

Nature's Remedies: Medicinal Plant Flowers and their Role in Health and Sustainability

Michelle-Nicole Paltineanu, Ioana GROZEA and Monica Butnariu*

University of Life Sciences "King Mihai I" from Timisoara, Romania

***Corresponding author:** Monica Butnariu, University of Life Sciences "King Mihai I" from Timisoara, 300645, Calea Aradului 119, Timis, Romania

ARTICLE INFO

Received: 📅 April 25, 2024

Published: 📅 May 08, 2024

Citation: Michelle-Nicole Paltineanu, Ioana GROZEA and Monica Butnariu. Nature's Remedies: Medicinal Plant Flowers and their Role in Health and Sustainability. Biomed J Sci & Tech Res 56(3)-2024. BJSTR. MS.ID.008868.

ABSTRACT

The medicinal plant flowers (MPFs) have been used for centuries for their healing properties, playing a crucial role in natural treatments. They can be used in various forms, each method extracting the specific benefits of the plants to treat or improve different health problems. By integrating these herbs into your health and personal care regimen, you can benefit from a natural and effective approach to the treatment and prevention of various health problems. By integrating these methods and herbs into your health and personal care regimen, you can benefit from a natural and effective approach to the treatment and prevention of various conditions. The MPFs are a valuable component of the natural pharmacopoeia, offering a wide range of curative properties that can be used in the prevention and treatment of many ailments. Understanding the specific properties of different medicinal flowers is essential to using them effectively.

Keywords: Medicinal Plant Flowers; Health and Personal Care; Treatment and Prevention; Active Substances; Healing Properties; Active Principles

Background

The doctor treats, "Nature Heals", said the famous Hippocrates. By medicinal plant flowers we mean those plants or parts of the plant that, through the substances they contain, can be used to cure or alleviate some diseases. Not all plants have medicinal value. For this they must contain one or more active substances that exert a certain beneficial action on the body. These substances are formed in plants as a result of metabolic processes that take place at the cellular level, located inside specialized tissues. Substances with a well-defined chemical structure are known as active principles [1]. The MPFs, for thousands of years, represent the raw material for the ancient and ever-present phytotherapy. Man since the dawn of his existence, at first from instinct, then from intuition and experience, and later through a scientific, rational approach, has used and continues to use, for the purpose of curing or ameliorating diseases, MPFs [2]. Ancient human civilizations each contributed to the knowledge and use of a growing number of MPFs. Numerous ancient and medieval scholars knew and recorded in their writings the medicinal properties and the way to use many plants. Nowadays, around half of the pharmaceutical

products in the world are based on MPFs or have in their composition extracted active principles from plants (alkaloids, glycosides, volatile oils, etc.), being used in the treatment of serious diseases of the heart, stomach, etc. Added to this are the products used in the preparation of teas and in various industries (food, perfumery, cosmetics). Flowers, with their incredible diversity and amazing beauty, hide behind their colorful petals much more than a simple aesthetic appeal.

Throughout history, people discovered and began to harness their therapeutic properties, turning them into essential components in traditional and, later, modern medicine. Today, the pharmaceutical industry actively recognizes and integrates floral extracts to develop innovative and effective treatments. The use of MPFs dates back to ancient times, when healers and shamans of local communities identified through empirical methods plants that could relieve pain or treat various ailments. This ancestral wisdom has been passed down from generation to generation, forming the basis of naturopathic medicine. Nowadays, science has begun to decipher the mechanisms by which these plants act at the cellular and molecular level, thus validating many of the traditional uses and opening the way to new pharma-

ceutical discoveries [3]. It is estimated that on a global scale, around 20,000 species of medicinal and aromatic plants are used today in popular and “cult” phytotherapy, of which the most used are around 300 plants. All over the world, the enrichment of the assortment of medicinal and aromatic plants and the diversification of their use is in full swing. The concern regarding the valorization of medicinal and aromatic plants in our country has gained a recognized scientific support since the beginning of this century. It is worth mentioning that the first experimental station in the world, specialized in the study of medicinal plants, was established in Cluj (Romania), in 1904, thus laying the foundations for experimental research in the field of medicinal and aromatic plants from our flora. [1].

