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Chemical Investigation of Indian Plants: Part X*

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Several compounds of known structures belonging to the class alkaloids, flavonoids, quinones, steroids and terpenoids have been isolated from a number of Indian plants.

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IN continuation of our investigations on Indian plant species for their biological activity[1], we have isolated a number of chemical constituents of known structures. Table 1 records the compounds isolated and identified. The various compounds identified are likely to be of some chemotaxonomic interest. The compounds were isolated from botanically identified species by usual techniques such as fractional crystallization and column chromatography. The identities of the compounds were established on the basis of elemental analysis and comparison of the m.m.p., TLC and IR spectra with authentic samples and preparation of derivatives.

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TABLE 1 — COMPOUNDS ISOLATED FROM VARIOUS PLANT SPECIES

Plant	Family	Part and solvent for extraction	Compound isolated
		FLAVONOIDS	
Derris brevipes Baker	Leguminosae	Stem (Acetone)	Rotenone[2]
Millettia rubiginosa Wt. & Arn.	do	Roots*	do
do		do (Methanol)	Durmillone[3] Ichthynone[4]
		COUMARINS	
Phyllanthus emblica Linn.	Euphorbiaceae	Roots*	Ellagic acid[2]
		NITROGEN CONTAINING COMPOUNDS	
Salvadora oleoides Decne	Salvadoraceae	Fruits*	Dibenzyl urea[2] Dibenzyl thiourea[2]
		QUINONES	
Derris brevipes Baker	Leguminosae	Stem*	Damnacanthal[2]
Embelia tsjerium-cottam A.D.C.	Myrsinaceae	do	Embelin[2]
		STEROIDS	
Anisomeles heyneana Benth.	Labiatae	Whole plant*	Sitosterol[2]
Apama barberi Gamble	Aristolochiaceae	Stem (Methanol)	Stigmasterol[2]
Baccaurea courtallensis Muell.-Arg.	Euphorbiaceae	Bark*	do
Cordia rothii R & S	Boraginaceae	Stem*	Sitosterol[2]
Derris brevipes Baker	Leguminosae	do (Acetone)	do
Justicia trinervia Vahl.	Acanthaceae	Roots*	Stigmasterol[2]
Lepisanthes tetraphylla Radlk.	Sapindaceae	Roots, leaves*	do
Macaranga peltata Muell.-Arg.	Euphorbiaceae	Roots*	Sitosterol[2]
Milletia racemosa Benth.	Leguminosae	Bark*	do
	do	Roots*	Sitosterol[2], stigmasterol[2]
Pittosporum floribundum W. & A.	Pittosporaceae	do	Stigmasterol[2]
Plectranthus mollis Spr.	Labiatae	Whole plant*	Sitosterol[2]
Salvadora oleoides Decne	Salvadoraceae	Fruits*	Stigmasterol[2]
Sterculia balanghas Linn.	Sterculiaceae	Bark*	do
Vernonia monosis DC.	Compositae	do	Sitosterol[2]
		TRITERPENOIDS	
Atalantia wightii Tan.	Rutaceae	Leaves*	Lupeol[2], lupenone[2], *epi*-fridelinol[2]
Lophopetalum wightianum Arn.	Celastraceae	Bark covering*	Pristimerin[5], lupeol[2]
Meliosma simplicifolia Walp.	Sabiaceae	Stem bark*	O-Acetyl oleanolic aldehyde[6] O-Acetyl oleanolic acid
Phyllanthus emblica Linn.	Euphorbiaceae	Roots*	Lupeol[2]
Radermachera xylocarpa K. Shum.	Bignoniaceae	do	O-Acetyl oleanolic acid[2]
Rotala floribunda Blatt.	Lythraceae	Whole plant*	Betulinic acid[2]
Vernonia monosis DC.	Compositae	Leaves*	β-Amyrin[2]

*Hexane was used as the solvent for extraction.

References

1. DESAI, H. K., GAWAD, D. H., GOVINDACHARI, T. R., JOSHI, B. S., PARTHASARATHY, P. C., RAMACHANDRAN, K. S., RAVINDRANATH, K. R., SIDHAYE, A. R. & VISWANATHAN, N., *Indian J. Chem.*, **14** (1976), 473.
2. KARRER, W., *Konstitution und Vorkommen der organischen Pflanzenstoffe* (Birkhauser Verlag, Basel & Stuttgart), 1958.
3. OLLIS, W. D., RHODES, C. A. & SUTHERLAND, I. O., *Tetrahedron*, **23** (1967), 4741.
4. SCHWARZ, J. S. P., COHEN, A. I., OLLIS, W. D., KACZA, E. A. & JACKMAN, L. M., *Tetrahedron*, **20** (1964), 1324.
5. HAM, P. J. & WHITING, D. A., *J. chem. Soc. Perkin Trans-I*, (1972), 330.
6. RUZICKA, L. & SCHELLENBERG, H., *Helv. chim. Acta*, **20** (1937), 1553.