

Chemistry and biological activities of genus *Phyllanthus*

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SUMMARY

Phyllanthus is a genus comprised of many species of herbs or undershrubs mainly distributed throughout world. These are used as folk medicine to treat various disorders like hepatitis B, diabetes, intestinal infection, urinary bladder disturbances etc. The plants of genus *Phyllanthus* have undergone extensive phytochemical and pharmacological screening. This review summarizes mainly the phytoconstituents and biological activities associated with the genus.

Key words: *Phyllanthus*, Hepatitis, Phytoconstituents and Antiviral.

The plants belonging to genus *Phyllanthus* (Euphorbiaceae) are widely distributed through out the tropical and subtropical countries and used in folk remedies; therefore this genus is of great importance in traditional medicine. It is a very large genus of approximately 550 to 750 species, which is subdivided into 10 to 11 subgenera, including *Isocladus*, *Kirganelia*, *Cicca*, *Embllica*, *Conani*, *Gomphidium*, *Phyllanthodendron*, *Xylophylla*, *Botryanthus*, *Ericococus*, and *Phyllanthus* W.C. Evans (1996). The plants of the genus have been used traditionally as hepatoprotective, antipyretic, antioxidative, laxative, tonic, antibacterial, antiatherosclerotics,

immunomodulatory, antiviral, antispasmodic, antineoplastic, antidiabetic etc. and have gone extensive phytochemical studies Kritikar et al., (2003). A large no. of phytoconstituents have been isolated which includes alkaloids, flavonoids, lactones, steroids, terpenoids, lignans, tannins etc The Wealth of India, (2005).

The purpose of this review is to provide a comprehensive update on the status of the recent chemical, pharmacological, and possible clinical relevance of the extract and active constituents isolated and identified in some of the plants belonging to the genus *Phyllanthus* in the treatment of various disorders.

Sr. No.	Name of the Plant	Chemical constituents	Biological activities and uses	References
1	<i>P. acidus</i>	Phyllanthusol-A, phyllanthusol-B phytosterol phyllanthol, β-amyrin lupeol, phyllanthoside	Cytotoxic	A. J. Ultee, (1933) P. Sengupta et al., (1966) N. Vongvanich et al., (2000)
2	<i>P. acuminatus</i>	Phyllanthostatins-1, phyllanthostatins-2, phyllanthostatins-3, phyllanthostatin-4 phyllanthoside, justicidin B, phyllanthostatin A	Anti-neoplastic	G. R. Pettit et al., (1984)
3	<i>P. amarus</i>	Geraniin, corilagin, amarulon, phyllanthusiin-D amarosterol-A,B, amariinic acid, amariin, amariinic acid, furosin, elaeocarpusin, repandusinic acid-A, geraniinic acid-B, isobubbialine, epibubbialine, gallic acid, 4-O-galloylquimic acid, galocatechin, rutin, quercetin-3-O-lucopyranoside, phyllanthusiin, elaeocarpusin, 1,6-digalloylglucopyranose	Anti-HIV, antimutagenic, anti-fungal, antidiabetic, radioprotective, diuretic, anti-allodynic, antitumor, anti-oedematogenic, insecticidal, hypotensive, anti-inflammatory, contraceptive effect, anti carcinogenic, anti-mutagenic, anti-diarrhoeal.	F. Notka et al., (2004) A. Agrawal et al., (2004) L. Y. Foo, (1993) N. Srividya et al., (1995) C. D. Lee et al., (1996) P. J. Houghton et al., (1996) A. A. Odetola et al., (2000) M. J. Moshi et al., (2001) M. V. Rao et al., (2001) B. Sripanidkulchai et al., (2002) C. A. L. Kassuya et al., (2003) S. Khanna, et al., (2003) K. Regi, et al., (2003) K. B. H. Kumar et al., (2004) L. Torben et al., (1993)
4	<i>P. anisobus</i>	Justicidin-B, phyllanthostatin-A, B & C, menisdaurilide, aquilegiolide	-	

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