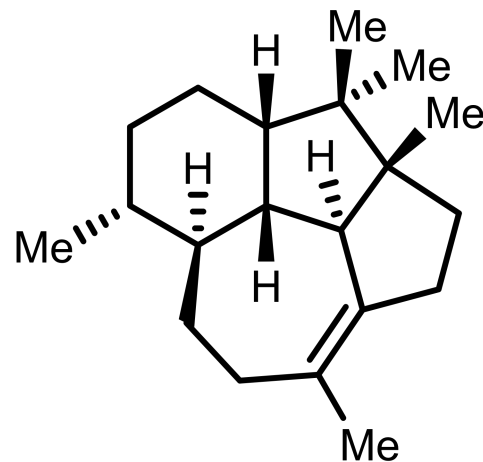


Asymmetric Total Synthesis of Venezuelaene A



Venezuelaene A

Wei Wang
2026.9.3

Introduction of Prof. Jing Xu



1996 – 2000 B.S., Nanchang University

2001 – 2004 M.S., Tongji University

2004 – 2005 Research Scientist, Synthetic Chemistry Department, WuXi AppTec Co., Ltd

2005 – 2009 Ph.D., Leipzig University

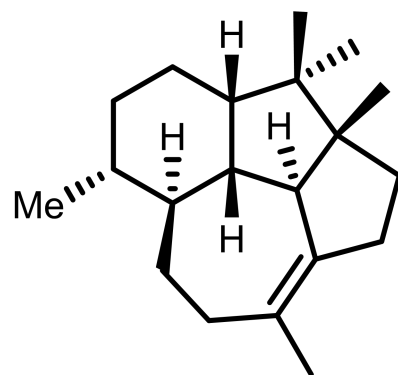
2009 – 2013 Postdoctoral Researcher, University of California, San Diego

2014 – 2015 Assistant Professor, Department of Chemistry, SUSTech

2015 – 2020 Associate Professor, Department of Chemistry, SUSTech

2020 – Present Tenured Professor, Department of Chemistry, SUSTech

Introduction of Venezuelaene A



Venezuelaene A

Isolation: from *Streptomyces venezuelaene* ATCC 15439 by Li and co-workers in 2020

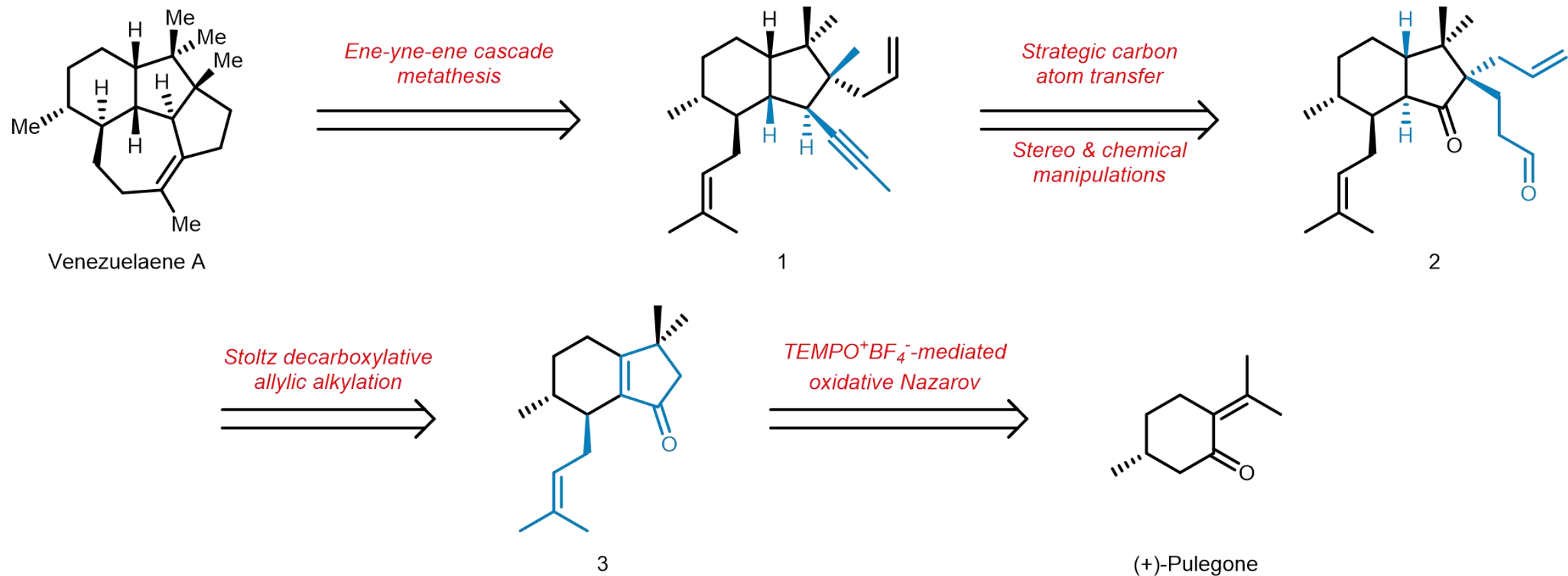
Structure:

