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ALOE VERA: ITS BIOLOGICAL PROPERTIES AND CLINICAL EFFECTIVENESS

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ABSTRACT

The purpose of this review article is to understand more about Aloe Vera, including its biological properties and cosmetic applications. Aloe Vera is a significant ingredient in the culinary, pharmaceutical, and cosmetics sectors, as well as in Ayurveda medicine. Despite the lack of scientific evidence for its therapeutic value, alternative medicine (a commercial product) is sold as having restorative qualities. It can also be used as a moisturiser and anti-irritant for facial tissues. Several research has connected oral administration to clinical success. The processing of aloe Vera leaves includes washing, pre-treating, peeling, and hand filleting. To extract gel from Aloe Vera pulp, cold extraction gel and purification of Aloe Vera gel are utilised. The key operations in the manufacturing of Aloe Vera leaf gel are raw material, filleting, grinding/homogenization, addition of enzyme, filtration, addition of vitamin C and crucial acid, deaeration, pasteurisation, flash cooling, and storing. The quality parameters of Aloe Vera gel are viscosity, refractive index, optical density, stabilisation of Aloe Vera gel, and product preparation from Aloe Vera, and the timing of the leaf process, leaf harvesting and handling, flash cooling, pasteurization, concentration, freeze or spray drying, and clinical effectiveness and cosmetology are important.

INTRODUCTION

Aloe Vera, commonly known as the "miracle" or "wonder" herb, has been used for generations to treat a variety of ailments because the inner gel of its leaves has been used to heal a range of diseases.^[1] In humans, aloe Vera is a potent herbal plant with a wide range of medicinal and pharmacological properties. Many civilizations across the world use aloe Vera for therapeutic purposes. Aloe Vera is an antibiotic that kills or inhibits the growth of bacteria, fungi, protozoa, and other parasitic organisms. Antibiotics either kill or inhibit bacteria, or prevent them from growing and becoming micro biostatic. Aloe Vera is a medicinal plant that looks like a cactus and has fleshy, narrowing, spiky, emarginated leaves that are packed with a clear white sticky gummy gel. Aloe Vera is a tough, perennial, tropical, and drought-resistant succulent plant.^[2] Aloe Vera is a xerophytes plant that grows in subtropical areas and is used for its medicinal benefits in Ayurveda, Homoeopathic, and Allopathic medicine.^[3] Aloe Vera has been utilised for therapeutic purposes for thousands of years. It was used in ancient civilizations like India, Egypt, Greece, Rome, and China. Aloe Vera is an antibiotic that kills or slows the growth of germs like bacteria, fungus, protozoa, and other parasitic organisms. Antimicrobial medications either kill or suppress the bacteria, or they prevent them from multiplying and becoming micro biostatic. Aloe Vera is a medicinal plant

Burn plant, first aid plant, and medicinal plant are just few of the labels given to aloe Vera. Its name is derived from the Arabic word "Alloeh," which means "gleaming bitter material."^[4] Aloe Vera has been known and utilised for its nutritional, therapeutic, and skin care or cosmetic properties for millennia. In dermatology, the aloe Vera plant has been utilised for a variety of purposes.^[5] It was seen as a boon to mankind by ancient physicians. Aloe Vera, also known as the "wonder plant" or "nature healer," is a plant full of surprises.^[6] Aloe Vera contains active vitamins, enzymes, minerals, carbohydrates, lignin, saponins, salicylic acids, and other substances. The building blocks of life are amino acids. the most important elements Aloe.^[7] Aloe Vera (Ghritkumari, Kumara; Hindi: Guarpatha, Ghikanvar) is a perennial succulent xerophyte plant with water-storage tissue in the leaves that allows it to thrive in dry environments with little or no rainfall. The plant has stiff grey-green lance-shaped leaves with a core mucilaginous pulp holding transparent gel. The polysaccharides found in the gel of Aloe Vera leaves are thought to be responsible for the plant's health benefits.^[8] The therapeutic properties of aloe Vera have long been included in Aloe Vera gel have the power to attack, diminish, control, or even eliminate infections since the gel penetrates directly into the deeper layers of the skin. Its analgesic nature contributes to its pain-relieving



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Herbal Potentials for Treatment of Peptic Ulcer: A Review

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ABSTRACT

The inflamed break in the skin or mucous membrane lining the elementary tract describes development of ulcer. About 10% of World's population suffering from peptic ulcer. It is a broad term that includes ulcers of digestive tract, in the stomach or the duodenum. The presence of acid and peptic activity in gastric juice with a breakdown in mucosal defences develops peptic ulcer. It may be occurring due to regular usage of drugs, irregular food habits, stress. The ideal aims of treatment of peptic ulcer disease are to relieve pain, heal the ulcers and delay ulcer recurrence. The availability of number of synthetic drugs such as proton pump inhibitors (PPIs) and histamine-2 (H2) receptor antagonists are conventionally used for treatments of peptic ulcers, associated with adverse effects, relapses, various drug interactions are observed and expensive when compared to herbal medicines. Herbal medicines demand has increased globally. Availability of gastro-protective remedies without side effects are excellent resources for cost-effective medicines. Natural compounds showed significant antiulcerogenic activity, compounds such as tannins, flavonoids, alkaloids, triterpenoids, steroids, saponins, and coumarins. The current review states some medicinal plants, being used in Ayurveda or modern science for the treatment or prevention of peptic ulcer and comparison with synthetic drugs.

Keywords: Ulcer, elementary tract, gastro-protective, synthetic drugs, herbal medicines, natural compounds.

