



# A REVIEW ON COMMERCIALY IMPORTANT PLANTS

Laxmi Kant Sharma

Former Principal, St. Xavier's PG College, Phagi, Jaipur

## ABSTRACT

After realizing the importance of Indian Medicinal system and other tradition medicinal system scientists started screening of the plants for the isolation of important constituents occurring naturally. Latter active principals isolated from various medicinal plants were synthesized commercially.

We have made an attempt to list certain medicinal plants and active principals isolated from them.

### List of Medicinal Plants

S. No.	Name of the Plant	Part of the Plant	Active Principal/ Extract	Biological Activity	References
1.	<i>Acokanthera schimperi</i>	----	oubain	Cardiac	1
2.	<i>Aesculus hippocatanum</i>	Bark and Seeds	Escin, Petroleum Eather	Anti-inflammatory, Antihyaluronidase	2,3
3.	<i>Allium spp.</i>	----	Alan, Allicin, Ajoene, Adenosine	Antiviral, antihelicobacter pylori, Antistroke, Antibacterial, Antibiotic, Anti-inflammatory, Antifungal, Antiprotozoal	4, 5, 6, 7, 8
4.	<i>Alstonia scholaris</i>	Bark, Root bark	a-Amyrin Acetate, Lupeol Acetate Benzene Extract	Male antifertility, Cytotoxic, Malaria	9, 10, 11, 12, 13
5.	<i>Berberis Spp.</i>	Root, Rhizome and Stem bark	Berberine	Antidysentric, Antimicrobial	14
6.	<i>Borrago officinalis</i>	Seeds	Linoleic acid, aqueous methanolic extract	Antihepatoma activity on five human liver-cancer cell lines	15
7.	<i>Calendula officinalis</i>	Flower heads	Calendula Oil, Faradiol esters	Antioedematous	16
8.	<i>Cephalotaxus</i>	----	Harringtonine	Antitumor	17
9.	<i>Cinchona spp.</i>	Stem bark and wood	Quinine, Qunidine	Antimalarial, Antitumor	18
10.	<i>Digitalis spp.</i>	Leaves	Digoxin, lanatoside-C, Acetyldigoxin, Methanolic extract	Cardiovascular, urinary excretion, emetic effect, Systolic ventricular dysfunction	19, 20, 21, 22, 23
11.	<i>Heliotropium indicum</i>	----	Helitrotrine	Antitumor, wound healing	24
12.	<i>Jatropha curcas</i>	Seeds	Curcin	Antitumor, Antidiabetic	25
13.	<i>Opuntia dillenii</i>	----	Chloroform extract	Male antifertility	26
14.	<i>Phyllanthus spp.</i>	----	Phyllanthoside	Antitumor	27

15.	<i>Plumeria bicolor</i>	Bark	Plumeride	Male antifertility, Antitumor activity	28, 29
-----	-------------------------	------	-----------	--	--------

