WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
Coden USA: WJPRAP Impact Factor 8.63
Volume 15, Issue 7, 1330-1336. Review Article ISSN 2277–7105

RECENT TRENDS IN HERBAL MEDICINES

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Article Received on 05 March 2026,
Article Revised on 25 March 2026,
Article Published on 01 April 2026,

https://doi.org/10.5281/zenodo.19413221

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How to cite this Article: Ms. Kalyani Chande*[1], Mr. Priyanshu Shinde[2], Mr. Pushkar Ahir[2], Ms. Samruddi Andre[2], Ms. Sakshi Bhosale[2]. (2026). Recent Trends In Herbal Medicines. World Journal of Pharmaceutical Research, 15(7), 1330–1336.

ABSTRACT

Herbal medicines are the products derived from plant origin. From the ancient times herbal medicines are used in the treatment and cure of various diseases. Herbal medicines are nowadays widely used of people due to their less side effects and more benefits. Several nutritional supplements are prepared from herbal plants which helps in strengthen immune system. In recent time herbal industry in continuously growing and in future it will more developed.in recent years many herbal drugs are added in medicine preparation after a long research and studies on various medicinal plants. Herbal drugs are used widely in healthcare and pharmaceutical industry to improve patient health.

KEYWORDS: Herbal medicines, Herbal industry, Nutritional supplements, Drug development from plants.

INTRODUCTION

Herbal medicines are derived from plant and botanical sources.[1] from ancient times ayurvedic techniques involves the use of herbal medicines in treatment of disease in India.[2] Herbal medications are utilized for million across diverse cultures as primary source of healthcare system.[3] According to world health organization (WHO) guidelines herbal medicines are the plant derivatives with therapeutic effects. For preparation of herbal medicines, we use the whole plant or various parts of plant such as leaves, root, flowers,

fruits, bark etc. herbal medications are used to treat injuries and several types of diseases such as asthma, depression, cancer, anxiety, kidney disorder, cold, flu mental disorder and many other types of infectious diseases.[4] Herbal medicines offer a vast number of benefits and hence have been used since down of civilization. WHO issued guideline for the measurement of safety and efficacy of herbal medicines?

WHO estimates that 80% of total world population uses herbal medicines as major healthcare? herbal drugs are easily available in nature and are generally safe and cost effective.[5] In India herbal medicine are used in many traditional healthcare techniques like ayurveda, homeopathy, neuropathy and other systems.[6] Due to the toxic side effects of allopathic medicines use of herbal medicines is rapidly increasing. Herbal medicines are consumed by people without prescription from a long time. Herbal medicine provides various health benefits such anti-inflammatory, antioxidant, antidiabetic, antimicrobial, sedative, analgesic, anti-arthritic, antidepressant and memory enhancing activities.[7] Due to toxicity certain herbal drugs are prevented from preparation of medicines while some drugs are modified or combined with other drugs for preparation of herbal medicines.

Preparation and usage of herbal drugs

Herbal medicines produce safe and effective treatment of many diseases, if usage of drugs maintain in right way.[8] Various herbal medicines have various strengths that depends on the growing condition, timing, genetic distinction of the plant. Some of the herbal plants are cultivated and processed among the country while some herbal plants are exported from the other countries. in India some of the main herbal plants grown are tulsi, turmeric, aloe vera, ashwagandha, adhatoda vasica etc.[9]

Herbal drugs are present in herbal plants and requires proper extraction before preparation of medicines. Usually, companies buy raw product of herbal plants like dried plant or parts of the plant for the preparation of medicines. Herbal medicines are prepared by many techniques such as extraction, distillation, expression, fractionation, purification, and fermentation.[10]

These techniques include powdered herbal product, extracts, processed exudates and essential oils. Some of the pharmacological actions of herbal drugs with examples are shown in above table: -

Pharmacological action of herbal drugs	Examples
Anti-aging activity	Ocimum sanctum, Curcuma longa, Terminalia arjuna, Lyciumbarbarum, Rosa damascene
Dental care activity	Piper nigrum, Salvadorapersica, Panax ginseng, Acacia arabica, Azadirachaindica
Anticancer activity	Wrightiatinctoria, Vachellianilotica, Terminalia chebula, Garcinia indica, Allium sativum, Aloe vera
Anti-inflammatory activity	Vernoniacinerea, Solanumnigrum, Curcuma long, Bauhinia tarapotensis
Antidiabetic activity	Aloe vera, Acacianilotica, Zeamays, Medicagosativa, Psidiumguajava, Xanthium stramonium

