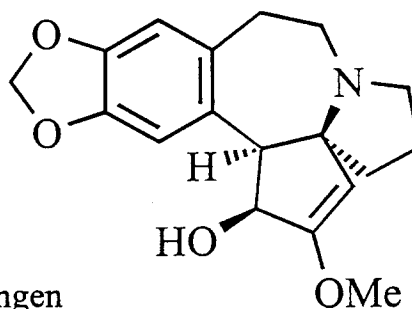


Ischia Advanced School of Organic Chemistry
1998

Palladium in the Stereoselective Synthesis of
Natural Products

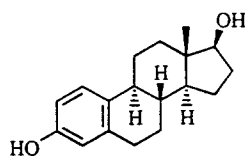
Lutz F. Tietze
Georg-August Universität Göttingen



Reviews:

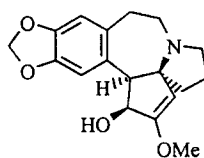
1. L.F. Tietze, U. Beifuß, *Angew. Chem.* **1993**, *105*, 137; *Angew. Chem. Int. Ed. Engl.* **1993**, *32*, 131
2. L. F. Tietze, *Chem. Rev.* **1996**, *96*, 115
3. L. F. Tietze, *Nachr. Chem. Tech. Lab.* **1997**, *45*, 1181

Targets for Efficient Syntheses by Metal Mediated Cyclisations



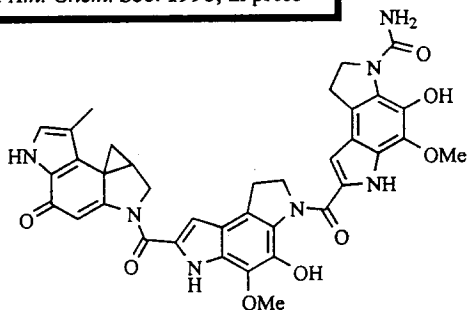
Estradiol

L. F. Tietze, T. Nöbel, M. Spescha
J. Am. Chem. Soc. **1998**, in press



Cephalotaxine

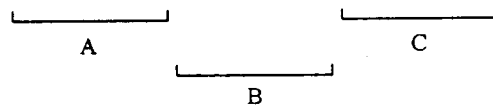
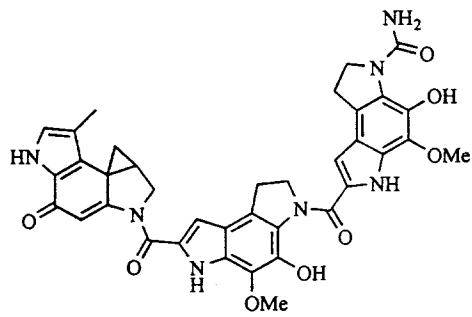
L. F. Tietze, H. Schirok,
Angew. Chem. Int. Ed. Engl.
1997, *36*, 1124



