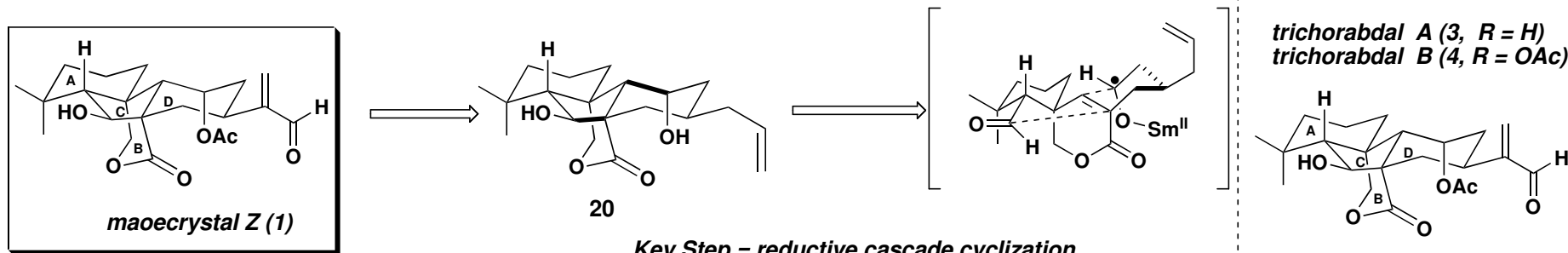
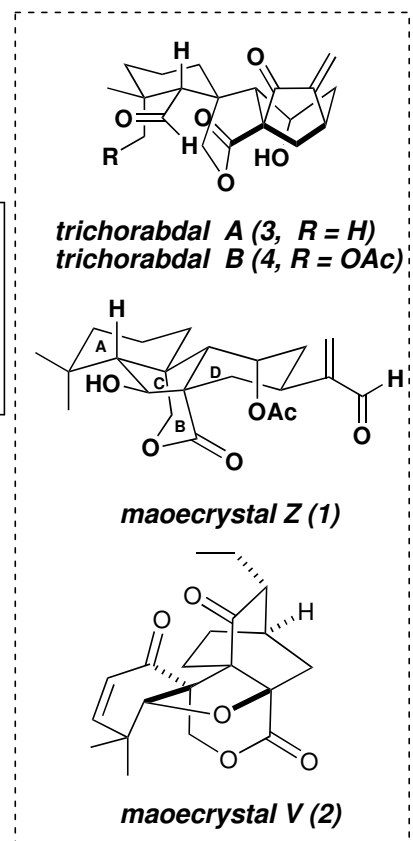
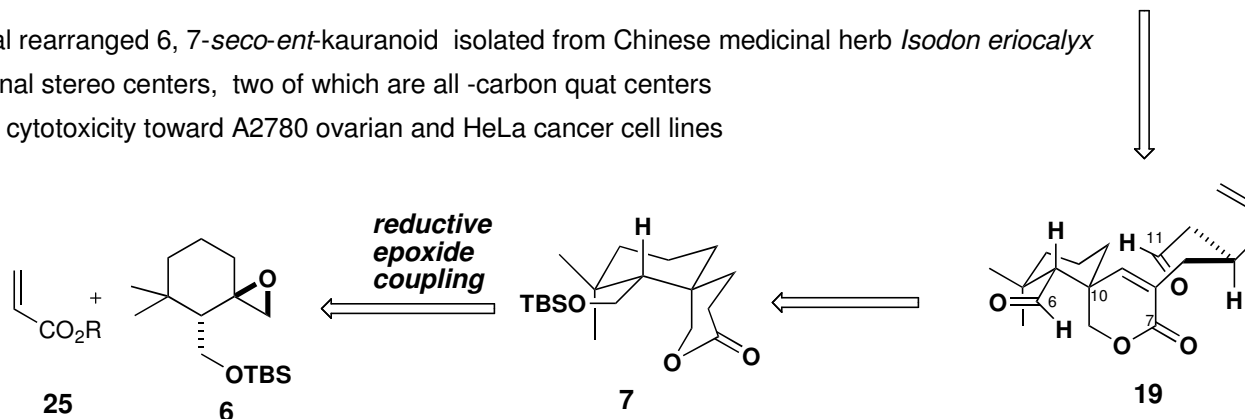


**Progress in Total Synthesis: A Concise Total Synthesis of (-)-Maoecrystal Z**  
 Jacob Y. Cha, John T. S. Yeoman, and Sarah E. Reisman *J. Am. Chem. Soc.* **2011**, *133*, 14964.

