

Chemical relationship between red algae genus *Laurencia* and sea hare (*Aplysia dactylomela* Rang) in the North Borneo Island

Abstrak

Red algae genus *Laurencia* is an interesting alga with the ability to produce halogenated secondary metabolites that exhibits ecological and pharmaceutical potential. In nature, *Laurencia* is selectively grazed by sea hares (*Aplysia dactylomela*). In this study, *Laurencia* populations in three islands (Mantanani, Sulug, and Dinawan Islands) in the coastal waters of North Borneo were investigated and their chemical relationship with sea hare determined. Four species of *Laurencia* were found to grow abundantly in these waters, *Laurencia snackeyi*, *Laurencia majuscula*, *Laurencia nangii*, and *Laurencia similis*. Sea hares, *Aplysia dactylomela*, found grazing on *Laurencia* were collected and their chemical composition determined. A total of 20 halogenated metabolites were isolated and identified via spectroscopic data. Isolated compounds could be grouped into syndrean (5), chamigrane (6), non-chamigrane sesquiterpene (3), cuparane (1), bromoindole (2), and C15 acetogenin (acetylene type) (3). Sea hares from Mantanani, Sulug, and Dinawan Islands contained a total of 9, 10, and 10 compounds, respectively. In addition, 12-acetoxypalisadin B (1), which was isolated from sea hares of Sulug Island is a first record of its existence in nature.