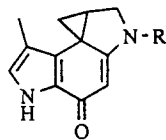
CC - 1065

L. F. Tietze, W. Buhr, J. Looft, T. Grote,
Chem. Eur. J. **1998**, *4*, 1554

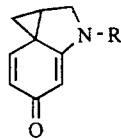
Novel Cytotoxic Agents



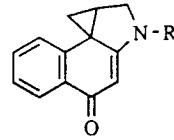
CC - 1065



CPI

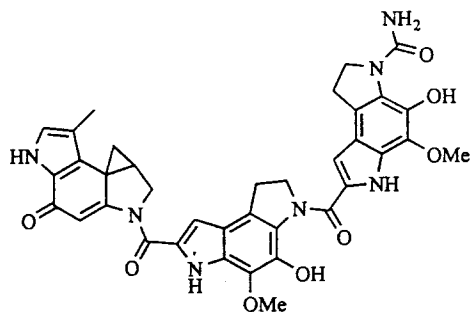


CI

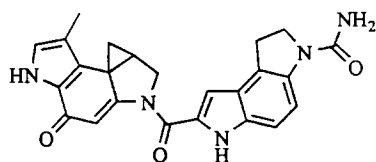


CBI

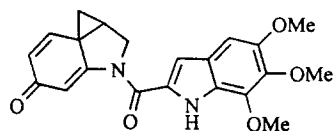
Cytotoxicity of CC-1065 Compounds



ED₅₀
 (+) CC-1065 0.03 nM
 (-) CC-1065 0.007 nM

