



Scholars Research Library

J. Nat. Prod. Plant Resour., 2012, 2 (1): 182-185

(<http://scholarsresearchlibrary.com/archive.html>)



An annual review on wound-healing medicinal plants (Jan-Dec 2011)

Raju Kasarla*, A. Elumalai, M. Chinna Eswaraiah, Palla Ravi, Veldi Naresh

*Department of Pharmacognosy, Anurag Pharmacy College, Ananthagiri (v), Kodad (M),
Nalgonda (Dt), Andhra Pradesh, India*

ABSTRACT

Wound is defined as the disruption of the cellular and anatomic continuity of a tissue. Wound may be produced by physical, chemical, thermal, microbial or immunological insult to the tissues. The process of wound healing consists of integrated cellular and biochemical events leading to re-establishment of structural and functional integrity with regain of strength in injured tissues. Therefore the aim of treating a wound is to either shorten the time required for healing or to minimize the undesired consequences. Wound-healing agents derived from plants need to be identified and formulated for treatment and management of wounds. Various herbal products have been used in management and treatment of wounds over the years. In this direction an annual review collection of scientifically proved medicinal plants are listed. This will help researchers in interest for developing new herbal wound healing medicinal formulations for human use.

Key words: Wound healing medicinal plants, annual review collection.

INTRODUCTION

India has a rich flora that is widely distributed throughout the country. Herbal medicines have been the basis of treatment and cure for various diseases and physiological conditions in traditional methods practiced such as Ayurveda, Unani and Siddha. Medicinal components from plants play an important role in conventional as well as western medicine. Plant derived drugs have been a part of the evolution of human, healthcare for thousands of years. Plant based drugs were commonly used in India and China. Today a substantial number of drugs are developed from plants which are active against a number of diseases. The majority of these involve the

isolation of the active ingredient (chemical compound) found in a particular medicinal plant and its subsequent modification [1-3].

One of the survey conducted by the WHO reports that more than 80% of the world's population still depends upon the traditional medicines for various diseases. In the developed countries 25 percent of the medical drugs are based on plants and their derivatives and the use of medicinal plants is well known among the indigenous people in rural areas of many developing countries [4, 5].

A wound may be defined as a break in the epithelial integrity of the skin or may also be defined as a loss or breaking of cellular and anatomic or functional continuity of living tissue. According to the Wound Healing Society, wounds are physical injuries that result in an opening or break of the skin that cause disturbance in the normal skin anatomy and function. They result in the loss of continuity of epithelium with or without the loss of underlying connective tissue [6].

The wound healing activities of plants have since been explored in folklore. Many Ayurvedic herbal plants have a very important role in the process of wound healing. Plants are more potent healers because they promote the repair mechanisms in the natural way. Extensive research has been carried out in the area of wound healing management through medicinal plants.

Table 1: List of Wound healing medicinal plants

S. No	Botanical Name	Family	Parts Used	Solvents Used	Chemical Constituents	Screening Method	References
1	<i>Aegle marmelos</i> Linn	Rutaceae	Seeds	Methanol	tannins	Excision wound model and incision wound model	Sharma et al [7]
2	<i>Arisaema leschenaultii</i> Blume	Araceae	Tubers	Ethanol	Triterpenoids, tannins, anthraquinone glycosides	Excision wound model and incision wound model, dead space wound model	Pravin suruse et al [8]
3	<i>Asparagus racemosus</i> Willd	Liliaceae	Roots	Aqueous	Flavonoids, tannins	Excision wound model and incision wound model	Udupa et al [9]
4	<i>Blechnum orientale</i> Linn	Blechnaceae	Leaves	Aqueous	Polyphenolic flavonoids, tannins	Excision wound model	Lai et al [10]
5	<i>Brassica juncea</i> Linn	Brassicaceae	Leaf	Aqueous	Alkaloids, flavonoids, saponins,	Excision wound model	Sumeet Gupta et al [11]
6	<i>Carica papaya</i> Linn	Caricaceae	Roots	Aqueous	Saponins, flavonoids,	Excision wound model and incision wound model	Prashant Tiwari et al [12]
7	<i>Centella asiatica</i> Linn	Apiaceae	Leaves	Ethanol	Triterpenes like Asiatic acid	Excision wound model and burn wound model	Sushma et al [13]
8	<i>Chromolaena odorata</i> Linn	Asteraceae	Leaves	Aqueous	Phenolic acids, complex mixtures of lipophilic flavonoids	Excision wound model	Vaisakh et al [14]
9	<i>Croton bonplandianum</i> Baill	Euphorbiaceae	Leaf	Ethanol	Rutin, crotosparinine, crotosparin	Excision wound model	Ramachandran et al [15]
10	<i>Ficus bengalensis</i> Linn	Moraceae	Roots	Aqueous, ethanol	Saponins, flavonoids, tannins	Excision wound model & incision wound model	Krishnamurti et al [16]
11	<i>Gymnema sylvestre</i> R.Br	Asteraceae	Leaves	Ethanol	Flavonoids, sterols, alkaloids	Excision wound model and Burn wound model	Ibrahim et al [17]
12	<i>Heliotropium indicum</i> Linn	Boraginaceae	Leaves	Aqueous, ethanol	Alkaloids, Saponins, tannins	Excision wound model & incision	Shenoy ashoka M et al [18]