Flowering herbs have been an essential component in traditional medicine and continue to be valued for their therapeutic properties in modern medicine as well. These plants not only enrich the natural landscape, but are also an invaluable source of active ingredients that can prevent and treat various ailments. From pain relief to wellness enhancement, flowering herbs have served humanity throughout history. The history of the use of MPFs dates back to ancient times, being documented in various cultures around the globe. Ancient Egyptians, Greeks, Romans and Asian civilizations recognized their value and used them wisely to treat disease and maintain health [4,5]. Flowering herbs are not only a source of beauty and calm, but also a storehouse of benefits for our health. Their use spans a wide spectrum of applications, from relieving minor symptoms to supporting healing processes in more serious conditions. Plants that can be used in phytotherapy:

- Extracts to improve digestion: artichoke, plantain, ash, fennel, garlic, dandelion, nettle, oats.
- Extracts with antibacterial effect: pomegranate, sage, echinacea.
- Extracts with anti-inflammatory effect: chamomile, dandelion, sage.
- Extracts for cardiovascular conditions: linden, artichoke, hawthorn, lily, mistletoe.
- Extracts for diabetes: artichoke, dandelion, pomegranate.
- Extracts for immunity: acerola, garlic, thyme, echinacea, sage, nettle, parsley.
- Extracts for gynecological conditions: raspberry, mouse tail, St. John's wort,
- Extracts for allergies: dandelion, St. John's wort, nettle.
- Extracts for liver disorders: artichoke, dandelion, sage, St. John's wort.
- Extracts for emotional imbalances: St. John's wort, ginkgo-biloba, nightshade, hawthorn.
- Extracts for skin conditions: potato, thyme.
- Herbs for migraine: St. John's wort, captalan or sweet burdock, mint or isma, willow extract, ginger, green tea/caffeine, valerian, coriander seeds, lavender oil, rosemary, horseradish.

Plants and extracts for atherosclerosis: artichoke extract, garlic, niacin, red rice yeast, hawthorn.

- Plants, supplements for rheumatoid arthritis: lamb's tongue oil, cayenne pepper, cat's claw or cat's claw, evening primrose oil, fish oil, turmeric, ginger, green tea extract.
- Supplements for Crohn's disease: Boswellia serrata, turmeric, green tea, elder mallow.

Plants for gastroesophageal reflux disease: peppermint oil, ginger root, cumin, angelica, German chamomile, rostopasca, licorice root, armor, turmeric.

- Essential oils/volatile compounds to treat depression: lavender, wild ginger, bergamot, rose oil, ylang-ylang oil, chamomile oil, sweet orange oil, grapefruit oil, jasmine oil [6,7];

There are a multitude of flowering and non-flowering medicinal plants that are valued for their therapeutic properties. Each of these herbs offers unique benefits, being used in various ways to improve health and treat specific conditions [8]. The MPFs are an important source of treatment for various diseases and health conditions. Due to their effectiveness and low cost, many people have turned to these herbs as an alternative to conventional drugs. However, it is important to remember that the use of MPFs must be done in a responsible and sustainable way, to avoid the extinction of species and to ensure the preservation of the environment. The sustainable use of MPFs involves a range of practices, such as responsible collection, cultivation in agroforestry systems and conservation of natural areas. Moreover, it is necessary to have a thorough knowledge of the properties and indications of each plant, so that its use is safe and effective. To achieve this, it is important to have qualified professionals, such as herbalists and biologists, who can advise you on the correct use of herbs [9].

