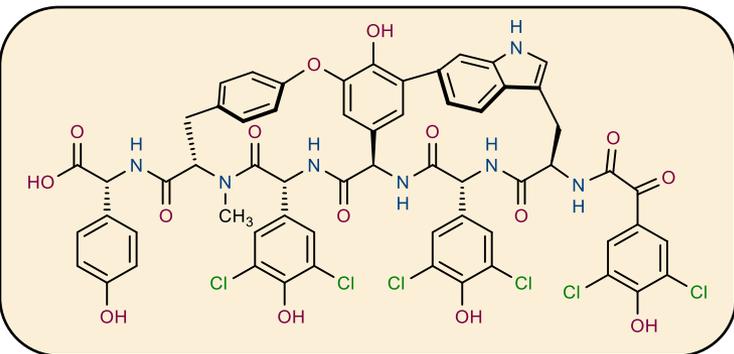


Complestatin (*chloropeptin II*)



- First isolated in 1989 from *streptomyces lavendulae* where disconnections and partial stereochemistry were determined. Full stereochemistry was not determined until 1998.
- Originally shown to be a human complement protein inhibitor and was later demonstrated to show activity against HIV-1 induced cytopathicity, HIV-1 antigen expression, and HIV-1 integrase.
- The only previous synthesis of a member of this family was from Hoveyda and Snapper in 2003, for the synthesis of *chloropeptin I* (C7 connectivity of Indole to phenol vs C6 here).
- This is Boger's second generation synthesis of *complestatin II*, occurring one year after their original in 2009.



streptomyces lavendulae

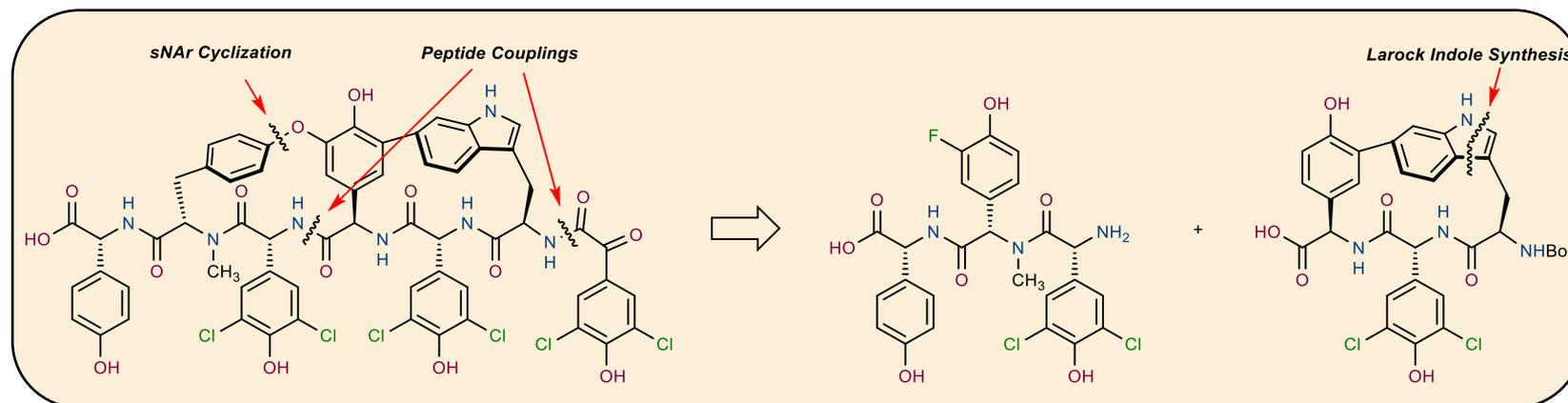
Kaneko, I. *J. Antibiot.* **1989**, *42*, 236. <https://doi.org/10.7164/antibiotics.42.236>

Seto, H. *Tetrahedron Lett.* **1989**, *30*, 4987. [https://doi.org/10.1016/S0040-4039\(01\)80562-1](https://doi.org/10.1016/S0040-4039(01)80562-1)

Momota, K. *Biochem. Biophys. Res. Commun.* **1991**, *179*, 243. [https://doi.org/10.1016/0006-291X\(91\)91361-F](https://doi.org/10.1016/0006-291X(91)91361-F)

