

Medicinal plants and their usages in cancer

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Different types of acute or chronic and infectious or non-infectious diseases at any age are always associated with suffering and economic and social burden [1-3]. Viral infectious diseases, neurofibroma, hepatitis, etc., are some of the major diseases that cause pain and suffering in the patient [1-4]. Meanwhile, cancer is not an exception to these complications. In cancer, cancer cells are separated from normal mechanisms cell division and growth. The exact cause of this phenomenon is unclear, but it is possible that genetic factors or factors that disrupt the activity of the cells can impair the cell nucleus [5-7]. Several efforts have been made to treat cancer, and various mechanisms and therapies in this area have been investigated [8-10]; however, researchers have always been seeking out more novel approaches [11]. Nowadays, the importance of medicinal plants and their vital role in the health and well-being of communities, self-sufficiency in pharmaceutical production, entrepreneurship, economic development, food security, etc., is undeniable [12-14]. According to reliable statistics, a significant proportion of people use complementary and traditional medicine, and this figure is increasing [15-19]. Chemical drugs are associated with serious side effects [20-22]. It is therefore necessary to use medicinal plants, which are a reliable and low-risk source. Turmeric (*Curcuma longa*), *Ginkgo biloba*, *Aloe vera*, green tea (*Camellia sinensis*), wormwood (*Artemisia absinthium*), garlic (*Allium sativum*), grapes (*Vitis vinifera*), rosemary (*Rosmarinus officinalis*), ginger (*Zingiber officinale*), apple (*Malus domestica*), broccoli sprouts (*Brassica oleracea*), basil (*Ocimum basilicum*), oak (*Quercus brantii*), green cumin (*Cuminum cyminum*), cinnamon (*Cinamomum verum*), cloves (*Syzygium aromaticum*), licorice (*Glycyrrhiza glabra*), and plantain (*Plantago major*) are one of the most important medicinal plants that can affect cancer. In some studies, the full range of phytochemicals and bioactive compounds of each plant have been reported to affect the treatment of the disease [23].

