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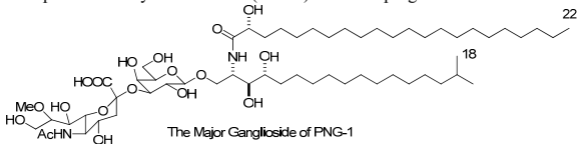
棘皮動物コブヒトデの新規 GM₄ 型ガングリオシドの単離と構造

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[Objective] Gangliosides have been suggested to play a significant role in the regulation of many cellular events such as neuronal differentiation. A series of studies on gangliosides from echinoderms have been performed in our laboratory.¹⁾ Continuing the previous studies, we conducted the isolation and structural elucidation of biologically active ganglioside from Starfish *Protoreaster nodosus* collected in Okinawa, Japan, with the objective of searching for lead compounds for various neuronal diseases.

[Method] Two digestive organs, pyloric caeca and stomach, were dissected from fresh materials and then extracted with chloroform/methanol. The extract was subjected to silica gel, RP-8 and Sephadex LH-20 column chromatography to give a ganglioside molecular species, designated PNG-1. The structure of PNG-1 was elucidated by spectral data as well as chemical methods.

[Result] PNG-1 is a novel GM₄-type ganglioside with an 8-*O*-Methyl NeuAc. This is the first report on GM₄-type ganglioside from the invertebrates. The neurotogenic activity against rat pheochromocytoma cell line (PC-12) is now in progress.



- 1) 潘ら, 日本薬学会第128年会講演要旨集, P8 (2008, 横浜); R. Higuchi, M. Inagaki, K. Yamada, T. Miyamoto, *J. Nat. Med.*, **61**, 367-370 (2007).