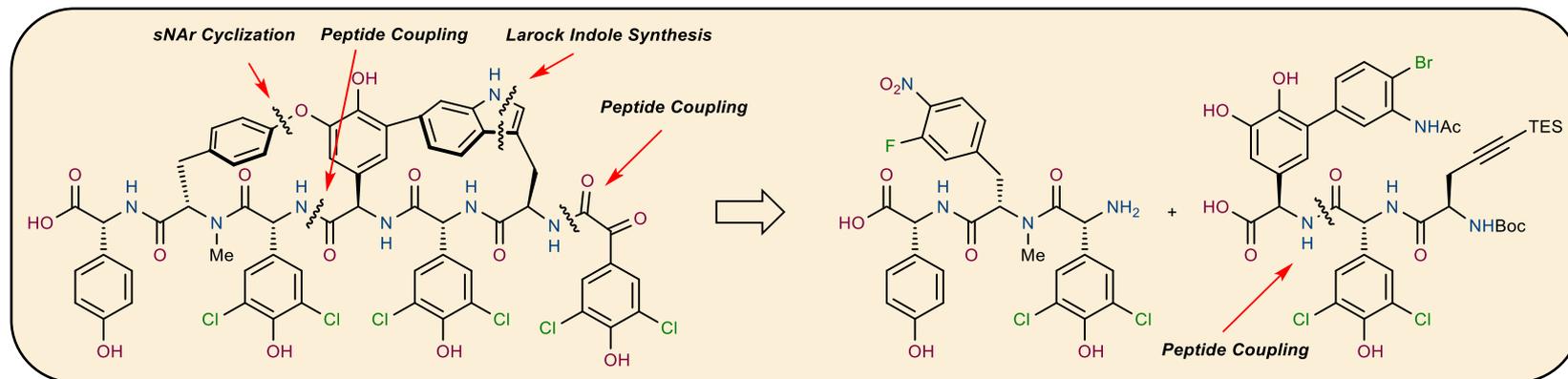
Patane, M. *Tetrahedron Lett.* **1998**, *39*, 2247. [https://doi.org/10.1016/S0040-4039\(98\)00270-6](https://doi.org/10.1016/S0040-4039(98)00270-6)

Gen I. Retrosynthetic Analysis

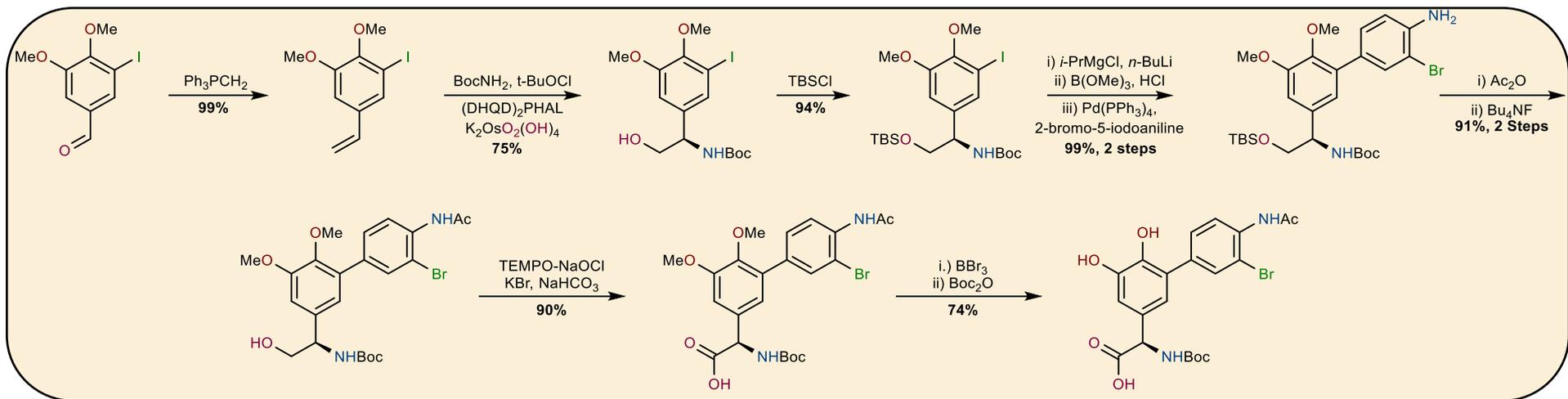


Boger, D. *J. Am. Chem. Soc.* **2009**, *131*, 16036. [doi:10.1021/ja907193b](https://doi.org/10.1021/ja907193b).