Standardization of herbal drugs

Herbal drugs are used in preparation of medicines for the prevention, and treatment of various diseases. The healthcare industry is rapidly growing with time throughout the world. Also, the pharmaceutical industry is also growing progressively. according to the report of world bank the trade of herbal plants, botanical drugs products and raw materials are growing at the rate of 15%.[11] Herbal medicines and other products are not considered scientifically valid if the product is not authenticated and characterized in order to ensure its safety.[12]

Certain herbal drugs have shown certain side effects such as toxicity, allergic reactions, drug interactions with other herbs and effects from contamination of product. Standardization of herbal drugs is necessary for desired therapeutic effects.[13] Pharmacological properties of herbal drugs totally depend on the constituent of phytochemical composition present in the medicinal plant. Standardization is the first step in the establishment of biological activity, a quality assurance program for production or consistence chemical profile for manufacturing of herbal products. EU has defined three categories for herbal products: -

- Compounds containing elements with known and effective therapeutic activity are responsible for clinical efficacy of medicine.
- Compounds containing chemically known phytoconstituents with known pharmacological action which likely contribute in clinical efficacy of formulations.
- Some compounds have no active constituents that are identified still they are responsible for certain therapeutic activity.[25]

Standardization of drugs is defined as the guidance on quality of herbal medicinal products by means of adjusting the herbal preparations to define a content of constituents with known pharmacological action. The European medicine agency (EMEA) defines marker compounds for the standardization of herbal drugs which are discovered for our interest purpose.[14] Examples of such markers are the gingkolides and flavonoids in ginkgo biloba L. valerenic acid in valeriana offinalis L and hypericin in hypericum perfoliatum L.

Pharmacovigilance of herbal drugs

Pharmacovigilance is the branch of science which deals with the pharmacological activities of herbal drugs relating to the detection, understanding, assessment and prevention of adverse effect of drugs or any other type of drug related problems.[15] In recent years it has included the herbal, blood products, traditional and complementary medicines. the main purpose of pharmacovigilance is to prevent the adverse effects of drugs in human beings. The history of use of herbal medicines for treatment of various diseases is old as history itself. The first recorded use of herbs as medicinal treatment was begun over 4000 years ago. The origin of use of herbs as a medical treatment began in India and China in ancient times.[16] Traditionally herbal drugs are considered harmless but as medicinal products these drugs required observation to identify its side effects. WHO has increased its efforts in research of herbal drugs? Pharmacovigilance is an important post-marketing safety tools in insuring safety of herbal and other pharmaceutical products.

Various herbal drugs are tested for its therapeutical action for preparation of medicines. Due to less knowledge of constituents of herbal plants and its standardization. Herbal medicines are continuously developing with recent technologies and their standardization has also become much better than previous techniques. Pharmacovigilance helps in the development of herbal products by checking its properties.[17]

Advantages of herbal drugs

- ✓ Herbal drugs are economically cheap[18]
- ✓ More effectiveness[19]
- ✓ Herbal drugs have Low risk of side effects
- ✓ Promote tolerance[20]
- ✓ Herbal drugs have Widespread accessibility[21]
- ✓ Herbal drugs strengthen immune system
- ✓ Herbal medicines reduce the risk of cancer

- ✓ Better cultural acceptability

Disadvantages of herbal drugs

- ✓ Herbal drugs have high risk of self-dosing[22]
- ✓ Standardization of herbal drugs are difficult[23]
- ✓ Herbal drugs are not able to cure rapid sickness and accident marks.
- ✓ High chances of adulteration[24]
- ✓ Certain herbal drugs are toxic in nature

CONCLUSION

Medicinal plants serve as a essential source of therapeutics aids which has gained a significant role in the healthcare and pharmaceutical system all over the globe for the treatment of many diseases. Herbal medication system is continuously growing in the world. It is clear that the herbal industry will continuously grow in the future and it has a vast scope of development and research. Herbal medicines are slowly replacing the allopathic medicines due to recent development in preparation methods and research on the medicinal plants. Today many herbal products are available in the market.

