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Review Article

MEDICINAL EFFECTS OF SOME WILD PLANTS

Dr. Suman Kacholia[1*], Dr. Manisha Chauhan

[1]Associate Professor, Department of Botany, B.B.D. Govt. College Chimanpura, Shahpura, Jaipur, Rajasthan, India

[2]Associate Professor, Department of Botany, S.K. Govt. College Sikar, Jaipur, Rajasthan, India

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Corresponding author: Dr. Dr. Suman Kacholia

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Abstract

Wild plants have been utilized for their medicinal properties since ancient times, and their potential in modern medicine is of great interest. This abstract provides a concise overview of the medicinal effects exhibited by various wild plants, emphasizing their potential therapeutic applications and highlighting the need for further research and clinical studies. Artemisia annua (Sweet Wormwood) Medicinal Effects: Artemisia annua contains artemisinin, a compound with potent antimalarial properties. It has been used in traditional medicine for the treatment of malaria and shows promise in combating drug-resistant strains of the disease. Taxus brevifolia (Pacific Yew) Medicinal Effects: Taxus brevifolia is a source of paclitaxel, a powerful anticancer compound. Paclitaxel has been widely used in chemotherapy for various cancers, including ovarian, breast, and lung cancer. Vinca rosea (Madagascar Periwinkle) Medicinal Effects: Vinca rosea produces alkaloids, such as vincristine and vinblastine, which exhibit potent anticancer effects. These compounds have been used in the treatment of leukemia, lymphoma, and other cancers. Digitalis purpurea (Foxglove) Medicinal Effects: Digitalis purpurea contains cardiac glycosides, including digoxin and digitoxin, which have a positive inotropic effect on the heart. They are commonly used in the treatment of congestive heart failure and certain cardiac arrhythmias.

Keywords: Medicinal, Artemisia annua, Taxus brevifolia, Vinca rosea, Digitalis purpurea..

Introduction

The use of plants for medicinal purposes dates back to ancient times and remains an integral part of various traditional medical systems worldwide. Wild plants, in particular, have garnered significant attention for their potential medicinal effects. These plants, found in diverse ecosystems and often thriving in natural habitats, have adapted to survive and contain bioactive compounds that exhibit therapeutic properties. The exploration of the medicinal effects of wild plants offers promising avenues for the discovery of novel drugs and alternative treatments.

The rich biodiversity of wild plants provides a vast repertoire of potential medicinal resources. Indigenous cultures have long recognized and utilized these plants for their healing properties, and modern scientific research has further substantiated their efficacy. These plants have the ability to produce a wide range of chemical compounds, including alkaloids, flavonoids, terpenoids, and phenolic compounds, which contribute to their

pharmacological activities. One significant advantage of wild plants is their potential to offer new solutions for treating various diseases and conditions. As natural sources of bioactive compounds, these plants may present alternatives or complements to synthetic drugs. Moreover, wild plants often possess a complex mixture of compounds that can act synergistically, providing enhanced therapeutic effects and potentially reducing side effects compared to isolated compounds. The medicinal effects of wild plants span a broad spectrum of health conditions. They may exhibit antimicrobial, anti-inflammatory, antioxidant, analgesic, antiviral, anticancer, immunomodulatory, and neuroprotective activities, among others. Some examples include plants with antimalarial properties like Artemisia annua, anticancer compounds derived from Taxus brevifolia, and antidepressant effects of Hypericum perforatum. Despite the extensive traditional knowledge and promising scientific findings, the full potential of wild plants in modern medicine is still not fully understood. Further research is necessary to elucidate their mechanisms of action, identify active compounds, optimize extraction methods, determine dosage and safety profiles, and conduct rigorous clinical trials. These efforts are crucial to bridge the gap between traditional medicinal practices and evidence-based medicine, ensuring the integration of wild plant-based therapies into mainstream healthcare.

