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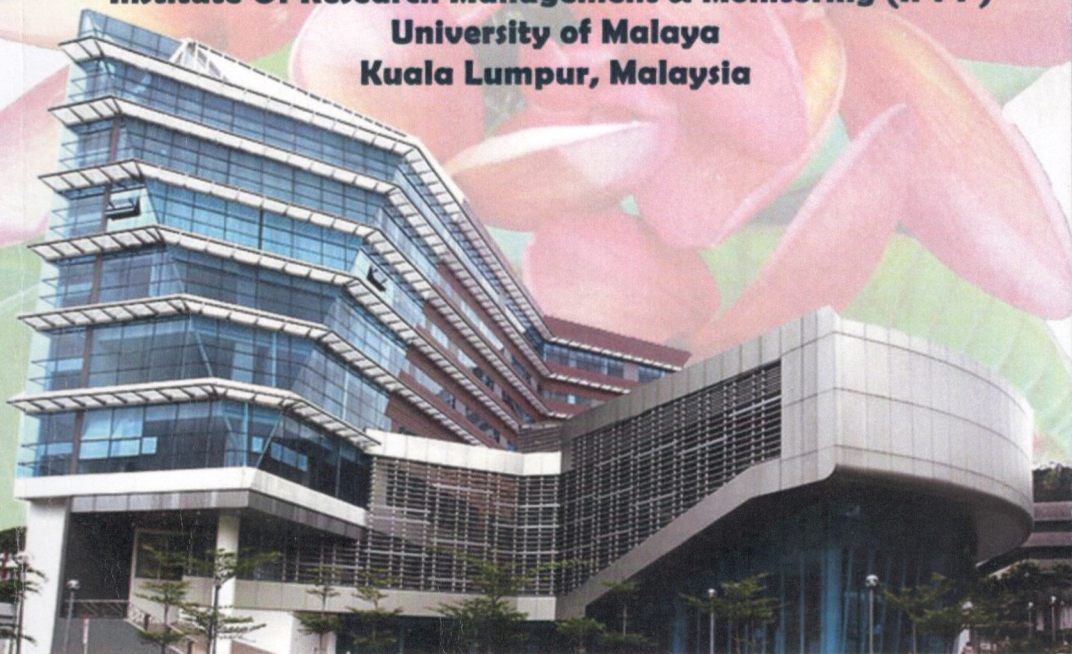
Programme and Abstracts

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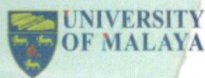
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**PHOTO ACTIVATED BACTERIAL DNA BINDING ACTIVE
RUTACEOUS ALKALOIDS FROM *Glycosmis pentaphylla* (RETZ.) DC.
AND *Ruta angustifolia* (L.) PERS.**

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Arborine, a quinazoline and graveoline, a 4-quinolone are the antimicrobial active Rutaceous alkaloids isolated from *Glycosmis pentaphylla* and *Ruta angustifolia*, respectively. Both alkaloids possess chromophore with a few structural similarities with the pharmacophore of 4-quinolone antimicrobial agent. Their bacterial DNA binding activity was assessed by photo activated DNA binding assay and agarose gel electrophoresis. Ten different restriction enzymes which recognise and cleave DNA in a sequence-specific manner were competed by the alkaloids. The DNA binding activity was detected as inhibition of the enzymatic restriction resulting in the detection of uncleaved DNA fragments of the original size. Arborine showed inhibitory activity against the restriction enzymes *EcoR* I, *Pae* I and *Dra* I with the highest intensity of inhibition for *Dra* I which have 5'-TpA sequence. Graveoline was active against *EcoR* I, *Dra* I and *Pst* I. Ciprofloxacin, the second generation of quinolone antimicrobial agent only the inhibitor of *Kpn* I and *Pst* I. The photo activated bacterial DNA binding activity was in the sequence of arborine>graveoline>ciprofloxacin. This finding revealed the potential of arborine and graveoline as lead compounds for future development of quinolone antimicrobial agents in resolving the antibiotic resistance cases which are globally common nowadays in clinical setting.

Keywords: Arborine; graveoline; photactivated; antibacterial; DNA-binding