

Supplementary data

Daurichromenic acid from the Chinese traditional medicinal plant *Rhododendron dauricum* inhibits sphingomyelin synthase and A β aggregation

Hadya Virupaksha Deepak¹, Mahadeva M. M. Swamy¹, Yuta Murai^{1,2}, Yoshiko Suga², Masaki Anetai², Takuro Yo³, Masahiro Kuragano³, Koji Uwai³, Kiyotaka Tokuraku³ and Kenji Monde^{1,2*}

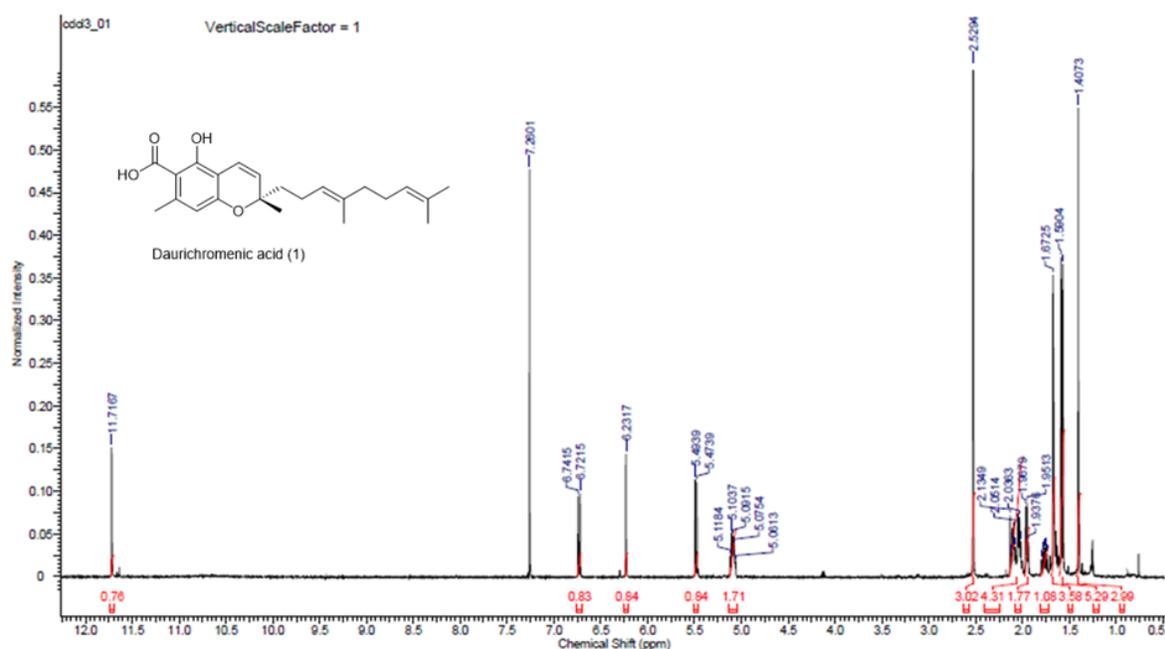
¹Graduate School of Life Science, Hokkaido University, Sapporo, Japan, 001-0021