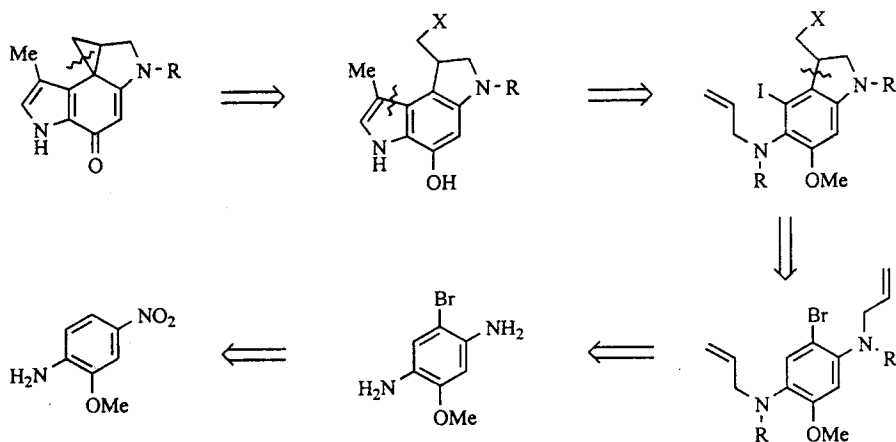


ED₅₀
 CPI-CDPI 0.04 nM

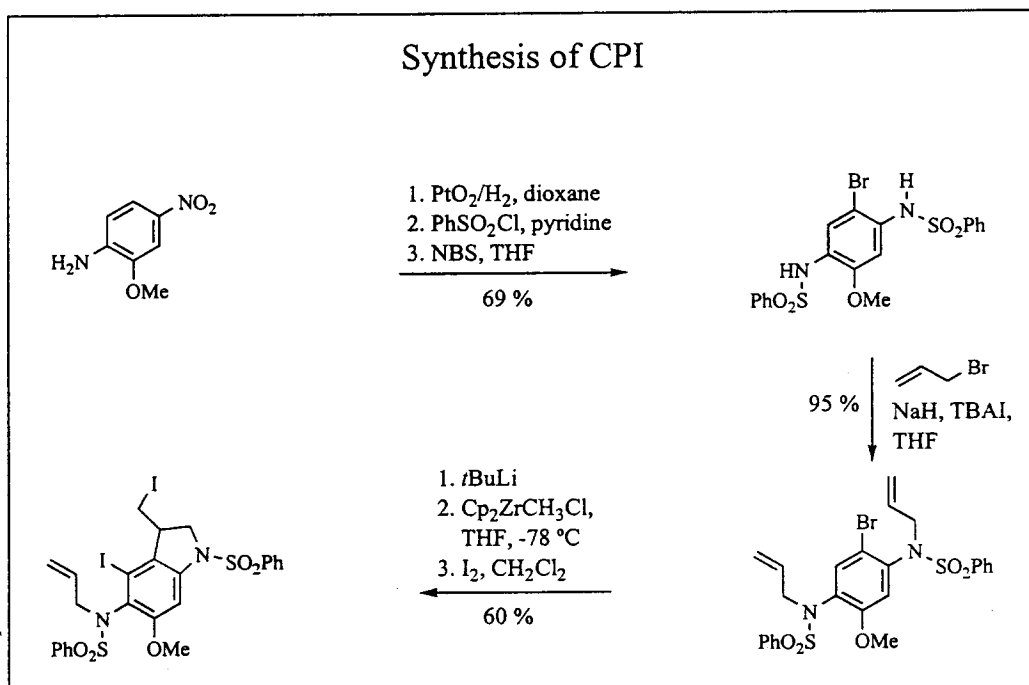


ED₅₀
 CI-TMI 2.6 nM

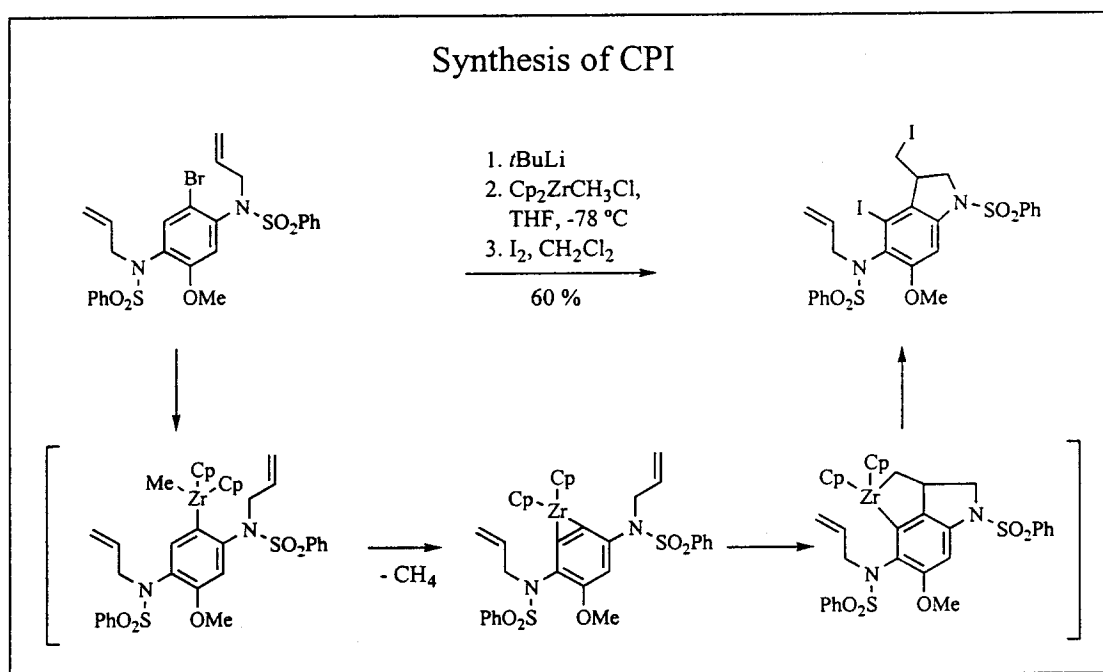
Retrosynthesis of CPI



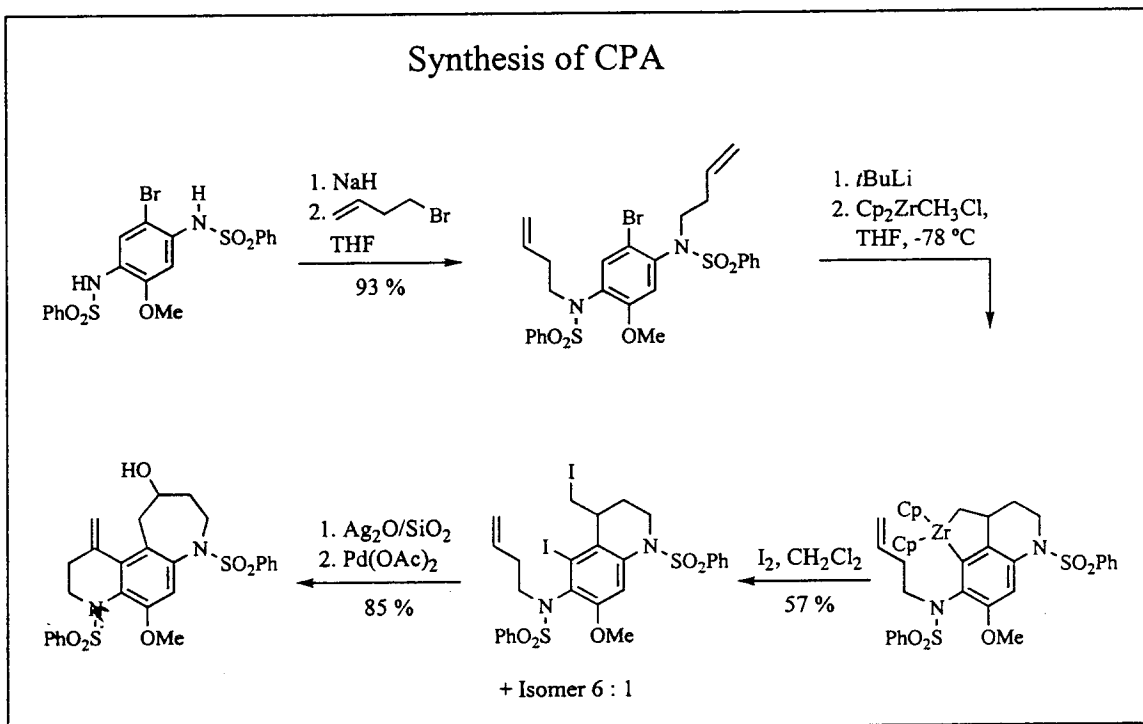
