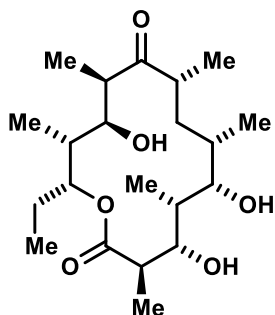


Total Synthesis via C-C Bond Forming Hydrogenation



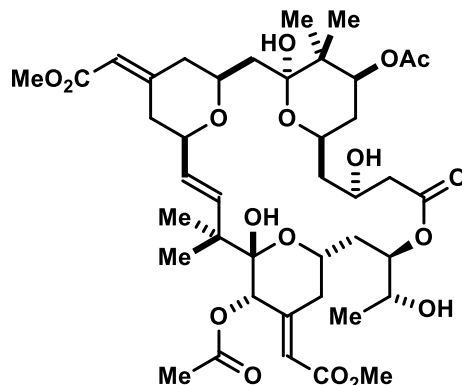
6-DEOXYERYTHRONOLIDE B

14 Steps (LLS), 3 C-C Bonds Formed
via Hydrogen Mediated C-C Coupling

26 Steps (Masamune), 23 Steps (Evans)
42 Steps (Danishefsky), 23 Steps (White)

"The ideal synthesis creates a complex skeleton... in a sequence only of successive construction reactions involving no intermediary refunctionalizations, and leading directly to the structure of the target, not only its skeleton but also its correctly placed functionality."

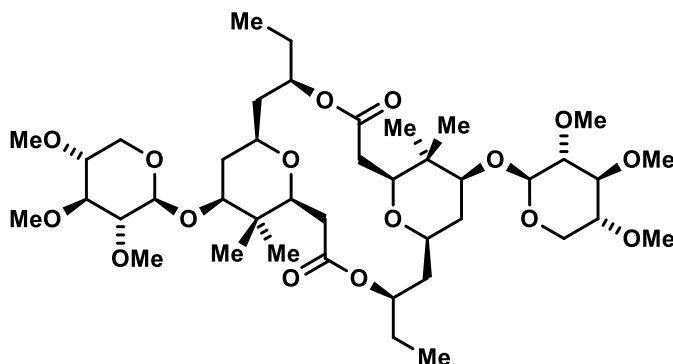
Hendrickson, J. B.
J. Am. Chem. Soc.
1975, 97, 5784.



BRYOSTATIN 7

20 Steps (LLS), 5 C-C Bonds Formed
via Hydrogen Mediated C-C Coupling

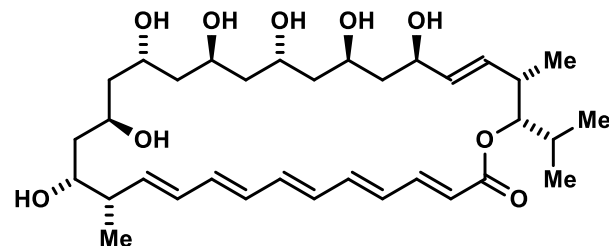
41 Steps (Masamune), 43 Steps (Yamamura)
42 Steps (Evans), 31 Steps (Keck)
28 Steps (Trost), 25 Steps (Wender)



CYANOLIDE A

6 Steps (LLS), 2 C-C Bonds Formed
via Hydrogen Mediated C-C Coupling

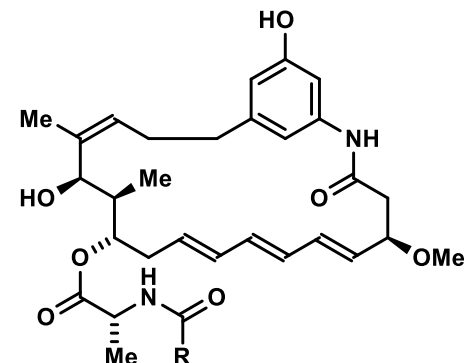
14 Steps (Hong), 17 Steps (Reddy)
14 Steps (She), 17 Steps (Pabbaraja)
12 Steps (Rychnovsky), 15 Steps (Jennings)



(+)-ROXATICIN

20 Steps (LLS), 8 C-C Bonds Formed
via Hydrogen Mediated C-C Coupling

45 Steps (Mori), 31 Steps (Rychnovsky)
29 Steps (Evans)



TRIENOMYCINS A and B

16 Steps (LLS), 3 C-C Bonds Formed
via Hydrogen Mediated C-C Coupling

30 Steps (Smith), 24 Steps (Panek)
35 Steps (Hayashi)