²Faculty of Advanced Life Science, Hokkaido University, Sapporo, Japan, 001-0021

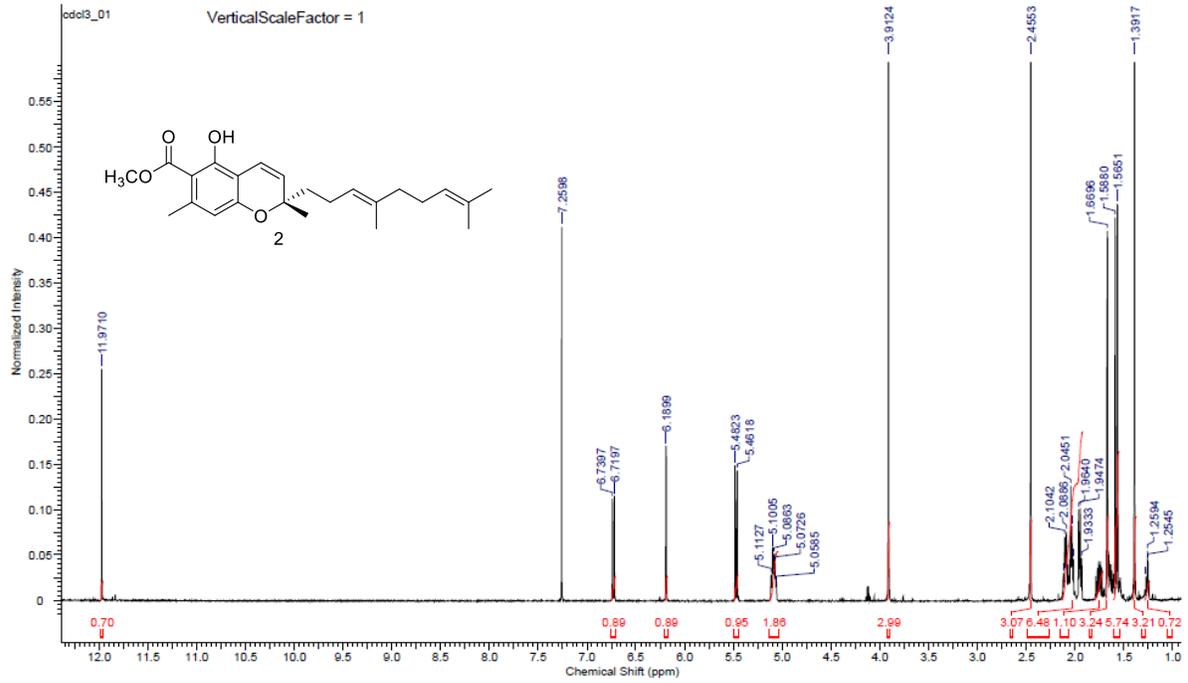
³Department of Applied sciences, Muroran Institute of Technology, 27-1 Mizumoto-cho, Muroran, Japan 050-8585,