Synthesis of CPI



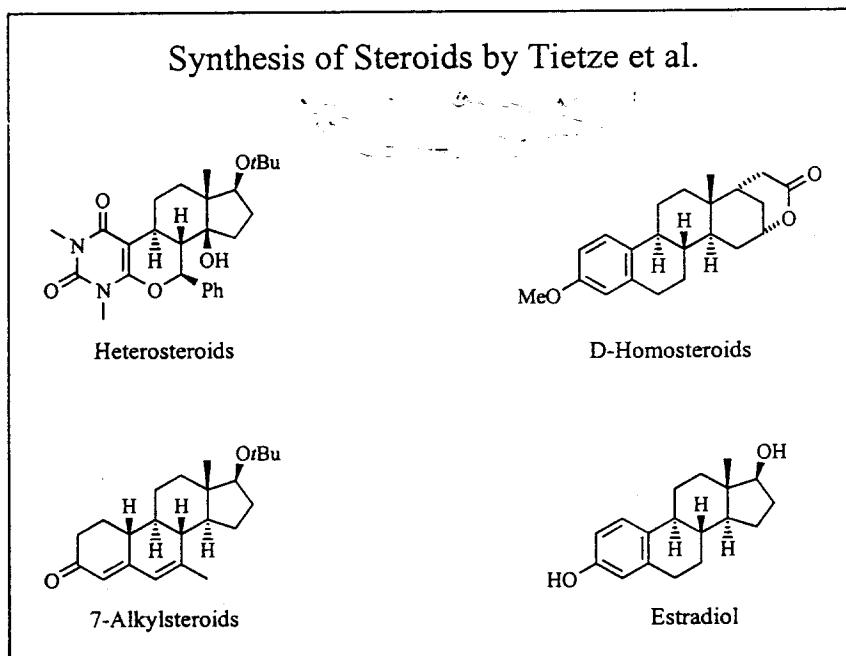
Synthesis of CPI

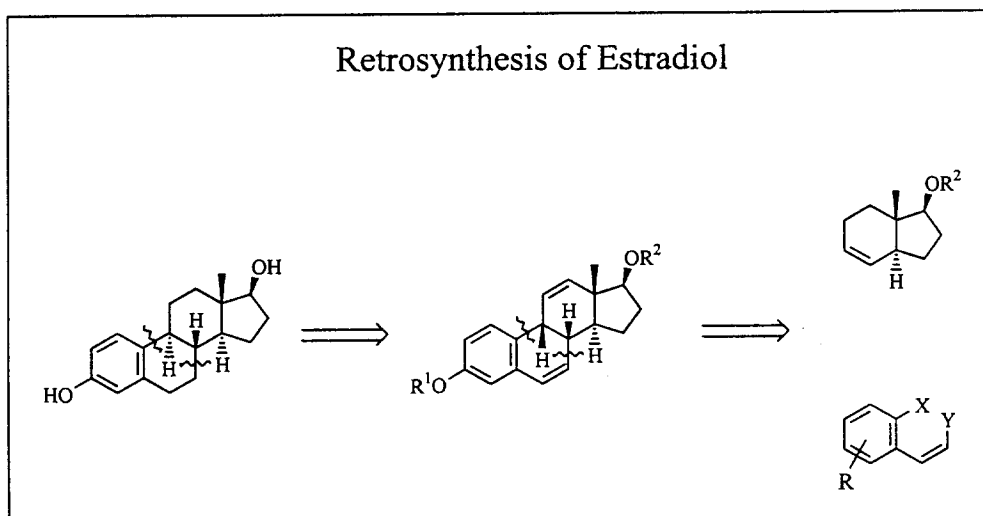


Synthesis of CPA

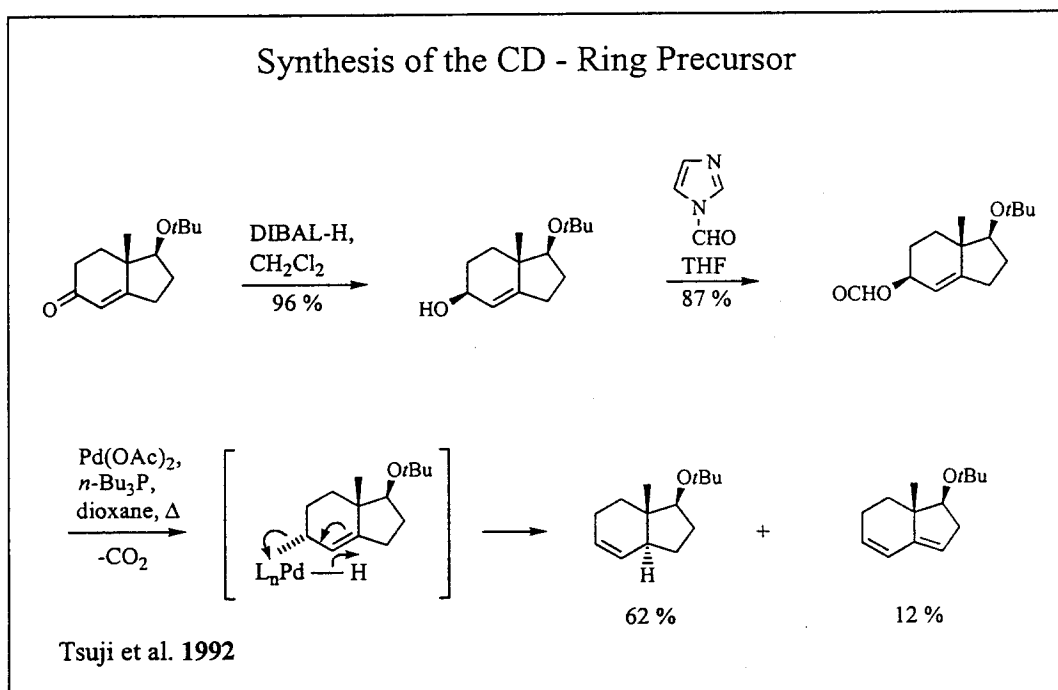


Synthesis of Steroids by Tietze et al.

