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Chemical Investigation of Some Indian Plants

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Isolation of several known compounds belonging to the class of steroids, terpenoids, coumarins, etc., from a number of Indian plants is recorded.

WE have been examining a large number of Indian plants to see whether any biologically active principles are present. In the course of this work

a number of compounds of known structure were isolated. We place these results on record since they may be of some value from the point of view of chemotaxonomy. All the plants were correctly identified, dried in the shade and powdered. They were then extracted by successive percolation with hexane (b.p. 60-80°), methanol and acetone. The compounds were isolated and purified by the usual methods and the identities of the compounds listed in the Table 1 were established by elemental analysis, spectral data, thin layer chromatography and mixed melting point determination with authentic specimens.

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TABLE 1—COMPOUNDS ISOLATED FROM VARIOUS PLANT SPECIES

Plant	Family	Part of plant	Solvent for extraction	Compound isolated
TRITERPENOIDS				
<i>Alstonia scholaris</i>	Apocynaceae	Stem bark	Hexane	Lupeol
<i>A. scholaris</i>	do	do	Methanol	Betulinic acid
<i>Bassia malabarica</i>	Sapotaceae	Bark	Hexane	Friedelin
<i>Ehretia cuneata</i>	Boraginaceae	Stem	do	Baurenol
<i>E. cuneata</i>	do	Roots	do	do
<i>Euphorbia acaulis</i>	Euphorbiaceae	Tubers	do	Taraxerol
<i>E. neriifolia</i>	do	Stem	do	Friedelan-3 α -ol, friedelan-3 β -ol, taraxerol
<i>Grewia tiliacea</i>	Tiliaceae	Bark	do	Betulin, friedelin, lupeol
<i>G. tiliacea</i>	do	Roots	do	Friedelin, lupeol
<i>Gymnosporia montana</i>	Celastraceae	Stem	do	β -Amyrin
<i>Lophopetalum wightianum</i>	do	Bark	do	Lupeol
<i>Mastixia arborea</i>	Cornaceae	do	do	Taraxerol, taraxerone
<i>Moringa oleifera</i>	Moringaceae	do	do	Baurenol
<i>Ougeinia daibergioides</i>	Leguminosae	Stem bark	do	Lupeol
<i>Poeciloneuron indicum</i>	Guttiferae	Fruits	do	Friedelin
<i>Pouteria tomentosa</i>	Sapotaceae	Bark	do	β -Amyrin acetate
<i>Securinega leucopyrus</i>	Euphorbiaceae	do	do	Friedelin
<i>Terminalia arjuna</i>	Combretaceae	do	do	do
<i>Vepris bilocularis</i>	Rutaceae	Leaves	do	Lupeol
STEROIDS				
<i>Alstonia venenata</i>	Apocynaceae	Bark	do	Stigmasterol
<i>Anisomeles malabarica</i>	Labiatae	Whole plant	do	β -Sitosterol
<i>Ervatamia divaricata</i>	Apocynaceae	Stem	do	do
<i>Ligustrum neilgherrense</i>	Oleaceae	Roots	Methanol	Stigmasterol
<i>Mitragyna parviflora</i>	Rubiaceae	Bark	Hexane	β -Sitosterol
<i>Nardostachys jatamansi</i>	Valerianaceae	Rhizomes	do	do
<i>Opuntia vulgaris</i>	Cactaceae	Whole plant	do	do
<i>Pueraria tuberosa</i>	Leguminosae	Tubers	do	do
COUMARINS				
<i>Hymenodictyon obovatum</i>	Rubiaceae	Bark	Methanol	Aesculin
<i>H. obovatum</i>	do	Roots	do	do
LEUCOANTHOCYANIDINS				
<i>Bassia latifolia</i>	Sapotaceae	Bark	Acetone	Leucodelphinidin
CARBOHYDRATES				
<i>Ervatamia divaricata</i>	Apocynaceae	Roots	Methanol	D-Mannitol
<i>Ixora parviflora</i>	Rubiaceae	do	do	do
<i>Randia dumetorum</i>	do	do	do	do
ALKALOIDS				
<i>Alstonia venenata</i>	Apocynaceae	Bark	do	Reserpine
<i>A. venenata</i>	do	do	Acetone	Kopsinine
<i>Annona reticulata</i>	Annonaceae	Root bark	Methanol	Liriodenine
<i>Michelia champaca</i>	Magnoliaceae	Roots	do	do