A Novel Total Synthesis of Antibiotic Carbazole Alkaloid Carbazomycin G

Hitomi Hagiwara, Tominari Choshi, Hiroyuki Fujimoto, Eiichi Sugino, and Satoshi Hibino

ABSTRACT: A total synthesis of carbazomycin G, isolated from *Streptovorticillium ehimense*, has been newly completed in seven steps. The 1,3-dioxygenated carbazole as a synthetic precursor was synthesized by the allene-mediated electrocyclic reaction of a 6π electron system generating from the 2-propargylindole derivative. The oxidation of the 4-hydroxycarbazole, followed by the addition of methyl lithium to the carbazole-1,4-quinone provided carbazomycin G.