

Polychlorinated pyrrolidinones from a Saudi Arabian Red Sea sponge of the genus *Lamellodysidea*

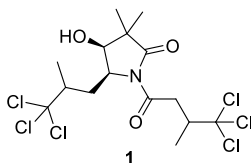
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The Red Sea, the world's northernmost tropical sea, is a seawater inlet of the Indian Ocean, lying between Africa and Asia. The more than 2,000 km long stretch of coral reef system in the Red Sea ranks among the five most significant reefs in the world and hosts approximately 1,100 species of fish and more than high degree of endemism. Nonetheless, the Red Sea still remains one of the most understudied ecosystems on the planet. In the framework of a joint project aiming at the bioprospection of marine organisms from the Saudi Arabian Red Sea as a source of new bioactive secondary metabolites, a large number of invertebrates and algae were collected from various coral reefs surrounding Thuwal. Among them, the organic extract of a sponge of the genus *Lamellodysidea* was prioritized for phytochemical analysis on the basis of its interesting chemical profile, as analyzed by NMR and LC-MS. Fresh tissues of the organism were extracted with mixtures of CH₂Cl₂/MeOH and the resulting organic extract was subjected to a series of chromatographic separations that led to the isolation of a number of polychlorinated pyrrolidinones (eg. **1**). The structures of the isolated alkaloids, among which two are new natural products, were established mainly on the basis of extensive analysis of their 1D and 2D NMR and MS data.



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