a stereochemical determination at C-19 and C-20 positions of cabufiline.

Six new indole alkaloids were isolated from the leaves of *Hunteria zeylanica* (Retz) Gardn. ex Thw., i.e., coryzeylamine, deformylcoryzeylamine, N_a-demethylcorymine N_a-demethyldeformylcorymine, hunteriatryptamine and N_b-methyl-3α-amino-*seco* -voacarpine, along with 8 known base, corymine, pleiocarpamine, tubotaiwine, 17*S* and 17*R* 17,4',5',6'-tetrahydrousambarenine, deformylcorymine, fluorocarpamine and lanceomigine. Coryzeylamine and deformylcoryzeylamine are the first examples of dimeric indole alkaloids, which are composed of sarpagine-type and echitamine-type monoterpenoid indole alkaloids. Full assignments in ^{13}C-NMR of fluorocarpamine was conducted by basing on H-H COSY, PHSQC and HMBC spectra. Two novel glycosidic indole alkaloids were isolated from the stem barks of *Hunteria zeylanica* (Retz) Gardn. ex Thw., hunterioside and hunterioside B, along with 9 known bases, (+)-eburnamonine, (+)-eburnamenine, (+)-isoeburnamine, (-)-eburnamine, pleiocarpamine, tubotaiwine, pleiomutinine, yohimbol and strictosidinic acid. The novel glycosidic alkaloids are the first finding of a natural biose congener of monoterpenoid indole alkaloid glycosides.

CD absorption pattern of strictosidinic acid was first reported. It displayed very uncommon absorption, a negative Cotton effect at the longest wavelenth region, while those of strictosidine and strictosamide showed positive Cotton effect. The anomalous high field acetate signal of strictosamide tetraacetate was determined to be that of the position 2'.