[5-5-6-7] tetracyclic diterpenoid scaffold

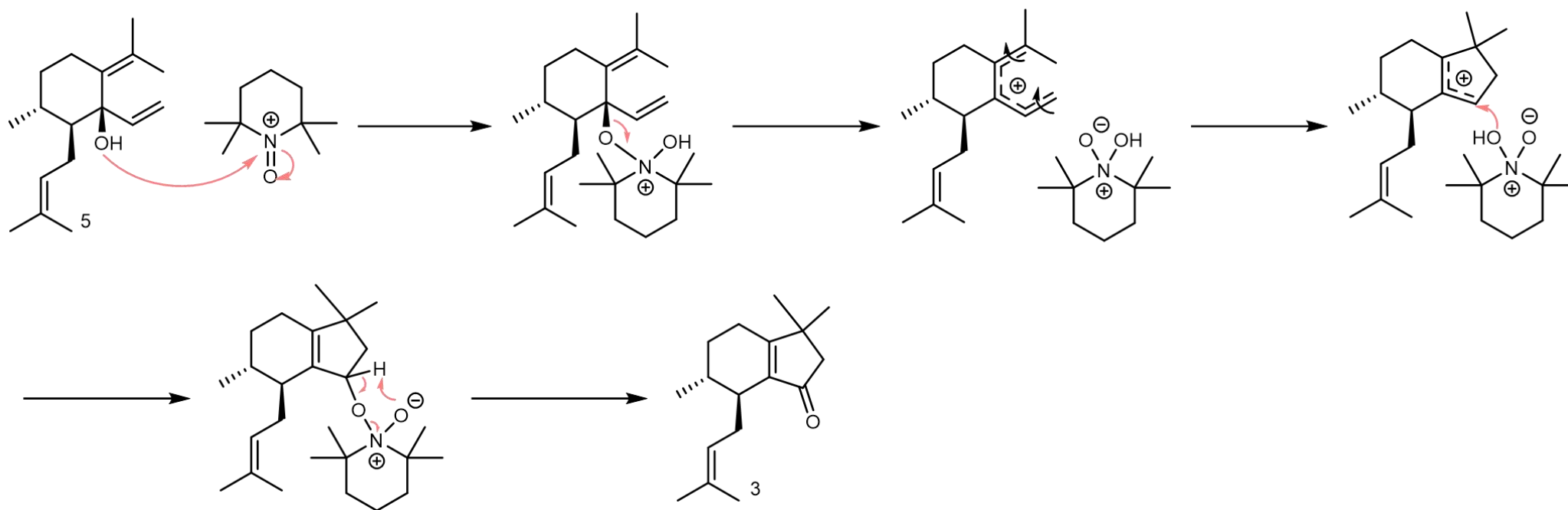
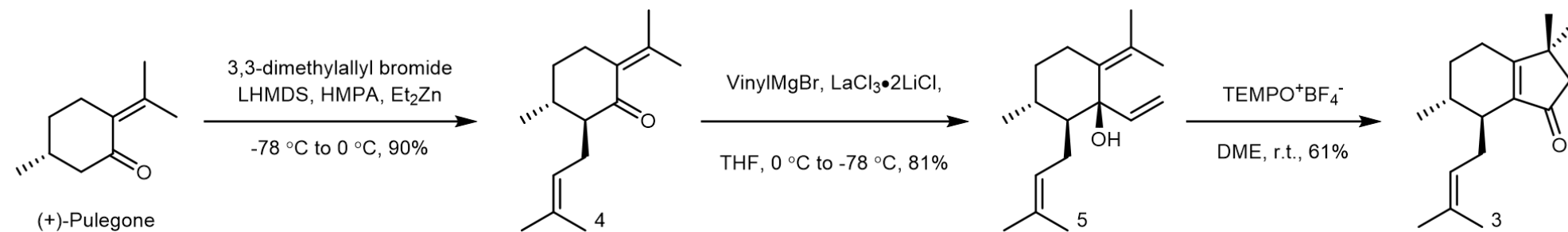
Highly strained trans-fused bicyclo[3.3.0]octane

