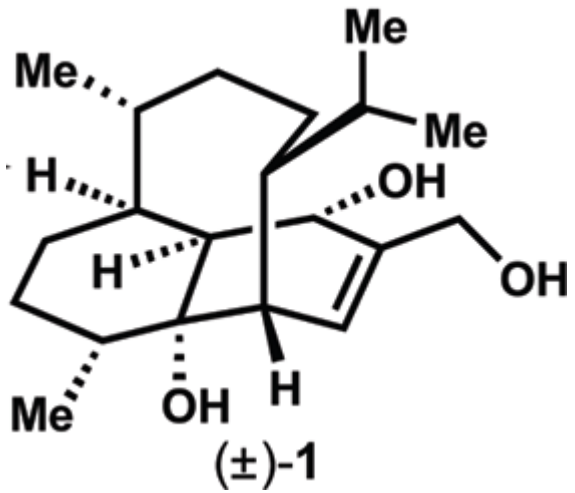
Total Synthesis of Vinigrol

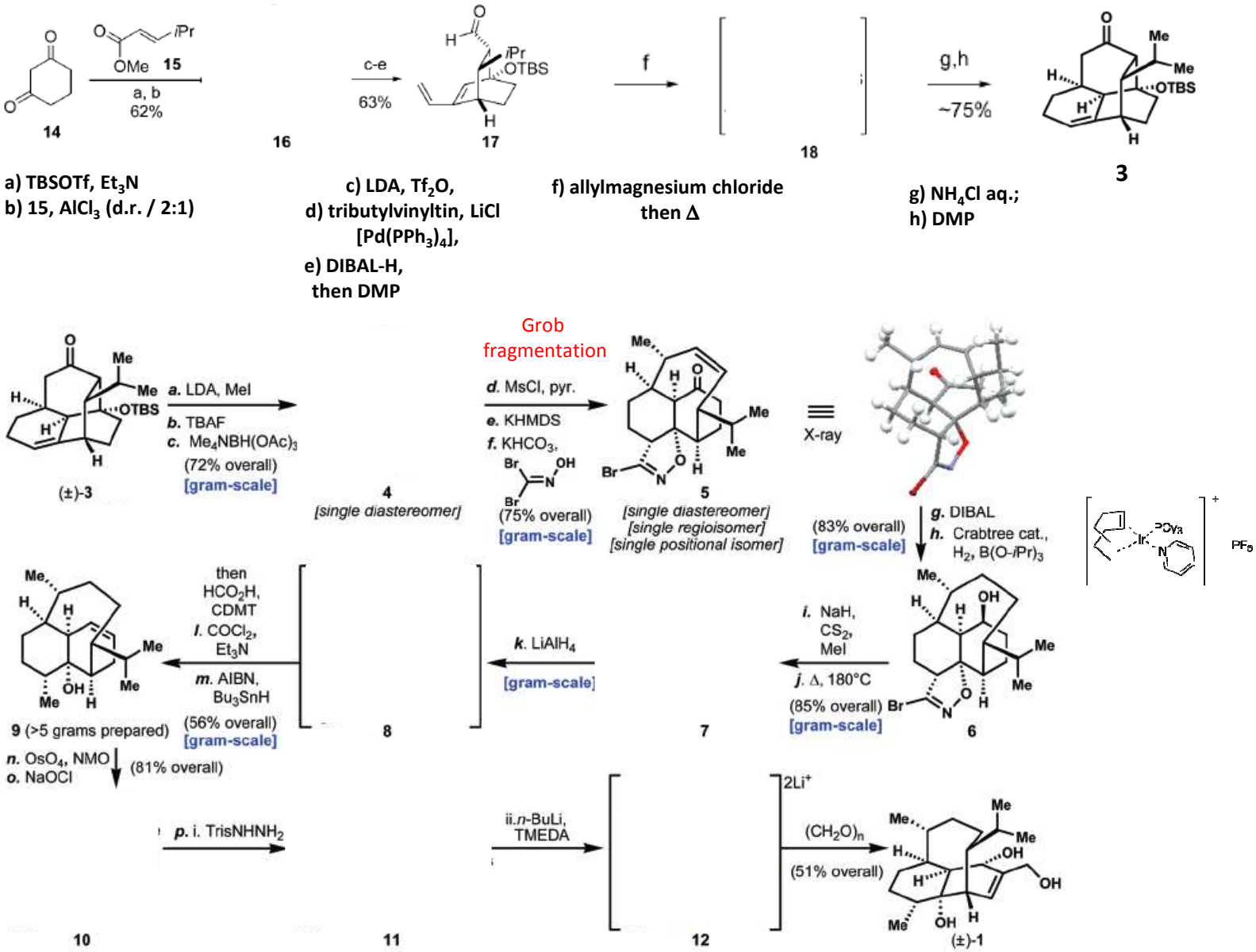


(±)-1

Maimone, T. J.; Voica, A.-F.; Baran, P. S. *Angew. Chem. Int. Ed.* **2008,** *47,* 3054–3056.
T. J. Maimone, J. Shi, S. Ashida, P. S. Baran, *J. Am. Chem. Soc.* **2009**, *131*, 17066 – 17067.
Lu, J-Y.; Hall. D. G. *Angew. Chem. Int. Ed.* **2010,** *Early view.*

Vinigrol was isolated in 1987 from the fungal strain Virgaria nigra F-5408,[2a] and displays a host of biological activities including antihypertensive and platelet aggregation-inhibiting properties. Its unique diterpene framework, featuring a congested cis-fused tricyclic core with eight contiguous stereogenic centers, offers unprecedented structural challenges and has attracted significant attention from the synthetic community.

The recent completion of the vinigrol synthesis by the Baran group presents original solutions to these synthetic challenges.



AIBN=azobis(isobutyronitrile), CDMT=2-chloro-4,6-dimethoxy.1,3,5-triazine, DCB=dichlorobenzene, NMM=Nmethylmorpholine, NMO=N-methylmorpholine N-oxide, TEMPO=2,2,6,6-tetramethyl-1-piperidinyloxy free radical, TMEDA=N,N,N',N'-tetramethylethylenediamine, Tris=triisopropylbenzenesulfonyl hydradide.