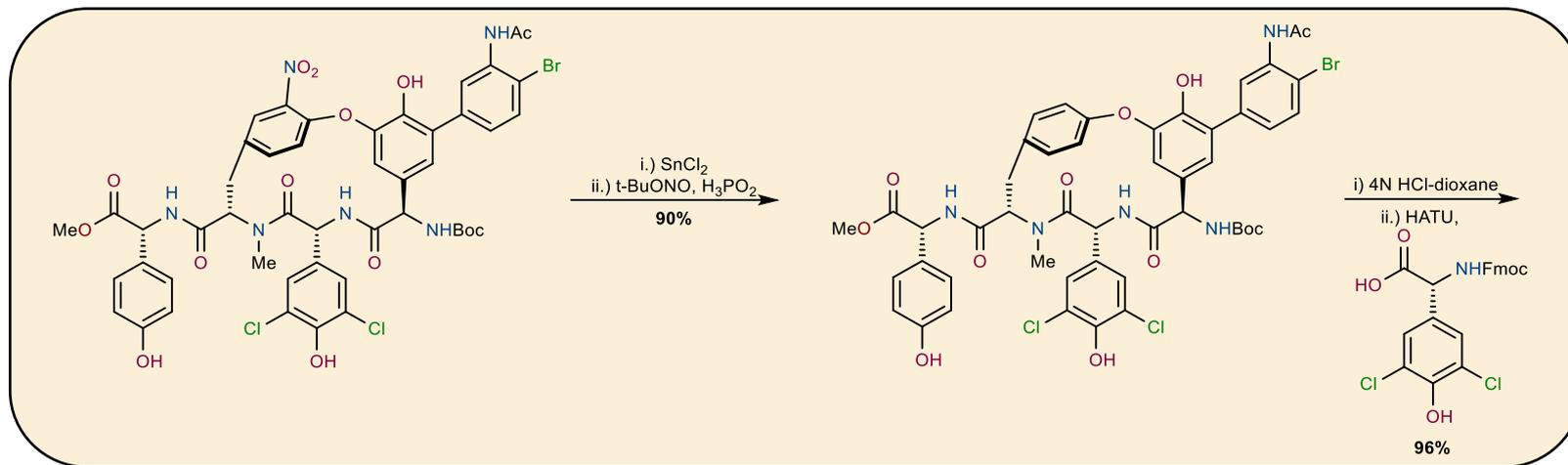
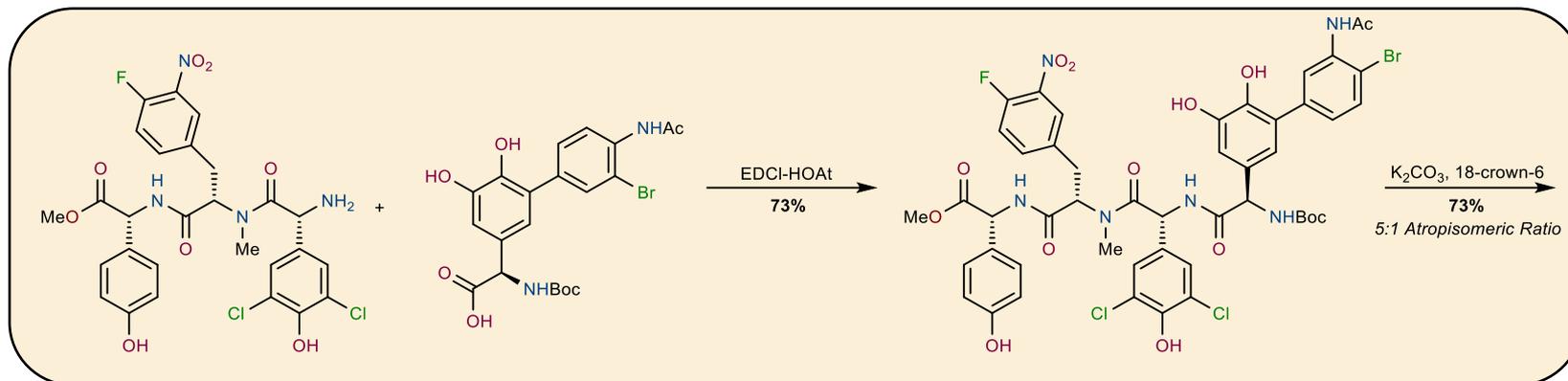
Gen II. Retrosynthetic Analysis