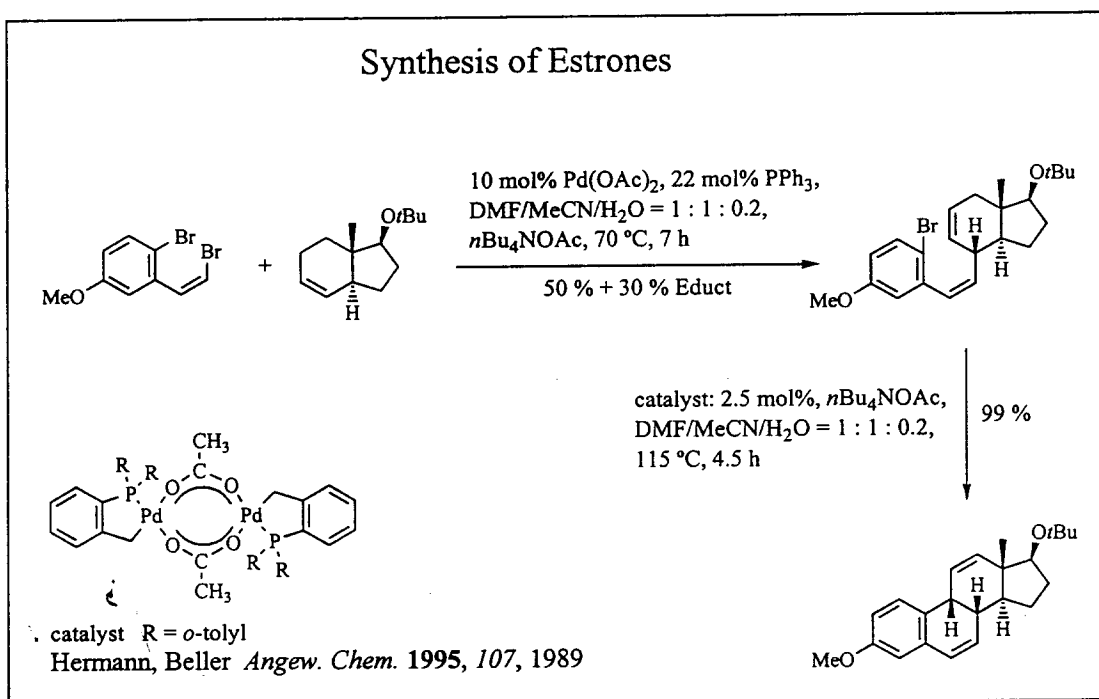




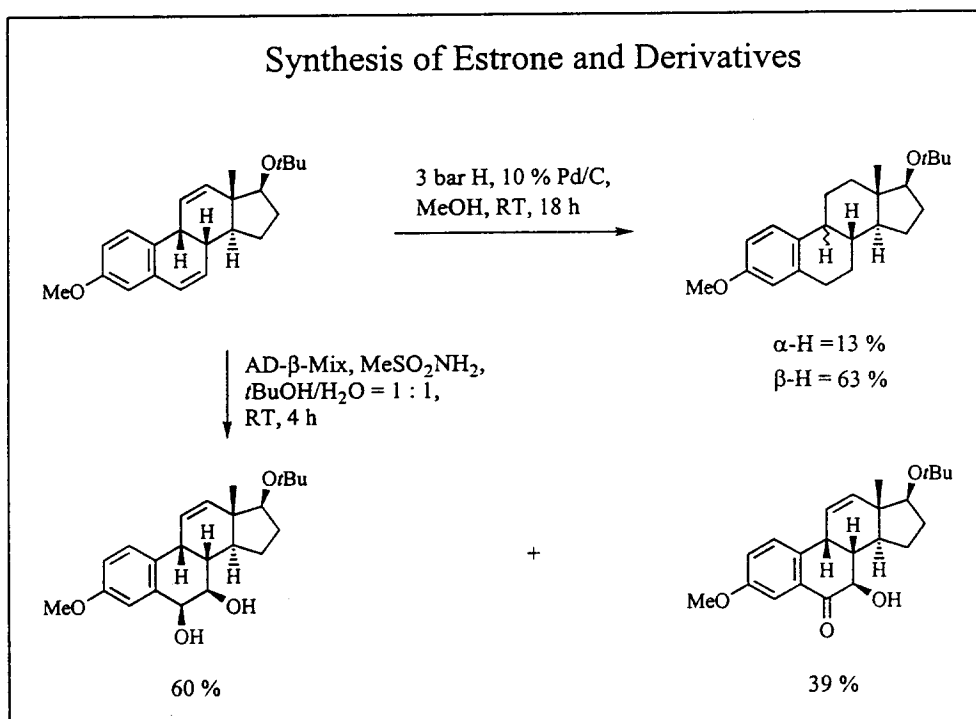
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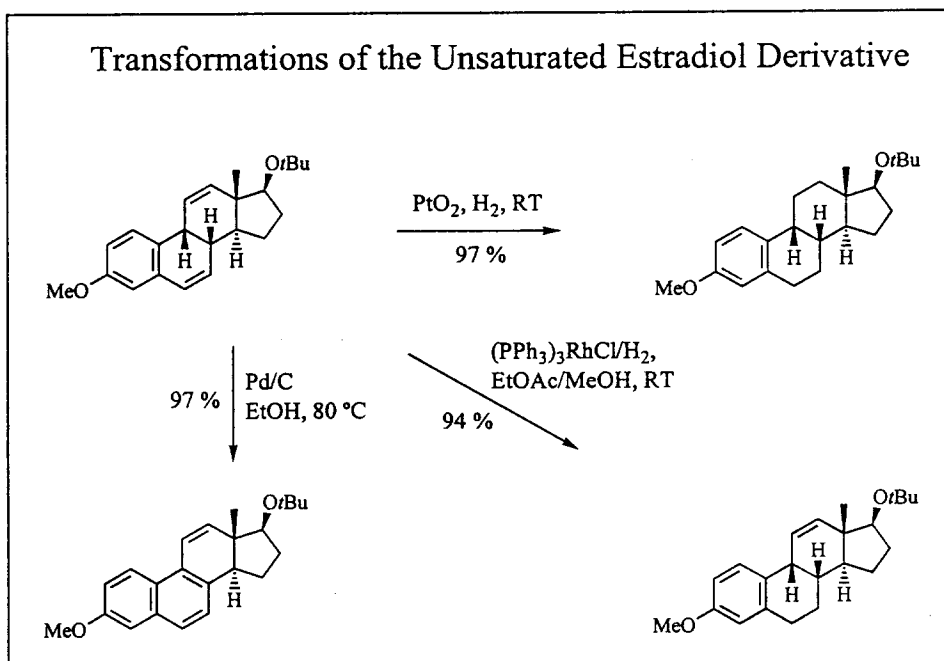
Synthesis of Estrones



