

ANTIMICROBIAL ACTIVITY OF SOME SRI LANKAN RUBIACEAE AND MELIACEAE

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Continuing our work on biologically active compounds from Sri Lankan plants we have now screened 94 solvent extracts (*n*-hexane, dichloromethane and methanol) obtained from leaves, bark and stem of thirteen Rubiaceae species (*Benkara malabarica*, *Canthium coromandelicum*, *Canthium dicocum*, *Haldina cordifolia*, *Ixora calycina*, *Morinda tinctoria*, *Mussaenda frondosa*, *Psychotria gardneri*, *Psychotria nigra*, *Psychotria stenophylla*, *Saprosma foetens*, *Tarenna asiatica* and *Wendlandia bicuspidata*) and two Meliaceae species (*Agليا congylos* and *Munronia pumilia*) for antibacterial activity against *Escherichia coli* (*Ec*), *Micrococcus luteus* (*Ml*), *Bacillus subtilis* (*Bs*) and *Bacillus cereus* (*Bc*) and antifungal activity against *Saccharomyces cerevisiae* (*Sc*), *Ustilago maydis* (*Um*) and *Aspergillus niger* (*An*). Screening for antimicrobial activity was carried out using the disc diffusion method. The media used for culturing bacteria, fungi and yeast like fungi were nutrient agar, Czapek agar and glucose yeast agar, respectively.

The plants *M. tinctoria*, *M. frondosa*, *P. gardneri* and *P. stenophylla* showed antimicrobial activity against at least five of the seven microbes examined: *M. tinctoria* (leaves) – hexane extract against *Ec*, *Bs*, *Bc* and *An*, and dichloromethane extract against *Sc*, *Ec* and *Bc*; *M. tinctoria* (bark) – dichloromethane extract against *Sc*, *Ec*, *Bs* and *An*, and methanol extract against *Ml* and *Bc*; *M. frondosa* (leaves) – dichloromethane extract against *Sc*, *Ec*, *Bs* and *Bc*, and methanol extract against *Bs*; *M. frondosa* (bark) – hexane extract against *Sc*, *Um*, *Ml* and *Bc*, dichloromethane extract against *Sc*, *Ml* and *Bc*, and methanol extract against *Ec* and *Bs*; *P. gardneri* (leaves) – dichloromethane extract against *An*, and methanol extract against *Sc*, *Ec*, *Ml* and *Bc*; *P. gardneri* (bark) – hexane extract against *An*, dichloromethane extract against *Sc* and *Bs*, and methanol extract against *Ec*, *Ml*, *Bs* and *Bc*; *P. stenophylla* (leaves) – dichloromethane extract against *Ec*; *P. stenophylla* (bark) – dichloromethane extract against *Um*, *Ec*, *Ml*, *Bs*, *Bc* and *An* and methanol extract against *Ml*. The following extracts were found to be inactive: *A. congylos* (leaves - methanol), *B. malabarica* (leaves - hexane), *C. coromandelicum* (leaves - hexane), *H. cordifolia* (leaves - hexane, bark - hexane and methanol), *I. calycina* (bark - hexane), *M. tinctoria* (leaves - methanol, bark - hexane), *M. frondosa* (leaves - hexane), *M. pumilia* (leaves - hexane, dichloromethane and methanol), *P. gardneri* (leaves - hexane), *P. nigra* (leaves - hexane and dichloromethane), *P. stenophylla* (leaves - hexane and methanol, bark - hexane), *S. foetens* (bark - hexane), *T. asiatica* (bark - hexane), *W. bicuspidata* (leaves - methanol, bark - methanol).

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