Concepts and Definitions

Phytotherapy is the use of MPFs for therapeutic purposes, which can be used to prevent, treat and cure diseases. This practice is widely used throughout the world, being one of the oldest forms of medicine. Phytotherapy is considered a complementary therapy and is used in conjunction with other forms of treatment. Phytotherapy is a branch of therapy that deals with the means of preventing and curing diseases, through plants. The field of pharmacognosy has seen great progress that has increased the use of MPFs by practitioners of alternative medicine. This systematic review explored the history and current application of phytotherapeutic drugs, as there are currently many therapeutic possibilities in the use of phytotherapeutic drugs and MPFs. What exactly is phytotherapy and how does it work in the human body [10]. Ethnobotany is the study of the relationships between humans and plants, especially as they relate to medicinal, dietary, and cultural use. This science studies the diversity of plants used by different cultures and peoples, as well as the methods of using and preparing these plants [11]. Pharmacognosy is the science that stud-

ies the chemicals present in MPFs and their use in the production of medicines. This science is responsible for identifying, isolating and characterizing active substances present in MPFs, as well as studying their pharmacological effects [12].

Challenges and Future Prospects

Sustainable use of MPFs can bring socioeconomic benefits to local communities. Collecting and cultivating these plants can generate income for families and promote the economic development of the region. However, it is important that this use is done responsibly, avoiding overexploitation of the plants and ensuring that the income generated is distributed fairly among community members. It is also important that producers have access to information on the medicinal plant market and sustainable cultivation techniques to ensure product quality and market competitiveness [13]. For the sustainable use of MPFs, it is important to recognize that there are many challenges to face. Here are some questions that need to be addressed:

Preservation of Biodiversity

Excessive collection of MPFs can lead to the disappearance of some species. It is important to ensure that collection is done sustainably and that plant populations are monitored to ensure their survival [14].

Quality Control

The MPFs must be harvested and processed properly to ensure their effectiveness and safety. It is important to establish quality standards and ensure that plants are grown, harvested and processed properly [15].

Access to Resources

Communities that depend on MPFs for their livelihoods must have access to the resources needed to grow and harvest plants sustainably. This can include training, equipment and funding [16].

Regulation

It is important to establish clear regulations for the use of MPFs. This may include creating laws to protect plants, regulating the collection and trade of MPFs, and ensuring that harvesting and processing practices are safe and sustainable [17].

Research and Development

Research is essential for understanding the medicinal properties of plants and developing new herbal medicines. It is important to support research and development of new products to ensure that MPFs remain a viable option for treating disease [18]. Although there are many challenges to face, there are also many promising future prospects for the sustainable use of MPFs. With the right support, communities can continue to use MPFs safely and sustainably, while protecting biodiversity and promoting research and development of new products [19].

Why People Choose Herbal Medicine Over Science-Based Medicine

One theory is that the consumer/patient is disillusioned. He is dismayed by the number of questions that science still has no answers to. There are people who have been let down by overly broad and impersonal health services. But most importantly, he has become accustomed to choose and the power to exercise that choice. Another important factor is that, "people still believe that 'Natural' equals good and safe, despite the overwhelming evidence to the contrary." This view is echoed by most researchers caught up in this unexpected anti-science boom. "People seem to manage to hold conflicting opinions at the same time. For example, that nicotine is bad, but other natural products are good". "Although I know there are poisonous plants, this does not seem to affect the belief that herbs are good." This situation may result from the fact that herbs are associated with a healthy diet. Physiologically, the body cannot tell the difference between chemically synthesized vitamin C and vitamin C that has been extracted from an orange. Another reason given for the resurgence of herbal medicine is that people are concerned about the side effects associated with synthetic drugs. Compared to some of the harsh treatments that are needed for many life-threatening illnesses, "the claim is that herbal remedies are gentler, easier and safer" [20].