6 contiguous stereogenic centers

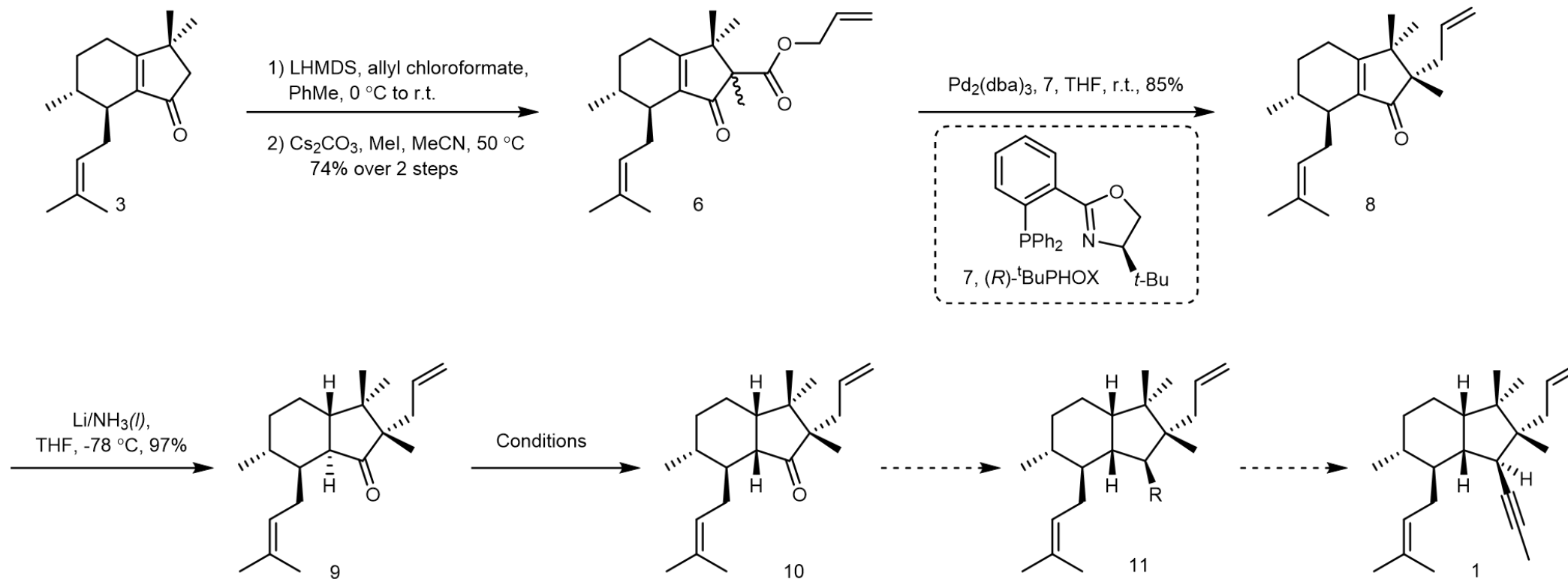
Retrosynthetic Analysis of Venezuelaene A



