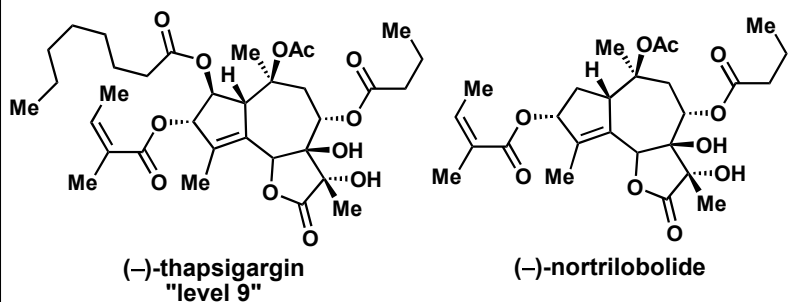


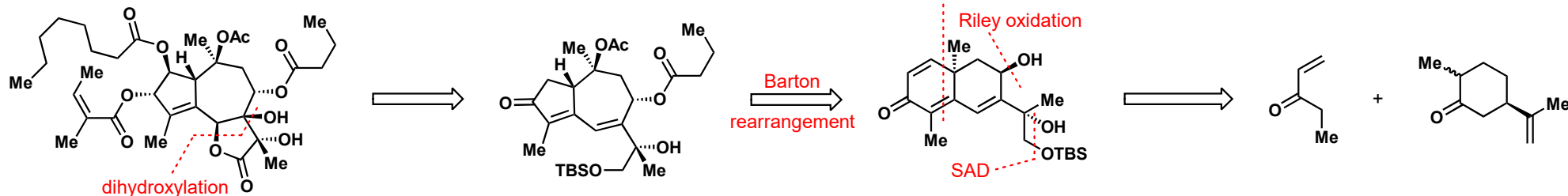
Synthesis of the Week: (-)-Thapsigargin



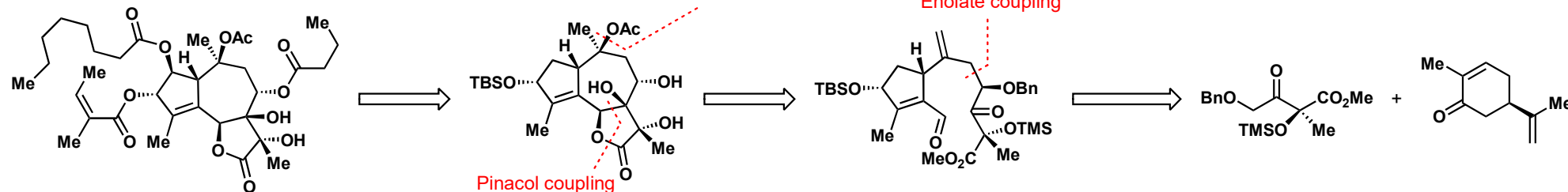
- First isolated from the Mediterranean plant *Thapsia garganica* in 1978
- Since its isolation 40 years ago there have been over 17000 publications on this molecule detailing its biological activity.
- (-)-thapsigargin is a highly selective subnanomolar inhibitor of intracellular calcium ion transport enzymes known as SERCA's. This high selectivity makes it very useful when studying Ca^{2+} dependant cellular processes.
- As the induction of apoptosis is also a Ca^{2+} dependant process, (-)-thapsigargin has been heavily studied in regards to cancer treatment. these studies lead to the development of the prodrug Mipsagargin which is currently in phase 2 clinical trials.