Contraindications and Possible Risks of Phytotherapy

However, what is so safe about consuming substances that do not have to meet content standards? For example, some so-called "ginseng tablets" have recently been found to contain no ginseng at all. There should be no uniformity of chemical constituents: some "healthy" preparations contain completely different ingredients. In addition, so-called "natural" remedies are sold with very little information about their effects and dangers. The risks associated with phytotherapy also depend on the amount of substance consumed. If the recommendations for use are followed, phytotherapeutic products rarely produce adverse effects. However, some herbs are toxic, others can interact with medications and cause side effects. Also, pregnant and lactating women should limit the consumption of such products. It is recommended to use them only according to the doctor's instructions. The European Medicines Agency has contra-indicated the use of certain plants in children under 12 years of age. They are often recommended for children under 18. Some plants can be used from the age of 3 and 6. Therefore, it is essential to consult a doctor to see if that treatment is suitable. When using an herbal product, read the package recommendations, dosage information, and possible risks and interactions of that herb or combination of herbs. Start with small doses to detect possible allergies to that plant [10]. In conclusion, flowering MPFs are a treasure of nature, offering effective and affordable solutions to improve the quality of life. By harnessing traditional knowledge and integrating modern scientific discoveries, we can navigate a future where health and nature go hand in hand.

Concluding Remarks and Future Perspectives

Preventive use of flowering herbs can play a key role in maintaining health and preventing disease. By including these herbs in our daily routine, whether in the form of teas, tinctures, or essential oils, we can harness their antioxidant, anti-inflammatory, and antimicrobial properties to strengthen the immune system and improve the body's resistance to infection and disease. In recent years, interest in flowering MPFs and their therapeutic potential has increased significantly among the scientific community. Numerous case studies and research have been devoted to analyzing the effects and benefits of these plants on human health. These studies contribute to the understanding of the mechanisms by which the active components of plants influence various health conditions and provide a scientific basis for their use in medical practices. Exploring the world of medicinal flowering plants gave us valuable insight into their potential to improve health and well-being. From their traditional uses to the scientific confirmation of their effectiveness through modern studies, it is clear that these herbs hold an essential role in natural medicine and preventive health practices.

Funding

Not applicable.

Conflicts of Interest/Competing Interests

The authors declare no conflict of interest.

Availability of Data and Material

Not applicable.

Code Availability

Not applicable.

Authors' Contributions

Conceptualization, M.N.P.; I.G. and M.B.; data curation, M.N.P. and M.B.; writing—original draft preparation, M.B.; writing—review and editing, M.N.P.; I.G. and M.B.; visualization, M.B.; supervision, I.G. and M.B. All authors have read and agreed to the published version of the manuscript.

Ethics Approval

Not applicable.

Consent to Participate

Not applicable.

Consent for Publication

Not applicable.

Data Availability Statement

The data presented in this study are available on request from the corresponding author.

