

In this work a new route for an enantioselective synthesis of 6–6–6 condensed ring system from a bicyclic unsaturated aldehyde is described. This novel synthesis consisted in allylation of a α,β -unsaturated bicyclic aldehyde followed by the oxy-Cope rearrangement, which afforded a crucial intermediate. Further transformation and Grubbs II catalyzed metathesis provided the 6-6-6 condensed ring scaffold with the angular formyl group.

The enantioselective synthesis was based on Ti(IV)/BINOL mediated allylation of the α,β -unsaturated bicyclic aldehyde, which provided the product with the highest enantiomeric excess of 95%. The following oxy-Cope rearrangement showed a partial loss of the optical purity (down to 20%).