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INTRODUCTION

Peptic ulcer also called peptic ulceration disease, an ulceration (defined as mucosal erosions equal to or bigger than 0.5 cm) of an area of the GI tract that's typically acidic and therefore very painful¹. Ulceration is common gastrointestinal disorder and can be inflamed lesions of the mucous membrane and tissue that defend the GI tract. Injury of mucus membrane, that commonly protects the oesophagus, stomach and small intestine from gastric acid and pepsin causes ulceration². There are many types of ulcers like mouth ulcer, oesophagus, peptic and genital ulceration. Erosion of lining of stomach or the duodenum occurs in peptic ulcer³. The most common types are referred as gastric ulcer and duodenal ulcer, indicating positioning of ulceration. Gastric ulcers are situated within the stomach, characterized by pain. Ulcers are common in old ages. Symptoms might include nausea, vomiting and weight loss. Ulcers could occur even in complete absence of acid though patients with gastric ulcers have normal or diminished acid production⁴. Duodenal ulcers are found at the start of intestine and are characterized by severe pain with burning sensation in upper abdomen that awakens patients from sleep. Generally, pain happens when the stomach is empty and

relieves once eating. A duodenal ulcer is very common in younger individual and preponderantly affects males, could see on both the anterior and posterior walls⁵. Medicines available in market are useful against the ulcers however they do not provide a permanent relief. Relapse of ulcers can be observed. Therefore, the herbal treatment is employed. Herbs give good protection from ulcers and has less side effects as compared to general medicines.

Causes of peptic ulcer

Helicobacter pylori: A major contributory factor for chronic inflammation is *Helicobacter pylori* that colonizes the antral membrane. The immune system is unable to clear the infection, despite the presence of antibodies. Gastrin secretion can either be reduced (most cases) resulting in hypo or achlorhydria or enhanced. Gastrin stimulates the production of gastric acid by parietal cells and *H. pylori* colonization increases gastrin, the rise in acid can contribute to the erosion of the mucous membrane and results in ulceration.

NSAIDs: The gastric mucous membrane protects itself from gastric acid with a layer of mucus, the secretion of mucous is aroused by certain prostaglandins. Use of NSAIDs block the function of cyclooxygenase (cox-1), that is essential for the production of those prostaglandins.

Factors responsible for increasing gastric acid secretion are;

Stress: In view of researchers, stress as a potential cause or a least complication, in the event of ulcers. Psychological stress will influence the extent of biological



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Evaluation of *In Vitro* Anti-Inflammatory Potential of *Psidium guajava* Seeds Extract



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ABSTRACT

Secondary metabolites obtained from medicinal plants are progressively used in the treatment of various diseases or pathogenic conditions as complementary medicine. Inflammation is a pathological condition including wide range of diseases such as arthritis, osteoarthritis, inflammatory bowel disease, chronic asthma etc. The present study reveals the efficiency of *Psidium guajava* Linn. (*Myrtaceae*) seeds extract for anti inflammatory activity by simple, non toxic, less time consuming and reliable HRBC membrane stabilization method, as it is similar to lysosomal membrane which influence inflammation process. The main constituents of guava seeds possess glycosides, carotenoids and phenolic compounds. Furthermore, seeds and peel are treated as wastes by the food processing industry and are toss out, so their use may decrease the discard of these parts of guava as waste. The resent study reveals the estimation of *in-vitro* anti-inflammatory potential of guava seed extract on the basis of traditionally use of Guava in gastroenteritis, vomiting, diarrhea, dysentery, wounds, ulcers, toothache, cough, sore throat, inflamed gums, and a number of other conditions.




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Review Article

Herbal immunity booster against Covid-19- A review

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ABSTRACT

This review focused on the use of nutrients and herbs for enhancing the immunity against COVID-19. In humans, corona viruses are causing the common cold and, recently, severe acute respiratory syndrome (SARS). This presents a major threat to public health. The novel coronavirus has spread rapidly to multiple countries and has been declared a pandemic by the WHO. COVID-19 is usually caused by a virus to which most probably the people with low immunity response are being affected. Herbal plants increase the intestinal beneficial bacteria which are helpful and make up the immune system. In addition to the well-known personal hygiene and preventive measures against the new coronavirus (COVID-19), we can also follow some simple recommendations regarding our nutrition that strengthen our immune system and could better prepare us for an epidemic. The virus rapidly spreads to many people within a short period of time. Good nutrition is crucial for health, particularly in times when the immune system might need to fight back. It can also potentially lead to an increased consumption of highly processed foods, which tend to be high in fats, sugars and salt. Nonetheless, even with few and limited ingredients, one can continue eating a diet that supports good health. Various studies investigated that a powerful antioxidant glutathione and a bioflavonoid Quercetin may prevent various infections including COVID-19. In conclusion, the Nutrition and Herbal plants play a vital role to enhance the immunity of people to control of COVID-19.

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1. Introduction

The term immunity in a biologic context has historically referred to resistance to pathogens; however, reactions to some noninfectious substances including harmless environmental molecules, tumors, and even unaltered host components are also considered forms of immunity (Allergy, tumor immunity, and autoimmunity, respectively). The collection of cells, tissues, and molecules that mediate these reactions is called the immune system, and the coordinated response of these cells and molecules to pathogens and other substances comprises an immune response. The most important physiologic function of the

immune system is to prevent or eradicate infections. Types of immunity: Immune system can be divided into two parts- innate and adaptive. Our first line of defence the natural protection power we are born with is innate immunity and this innate response acts quickly. The protection that we gain through life when we are exposed to various diseases or protection against them for vaccination is adaptive immunity, this adaptive immunity generates antibodies when it spots an enemy in the body. The adaptive immunity takes 5 to 10 days to generate antibodies and meanwhile innate immunity keeps fighting to maintain the levels of pathogens.

The immune system is responsible for fighting foreign invaders in the body, like pathogenic bacteria and viruses, and also destroying cells within the body when they become

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