						wound model and Dead space wound	
13	<i>Jatropha curcas</i> Linn	Euphorbiaceae	Stem Bark	Methanol	Flavonoids	Excision wound model & incision wound model	Kamal Sachdeva et al [19]
14	<i>Michelia champaca</i> Linn	Magnolianaceae	Flowers	Ethanol	Flavonoids, tannins, terpenes	Burn wound model	Sunitha et al [20]
15	<i>Mimusops elengi</i> Linn	Sapotaceae	Bark	Methanol	Taraxerol, taraxerone, ursolic acid, V-spinosterol	Excision wound model, incision wound model and dead space wound model	Jain et al [21]
16	<i>Ocimum sanctum</i> Linn	Labiatae	Leaves	Aqueous	Flavonoids	Excision wound model and incision resutured wound model	Asha B et al [22]
17	<i>Oncidium flexuosum</i> Sims	Orchidaceae	Leaf	Hydroalcoholic extract	Flavonoids, tannins, terpenes	Incision wound model	Fernada et al [23]
18	<i>Plumbago zeylanica</i> Linn	Plumbaginaceae	Root	Methanol	Flavonoids, carbohydrates, tannins, alkaloids	Excision wound model	Devender et al [24]
19	<i>Psidium guajava</i> Linn	Myrtaceae	Leaf	Methanol	Flavonoids, guayavolic acid, guavanoic acid, guajadiol	Excision wound model	Gupta et al [25]
20	<i>Pterospermum acerifolium</i> Wild	Malvaceae	Flowers	Ethanol	Flavonoids, alkaloids, sterols	Excision wound model	Aswini et al [26]
21	<i>Sbutilon indicum</i> Linn	Malvaceae	Leaf	Petroleum ether, ethanolic	Flavonoids, saponins	Excision wound model and incision wound model	Suresh et al [27]
22	<i>Sesbania grandiflora</i> Linn	Leguminosae	Flower	Ethanol	Proteins, tannins, oleanolic acid, keampferol	Excision wound model and incision wound model	Aijaz et al [28]
23	<i>Sida spinosa</i> Linn	Malvaceae	Leaf	Ethanol		Excision wound model and Incision wound model	Krishman et al [29]
24	<i>Tagetes erecta</i> Linn	Asteraceae	Leaves	Ethanol	Flavonoids, Sterols and Alkaloids	Excision wound model and Burn wound model	Ibrahim et al [17]
25	<i>Teucrium polium</i> Honey	Labiatae	Flower Honey		Flavonoids, sterols and β -caryophyllene	Excision wound model and incision wound model	Alizadeh et al [30]
26	<i>Ziziphus nummularia</i> Linn	Rhamnaceae	Leaf	Ethanol	Alkaloids, flavonoids, Glycosides	Excision wound model	Hasan [31]

REFERENCES

- [1] Perumal SR; Ignacimuthu S; Patric RD; *Eur Rev Med Pharmacol Sci*, 12, **2008**, 1-7.
- [2] Fabricant DS; Farnsworth NR; *Environ Health Pers*, 109 (Suppl 1), **2001**, 69-75.
- [3] Priya KS; Gnanamani A; Radhakrishnan N; Babu M; *J. Ethnopharmacol.*, 83, **2002**, 193-199.
- [4] Steenkamp V; Mathivha E; Gouws MC; Rensburg CEJ; *J. Ethnopharmacol.*, 95, **2004**, 353-357.
- [5] Ramzi SC; Vinay K; Stanley R; Pathologic Basis of Diseases, 5th edition, WB Saunders Company, Philadelphia, **1994**, 86.
- [6] Strodbeck F, *Newborn Infant Nurs. Rev*, 1, **2001**, 43-45.
- [7] Ganesh Sharma N; Susheel Dubey K; Nitin Sati; Jyotsana Sanadya; *Pharmacologyonline*, **2011**, 2, 171-178.
- [8] Pravin Suruse; Kale MK; Mahendra Gunde; Nikhil Amnerkar; Pathak AK; *Der Pharmacia Lettre*, **2011**, 3, 4, 200-206.