REFERENCES

- [1] Amirabi A, Naji S, Yekta Z, Sadeghi Y. Chorioamnionitis and diagnostic value of C-reactive protein, erythrocyte sedimentation rate and white blood cell count in its diagnosis among pregnant women with premature rupture of membranes. Pak J Biol Sci. 2012, 15(9):454-8.
- [2] Mohsenzadeh, A., Ahmadipour, S.H., Firouzi, M., Homa, B., Anbari, K.H. Effect of breast-feeding and formula-feeding on antibody response of hepatitis B vaccination. Life Science J 2013;
- [3] Tabrizi, A., Mirzatooei, F., Afshar, A., Pourjabali, M., Shariyate, M.J. Solitary neurofibroma in lower extremity with central extensive hyalinization. International Journal of Cancer Management 2017;
- [4] Yousefi B, Ahmadi Y, Ghorbanihagho A, Faghfoori Z, Irannejad VS. Serum arsenic and lipid peroxidation levels in patients with multiple sclerosis. Biological Trace Element Research. 2014;158(3):276-9.
- [5] Yousefi B, Samadi N, Baradaran B, Shafiei-Irannejad V, Zarghani N. Peroxisome Proliferator-Activated Receptor Ligands and Their Role in Chronic Myeloid Leukemia: Therapeutic Strategies. Chemical Biology and Drug Design. 2016:17-25.
- [6] Menbari MN, Rahmani SA, Ahmadi A, Zandi F, Bagheri N, Jalili A, et al. Evaluation of E-cadherin (CDH1) gene polymorphism related to gastric cancer in Kurdish population. Life Science Journal. 2013;12(SPL.ISSUE):212-6.
- [7] Azadegan-Dehkordi F, Bagheri N, Shirzad H, Rafieian-Kopaei M. The role of Th1 and Th17 cells in glomerulonephritis. Journal of Nephropathology. 2015;4(2):32-7.
- [8] Majidinia M, Yousefi B. DNA damage response regulation by microRNAs as a therapeutic target in cancer. DNA Repair. 2016;47:1-11.
- [9] Mohammadzadeh R, Baradaran B, Valizadeh H, Yousefi B, Zakeri-Milani P. Reduced ABCB1 expression and activity in the presence of acrylic copolymers. Advanced Pharmaceutical Bulletin. 2014;4(3):219-24.
- [10] Yousefi B, Darabi M, Baradaran B, Khaniani MS, Rahbani M, Darabi M, et al. Inhibition of MEK/ERK1/2 signaling affects the fatty acid composition of HepG2 human hepatic cell line. BioImpacts. 2012;2(3):145-50.
- [11] Majidinia M, Yousefi B. Breast tumor stroma: A driving force in the development of resistance to therapies. Chemical Biology and Drug Design. 2017;89(3):309-18.
- [12] Ahmadipour SH, Ahmadipour S, Mohsenzadeh A and Hassanzadazar H. Neonatal jaundice treatment with Iranian native medicinal plants: *Cotoneaster persicus*, most important medicinal plant affecting on neonatal jaundice. Der Pharmacia Lettre, 2015, 7 (12):313-315.
- [13] Ahmadipour SH, Mohsenzadeh A, Ahmadipour S, Eftekhari Z and Tajeddini P. Ethnobotanical identification of medicinal plants effective on toothache in Shiraz, south Iran. Der Pharmacia Lettre, 2015, 7 (12):419-426.
- [14] Zarei L, Pourjabali M, Naghdi N, Naji-Haddadi S, Bahmani E. A Systematic Review of the Most Important Medicinal Plants Native to Iran Effective on Testicular Morphology and Hormonal Testicular Function. J. Pharm. Sci. & Res. Vol. 9(5), 2017, 562-567.
- [15] Ahmadipour SH, Mohsenzadeh A, Eftekhari Z and Ahmadipour S. An overview of the most important medicinal plants affecting on child's jaundice in Ethnobotanical resource of Iran. Der Pharmacia Lettre, 2016, 8 (1):135-139.
- [16] Mahmoudi GHA, Mahmoodnia L, Mahmoud Mirhosseini M. Medicinal Plants with Anti-Poisoning Toxicity of Carbon Tetrachloride: An Overview of the Most Important Medicinal Plants Native to Iran with Anti- Carbon Tetrachloride Toxicity. Journal of Global Pharma Technology. 2016; 11(8):17-20.
- [17] Naji S, Zarei L, Pourjabali M, Mohammadi R. The Extract of *Lycium depressum* Stocks Enhances Wound Healing in Streptozotocin-Induced Diabetic Rats. Int J Low Extrem Wounds. 2017 Jun;16(2):85-93.
- [18] Pourjabali, M. and Mohammadrezaei-Khorramabadi, R. and Abbaszadeh, S. and Naghdi, N. and Naji-Haddadi, S. and Bahmani, F. Medicinal plants used for hypertension. Journal of Pharmaceutical Sciences and Research 2017; 9 (5): 537-541.
- [19] Zarei L, Naji-Haddadi S, Pourjabali M, Naghdi N, Tasbih-Forosh M, Shahsavari S. Systematic Review of Anti-Rheumatic Medicinal Plants: An Overview of the Effectiveness of Articular Tissues and Joint Pain Associated with Rheumatoid Arthritis. J. Pharm. Sci. & Res. Vol. 9(5), 2017, 547-551
- [20] Azadegan-Dehkordi F, Bagheri N, Shirzad M, Sanei MH, Hashemzadeh-Chaleshtori M, Rafieian-Kopaei M, et al. Correlation between mucosal IL-6 mRNA expression level and virulence factors of *Helicobacter pylori* in Iranian adult patients with chronic gastritis. Jundishapur Journal of Microbiology. 2015;8(8).
- [21] Kuhn M, Letunic I, Juhl Jensen L and Bork P. The SIDER database of drugs and side effects. Nucleic Acids Res. 2016; 44(Database issue): D1075–D1079.
- [22] Moradi MT, Karimi A, Alidadi S, Ghasemi-Dehkordi P, Ghaffari-Goosheh MS. Cytotoxicity and in vitro antioxidant potential of *Quercus Brantii* acorn extract and the corresponding fractions. International Journal of Pharmacognosy and Phytochemical Research. 2016;8(4):558-62.
- [23] Ghamari S, Mohammadrezaei-Khorramabadi R, Mardani M, Shahsavari S. An overview of the most important medicinal plants used as Mouth Freshener. J. Pharm. Sci. & Res. Vol. 9(6), 2017, 804-807.