

Massachusetts Institute of Technology
Organic Chemistry 5.512

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Unit 7

Stereocontrolled Reduction of Ketones

- ★ Substrate Control: 1,2-Asymmetric Induction
- ★ Substrate Control: 1,3-Asymmetric Induction
- ★ Reagent Control Strategies
- ★ Retrosynthetic Analysis: Chiral Secondary Alcohols

(2) Noyori Asymmetric Hydrogenation

Case Study: Synthesis of C-D Spiroketal Unit of Spongistatin 1

Holson, E. B.; Roush, W. R. *Org. Lett.* **2002**, 4, 3719



Ryoji Noyori

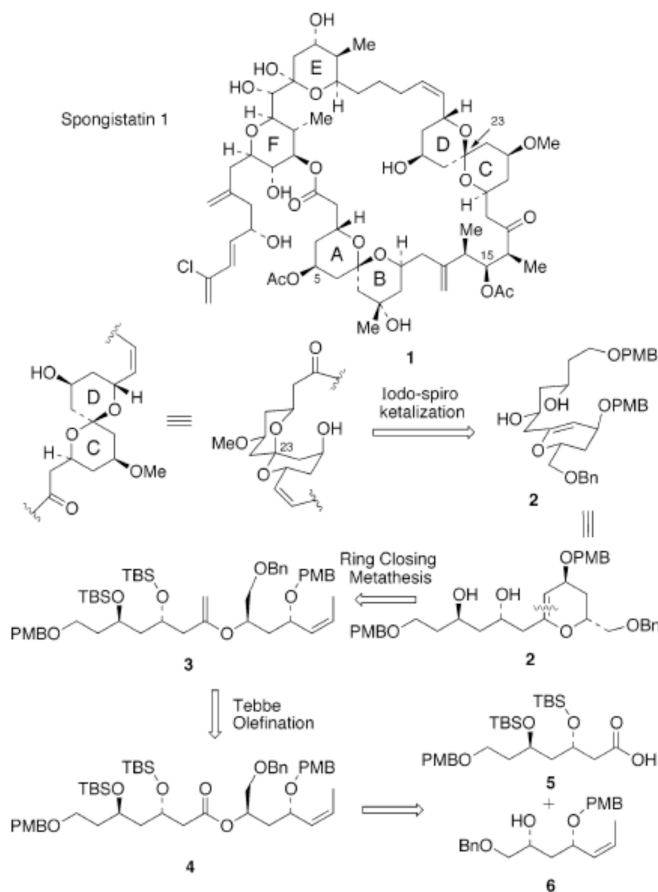


Figure 1. Retrosynthetic Analysis of the C-D Spiroketal.