

Antioxidant Activity of Amaranthus Viridis Linn

Omkar R. Zaware¹, Rutika S. Wakchaure², Akshada V. Tambe³, Rahul P. Lokhande⁴

Bachelor of Pharmacy, Samarth Institute of Pharmacy, Belhe, Pune, Maharashtra, India^{1,2,3}

Department of Pharmaceutical Chemistry, Samarth Institute of Pharmacy, Belhe, Maharashtra, Pune, India⁴

Abstract: *Amaranthus viridis L. belongs to family (Amaranthaceae). It is a common wild vegetable and weed of cultivation. Phytochemistry and antioxidant activity of Amaranthus viridis Linn. (Green leaf) were undertaken with standard methods. The phenolic and flavonoids compounds identified in leafy vegetable Amaranthus viridis demand a comprehensive pharmacological study. Amaranthus viridis contains several compounds like arginine, amino acids lysine, histidine, cystine, valine, phenylalanine, leucine, isoleucine, tyrosine, threonine, methionine, etc. In search of new activities pytochemical screening, chemical entities of the Amaranthus viridis extract from leaves, indicates the presence of biologically active constituents like tannins and phenols, saponins, alkaloids, flavonoids, cardiac glycoside, steroid and triterpenoids. Amaranthus viridis contains some chemical constituent that possesses potent anti-inflammatory, antiviral, antihepatotoxic, antiulcer antiallergic actions. Amaranthus viridis is used in Indian traditional system to reduce labour pain and act an anti-inflammatory and santipyretic. Other traditional uses range from an anti-inflammatory agent of the urinary tract, anti-rheumatic, antiulcer, venereal diseases vermifuge, diuretic, anti-rheumatic, antiulcer, analgesic, antiemetic, laxative, , antileprotic, improvement of appetite, treatment of eye problems and respiratory problems , to treatment of asthma. Also the phenolic and flavonoids compounds identified in leafy vegetable Amaranthus viridis demand a comprehensive pharmacological study.*

Keywords: *Amaranthus viridis*, Pharmacologicals, Pytochemicals, Anti-inflammatory, Antinociceptive, Antidiabetic, Hepatoprotective, Antihyperglycemic, Antihyperlipidemic, Cardio Protective

REFERENCES

- [1]. Antioxidant And Anticancer Activities Of Selected Indian Medicinal Plant Viz., Artocarpus Lakoocha, Kigelia Pinnata, And Amaranthus Viridis, By Tanveer Ahamad, June 2020.
- [2]. Kiritikar Kr, Basu Bd. Indian Medicinal Plants. Vol. 3. 2nd Ed. In: Kirtikar Kr, Basu Bd (Eds). Dehra Dun, India: International Book Distributors; 1987, 2061-2062.
- [3]. Council of Scientific and Industrial Research (Csir). Publications and Information Directorate. The Wealth Of India. Vol. 1. A Dictionary Of In-Dian Raw Materials And Industrial Products. New Delhi, India: 1988. 221 P.
- [4]. Agra Mf, Baracho Gs, Nurit K, Basilio Ijld, Coelho Vpm. Medicinal And Poisonous Diversity Of The Flora Of "Cariri Paraibano" Brazil. J Ethno-Pharmacol 2007; 111(2):283-395.
- [5]. Sena Lp, Vanderjagt Dj, Rivera C, Tsin Atc, Muhamadu I, Mahamadou O, Et Al. Analysis Of Nutritional Components Of Eight Famine Foods Of The Republic Of Nigeria. Plant Foods Hum Nutr 1998; 52(1):17-30.
- [6]. Gallagher, R. S., & Cardina, J. Phytochrome-Mediated Amaranthus Germination I: Effect Of Seed Burial And Germination Temperature. Weed Sci. 1998; 46, 48-52.
- [7]. M. B. Nordeide, A. Hatløy, M. Følling, E. Lied And A. Oshaug , Nutrient Composition And Nutritional Importance Of Green Leaves And Wild Food Resources In An Agricultural District, Koutiala, In Southern Mali. 1996; 47(6), 455- 468.
- [8]. Bagepalli Srinivas Ashok Kumar , Kuruba Lakshman , Korala Konta Narsimha Jayaveera , Devangam Sheshadri Shekar , Chinna Swamyvel Muragan , And Bachappa Manoj , Antinociceptive And Antipyretic Activities Of Amaranthus Viridis Linn In Different Experimental Models. Avicenna Journal of Medical Biotechnology. 2009; 1(3): 167-171.
- [9]. Muhammad Javid Iqbal, Sumaira Hanif, Zahed Mahmood, Farooq Anwar and Amer Jamil Antioxidant And Antimicrobial Activities Of Chowlai (Amaranthus Viridis L.) Leaf and Seed Extracts. Journal of Medicinal Plants Research. 2012; 6(27), 4450-4455.