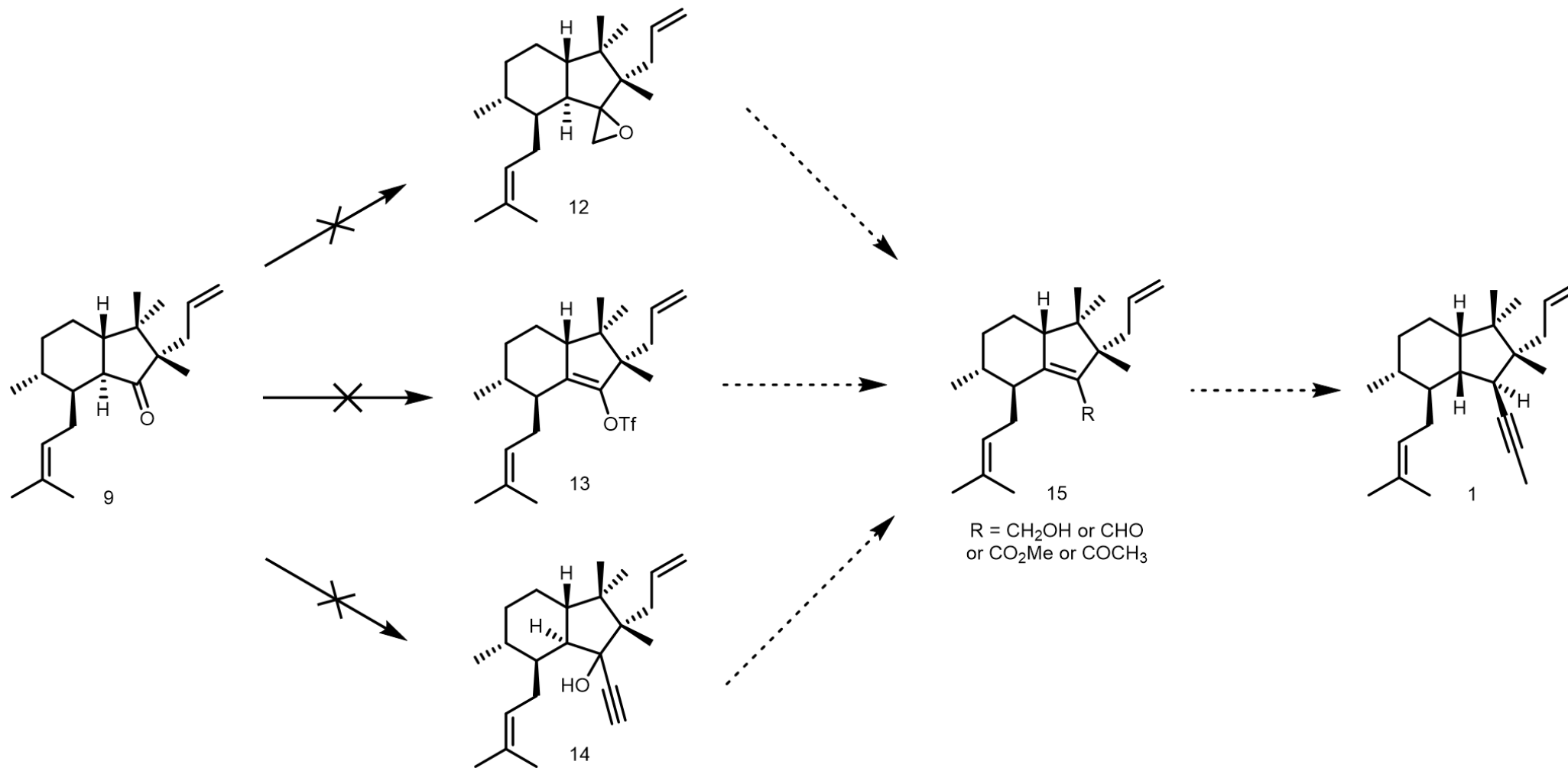
Construction of the Hydrindane Core



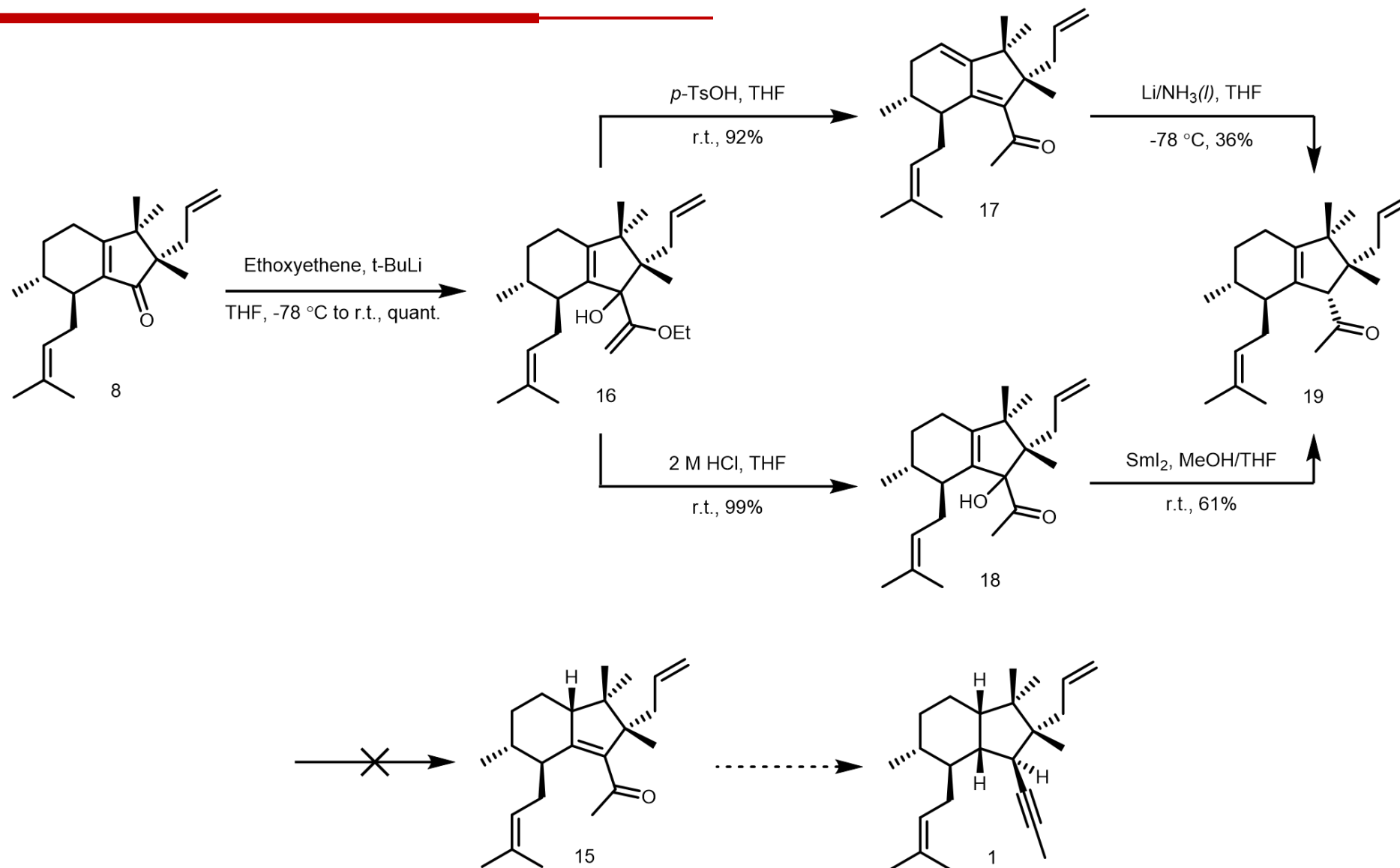
