Syntheses of Neuroprotective Bridged Diterpenes

OMasataka Ihara (Tohoku Univ., Graduate School of Pharm. Sciences)

Serofendic acids (1), isolated from fetal calf serum, exhibit potent neuroprotective

activity. Total syntheses of optically active serofendic acids have been accomplished *via* palladium catalyzed cycloalkenylation reaction and tin-free homoallyl-homoallyl radical rearrangement as key steps.¹

Evaluation of synthetic compounds possessing a variety of bridged skeletons for lactate dehydrogenase induced by NMDA led us finding a new seed compound, methyl 7 β -hydroxykaurenoate (2). It is noteworthy that the optically active compound 2 showed about twice activity of the corresponding racemate.²





Details of syntheses of these diterpenes are going to be discussed.

References

(1) Toyota, M.; Asano, T.; Ihara, M. Org. Lett. 2005, 7, 3929–3932.

(2) Toyota, M.; Matsuura, K.; Yokota, M.; Kimura, M.; Yonaga, M.; Sugimoto, H.; Ihara, M. Chem. Pharm. Bull. 2004, 52, 1153–1154.