

## Traditional medicine, SARS-CoV-2 and human immune system

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### Extended Abstract

**Introduction:** The emergence of SARS-CoV-2, which causes COVID-19, has dramatically impacted global public health since its identification in late 2019. As a respiratory virus, it leads to symptoms ranging from mild respiratory issues to severe complications, including death. The rapid spread of this virus has highlighted the limitations of existing medical interventions and sparked an increased interest in complementary treatment approaches. Traditional medicine, with its focus on natural methods and remedies, has garnered significant attention, especially during health crises. In particular, medicinal plants, which have long been utilized to enhance immune function and prevent illness, are being explored for their potential to assist in managing and mitigating the effects of COVID-19. This review discusses the role of traditional medicine in strengthening the immune system, focusing on the use of medicinal plants and natural compounds that may help combat SARS-CoV-2 and other viral infections.

**Methods:** This article reviews the historical and contemporary relevance of traditional medicine in managing respiratory diseases, particularly viral infections like SARS-CoV-2. We examine how traditional practices, including the use of medicinal plants, dietary adjustments, and relaxation techniques, have been employed to boost immune health. The research explores the biochemical properties of plants known for their immunomodulatory effects and their potential to work synergistically with modern medical treatments. Additionally, we discuss the emerging role of traditional medicine in supporting patients during the pandemic, especially when conventional treatments were initially limited or unavailable.

**Results:** Several medicinal plants have been identified for their potential to enhance immune responses and mitigate the severity of viral infections. These plants include turmeric, ginger, garlic, and licorice, which have been shown to possess anti-inflammatory, antiviral, and immune-boosting properties. Turmeric, for instance, contains curcumin, a compound known for its anti-

inflammatory and antiviral effects, while ginger and garlic have been used for their antimicrobial properties. Licorice, which contains glycyrrhizin, has demonstrated the ability to inhibit the replication of coronaviruses, including SARS-CoV-2. Research from multiple studies supports the use of these plants, suggesting that they may reduce the inflammatory cytokine storm associated with severe COVID-19, thereby reducing complications and aiding recovery. The results also indicate that the integration of these traditional remedies with modern medicine can help optimize treatment outcomes, though more clinical trials are needed to confirm their efficacy.

**Discussion:** The integration of traditional medicine, particularly the use of medicinal plants, into the treatment regimen for COVID-19 presents both opportunities and challenges. On one hand, these natural remedies offer an affordable and accessible option for individuals seeking to strengthen their immune systems and prevent viral infections. On the other hand, there are concerns regarding the potential interactions between traditional remedies and conventional pharmaceutical treatments. For example, medicinal plants can influence the metabolism of drugs, potentially altering their effectiveness or causing adverse effects. Additionally, the lack of standardized practices for harvesting, preparing, and dosing these plants complicates their widespread use in clinical settings. Nevertheless, studies suggest that when used under professional guidance, these remedies can complement modern treatments and help mitigate the severity of symptoms, especially when combined with preventive measures such as vaccination and proper hygiene.

**Conclusion:** The COVID-19 pandemic has underscored the need for alternative approaches to health management, and traditional medicine offers promising supplementary strategies. Medicinal plants, with their immune-modulatory and antiviral properties, hold significant potential in the fight against viral infections like SARS-CoV-2. However, while these natural remedies can offer substantial benefits, it is crucial that they be used in conjunction with, not as a replacement for, modern medical treatments. Further research and clinical trials are necessary to better understand the full scope of their efficacy and safety. Traditional medicine, when used appropriately and under expert supervision, can play an essential role in enhancing immune responses and supporting public health efforts during pandemics. The integration of traditional and modern medical practices could provide a more holistic approach to disease prevention and treatment, offering a comprehensive strategy to combat current and future health crises.

**Keywords:** SARS-CoV-2, Traditional medicine, Immunity