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## Synthesis of aminocyclopetitol analogues via CSI-mediated stereoselective amination

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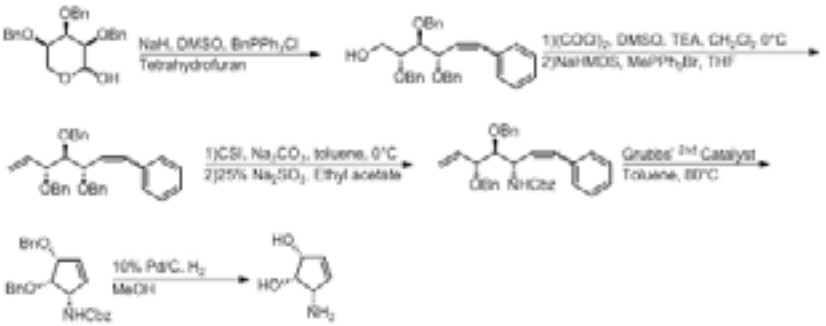
Recent years have witnessed a great deal of attention in the preparation and biological evaluation of carbocyclic amino alcohols, which either exist in nature or constitute crucial core structures of several natural products. This class of molecules involves two typical substructures such as aminocyclopentitol and aminocyclohexitol. Among the well-known examples of aminocyclopentitol are mannostatin A and trehazolin. Aminocyclopentitol scaffold has been also found in a range of carbocyclic nucleosides such as neplanocin A and its unsaturated analogue (–)-aristeromycin. Due to the absence of a true glycosidic bond, carbocyclic nucleosides are more chemically stable and not involved in the action of the enzymes that cleave the N-glycosidic linkage in conventional nucleosides. Thus carbocyclic amino alcohol moiety has been the focus of much attention in the development of new therapeutic agents. In this presentation, we describe a divergent synthesis of some novel aminocyclopentitol analogues was concisely achieved from readily available sugar via the highly diastereoselective amination of carbocyclic polybenzyl ether using chlorosulfonyl isocyanate, diastereoselective dihydroxylation, and epoxidation as the key steps.

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