*Correspondence: kmonde@sci.hokudai.ac.jp

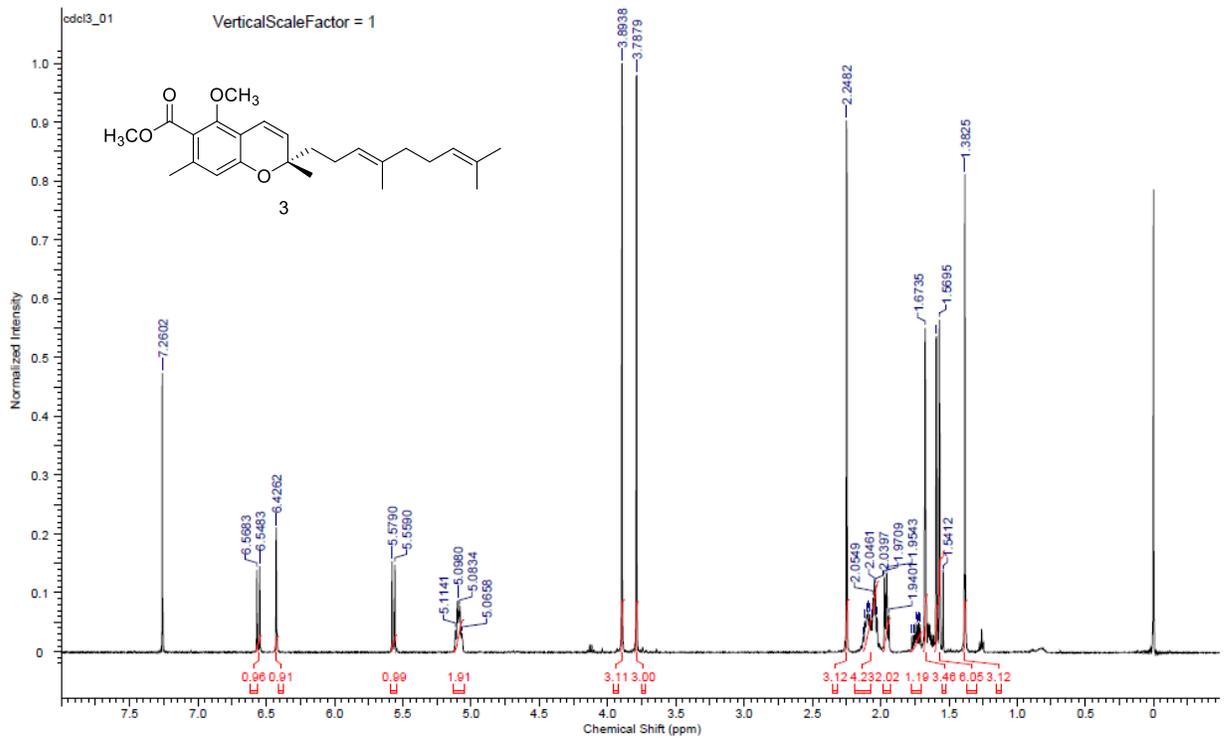
S-1



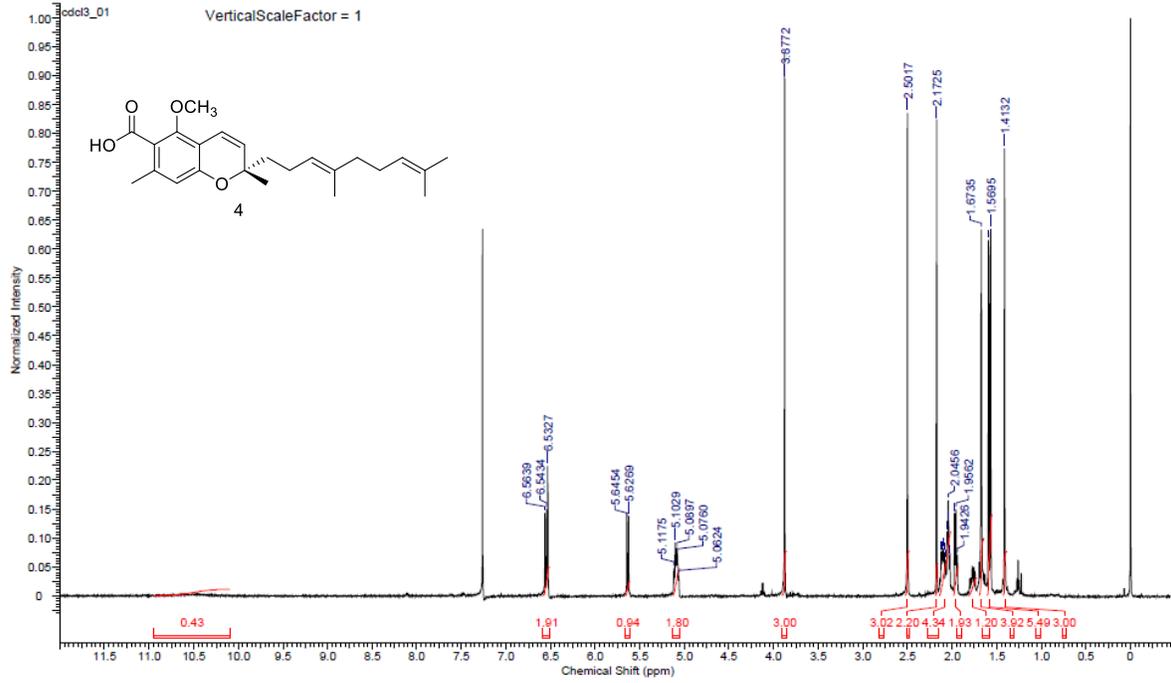
¹HNMR of Daurichromenic acid (DCA) (1)



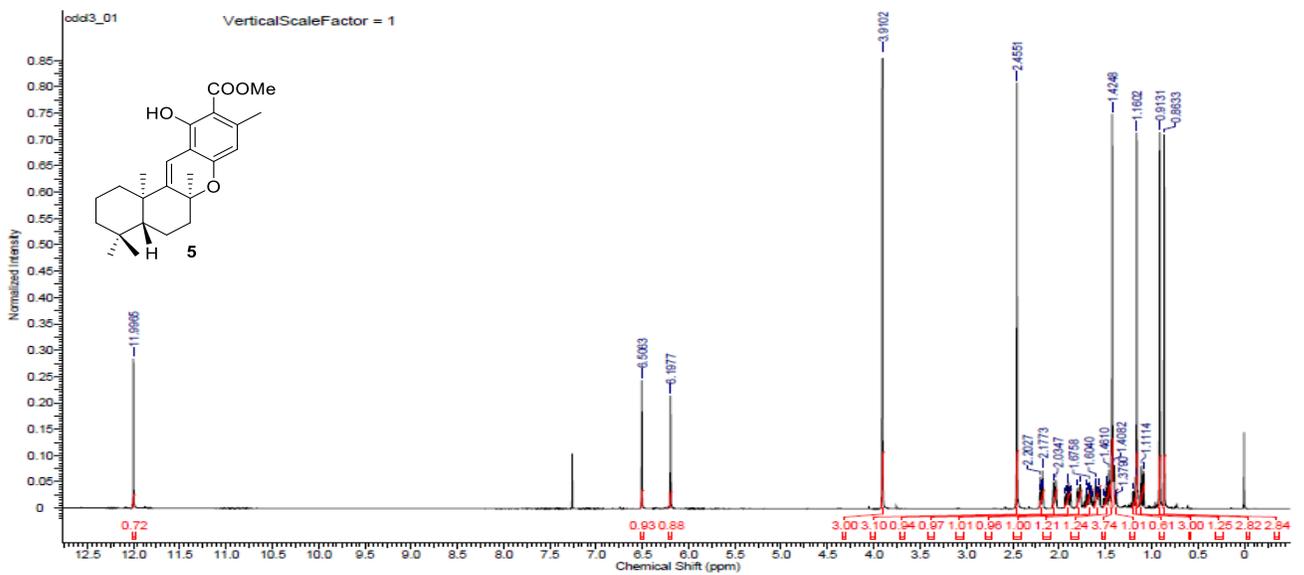
¹HNMR Methyl ester of daurichromenic acid (2)



