O11: Asymmetric synthesis of 1-substituted tetra-hydroisoquinolines alkaloids

F. Louafi,[a] J.-P. Hurvois,[b] A.Chibani,[a]

[1] Département de Chimie, Université Mentouri de Constantine, Route Ain El Bey, Constantine 25000
[2] Sciences Chimiques de Rennes, Université de Rennes 1, Campus de Beaulieu, 35042 Rennes Cedex, France
Flouafi_dz@yahoo.fr

Abstract:

Due to widespread occurrence in nature and marked physiological action, 1-substituted tetrahydroisoquinoline alkaloids have long offered intensive targets for synthesis.[1] in this regard, the enantioselective construction of 1-substituted tetrahydroisoquinoline has attracted growing attention in the last decade.[2] We describe here in this communication a novel asymmetric approach to the synthesis of 1- substituted tetrahydroisoquinoline by deprotonation of an □-amino nitrile and alkylation of the resulting carbanion followed by asymmetric reduction[3,4] (Figure1).

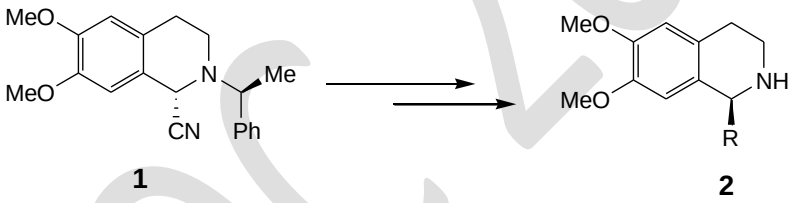

Figure 1: Synthesis of natural ~alkyl tetrahydroisoquinoline

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