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Title : Alkaloids from the roots of *Stemona javanica* (Kunth) Engl. (Stemonaceae) and their anti-malarial, acetylcholinesterase inhibitory and cytotoxic activities

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Abstract : Two new protostemonine-type alkaloids, javastemonine A and B (3 and 4) have been isolated from the root extracts of *Stemona javanica* together with four known *Stemona* alkaloids, 13-demethoxy-11(S*),12(R*)-dihydroprotostemonine (1), isoprotostemonine (2), protostemonine and isomaistemonine. The structures and relative configurations of the new alkaloids were determined by spectroscopic analysis. The alkaloids 1 and 2 and protostemonine showed moderated antiplasmodial activities against the *Plasmodium falciparum* strains, TM4 (IC₅₀ values of 17.7 ± 3.7, 16.8 ± 5.4, 16.0 ± 4.2 µg/mL, respectively) and K1 (IC₅₀ values of 16.8 ± 3.1, 14.1 ± 3.7, 11.9 ± 3.3 µg/mL, respectively). These compounds showed no significant cytotoxicities against KB or Vero cells or acetylcholinesterase inhibitory activities.

Subject : Anti-malarial; Cytotoxicity; Human acetylcholinesterase; Javastemonine A and B; *Stemona javanica*

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