

Abstract

This bachelor work aims to synthesize the natural product selaginpulvilin X using a six-step synthetic route. Subsequently, the spectra of the synthesized compound were compared with the spectra of the previously isolated compound from the genus *Selaginella* to verify the proposed structure of selaginpulvilin X. The total synthesis of natural product deploys Suzuki and Sonogashira coupling, generation, and addition of an organolithium compound to aldehyde, consecutive oxidation, and final deprotection. Various protective groups are also used in the preparation of selaginpulvilin X derivatives.

Keywords: Natural product, total synthesis, genus *Selaginella*, *Selaginellaceae* polyphenols, selaginpulvilin X, Suzuki-Miyaura coupling, Sonogashira coupling