B24

Four new sphingolipids from *Bombycis corpus* 101A and their neurotrophic effects

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Bombycis corpus is a silkworm larvae killed by inoculation of the fungi, *Beauveria bassiana* and a Korea traditional medicine to treat palsy, headache, convulsion, stroke induced speech problem and tremor.[1)] *Bombycis corpus* 101A was developed at National Institute of Agricultural Science and Technology in Korea and inoculated by homogeneous fungi, *Beauveria bassiana* 101A. Several sterols were reported from *Bombycis corpus*[2)]. In the course of searching for bioactive compounds from Korean traditional medicine, we have isolated two cytotoxic sterols and two cyclodepsipeptides from a methanolic extract of *Bombycis corpus* 101A[3,4)]. In continuation of our research of this source, four new sphingolipids (**1**~**4**) were isolated from the hexane soluble fraction.

On the basis of spectroscopic data, their structures have been elucidated as (4*E*,2*S*,3*R*)-2-N-octadecanoyl-4-tetradecasphingenine(**1**),(4*E*,6*E*,2*S*,3*R*)-2-N-eicosanoyl-4,6-tetradecasphingenine(**2**),(4*E*,2*S*,3*R*)-2-N-eicosanoyl-4-tetradecasphingenine(**3**),(4*E*,6*E*,2*S*,3*R*)-2-N-docosanoyl-4,6-tetradecasphingadienine(**4**). Neurotrophic effects of isolated sphingolipids were evaluated by microscopically monitoring their potency to induce neurite outgrowth in PC12 cells and showed processes with lengths equivalent to two diameters of the cell body in 10 μM.