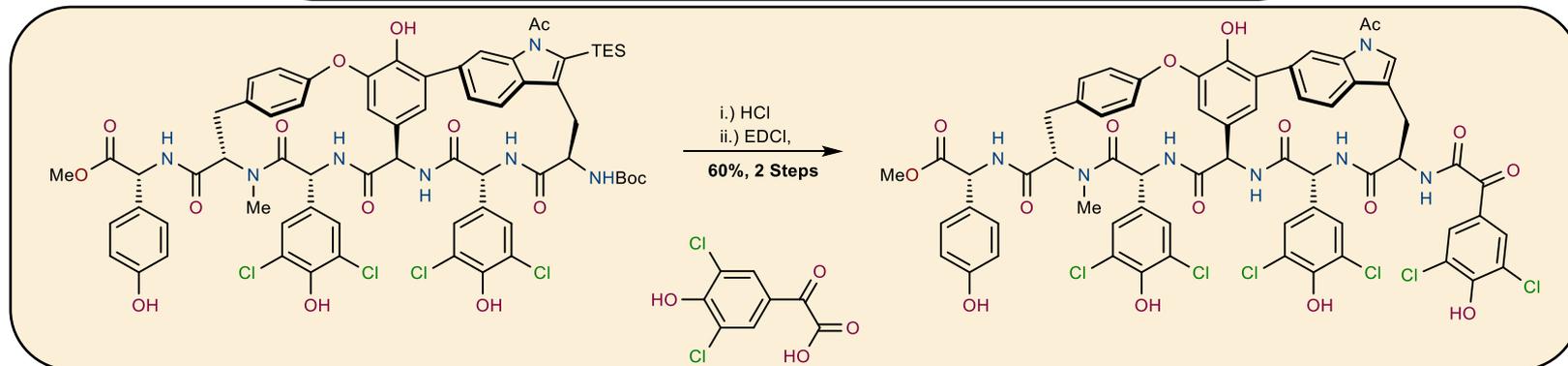
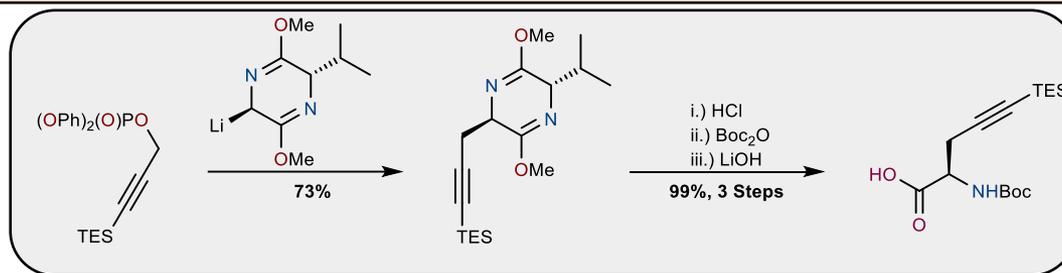
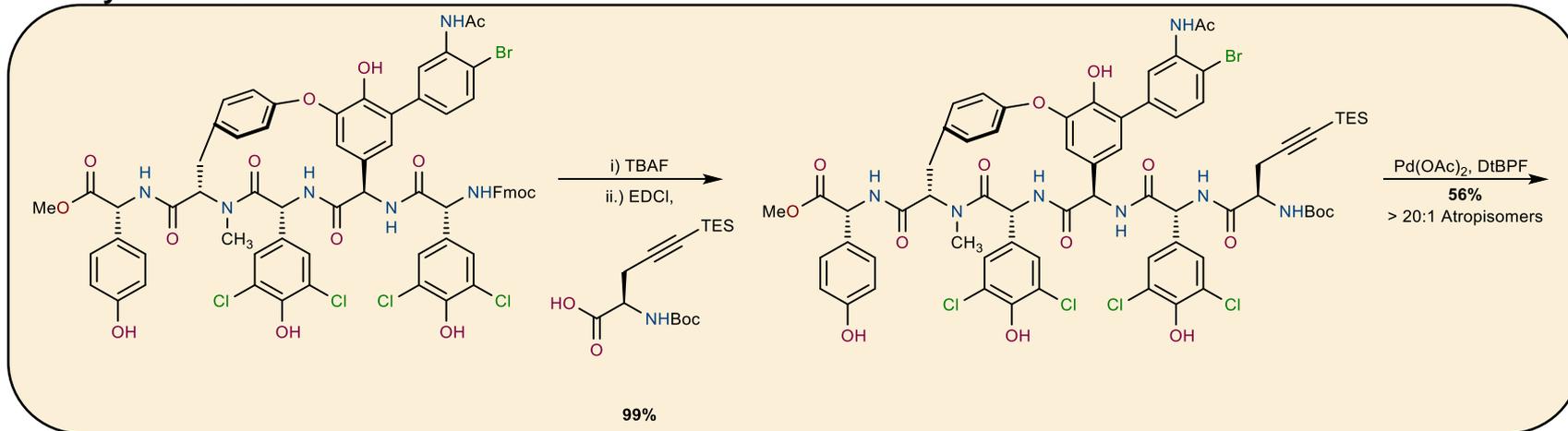
Forward Synthesis



Forward Synthesis Continued



Forward Synthesis Continued



Forward Synthesis Continued