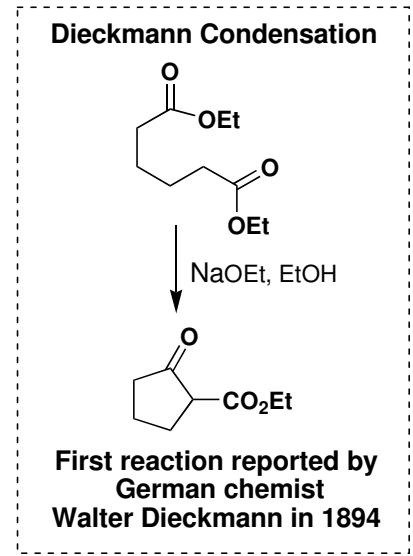
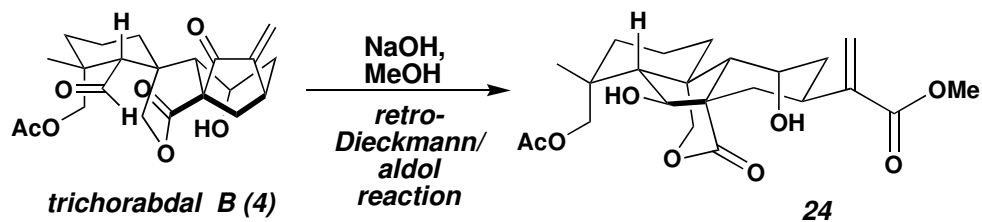
**Retrosynthetic Analysis:**



- unusual rearranged 6, 7-*seco-ent*-kauranoid isolated from Chinese medicinal herb *Isodon eriocalyx*
- six vicinal stereo centers, two of which are all -carbon quat centers
- in vitro cytotoxicity toward A2780 ovarian and HeLa cancer cell lines