Attempted Synthesis of Compound 1



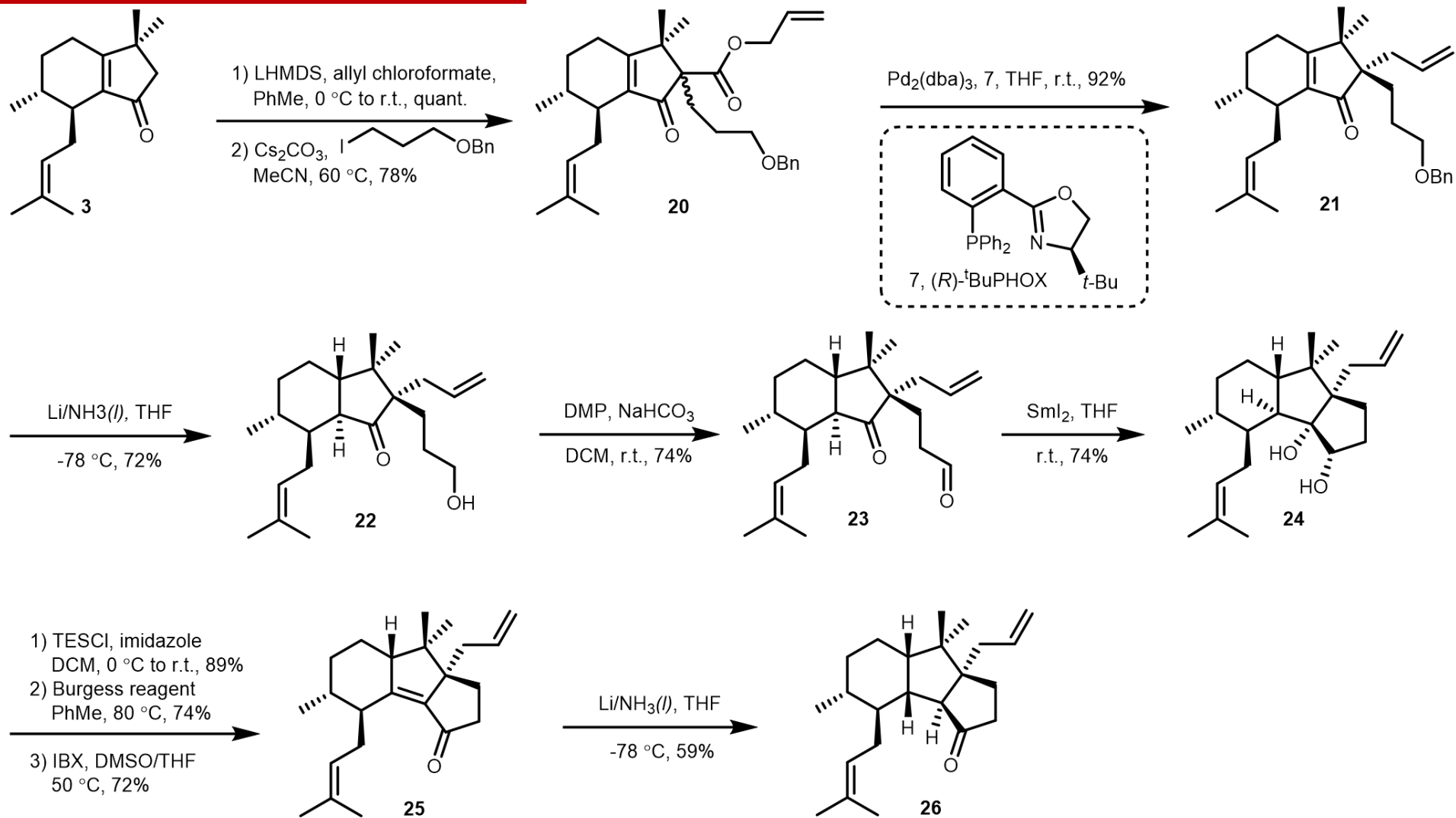
Attempted Synthesis of Compound 1



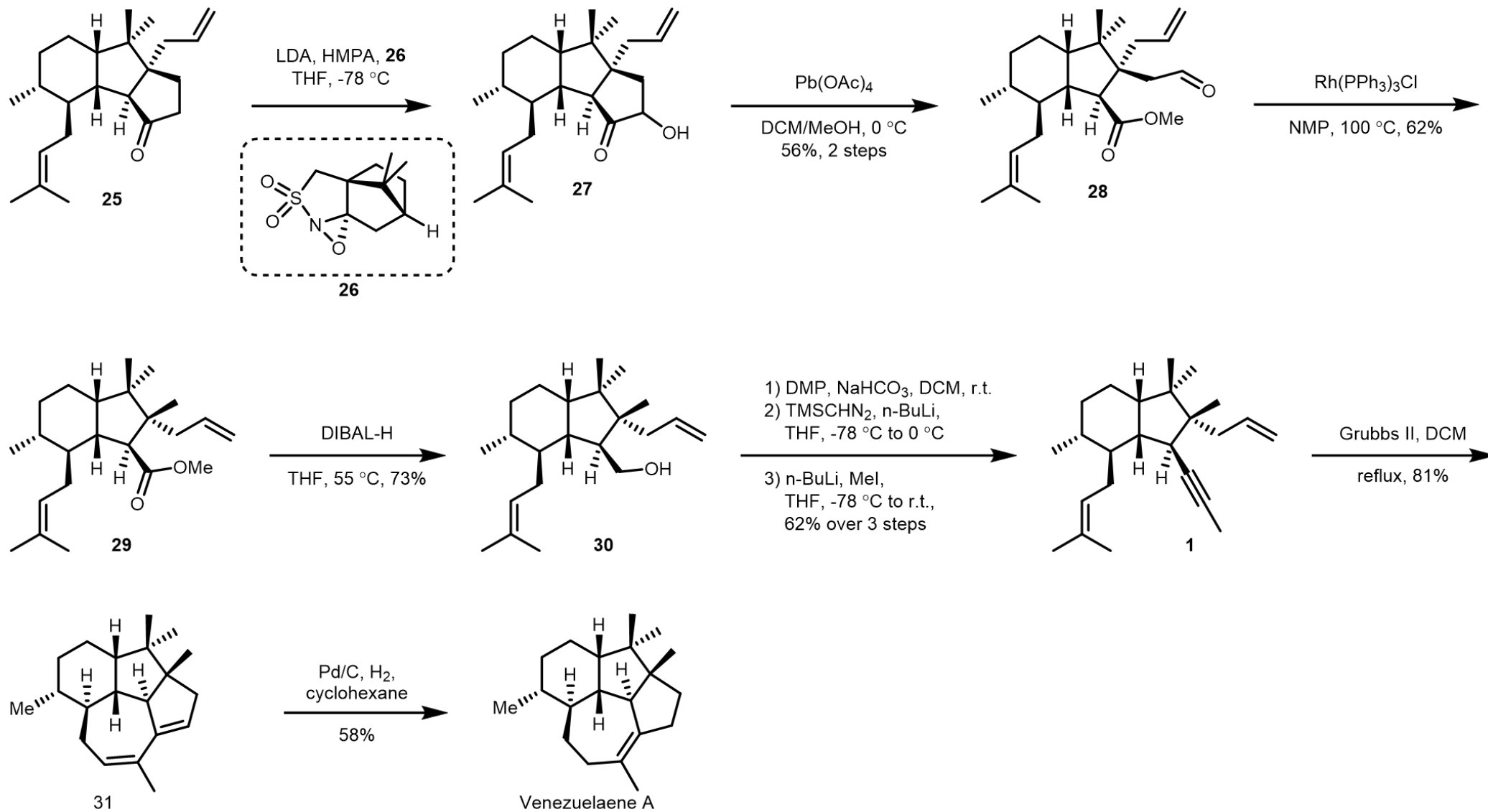