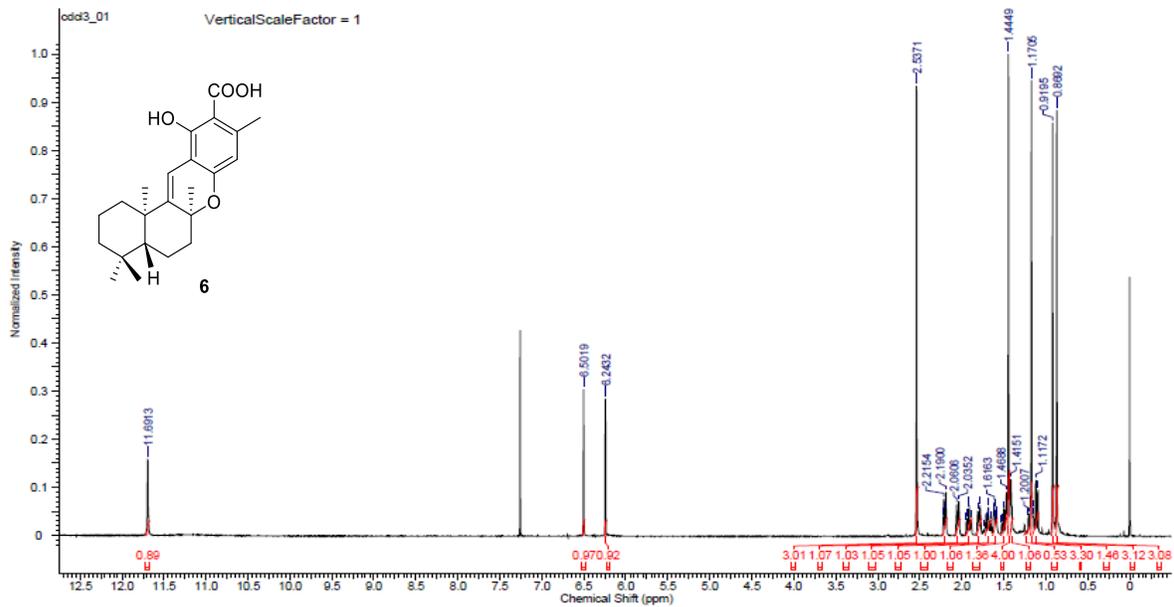
¹HNMR of Methyl(S,E)-2-(4,8-dimethylnona-3,7-dien-1-yl)-5-methoxy-2,7-dimethyl-2H-chromene-6 carboxylate (3)



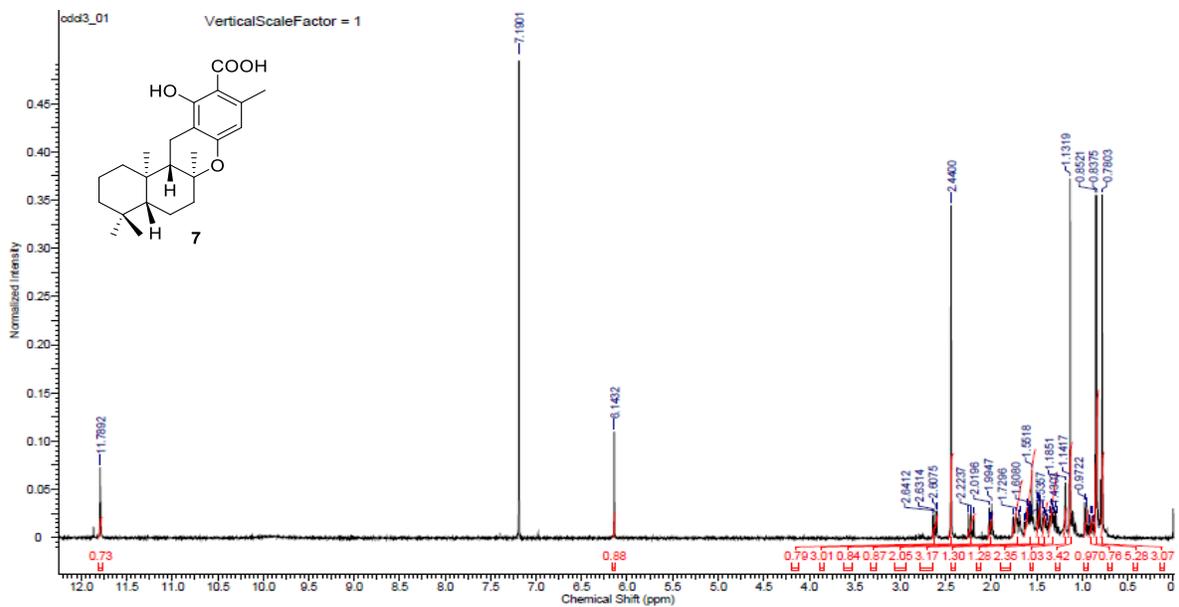
^1H NMR of (*S,E*)-2-(4,8-dimethylnona-3,7-dien-1-yl)-5-methoxy-2,7-dimethyl-2H-chromene-6-carboxylic acid (**4**)