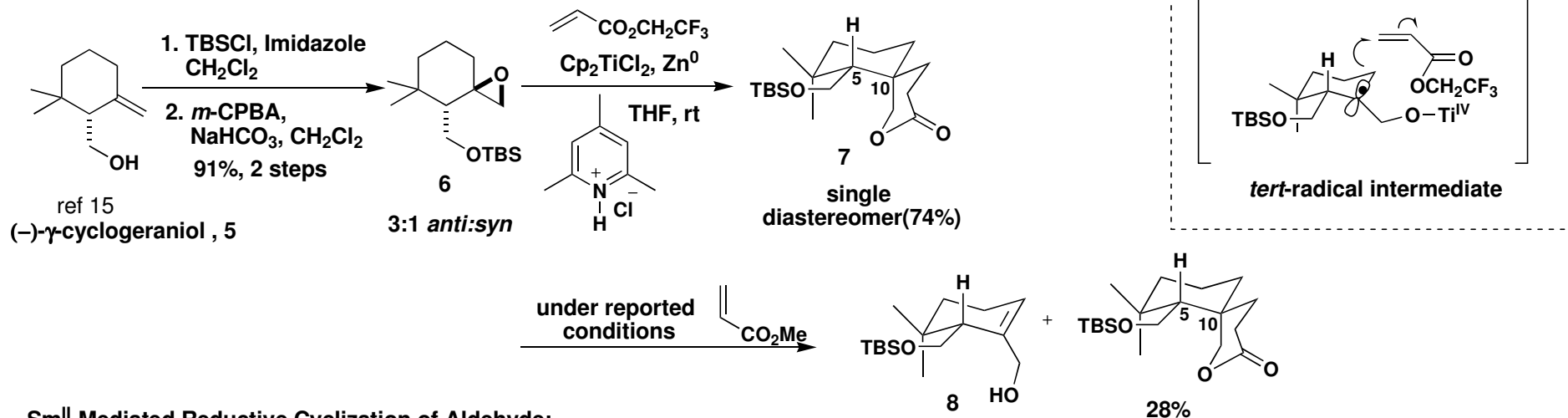


**Methoxide-Mediated Retro-Dieckmann/Aldol Reaction of Trichorabdal B**

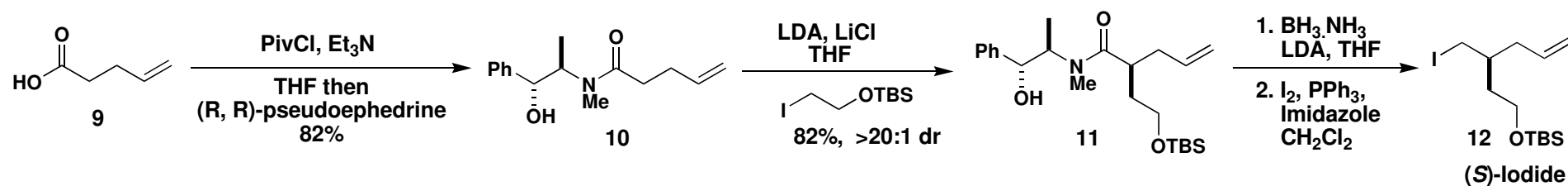


## Forward Synthesis:

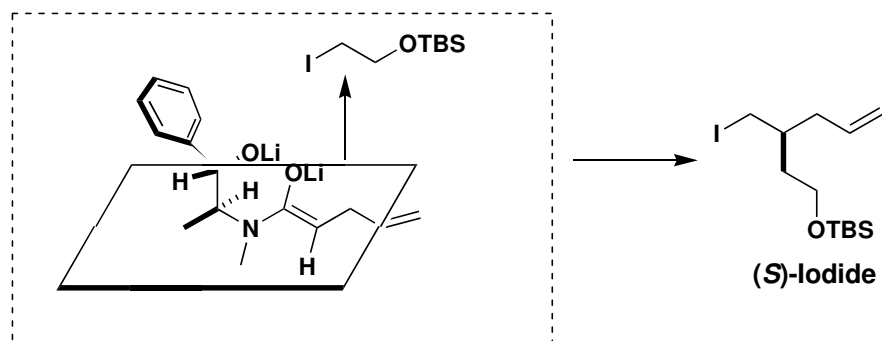
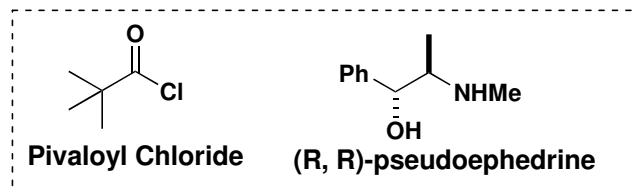
### Preparation of Spirolactone:



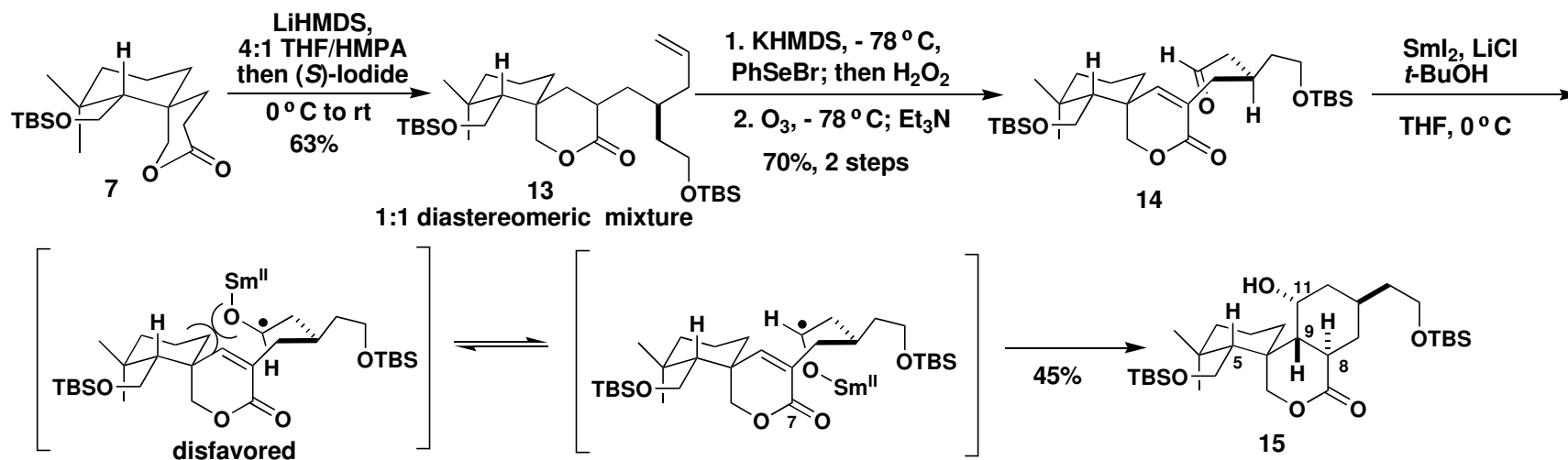
### Sm<sup>II</sup>-Mediated Reductive Cyclization of Aldehyde:



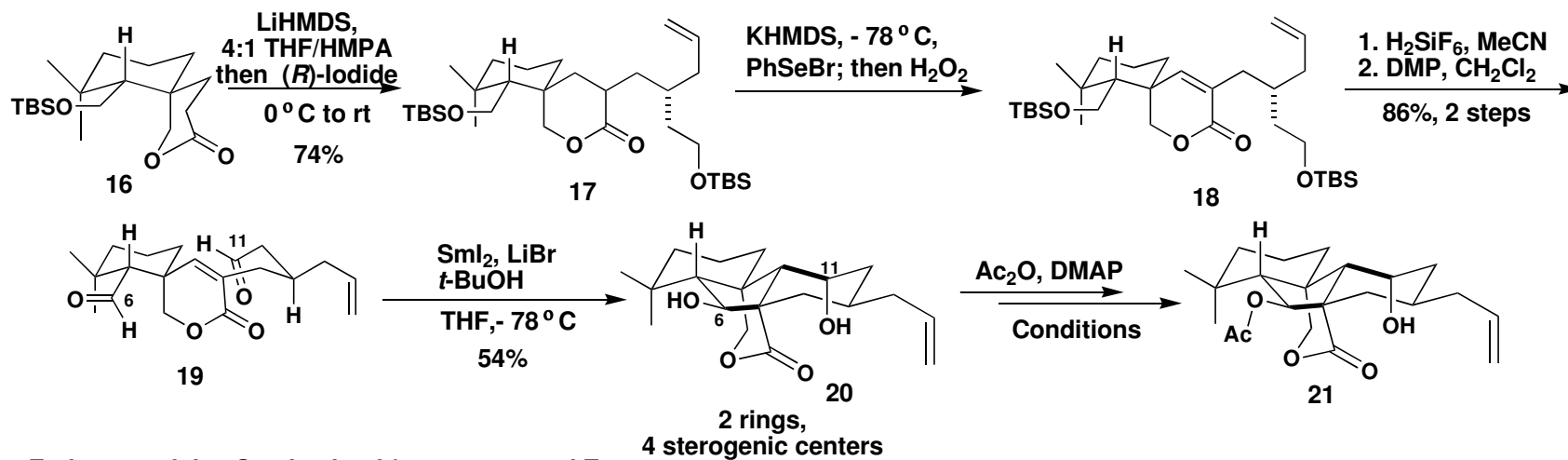
### Mnemonic for Myers Diastereoselective Alkylation



**Sm<sup>II</sup>-Mediated Reductive Cyclization of Aldehyde(ABD tricycle):**



**Reductive Cascade Cyclization of Dialdehyde:**



**End game of the Synthesis of (-)-maoecrystal Z:**