- [9] Prabhath Kodancha G; Satish Kumar MC; Ravindrasingh Rajput; Vijayalaxmi Patil; Udupa A; Subir Gupta; Rathnakar UP; Sahana Rao; Deepa Benegal; Adarsh Benegal; Shubha HV; *Current Pharma Research*, **2011**, 1, 2, 111-114.
- [10] How Yee Lai; Yau Yan Lim; Kah Hwi Kim; *BMC Complementary and Alternative Medicine*, **2011**, 11, 62, 1-9.
- [11] Rajat Malan; Anu Walia; Vipin Saini; Sumeet Gupta; *European Journal of Experimental Biology*, **2011**, 1, 2, 33-40.
- [12] Prashant Tiwari; Kuldeep Kumar; Rajnikant Panik; Alok Pandey; Ashish Pandey; Pratap Kumar Sahu; *Journal of Chemical and Pharmaceutical Research*, **2011**, 3, 4, 291-295.
- [13] Sushma Tiwari; Sangeeta Gehlot; Gambhir; *Centella asiatica: Journal of stress physiology & Biochemistry*, **2011**, 7, 1, 38-44.
- [14] Vaisakh MN; Anima Pandey; *International journal of pharmaceutical sciences and research*, **2012**, 3, 1, 80-83.
- [15] Divya K. Naveen Krishna; Ramachandran S; Dhanaraju MD; *Global Journal of Pharmacology*, **2011**, 5, 3, 159-163.
- [16] Krishna Murti; Upendra Kumar; *American journal of pharmacology and toxicology*, **2011**, 6, 2, 68-75.
- [17] Kiranmai M; Kazim SM; Ibrahim M; *International journal of pharmaceutical applications*, **2011**, 2, 2, 135-140.
- [18] Shenoy Ashoka M; Shastry C; Shashidhar; Shetiya Prakash; *International research Journal of Pharmacy*, **2011**, 2,1, 279-284.
- [19] Kamal Sachdeva; Preeti Garg; Manmohan Singhal; Birendra Srivastava; *Pharmacognocoy Journal*, **2011**, 25, 12.
- [20] Tara Shanbhag, Sunitha Kodidela, Smita Shenoy, Arul Amuthan, Sarath Kurra, *International Journal of Pharmaceutical Sciences Review and Research*, **2011**, 7(2): 112-115.
- [21] Gupta N; Jain UK; *Afr J Tradit Complement Altern Med*, **2011**, 8, 2, 98-103.
- [22] Asha B; Nagabhushan A; Shashikala GH; *Al Ameen J Med Sci*, **2011**, 4, 4, 309-314.
- [23] Fernanda Oliveira de G, Gaspi de, et al; *Evidence-Based Complementary and Alternative Medicine*, **2011**, 1-9.
- [24] Devender Rao Kodati; Shashidher Burra; Kumar Goud P; *Asian Journal of Plant Science and Research*, **2011**, 1, 2, 26-34.
- [25] Girish Kumar Gupta; Jagbir Chahal; Deeksha Arora; *Journal of Pharmacy Research*, **2011**, 4, 1, 42-46.
- [26] Aswini Kumar Senapati; Ranjan Kumar Giri; Dibya Sundar Panda; Sremantula Satyanarayan; *Journal of Basic and Clinical Pharmacy*, **2011**, 2, 4, 203-206.
- [27] Ganga Suresh P; Ganesan P; Dharmalingam M; Baskar S; Senthil Kumar P; *Int J Biol Med Research*. **2011**, 2, 4);, 908 – 911.
- [28] Aijaz A.; Sheikh; Zaferuddin Sayyed; Siddiqui AR; Pratapwar AS; Sameer Sheakh S; *International journal of PharmTech Research*, **2011**, 3, 2, 895-898.
- [29] Navaneetha Krishnan S; Suresh kumar S; Shaji G; Mohideen S; SurendranathY; Usha V; *Pharmacologyonline*, **2011**, 3, 1017-1022.
- [30] Ali Mohammad Alizadeh; Hamid Sohanaki; Mahmood Khaniki; Mohammad Ali Mohagheghi; Giti Ghmami; Maryamsadat Mosavi; *Iranian Journal of Basic Medical Sciences*, **2011**, 14, 6, 499-505.
- [31] Hasan Soliman Yusufoglu; *International Journal of Pharmacology*, **2011**, 7, 8, 862-867.