^1H NMR of (-)-(5*R*,8*S*,10*R*)-9,15-didehydro Hongoquercin A methyl ester (**5**)



¹H NMR of (-)-(5R,8S,10R)-9,15-didehydro Hongoquercin A (6)



¹H NMR of hongoquercin A (7)

S-2 Amyloid beta aggregation assay

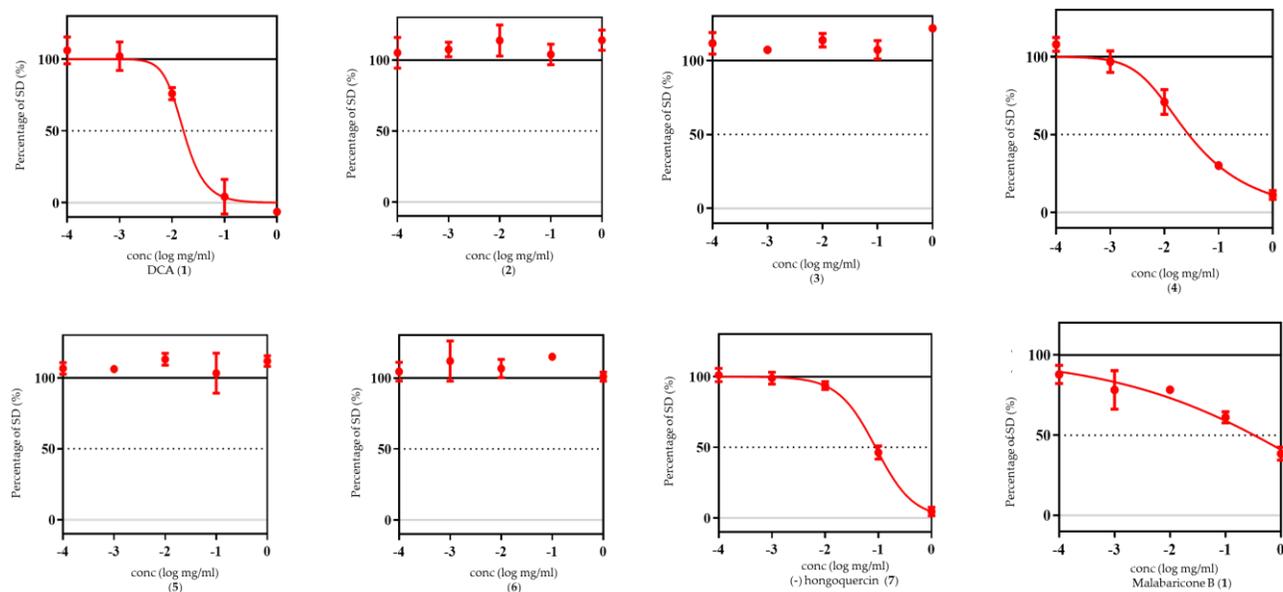


Figure S-2: Amyloid beta aggregation inhibition by daurichromenic acid and its derivatives: Inhibition of $A\beta$ aggregation by daurichromenic acid and its derivatives 30 nM QDA β and 30 μ M $A\beta$ were incubated with various concentrations of daurichromenic acid and its derivatives. Estimation of EC_{50} values from inhibition curve that are plotted percentage of SD of fluorescence intensities in the micrograph versus concentration of daurichromenic acid and its derivatives. Estimation of EC_{50} values from inhibition curve that are plotted percentage of SD of fluorescence intensities in the micrograph versus concentration of daurichromenic acid and its derivatives.