



Plants for Immunity and Conservation Strategies pp 153–168

[Home](#) > [Plants for Immunity and Conservation Strategies](#) > Chapter

Immunostimulatory Properties of *Echinacea purpurea* and Conservation Strategy

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Abstract

Echinacea purpurea (L.) Moench, a member of the Asteraceae (Compositae) family is an important and well-known medicinal plant. The plant is used in chemoprevention and chemotherapy for infectious disorders of the upper and lower respiratory tracts. Toothaches, gut pain, snake bites, skin problems, epilepsy, chronic arthritis, and cancer have all been treated with this species in the past. For instance, research has demonstrated the plant's ability to cause anti-anxiety, anti-depression, cytotoxicity,

and anti-mutagenic effects. Echinacea has immense decorative potential in addition to its potential medical benefits. Alkamides, caffeic acid derivatives, polysaccharides, and glycoproteins are some of the plant's secondary metabolites that have immunostimulatory properties. Echinacea's anti-inflammatory properties are largely due to its polysaccharides. In vitro culture offers the ability to overcome a variety of problems associated with Echinacea propagation, such as bottlenecks in growth and poor seed germination, and also to meet up the increased demand. Alkamides are thought to be responsible for the immunomodulatory actions of Echinacea extracts both in vitro and in vivo.

Keywords

Phytochemicals *Echinacea purpurea*

Alkamides **Caffeic acid** **Polysaccharides**

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