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Bromotyrosine-derived alkaloids from the sponge *Acanthodendrilla* sp.

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Bioassay-guided fractionation of the CH₂Cl₂/MeOH extract of the Thai marine sponge *Acanthodendrilla* sp. resulted in the isolation of six bromotyrosine-derived alkaloids; aerothionin (1), homoaerothionin (2), 2-hydroxy-3,5-dibromo-4-methoxyphenylacetamide (3), 2,4-cyclohexadiene-1-acetamide-3,5-dibromo-1,6-dihydroxy-4-methoxy (4), 11-oxoaerothionin (5), and 11,19-dideoxyfistularin (6). The structures of the isolated compounds were identified on the basis of detailed spectroscopic analysis. The compounds were tested for the acetylcholinesterase-inhibiting activity, and 3 showed the best acetylcholinesterase-inhibiting activity (92.0% at 0.1 mg/mL).

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