Attempted Synthesis of Compound 1



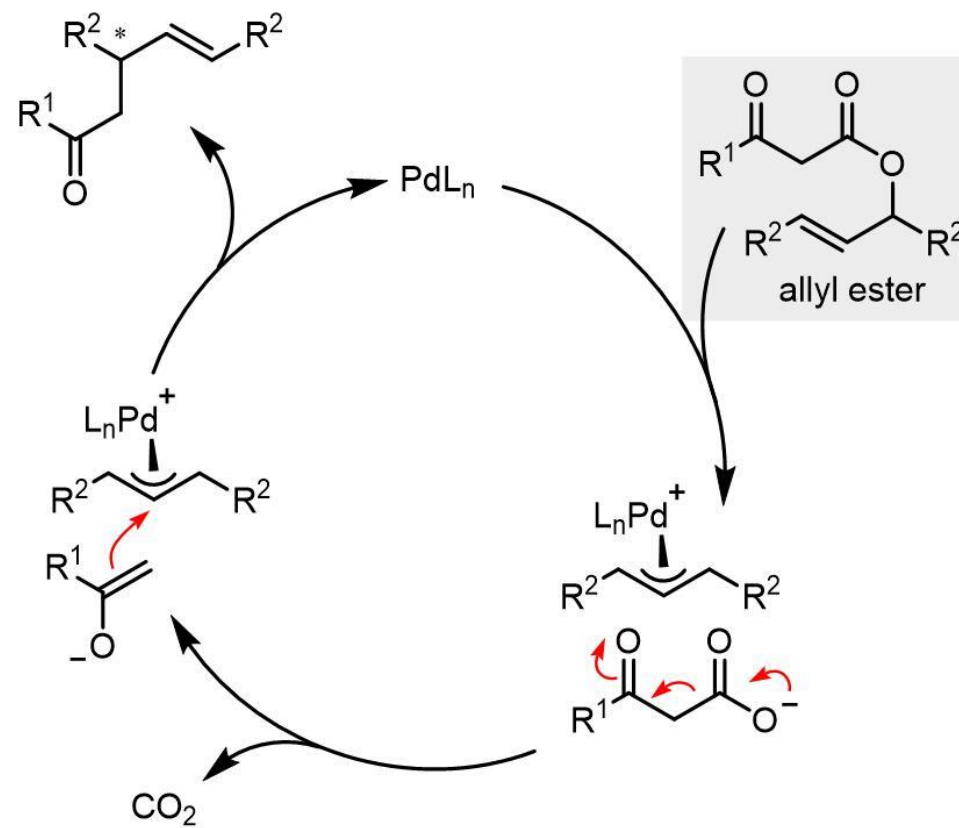
Total Synthesis of Venezuelaene A



Total Synthesis of Venezuelaene A

