

Antifouling Alkaloids from *Crinum augustum* (Amaryllidaceae)

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ABSTRACT

Fractionation and purification of the ethanolic extract of the bulbs of *Crinum augustum* Rox. (Amaryllidaceae) cultivated in Egypt yielded five alkaloids 6-methoxy-crinamine (1), crinamine (2), buphanisine (3), ungeremine (4), and hippadine (5); two fatty acid derivatives: myristic acid ethyl ester (6) and palmitic acid ethyl ester (7); four terpenoidal and steroidal compounds: ursolic acid (8), beta-sitosterol-O- beta glucopyranoside (9) and mixture of beta- sitosterol (10) and stigmasterol (11). The structures of all compounds were determined by interpretation of their spectroscopic data; 1D (¹H and ¹³C), 2D (HSQC, COSY, DQF, NOE and HMBC) NMR; MS and UV analyses. The compounds (1-4) and (6-8) were tested towards biofouling activity using larvae of barnacle *Balance amphitrie*. Significant activities of 1, 2 and 3 with EC₅₀ 1.8, 1.2 and 0.75 g/mL respectively, were observed.

KEYWORDS

Crinum augustum . Amaryllidaceous . anti-fouling . natural products

REFERENCES

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