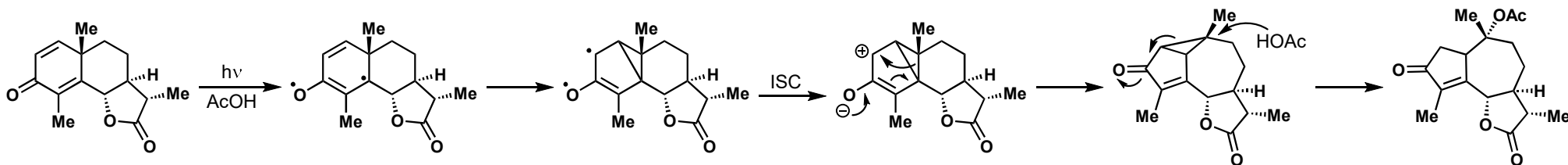
Baran's disconnect



Evans's disconnect

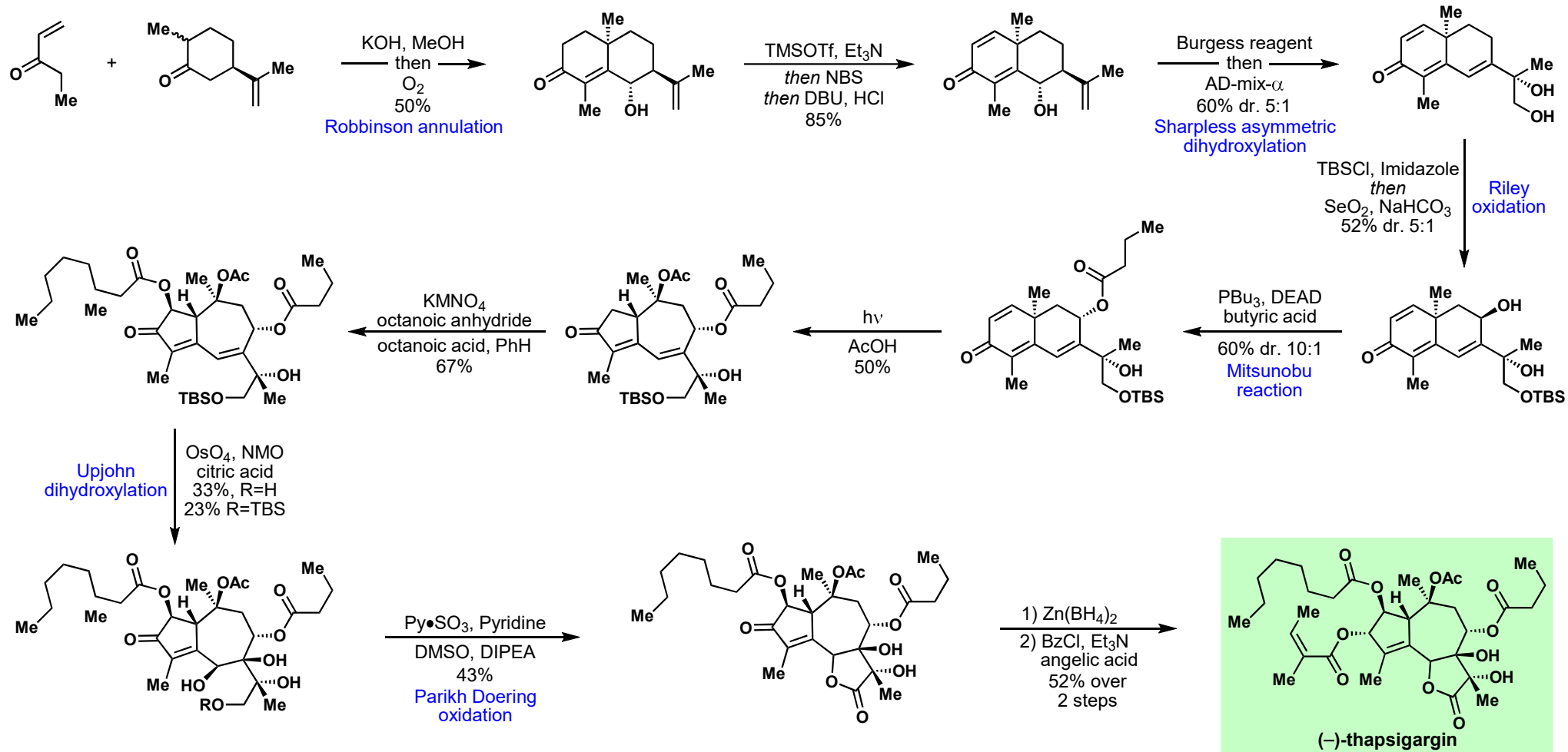


Barton rearrangement:

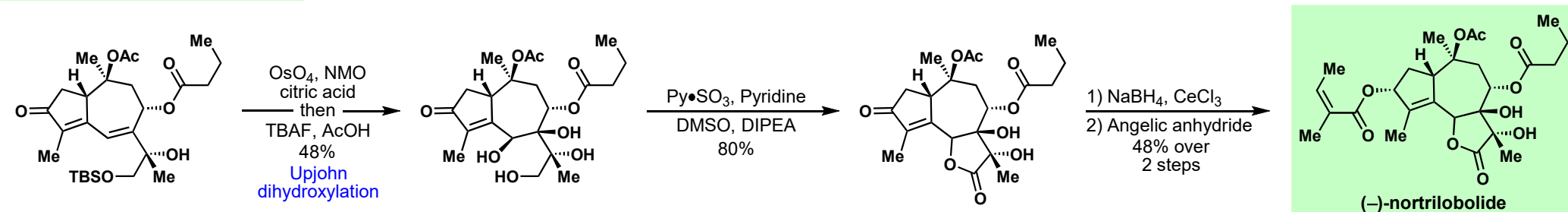


Synthesis of the Week: (-)-Thapsigargin

Baran's Route to (-)-Thapsigargin



Baran's Route to (-)-Nortrilobolide



Evans's Route to (-)-Thapsigargin

