



ANTIDERMATOPHYTIC ACTIVITY AND PHYTOCHEMICAL SCREENING OF *CEASALPINIA BONDUC* SEED COAT EXTRACTS

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ABSTRACT: The effective traditional medicinal plant *Ceasalpinia bonduc* (L.) Flem. was examined using agar well diffusion method against mycotic fungi *Trichophyton rubrum*, *Microsporum gypseum*, *Candida albicans*, *Trichophyton tonsurans*, *Trichophyton mentagrophytes* and bacteria like, *Escherichia coli*, *Pseudomonas aeruginosa*, *Bacillus subtilis* and *Staphylococcus aureus*. Plant selected parts were extracted using two different solvents such as petroleum ether and 98% methanol. Phytochemical screening of these plants was performed for constituents: alkaloids, flavonoids, tannins, saponins and glycosides. Among two extracts, the 98% methanol extract showed more antimycotic activity and moderate activity recorded with petroleum ether extracts. All the dermatophytes were more susceptible to inter-polar methanolic extracts than the low polar organic extract. MIC, MFC and MBC were determined using broth dilution method. In prospect the inter-polar plants extracts can be subjected to isolation of the antidermatophytic active constituent's and to further pharmacological evaluation.

Key words: Antidermatophytic activity, 98% methanolic extract, Inter-polar compounds

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The use of medicinal plants to treat human diseases has its roots in pre-historical times.

Medicinal plants are used by 80% of the world population as the only available medicines especially in developing countries (Hashim et al., 2010). Plants used for traditional medicine contain a wide range of substances that can be used to treat chronic as well as infectious diseases. Clinical microbiologists have great interest in screening of medicinal plants for antimicrobial activities and phytochemical as potential new therapeutics. The active principles of many drugs found in plants are secondary metabolites (Ghani, et al. 1990, Dobelis 1993). India with about 45,000 plant species and 550 tribal communities belonging to 227 ethnic groups (MEF 2003) inhabited in varied geographic and climatic zones with diversified plant species and varied culture rich traditional knowledge system. Living close to the nature the tribal communities are custodian of unique traditional knowledge system and wisdom about ambient flora and fauna and rich heritage of ethno medicine. Since most of these ethnic communities do not have their own scripts and written language, the information about prescriptions, pharmacology, attitude towards diseases and diagnosis of the age old tribal medicine are lying unclaimed. The

people of the modern society are totally unaware of this rich traditional medicinal system. However, the studies in tribal medicine have enabled to identify 1 600 new drug yielding plants. So that the collection of information, documentation, and the scientific analysis of ethno medicine is became important. Many efforts have been made to discover new antimicrobial compounds from various kinds of sources such as micro-organisms, animals, and plants. One of such resources is folk medicines. Systematic screening of them may result in the discovery of novel effective compounds (Tomoko et al., 2002, Jeeva et al., 2007, Anpin Raja et al. 2009, Anpin Raja et al., 2010). The Hyderabad Karnataka region comprises four districts namely, Bidar, Gulbarga, Raichur, and Yadgir located in the northern part of Karnataka, India. This region is economically little backward, but culturally unique. People speak five languages such as, Kannada, Marathi, Telugu, Hindi and Urdu and knowledge flows from one culture to other. The plant diversity is very rich and a good number of medicinal plants are used in the treatment of various diseases including skin diseases (Shivakumar Singh and Vidyasagar 2012). Therefore, the present study focused on the antimycotic activity and preliminary phytochemical studies of three traditional medicinal plants used in the treatment skin diseases.