

Indian Gooseberry

Phyllanthus emblica



Emblica officinalis, commonly known as amla, is arguably one of the most important plants in various traditional and folk systems of medicine in India. In Ayurveda, amla is considered to be a potent rejuvenator and immunomodulator effective in stalling degenerative processes and senescence, and to promote longevity, enhance digestion, treat constipation, reduce fever and cough, alleviate asthma, strengthen the heart, benefit the eyes, stimulate hair growth, enliven the body, and enhance intellect .

Oral administration of amla to tumor-bearing mice (Dalton's lymphoma ascites) has been reported to enhance natural killer cell (NK) activity and antibody-dependent cellular cytotoxicity (ADCC). Amla increased the lifespan of tumor-bearing animals by 35%, and co-administration of cyclophosphamide or anti-asialo-GM1 antibody treatment abrogated the survival time, clearly indicating that the observed effects were dependent on the activities of NK cells and killer cells. Amla mediated antitumor activity and subsequent reduction in tumor size by augmenting natural cell mediated cytotoxicity .



Preclinical studies also showed that amla was effective in preventing bacterial colonization while decreasing the bacterial load. Amla was more effective when administered for a longer (30 days) rather than shorter (15 days) period. When compared to the controls (non-aml treated), long-term feeding of amla caused a decrease in the levels of malondialdehyde while increasing phagocytic activity and nitrite levels in the bronchoalveolar lavage fluid. Together, these observations clearly suggest that amla has antibacterial activity.



Amla is shown to offer protection against hepatotoxicity by a wide variety of agents such as ethanol, paracetamol, CCl₄, heavy metals, ochratoxins, hexachlorocyclohexane, and antitubercular drugs. Treatment with amla is shown to be beneficial in mitigating hyperlipidemia, metabolic syndrome, hepatocarcinogenesis, and hepatotoxicity resulting from iron overload. The phytochemicals of amla, quercetin, gallic acid, corilagin, and ellagic acid were observed to exert hepatoprotective actions against toxicity of paracetamol, microcystins, galactosamine, and lipopolysaccharide. Amla appears to possess hepatoprotective effects by virtue of its antioxidant, anti-inflammatory, and hypolipidemic actions and by modulation of detoxifying enzymes. In milieu of these observations, it is safe to suggest that amla merits clinical studies especially in the high-risk group.