## REFERENCES

- [1] Hallaq H, Heller M, Panet R, Eilam Y. 1991. Binding properties and biological effects of oxidized-ouabain on cultured neonatal-rat cardiac myocytes. Implications on the mechanism of action of the digitalis-glycosides. *Biochem Pharmacol.* 41 (4), 509-519.
- [2] Senatore F, Mscisz A, Mrugasiewicz K, Gorecki P. 1989. Steroidal constituents and anti-inflammatory activity of the horse chestnut (*Aesculus hippocastanum L.*) bark. *Boll. Soc Ital Biol Sper.* 65 (2), 137 – 141.
- [3] Facino RM, Carinin M, Stefani R, Aldini G, Saibene L. 1995. Anti-elastase and Antihyaluronidase activity of saponins from *Hedera helix*, *Aesculus hippocastanum* and *Ruscus aculeatus*: factor contributing to their efficacy in the treatment of various insufficiency, *Arch Pharm. (Weinheim)*, 328 (10): 720 – 724.
- [4] O’Gara EA, Hill DJ, Maslin DJ. 2000. Activities of garlic oil, garlic powder and their diallyl constituents against *Helicobacter pylori*. *Appl. Environ. Microbiol* 66(5), 2269 – 2273.
- [5] Krest I, Keusgen M. 1999. Stabilization and pharmaceutical use of allinase. *Pharmazie* 54(4), 289 – 293.
- [6] Dirsch VM, Vollmar AM. 2001. Ajoene, a natural product with non-steroidal anti-inflammatory drug (NSAID) – like properties. *Biochem Pharmacol* 61(5), 587 – 593.
- [7] Harris JC, Cottrell SL, Plummer S, Lloyd D. 2001 Antimicrobial properties of *Allium sativum* (garlic). *Appl. Microbiol. Biotechnol* 57(3), 282 – 286.
- [8] Makheja AN, Bailey JM. 1990. Antiplatelet constituents of garlic and onion. *Agents Actions* 29(3-4), 360 – 363.
- [9] Gupta RS, Sharma R, Sharma A, Bhatnager AK, Dobhal MP, Joshi YC, Sharma MC. 2002. Effects of *Alstonia scholaris* bark extract on testicular functions of Wistar rats. *Asian Journal of Andrology* 4(3), 175 – 178.
- [10] Dassanayake MD. 1982. A revised hand book of the flora of Geylox; IV. Amerind Publication Co. Pvt. Ltd. New Delhi.
- [11] Sexton JE. 1965. The Alkloids Chemistry and Physiology, Academic Press, New York, 8<sup>th</sup> Edition, page 159.
- [12] Gupta RS, Bhatnager AK, Joshi YC, Sharma MC, Khushalani V, Kachawa JBS. 2005. Induction of Antifertility with Lupeol Acetate in Male Albino Rats. *Pharmacology: 75(2): 57 – 62.*
- [13] Gupta RS, Bhatnager AK, Joshi YC, Sharma R, Sharma A. 2004. Supression of Fertility in Male Albino Rats following a-Amrin Acetate Administration. *Pharmaceutical Biology: 42(2): 98 – 104.*
- [14] Dobhal MP, Joshi YC. 1992. *In-vitro* antimicrobial efficacy of *Berberis chitra*. *Fitoterapia* 63(1), 69 – 70.
- [15] Lin LT, Liu LT, Chiang LC, Lin CC. 2002. *In vitro* anti-hepatoma activity of fifteen natural medicines from Canada. *Phytother. Res.* 16(5), 440 – 444.
- [16] Zitter-Eglseer K, Sosa S, Jurenitsch J, Schubert- Zsilavec M, Della Loggia R, Tubaro A, Bertoldi M, Franz C. 1997. Anti-oedematous activity of the main triterpendiol ester of marigold (*Calendula officinalis L.*). *J. Ethnopharmacol.* 57(2), 139-144.
- [17] Duke JA, *Advances in new crops*, Timber Press, Portland, OR, page 491-498.
- [18] Park BS, Kim DY, Rosenthal PJ, Huh SC, Lee BJ, Park EU, Kim JE, Kim MH, Huh TL, Choi YJ, Suh KH, Choi WS, Lee SE. 2002. Synthesis and evaluation of new antimalarial analogous of quinolone alkaloid derived from *Chinchona ledgeriana Moens* ex Trimen. *Bioorg Med Chem Lett* 12(10), 1351 – 1355.
- [19] Hou WC, Lee MH, Chen HJ, Liang WL, Han CH, Liu YW, Lin YH. 2001. Antioxidant activities of Dioscorin, the storage Protein of Yam (*Dioscorea batatas Decne*) Tuber. *J Agric Food Chem* 49(10), 4956 – 4960.
- [20] Liu HW, Hu K, Zhao QC, Cui CB, Kobayashi H, Yao XS. 2002. Bioactive saponins from *Dioscorea futschauensis* . *Pharmazie* 57(8), 570 – 572.
- [21] Dong M, Feng XZ, Wu LJ, Wang BX, Ikejima T. 2001. Two new steroidal saponins from rhizomes of *Dioscorea panthaica* and their cytotoxic activity. *Planta Med.* 67(9), 853 – 857.
- [22] Gao H, Kuroyangi M, Wu L, Kawahara N, Yasuno T, Nakamura Y. 2002. Antitumor promoting constituents from *Dioscorea bulbifera L.* in JB6 mouse epidermal cells. *Biol Pharm Bull* 25(9), 1241 – 1243.
- [23] Osowski S, Rostock M, Bartsch HH, Massing U. 2000. Pharmaceutical comparability of different therapeutic preparations. *Forsch Komplementarmed Klass Naturheilkd* 7(6), 294 – 300.

- [24] Reddy JS, Rao PR, Reddy MS. 2002. Wound healing effects of *Heliotropium indicum*, *Plumbago zeylanicum* and *Acalypha indica* in rats. *J. Ethnopharmacol* 79(2), 261 – 263.
- [25] Lin J, Yan F, Tang L, Chen F. 2003. Antitumor effects of curcin from seeds of *Jatropha curcas*. *Acta Pharmacol Sin* 24(3) 241-246.
- [26] Gupta RS, Sharma R, Sharma A, Chaudhary R, Bhatnager AK, Dobhal MP, Joshi YC, Sharma MC. 2002. Antispermatic effects and Chemical investigation of *Opuntia dillenii*. *Pharmaceutical Biology* 40(6), 411 – 415.
- [27] Liu J, Lin H, McIntosh H. 2001. Genus *Phyllanthus* for chronic hepatitis B virus infection: a systematic review. *J Viral Hepat* 8(5), 358 – 366.
- [28] Gupta RS, Bhatnager AK, Joshi YC, Sharma R, Sharma A. 2004. Effects of Plumieride, an iridoid on spermatogenesis in male albino rats. *Phytomedicine* 11(2-3), 169 – 174.
- [29] Dobhal MP, Li G, Gryshuk A, Gram A, Bhatnager AK, Khaza SJ, Joshi YC, Sharma MC, Oseroff A, Pandey RK. 2004. Structural Modifications of Plumieride Isolated from *Plumeria bicolor* and the effect of these modifications on *in vitro* anticancer activity. *Journal of Organic Chemistry*: 69, 6165-6172.