References

- Sõukand R, Pieroni A (2016) The importance of a border: Medical, veterinary, and wild food ethnobotany of the Hutsuls living on the Romanian and Ukrainian sides of Bukovina. *Journal of ethnopharmacology* 185: 17-40.
- Baig M N, Chishty F, Immesoete P, Karas CS (2007) The Eastern heart and Galen's ventricle: a historical review of the purpose of the brain. *Neurosurgical focus* 23(1): E3.
- Sar S (1991) Some folk remedies used in Central Anatolia Region of Turkey. *Hamdard medicus* 34(3): 40-45.
- Mahmoodally MF, Coodian K, Hosenally M, Zengin G, Shariati M A, et al. (2024) Herbal remedies in the management of hyperuricemia and gout: A review of *In Vitro*, *In Vivo* and clinical evidences. *Phytotherapy research*.
- Abiramasundari G, Gowda CM, Pampapathi G, Praveen S, Shivamurugan S, et al. (2017) Ethnomedicine based evaluation of osteoprotective properties of *Tinospora cordifolia* on *In Vitro* and *In Vivo* model systems. *Biomedicine & Pharmacotherapy* 87: 342-354.
- Singh R S, Singh A, Kaur H, Batra G, Sarma P, et al. (2021) Promising traditional Indian medicinal plants for the management of novel Coronavirus disease: A systematic review. *Phytotherapy research: PTR* 35(8): 4456-4484.
- Fan Y, Wang M, Zhang Q, Ouyang S, Mao, et al. (2024) Traditional uses, phytochemistry, pharmacology, toxicity and clinical application of traditional Chinese medicine *Cynoglossum amabile*: a review. *Frontiers in pharmacology* 15: 1325283.
- Zuntini A R, Carruthers T, Maurin O, Bailey P C, Leempoel K, et al. (2024) Phylogenomics and the rise of the angiosperms. *Nature*.
- Sun Q, Leng J, Tang L, Wang L, Fu C, et al. (2021) A Comprehensive Review of the Chemistry, Pharmacokinetics, Pharmacology, Clinical Applications, Adverse Events, and Quality Control of Indigo Naturalis. *Frontiers in pharmacology* 12: 664022.
- Yap KY, Chan SY, Weng Chan Y, Sing Lim C (2005) Overview on the analytical tools for quality control of natural product-based supplements: a case study of ginseng. *Assay and drug development technologies* 3(6): 683-699.
- Bouafia M, Amamou F, Gherib M, Benaissa M, Azzi R, et al. (2021) Ethnobotanical and ethnomedicinal analysis of wild medicinal plants traditionally used in Naâma, southwest Algeria. *Vegetos (Bareilly, India)* 34(3): 654-662.
- Nigussie D, Davey G, Tufa T B, Brewster M, Legesse B A, et al. (2021) Antibacterial and Antifungal Activities of Ethiopian Medicinal Plants: A Systematic Review. *Frontiers in pharmacology* 12: 633921.
- Nigussie D, Legesse BA, Davey G, Fekadu A, Makonnen E (2020) Ethiopian medicinal plants used for their anti-inflammatory, wound healing or anti-infective activities: protocol for systematic literature review and meta-analysis. *BMJ open science* 4(1): e100064.
- Ayalew H, Tewelde E, Abebe B, Alebachew Y, Tadesse S, et al. (2022) Endemic medicinal plants of Ethiopia: Ethnomedicinal uses, biological activities and chemical constituents. *Journal of ethnopharmacology* 293: 115307.
- Mayra Cedillo Cortezano, Luis Ruben Martinez Cuevas, Jesús A Márquez López, Ingrid L Barrera López, Samantha Escutia Perezet al. (2024) Use of Medicinal Plants in the Process of Wound Healing: A Literature Review. *Pharmaceuticals (Basel, Switzerland)* 17(3): 303.
- Mssillou I, Bakour, M, Slighoua M, Laaroussi H, Saghrouchni, H, et al. (2022) Investigation on wound healing effect of Mediterranean medicinal plants and some related phenolic compounds: A review. *Journal of ethnopharmacology* 298.

17. Solati K, Karimi M, Rafeian-Kopaei M, Abbasi N, Abbaszadeh S, et al. (2021) Phytotherapy for Wound Healing: The Most Important Herbal Plants in Wound Healing Based on Iranian Ethnobotanical Documents. *Mini reviews in medicinal chemistry* 21(4): 500-519.
18. Jarić S, Kostić O, Mataruga Z, Pavlović D, Pavlović M, et al. (2018) Traditional wound-healing plants used in the Balkan region (Southeast Europe). *Journal of ethnopharmacology* 211: 311-328.
19. Suárez ME (2019) Medicines in the forest: Ethnobotany of wild medicinal plants in the pharmacopeia of the Wichí people of Salta province (Argentina). *Journal of ethnopharmacology* 231: 525-544.
20. Martínez G J, Luján M C (2011) Medicinal plants used for traditional veterinary in the Sierras de Córdoba (Argentina): an ethnobotanical comparison with human medicinal uses. *Journal of ethnobiology and ethnomedicine* 7(1): 23.

ISSN: 2574-1241

DOI: 10.26717/BJSTR.2024.56.008868

Monica Butnariu. Biomed J Sci & Tech Res



This work is licensed under Creative Commons Attribution 4.0 License

Submission Link: <https://biomedres.us/submit-manuscript.php>



Assets of Publishing with us

- Global archiving of articles
- *Immediate*, unrestricted online access
- Rigorous Peer Review Process
- Authors Retain Copyrights
- Unique DOI for all articles

<https://biomedres.us/>