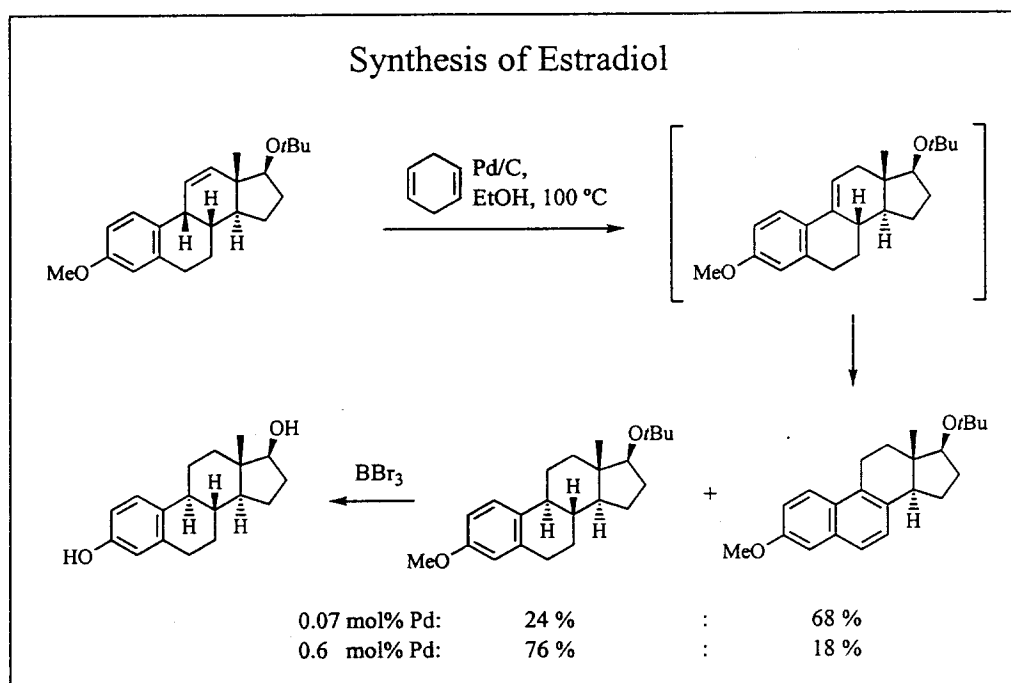
Synthesis of Estrone and Derivatives



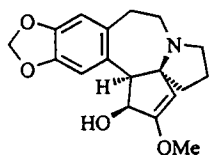
Transformations of the Unsaturated Estradiol Derivative



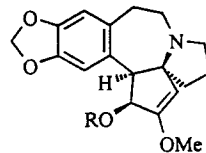
Synthesis of Estradiol



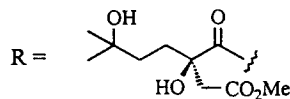
Harringtonines and Cephalotaxine



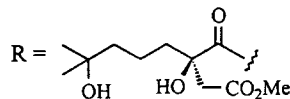
Cephalotaxine



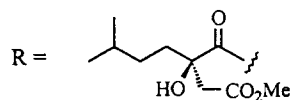
Harringtonine



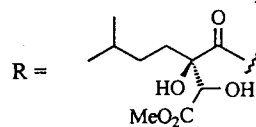
Homoharringtonine



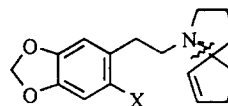
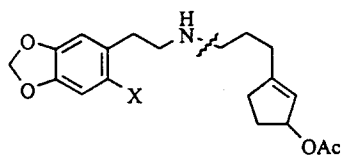
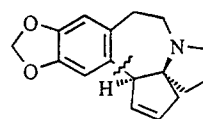
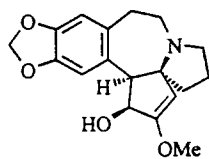
Deoxyharringtonine



