

Virtual Conference: Recent Trends in Life Sciences (TREND-LS-21)

[Conducted on 13-14 March – 2021]

Exploring Mechanism of Action of *Azadirachta indica* against Respiratory Disorders

Deepanshi Pathak¹ and Dr Rachana^{1*}

¹Jaypee Institute of information Technology, Noida, India, deepanshipathak14@gmail.com

*Corresponding author: Associate Professor, Department of Biotechnology, IIIT Noida, Sector 62, India 201307, Email: rachana.dr@iitbombay.org

Abstract

Azadirachta indica, most commonly known as Neem, is one of the most traditional and useful medicinal plant found in India and is a member of Meliaceae family. Every part of neem possesses medicinal property. Active chemical compounds are found in the neem plant such as glycosides, coumarin, tannins, azadirachtin, nimbin, nimbidin, diterpenoids, triterpenoids, proteins, carbohydrates, sulphurous compounds, polyphenolics, etc. These active compounds are hydrophilic in nature to some extent and are soluble in organic solvents. The leaves of the neem plant possess anti-inflammatory, anti-bacterial and anti-oxidant properties. The neem leaves extract attenuates the infiltration of inflammatory cells such as neutrophils and macrophages in bronchoalveolar lavage fluid (BALF). The leaves also reduce the production of reactive oxygen species as well as neutrophil activity. The neem leaves attenuate the release of pro-inflammatory cytokines such as tumor necrosis factor- α and interleukin-6 in BALF. It also helps in decreasing the expression of inducible nitric oxide synthase (iNOS) in the lungs. This review will explore the mechanism of the neem leaf bioactive compounds in the prevention and treatment of respiratory disorders.

Keywords: *Azadirachta indica*; Bioactive compounds; Neem leaf extract

Citation

Pathak D, Rachana, Exploring Mechanism of Action of *Azadirachta indica* against Respiratory Disorders. J Nat Prod Trad Med. 2021, S1: 008.

Submit your manuscript at
<http://enlivenarchive.org/submit-manuscript.php>