Problem Statement: Multiple drug resistance in human pathogenic micro organisms has developed due to indiscriminate use of modern antimicrobial drugs generally used in the management of infectious diseases. This increases the importance of exploiting the natural sources instead modern drugs. Approach: The antibacterial and antioxidant activity of different extracts from of Typhonium flagelliforme (L.) Blume tuber (family: Araceae) commonly called ‘Rodent Tuber’ was assessed towards selected bacteria as well as in different antioxidant models. The antibacterial screening was carried out by disc diffusion method. Two complementary test systems, namely DPPH free radical scavenging and total phenolic compounds, were used for the antioxidant analysis. Results: Except hexane extract none of the other extracts shown anti bacterial activity against the selected strains. The hexane extract from Typhonium flagelliforme tuber had interesting activity against both the gram negative bacteria, Pseudomonas aeruginosa (11±1.0 mm diameter) and Salmonella choleraesuis (12±1.1 mm diameter). The positive control, Streptomycin had shown zone of inhibition of 20±1.5 mm, 20±1.3 mm, 23±1.5 mm and 23±1.0 mm in Methicillin Resistant Staphylococcus aureus, Pseudomonas aeruginosa, Salmonella choleraesuis and Bacillus subtilis respectively. All the extracts were subjected to screening for their possible antioxidant activity. The DPPH assay showed that the inhibitory activity of ethyl acetate (77.6±0.9%) and dichloromethane (70.5±1.7%) extracts were having comparatively admirable inhibition capacity when compared to the positive control BHT (95.3±1.3%). Total phenolic content of all extracts was also evaluated, and dichloromethane extracts (5.21±0.82 GAE mg/g extract) was superior to all other extracts, followed by hexane and ethyl acetate. Conclusion: Considering all the results collectively T. flagelliforme appears to be a promising plant demonstrating antibacterial and antioxidant activity that requires further investigation.

Keyword: Typhonium flagelliforme; Rodent tuber; Antibacterial activity; Antioxidant activity; Fatty acids