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Indian medicinal plant- an inexpensive herbal agent to cure *kala-azar*

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Abstract

Visceral leishmaniasis, commonly known as '*kala-azar*', caused by the protozoan parasite *Leishmania donovani,* can be fatal if left untreated. The first line therapies include pentavalent antimonials,the polyene antibiotic amphotericin B as well as its lipid formulation AmBisome, and the diamidine pentamidine, but they all suffer from limitations of cost, specific toxicity or parenteral administration. India is endowed with an enviable wealth of medicinal plants with profound knowledge of their traditional use in the indigenous system of medicine, *Ayurveda*. This country is well known for its rich biodiversity and has been called the medicinal garden of the world. The present investigation has been focused on the scientific validation of traditional knowledge on Indian medicinal plants with a view to develop herbal drugs against visceral leishmaniasis. *Nyctanthes arbor-tristis* L., commonly known as night jasmine, is one of several commonly used plants for the treatment of a variety of human ailments in traditional Indian medicine. The leaves of the plant have a long history of being an edible source of bitter principles in different parts of India. Leaf extracts of night jasmine demonstrated significant activity against the axenic promastigotes of *Leishmania donovani* Ag83. Furthermore, the bioactive fraction was able to cure the *L. donovani* infected golden hamster. Therefore, leaves of night jasmine, with its long history of edibility, can be explored further for curing *kala-azar*, especially for the underprivileged section of our society where the visceral leishmaniasis is predominant.

Biography

Dr. Sharmila Chattopadhyay has completed her Ph.D at the age of 28 years from Visva Bharati University and postdoctoral studies from ATO-DLO, Wageningen, The Netherlands. She is actively engaged as Principal Scientist in CSIR-IICB, Kolkata, a premier R&D organization of International repute. Dr. Chattopadhay has presented her lab activities as an invited speaker at several International/National Conferences like GA(Germany), GORDON Research Conference, ISHS Conference etc. She has published more than 25 papers in peer-reviewed journals and serving as a reviewer as well as editorial board member of journals of repute.