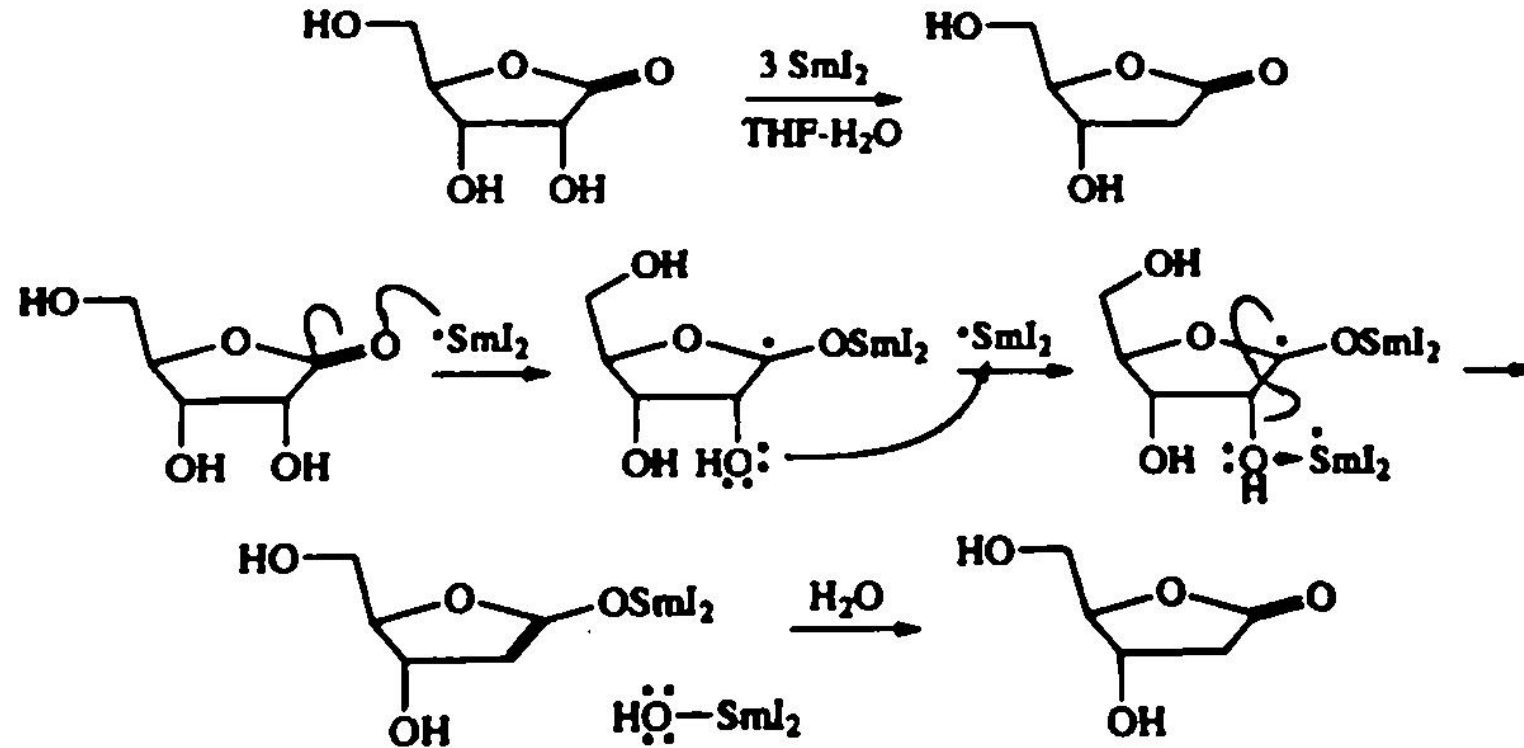


Tsuji-trost reaction

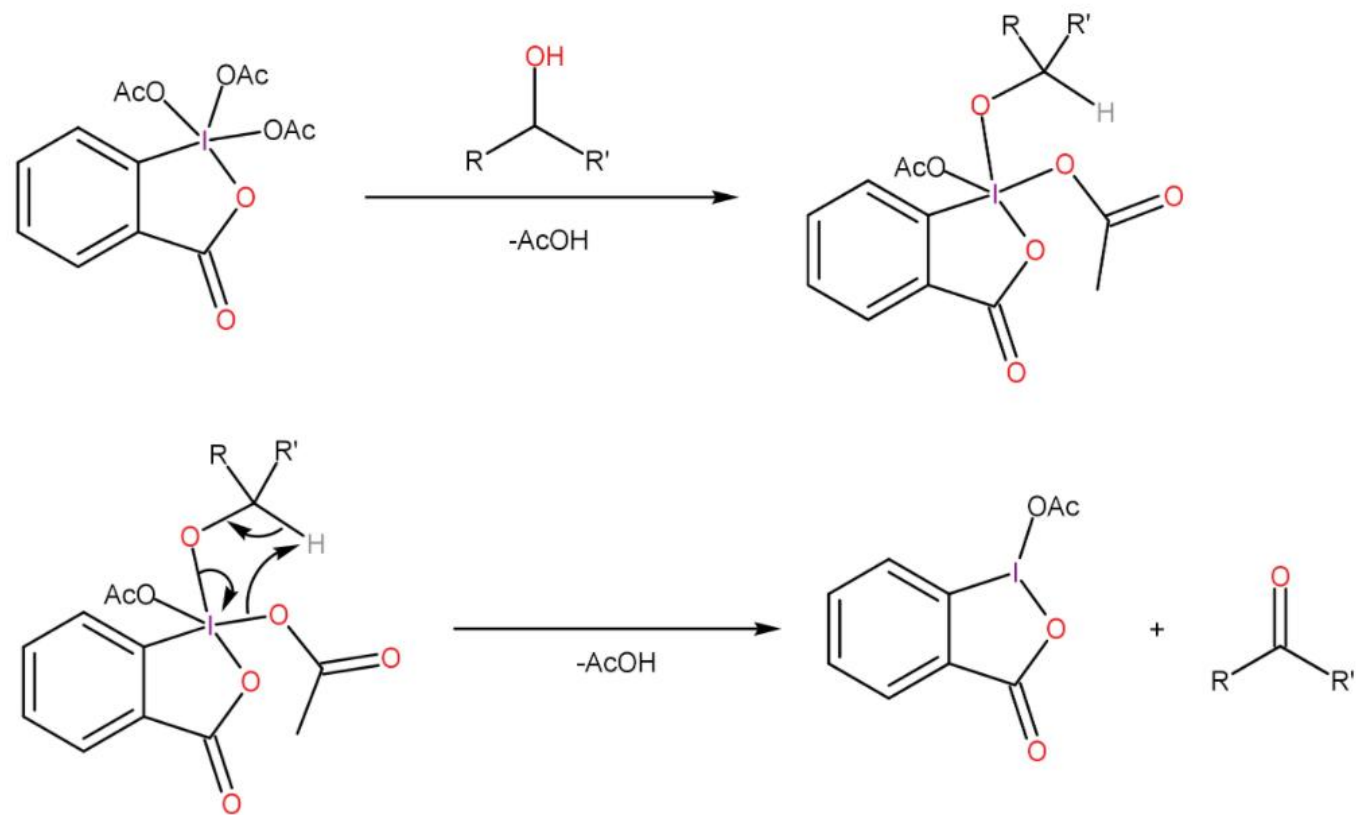


SmI₂ Reduction

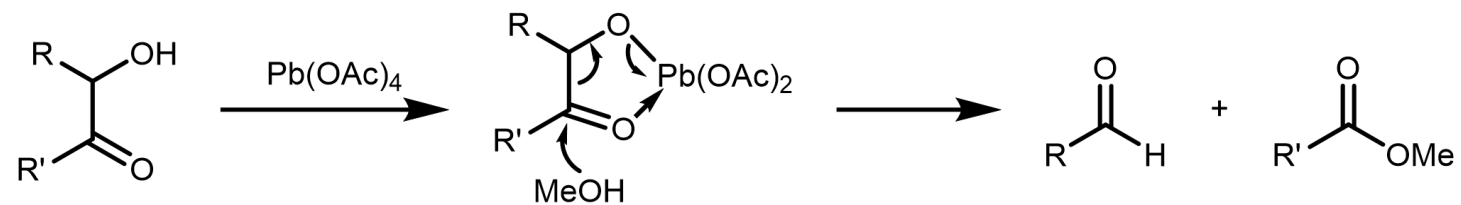
LAURENCE



Dess-Martin Oxidation



Criegee Oxidation



Tsuji-Wilkinson Decarbonylation

