The Enantioselective Esterfication Aryl Propargillic alcohols with Lipase (Novo-435)

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Because acetylene functional group could be converted to various functional groups, the chiral propargyllic alcohols could be one of the most important chiral syntons for the synthesis of natural products and biologically active compounds.[1] If the chiral propargyllic alcohols were obtained easily through the resolution or asymmetric synthesis, they could be used widely for the application in academic and industrial fields.

Novo-435, which is a lipase B of *Candida antarctica*, is known to have a excellent capability for the extremly enantioselective acylation with a number of chiral alcohols.[2] Using Novo-435, enantioselective acylation of alkyl (*R*)-lactates[3] and α -keto alcohols[4] from racemic mixtures, had been accomplished, and alcoholyses of lactide with various alcohols[5] had been also developed in this laboratory.

Based on these idea, the optimum resolving process of *rac*-aryl propargylic alcohol will be developed by enantioselective acylation with Novo-435, though their resolution methods are already reported.[6,7] By changing the reaction conditions such as solvents, temperature, acyl donner and substrate concentration, ideal reaction condition will be discussed, and the application of aryl propargylic alcohol will be shown.

Reference

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