

CHAPTER 5

Phytochemical screening and antibacterial activity of *Tamarix indica*

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ABSTRACT

Tamarix indica L., a woody invasive plant species, has traditionally been considered as a source of medicine for various ailments. It possesses several undesirable attributes along with some beneficial characteristics. Hence, an attempt has been taken to gather the reported information and availability of this phreatophyte in the urban areas of Cuttack. The survey was made during the January 2020 to locate the said species in the study areas. Results revealed that this intrusive species is used to treat many diseases and disorders. The pharmacological interest of these compounds, coupled with the use of this plant in traditional medicine prompted the researchers to check its possible antinociceptive, anti-inflammatory and antibacterial activities in animal models. Due to availability of some medicinal values it showed a positive step towards the conservation of this medicinally important plant in urban areas. Phytochemical studies including extraction and detection of secondary metabolites have been done here for assessment of medicinal values of the used plant parts. The results revealed that whole plant possess diverse secondary metabolites and showed antibacterial activity against *Streptococcus pyogenes*. The obtained results provide a support for the use of this plant in traditional medicine and its further investigation.

Keywords: *Tamarix*, Invasive, pharmacological, phytochemical, *Streptococcus pyogenes*

5.1 INTRODUCTION

Traditionally herbal medicines form an important part of healthcare system of India. Ayurveda considered being the oldest medical system in the world. It provides potential leads to find active and therapeutically useful compounds from plants. Plants have always played an important role in the treatment of different ailment in human and animals all over the world. Many researchers are working on plant and plant products for the recognition of natural products.