

Antioxidant, antimicrobial and tyrosinase inhibitory activities of xanthenes isolated from artocarpus obtusus F.M. Jarrett

ABSTRACT

One of the most promising plants in biological screening test results of thirteen *Artocarpus* species was *Artocarpus obtusus* FM Jarrett and detailed phytochemical investigation of powdered dried bark of the plant has led to the isolation and identification of three xanthenes; pyranocycloartobiloxanthone A (1), dihydroartoindonesianin C (2) and pyranocycloartobiloxanthone B (3). These compounds were screened for antioxidant, antimicrobial and tyrosinase inhibitory activities. Pyranocycloartobiloxanthone A (1) exhibited a strong free radical scavenger towards DPPH free radicals with IC₅₀ value of 2 g/mL with prominent discoloration observed in comparison with standard ascorbic acid, α-tocopherol and quercetin, The compound also exhibited antibacterial activity against methicillin resistant *Staphylococcus aureus* (ATCC3359) and *Bacillus subtilis* (clinically isolated) with inhibition zone of 20 and 12 mm, respectively. However the other two xanthenes were found to be inactive. For the tyrosinase inhibitory activity, again compound (1) displayed strong activity comparable with the standard kojic acid.

Keyword: Antimicrobial; Antioxidant; Antiproliferative; *Artocarpus obtusus*; Pyranocycloartobiloxanthone A; Tyrosinase inhibitory