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CHAPTER 6

ANTIBACTERIAL ACTIVITY OF SELECTED MEDICINAL PLANTS AGAINST *SHIGELLA FLEXNERI*

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Abstract

S. flexneri which is a gram negative facultative anaerobes that belong to the family, Enterobacteriaceae. This bacteria may occur as the organism pass through the small intestine and causes disease like diarrhea and food poisoning. The important sources of medicinal plants like Psidium guajava, Oroxylum indicum and Pergularia daemia are noted for their antimicrobial activity against S.flexneri. Hence an attempt has been taken to gather the reported information and availability of this plant species in the urban areas of Bhubaneshwar. Survey was made during the January 2020 to March 2020 to locate the said species in the study areas. Results revealed that selected plant species are used to treat many disease and disorder in general and particular against diarrhea. The phytochemical screening and antibacterial activities for evaluation of their pharmacological potential was carried out. The results revealed that selected plant species are rich with diverse bioactive compounds and excellent MIC (Minimum Inhibitory Concentration) against S. flexneri. The results indicate that there is wide scope in isolation of active compounds and formulation of drugs against food poisoning and diarrhea.

Keywords: Antimicrobial activity, Medicinal plants, MIC, *Shigella flexneri*