

Acylation of Tropane Alkaloids Displaying Reversed Diastereoselectivities under Enzymatic *versus* Chemical Conditions

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Dedicated to Professor Dieter H. Wolf on the occasion of his 65th birthday

Lipase-mediated monoacetylation of 6,7-dihydroxytropinones **4** gave acetates **5**, *ent*-**5** which were analyzed as Mosher esters **9a**, **b** by ¹H NMR spectroscopy. However, the hydroxy groups in **4** were not differentiated by lipases. Reduction of the keto function and subsequent silylation afforded a mixture of *endo/exo*-TBS ethers **11**, which were dihydroxylated to give the corresponding diols *endo/exo*-**12**. In chemical acetylation a change of the *endo/exo* ratio in favor of the *endo*-derivative *endo*-**13** was observed, whereas the formation of the *exo*-acetate *exo*-**13** dominated in lipase-catalyzed acylation reactions. A mechanistic proposal is given.

Key words: Desymmetrization, 3,4-Dihydroxytropinone Derivatives, Lipases, Monoacetylation, Mosher Esters