



Inhibitory Potential Against Methicillin-Resistant *Staphylococcus aureus* (MRSA) of *Dolichandrone spathacea*, a Mangrove Tree Species of Malaysia

Azmi J. SAIFUL^{1*}, Mohtar MASTURA¹, Mohamed I. MAZURAH¹ & Hashim NUZIAH²

¹ Antimicrobial Laboratory, Anti-infective Branch, Bioactivity Programme and

² Phytochemical Analysis Branch, Phytochemistry Programme, Medicinal Plants Division, Forest Research Institute of Malaysia (FRIM), 52109 Kepong, Selangor, Malaysia.

SUMMARY. In this study, methanol extracts from the leaf and stem of *Dolichandrone spathacea* (L.f) K. Schum., a lesser-known local mangrove tree species, was evaluated using disc diffusion and minimum inhibitory concentration (MIC) value determination assays against six strains of local MRSA clinical isolates and one ATCC MRSA reference strain. The stem extract exhibited a higher zone of inhibition as compared with the leaf extract against the tested isolates. Further qualitative evaluation of the stem extract showed MIC values between 1.25 to 1.88 mg/ml against three selected MRSA clinical isolates. Phytochemical screening revealed that the triterpene and saponin compounds might be responsible for the better inhibitory activity from the stem extract as compared to the leaf extract. This study is the first report of the phytochemical screening and the inhibitory activity of *D. spathacea* leaves and stems methanolic extracts against MRSA clinical isolates.

KEY WORDS: *Dolichandrone spathacea*, Inhibitory potential, Methicillin-resistant *Staphylococcus aureus* (MRSA), Phytochemical screening.

* Author to whom correspondence should be addressed. E-mail: saifulazmi@frim.gov.my