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Effects of Feeding Sialyllactose and Galactosylated *N*-Acetylneuraminic Acid on Swimming Learning Ability and Brain Lipid Composition in Adult Rats

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The learning behavior of adult rats was studied using a water-filled multiple T-maze apparatus and a Morris swimming-maze after feeding lactose, galactosyllactose (GL), *N*-acetylneuraminic acid (Neu5Ac), sialyllactose (SL) or galactosylated *N*-acetylneuraminic acid (GN) and a control diet. The learning behavior tended to improve in the groups fed SL or GN when compared with the other groups. The concentrations of gangliosides and GM3 in brain were significantly higher in the groups fed SL or GN. The data show that the feeding of SL or GN to adult rats raised the brain ganglioside and GM3 contents, which may be related to improvement in the swimming learning behavior.

Key words: sialyllactose, galactosylated *N*-acetylneuraminic acid, swimming learning behavior, brain ganglioside

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