Marine Phytochemical and Thin Layer Chromatography Analyses of Whole Body of *Hippocampus borboniensis* Duméril (Seahorse) Originated in Cambodia

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Abstract

Cambodian seahorse or *Hippocampus borboniensis* Duméril (local name: Ses Samot) possesses anti-tumor, anti-aging, anti-fatigue, anti-prostatic hyperplasia activities and can be used for the treatment of tumor, aging, fatigue, thrombus, inflammatory, hypertension and impotence. This study aimed to determine the phytochemicals and Thin Layer Chromatography (TLC) profile of the whole body of *Hippocampus borboniensis* Duméril originated in Cambodia. The dried form of *Hippocampus borboniensis* Duméril whole body was collected from the local medicinal plant drugstore, Phnom Penh, Cambodia, in February 2018. The marine body was authenticated with the voucher specimens (UPFOPMP-120001) of University of Puthisastra (UP)-Herbarium. The body was ground and subjected to the extraction with ethanol by using Ultrasocination-Assisted Extraction (UAE) method. The ethanolic extracts were in turn subjected to the analyses of phytochemical constituents and TLC. These experiments were conducted at the Faculty of Pharmacy, University of Puthisastra, Cambodia. The ethanolic extract of *Hippocampus borboniensis* Duméril whole body was positively tested of alkaloids, phenolic compounds, flavonoids and essential oils. The TLC analysis was evaluated with the mobile phase system of Toluene:Methanol (9:1) and investigated under 254-366 nm UV light and H_2SO_4, separating 10 compounds as the following R_f values 0.09, 0.13, 0.16, 0.39, 0.47, 0.56, 0.67, 0.80, 0.89 and 0.98. It is concluded that the presence of these phytochemicals and the TLC profiling of *Hippocampus borboniensis* Duméril whole body may be responsible for the marine medicinal purpose and of benefit for the future research in term of bioactive compound identification and isolation.

Keywords: *Hippocampus borboniensis* Duméril, TLC, Marine Phytochemicals, Cambodia

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