- [10]. Ashok Kumar Bs, Lakshman K, Narayan Swamy Vb, Arun Kumar Pa, Sheshadri Shekar D, Manoj B, Vishwantha GI Hepatoprotective And Antioxidant Activities Of Amaranthus Viridis Linn. Macedonian Journal of Medical Sciences. 2011 Jun 15; 4(2):125-130. Doi:10.3889/Mjms.1857- 5773.2011.0163 Basic Science
- [11]. Ashok Kumar Bs, Lakshman K, Jayaveea Kn, Sheshadri Shekar D, Saleemulla Khan, Thippeswamy Bs, Veerapur Vp Antidiabetic, Antihyperlipidemic And Antioxidant Activities Of Methanolic Extract Of Amaranthus Viridis Linn In Alloxan Induced Diabetic Rats. 2012; 64(1-2):75-79.
- [12]. Sravan Prasad Macharla, Venkateshwarlu Goli, K Vijaya Bhasker, P. Suvarna Devi Ch. Dhanalakshmi, Ch. Sanjusha, Effects Of Anti-Inflammatory Activity Of Amaranthus Viridis Linn. Scholars Research Library Annals Of Biological Research, 2011, 2 (4): 435-438.
- [13]. Ashok Kumar, B.S, Lakshman, K, Jayaveera, K.N., Nandeesh, R., Manoj, B. And Ranganayakulu, D, Comparative In Vitro Anthelmintic Activity Of Three Plants From The Amaranthaceae Family. Arch. Biol. Sci., Belgrade. 2010;62(1),185-189. Doi: 10.2298/ Abs 1001185 k .
- [14]. Bruna Carminate, Giordano Bruna Martin, Roney Martinho Barcelos, Ivoney Gontijo, Marcelo Suzart De Almeida, Valdenir Jose Belinelo Evaluation Of Antifungal Activity Of Amaranthus Viridis L. (Amaranthaceae) On Fusariosis By Piper Nigrum L. And On Anthracnose by Musa Sp. Agricultural Journal. 2012; 7(3):215-219.
- [15]. Girija Krishnamurthy, Kuruba Lakshman, Nagaraj Pruthvi, And Pulla Udaya Chandrik Department Of Pharmacognosy, Peoples Educational Society, College Of Pharmacy, Bangalore - 560 050, Karnataka, India. Correspondence To: Dr. K. Lakshman, E-Mail: DrLakshman26@Rediffmail.Com anti hyperglycemic And Hypolipidemic Activity Of Methanolic Extract Of Amaranthus Viridis Leaves In Experimental Diabetes, Indian J Pharmacol. 2011; 43(4): 450-454.
- [16]. Girija K, Lakshman K, Udaya Chandrika, Sabhya Sachi Ghosh, Divya T. Anti-Diabetic and Anti-Cholesterolemic Activity Of Methanol Extracts Of Three Species Of Amaranthus. Asian Pac J Trop Biomed. 2011;1(2):133-8. Doi: 10.1016/S2221-1691(11)60011-7.
- [17]. Sena Lp, Vanderjagt Dj, Rivera C, Tsin At, Muhamadu I, Mahamadou O, Millson M, Pastuszyn A, Glew Rh , Analysis Of Nutritional Components Of Eight Famine Foods Of The Republic Of Niger. Plant Foods Hum Nutr. 1998; 52(1):17-30.
- [18]. Brenan, J.P.M. The Genus Amaranthus in Southern Africa. Journal of South African Botany. 1981; 47: 451-492.
- [19]. Musharaf Khan, Shahana Musharaf, Mohammad Ibrar and Farrukh Hussain Pharmacognostic Evaluation Of The Amaranthus Viridis L Research In Pharmaceutical Biotechnology. 2011; 3(1), 11-16.
- [20]. Hamid Kheyrodin, Isolation and Identification Of New Eleven Constituents From Medicinal Plant. International Journal Of Nutrition And Metabolism. 2009; 1(2) 014-019l.
- [21]. Muhammad Islam, Ejaz Ali, Muhammad Asif Saeed, Muhammad Jamshaid and Muhammad Tahir Javed Khan. Antimicrobial And Irritant Activities Of The Extracts Of Malva Parviflora L., Malvastrum Coromandelianum L. And Amaranthus Viridis L. -A Preliminary Investigation, 42.Pak. J. Pharm. 20-23 (1 & 2), 3-6, 2007-2010 Issn: 1019-956x.
- [22]. G Saravanan, P Ponnurugan, M Sathiyavathi, S Vadivukkarasi, S Sengottuvelu, Cardioprotective Activity of Amaranthus Viridis Linn: Effect On Serum Marker Enzymes, Cardiac Troponin And Antioxidant System In Experimental Myocardial Infarcted Rats. Int J Cardiol. 2013; 25; 165(3):494-8. Doi: 10.1016/J.Ijcard.2011.09.005.
- [23]. Kaur N, Dhuna V, Kamboj Ss, Agrewala Jn, Singh J. A Novel Antiproliferative and Antifungal Lectin From Amaranthus Viridis Linn Seeds. Protein Pept Lett. 2006; 13(9):897-905.
- [24]. Formulation And Evaluation Of Herbal Antidiabetic Tablets By 2022, Rutika Wakchaure, DOI: <http://doi.one/10.1729/Journal.30606>