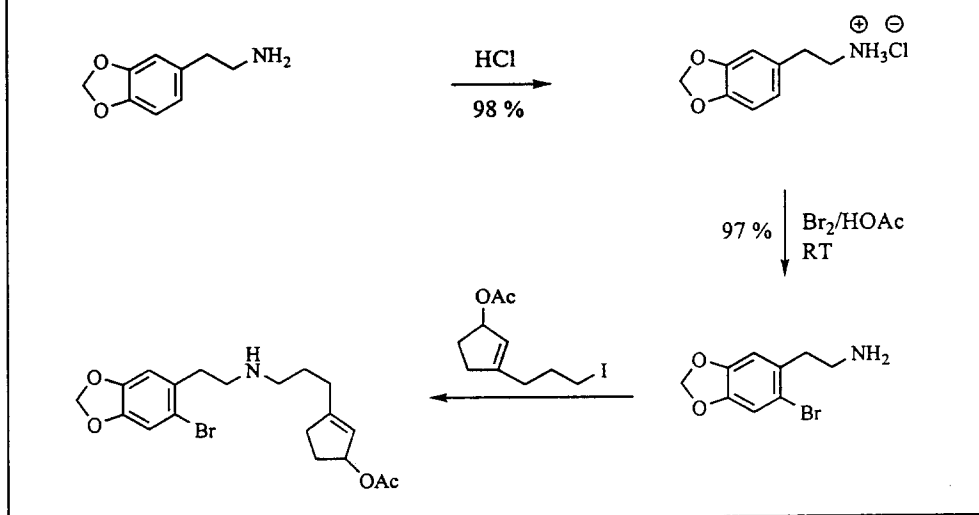
Isoharringtonine



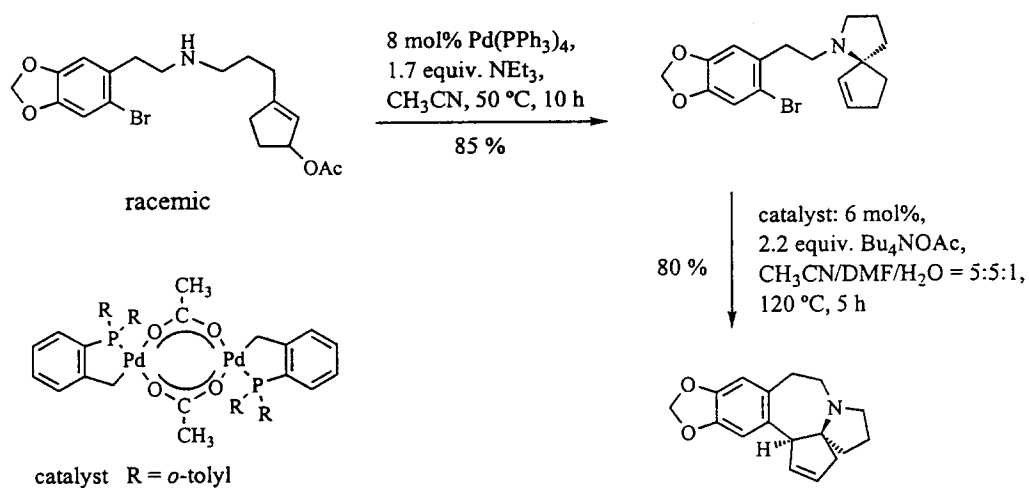
Retrosynthesis of Cephalotaxine



Synthesis of the Precursors for the Cyclisation to Cephalotaxine

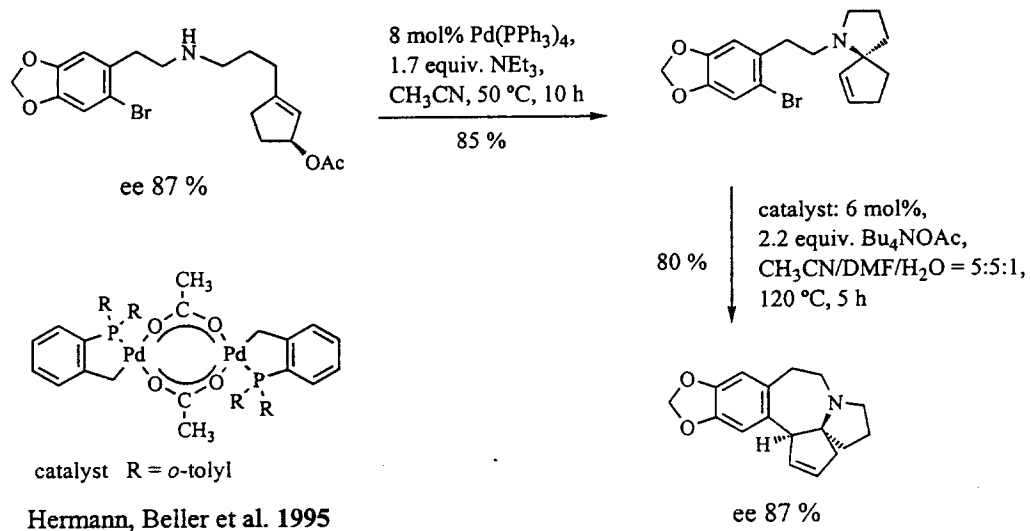


Synthesis of Cephalotaxine



Hermann, Beller et al. 1995

Synthesis of Cephalotaxine



Synthesis of Cephalotaxine

