

Botanical Drugs and Supplements Affecting the Immune Response in the Time of COVID-19: Implications for Research and Clinical Practice

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Abstract

In times of health crisis, including the current COVID-19 pandemic, the potential benefit of botanical drugs and supplements emerges as a focus of attention, although controversial efficacy claims are rightly a concern. Phytotherapy has an established role in everyday selfcare and health care, and since botanical preparations contain many chemical constituents rather than single compounds, challenges arise in demonstrating efficacy and safety. However, there is ample traditional, empirical and clinical evidence that botanicals can offer some protection and alleviation of disease symptoms as well as promoting general well-being. Newly emerging viral infections, specifically COVID-19, represent a unique challenge in their novelty and absence of established antiviral treatment or immunization. We discuss here the roles and limitations of phytotherapy in helping to prevent and address viral infections, and specifically regarding their effects on immune response. Botanicals with a documented immunomodulatory, immunostimulatory, and anti-inflammatory effect include adaptogens, *Boswellia* spp., *Curcuma longa*, *Echinacea* spp., *Glycyrrhiza* spp., medicinal fungi, *Pelargonium sidoides*, salicylate-yielding herbs, and *Sambucus* spp. We further provide a clinical perspective on applications and safety of these herbs in prevention, onset, progression, and convalescence from respiratory viral infections.

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