

CHAPTER 8

Antibacterial activity of *Dendrophthoe falcata* (L.f.)

Ettingsh against *Shigella flexneri*

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ABSTRACT

Nature is blessed with variety of plants having medicinal properties one of which is Dendrophthoe falacta, widely distributed in India. A survey was carried out from January 2020 to March 2020. The study revealed that Dendrophthoe falcata is an arboreal, hemiparasitic plant is being used by indigenous medical practitioners for healing diseases such as asthma, psychic disorders and tuberculosis etc. Here in this study we aim to determine the anti-bacterial activity of Dendrophthoe falcata in whole plant. The dry power of Dendrophthoe falcata was extracted with methanol, ethanol and acetone. The methanol, ethanol, acetone extract was subsequently partitioned successively using aqueous, n-hexane. Each fraction was analysed by a phytochemical method and tested as anti-bacterial activities. Dendrophthoe falacta was investigated for its anti-bacterial activities against gram negative bacteria i.e. Shigella flexneri. Anti-bacterial activity was performed by 2 different methods (Disk diffusion & Agar-well diffusion). The methanol and acetone extract was found to be the most effective and showed significant anti-bacterial activity against the test organisms. Among the extracts methanol and acetone fraction showed promising results.

Keywords: *Dendrophthoe falcata*, medicinal plant, hemiparasitic, phytochemical, anti-bacterial activity

8.1 INTRODUCTION

Throughout evolution, a wide number of organisms specialized in parasitizing plants. Among them parasitic plants are well known. A parasitic plant is a type of angiosperm that directly attaches to another plant such as *Haustorium*. The *haustorium* is a specialised multicellular organ homologous to a root, which penetrates a host, makes a vascular connection and facilitates the transfer of