REFERENCES

1. Ekor, M. The growing use of herbal medicines: issues relating to adverse reactions and challenges in monitoring safety. Frontiers in Pharmacology, 2014; 4: 177.
2. Patwardhan, B., Warude, D., Pushpangadan, P., & Bhatt, N. Ayurveda and traditional Chinese medicine: a comparative overview. Evidence-Based Complementary and Alternative Medicine, 2005; 2(4): 465–473.
3. Farnsworth, N. R. The role of ethnopharmacology in drug development. Bioactive Compounds from Plants, 1990; 154: 2–21.
4. World Health Organization. General guidelines for methodologies on research and evaluation of traditional medicine. Geneva: WHO., 2000.
5. Bent, S. Herbal medicine in the United States: review of efficacy, safety, and regulation. Journal of General Internal Medicine, 2008; 23(6): 854–859.
6. Mukherjee, P. K., & Wahile, A. Integrated approaches towards drug development from Ayurveda and other Indian system of medicines. Journal of Ethnopharmacology, 2006; 103(1): 25–35.
7. Gurib-Fakim, A. Medicinal plants: traditions of yesterday and drugs of tomorrow. Molecular Aspects of Medicine, 2006; 27(1): 1–93.

8. Calixto, J. B. Efficacy, safety, quality control, marketing and regulatory guidelines for herbal medicines (phytotherapeutic agents). Brazilian Journal of Medical and Biological Research, 2000; 33(2): 179–189.
9. Sharma, R., & Amin, H. Herbal medicine: a comprehensive review. International Journal of Pharmaceutical Research, 2011; 3(1): 1–5.
10. Khan, I. A., & Abourashed, E. A. Leung's Encyclopedia of Common Natural Ingredients: Used in Food, Drugs and Cosmetics. John Wiley & Sons, 2011.
11. World Bank. Medicinal plants: Rescuing a global heritage. Washington DC: The World Bank, 1998.
12. Kunle, O. F., Egharevba, H. O., & Ahmadu, P. O. Standardization of herbal medicines – A review. International Journal of Biodiversity and Conservation, 2012; 4(3): 101–112.
13. Pal, S. K., & Shukla, Y. Herbal medicine: current status and the future. Asian Pacific Journal of Cancer Prevention, 2003; 4(4): 281–288.
14. European Medicines Agency (EMEA). Guideline on quality of herbal medicinal products/traditional herbal medicinal products. London: EMEA, 2005.
15. World Health Organization. Pharmacovigilance: ensuring the safe use of medicines. Geneva: WHO, 2004.
16. Cragg, G. M., & Newman, D. J. Plants as a source of anti-cancer agents. Journal of Ethnopharmacology, 2005; 100(1–2): 72–79.
17. Wal, P., Wal, A., Gupta, S., Sharma, G., Rai, A. K. Pharmacovigilance of herbal products in India. Journal of Young Pharmacists, 2011; 3(3): 256–258.
18. Heinrich, M., Barnes, J., Gibbons, S., & Williamson, E. M. (2012). Fundamentals of Pharmacognosy and Phytotherapy. Elsevier Health Sciences.
19. Bhat, S. V., Nagasampagi, B. A., & Sivakumar, M. (2005). Chemistry of Natural Products. Springer.
20. Balunas, M. J., & Kinghorn, A. D. Drug discovery from medicinal plants. Life Sciences, 2005; 78(5): 431–441.
21. Fabricant, D. S., & Farnsworth, N. R. The value of plants used in traditional medicine for drug discovery. Environmental Health Perspectives, 2001; 109(1): 69–75.
22. Posadzki, P., Watson, L. K., & Ernst, E. Adverse effects of herbal medicines: an overview of systematic reviews. Clinical Medicine, 2013; 13(1): 7–12.
23. Singh, A., & Duggal, S. Adulteration and substitution in Indian medicinal plants. International Journal of Pharmaceutical Sciences Review and Research, 2010; 4(2): 67–75.

24. Ernst, E. Toxic heavy metals and undeclared drugs in Asian herbal medicines. Trends in Pharmacological Sciences, 2002; 23(3): 136–139.
25. Kalyani U Chande, Nikhil S Ekhande, Mayuri Padwal. Phytochemical and pharmacological activities of black turmeric: review. A&Vpublications, 2023; 327-330.