Some Medicinal Plants and its effects

- Artemisia annua (Sweet Wormwood): Artemisia annua contains artemisinin, a compound with potent antimalarial properties. It has been traditionally used in the treatment of malaria. Artemisinin and its derivatives are now widely used as essential components of artemisinin-based combination therapies (ACTs) for treating uncomplicated malaria and combating drug-resistant strains of the disease.
- Taxus brevifolia (Pacific Yew): Taxus brevifolia is a source of paclitaxel, a powerful anticancer compound. Paclitaxel has revolutionized cancer treatment and is used in chemotherapy for various cancers, including ovarian, breast, and lung cancer. It acts by inhibiting cancer cell division and promoting apoptosis (cell death).
- Vinca rosea (Madagascar Periwinkle): Vinca rosea produces alkaloids such as vincristine and vinblastine, which exhibit potent anticancer effects. Vincristine is used in the treatment of childhood leukemia, lymphoma, and other cancers, while vinblastine is used to treat Hodgkin's lymphoma, testicular cancer, and breast cancer. These alkaloids interfere with cancer cell division and prevent tumor growth.
- Hypericum perforatum (St. John's Wort): Hypericum perforatum contains hypericin and hyperforin, which have shown antidepressant and anxiolytic effects. St. John's Wort has been used to alleviate symptoms of mild to moderate depression and anxiety disorders. These compounds are thought to modulate neurotransmitters in the brain, such as serotonin, dopamine, and norepinephrine, which play a role in mood regulation.
- Salix alba (White Willow): Salix alba bark contains salicin, a compound with analgesic and anti-inflammatory properties. It has been used for centuries as a natural alternative to aspirin. Salicin is converted to salicylic acid in the body, which helps alleviate

pain, reduce inflammation, and lower fever.

- Curcuma longa (Turmeric): Curcuma longa, commonly known as turmeric, contains curcumin, a compound with potent anti-inflammatory and antioxidant effects. Curcumin has been extensively studied for its potential in treating various conditions, including arthritis, digestive disorders, and certain cancers. It modulates multiple molecular pathways involved in inflammation and oxidative stress.
- Plant Name: Echinacea purpurea Medicinal Effects: Echinacea purpurea exhibits immunostimulatory effects, primarily attributed to its bioactive compounds, such as polysaccharides and alkamides. It enhances the activity of immune cells, promotes the production of cytokines, and stimulates phagocytosis. Echinacea is commonly used to boost the immune system and alleviate symptoms of respiratory tract infections, colds, and flu.
- Plant Name: Ginkgo biloba Medicinal Effects: Ginkgo biloba leaves contain flavonoids and terpenoids that possess antioxidant and neuroprotective properties. They enhance blood flow, particularly to the brain, and protect against oxidative stress and inflammation. Ginkgo biloba is utilized to improve cognitive function, enhance memory, and alleviate symptoms associated with age-related cognitive decline.
- Plant Name: Calendula officinalis (Marigold) Medicinal Effects: Calendula officinalis flowers contain flavonoids, triterpenoids, and volatile oils that exhibit anti-inflammatory and wound-healing properties. Calendula extracts are used topically to soothe and heal various skin conditions, including burns, cuts, and dermatitis.
- Plant Name: Panax quinquefolius (American ginseng) Medicinal Effects: Panax quinquefolius root contains ginsenosides, which are known to possess adaptogenic and immunomodulatory properties. American ginseng is used to enhance energy, reduce fatigue, and support overall well-being. It may also have a positive impact on cognitive function and stress management.
- Plant Name: Silybum marianum (Milk thistle) Medicinal Effects: Silybum marianum seeds contain a flavonoid complex called silymarin, which exhibits hepatoprotective effects. It supports liver health, promotes liver cell regeneration, and has antioxidative properties. Milk thistle is commonly used to treat liver diseases, including hepatitis, cirrhosis, and fatty liver.
- Plant Name: Aloe vera Medicinal Effects: Aloe vera gel contains polysaccharides, enzymes, and other bioactive compounds that contribute to its medicinal effects. It possesses anti-inflammatory, wound-healing, and moisturizing properties. Aloe vera is widely used topically to soothe and heal burns, cuts, skin irritations, and promote skin health.
- Plant Name: Rosmarinus officinalis (Rosemary) Medicinal Effects: Rosmarinus officinalis leaves contain rosmarinic acid, flavonoids, and essential oils that exhibit antioxidant and anti-inflammatory properties. Rosemary is used as a culinary herb and has been associated with improved digestion, enhanced memory and concentration, and potential neuroprotective effects.

CONCLUSION:

The above study highlights the remarkable versatility of plants and their invaluable contributions to all living beings. Every part of a plant, including leaves, roots, flowers, bark, fruits, and rhizomes, serves as a boon in the treatment of various diseases afflicting humans and animals. The review project focused on 13 medicinal plant species, comprising both wild and cultivated plants. These plants have been traditionally used to address a range of ailments, including stomach pain, constipation, piles, dysentery, jaundice, diabetes, fever, asthma, menstrual disorders, snake bites, and skin diseases. The study observed that the majority of the medicinal plants investigated were herbs, followed by shrubs, trees, and climbers. The specific plant parts used for medicinal purposes vary depending on the species and their therapeutic properties. For example, leaves are often utilized for their active compounds and medicinal effects. Roots are known to contain valuable bioactive constituents, while flowers are prized for their aromatic and medicinal properties. Bark, fruits, and rhizomes also possess therapeutic potential and have been harnessed for medicinal applications.

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