STEREOSELECTIVE TOTAL SYNTHESIS OF ASPERGILLIDE A

Jeferson B. Mateus-Ruiz, Alejandro Cordero-Vargas

Universidad Nacional Autónoma de México

A stereoselective total synthesis of aspergillide A, a cytotoxic 14-membered macrolide, was achieved. The *cis*-2,6-disubstituted tetrahydropyran ring was constructed via stereoselective reduction of an intermediate cyclic hemiacetal from a substituted lactone, which in turn was assembled in a single operation using our previously developed radical-ionic iodolactonization as the key step. The *E* olefin was created by means of a cross metathesis (CM). Finally, the macrocyclic lactone was constructed by a Yamaguchi lactonization.