

Total Syntheses of Dibromophakellstatin and Dibromoangelaspongine

K. S. Feldman, A. P. Skoumbourdis *Org. Lett.* **2005**, *7*, 929–931.

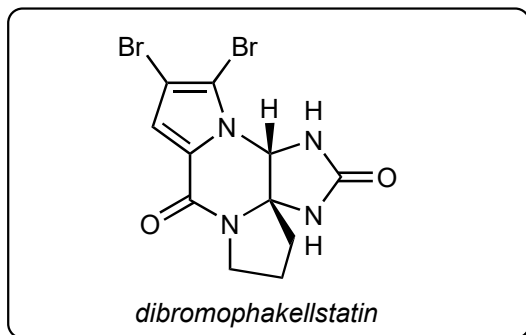
K. S. Feldman, M. D. Foor *J. Am. Chem. Soc.* **2008**, *130*, 14964–14965.

imidazole

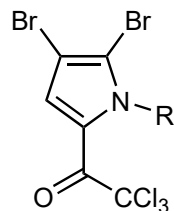
1–6



7–8



- 1) $\text{Me}_2\text{NSO}_2\text{Cl}$
- 2) *n*-BuLi then PhSPh
- 3) *n*-BuLi then 3-chloro-1-iodopropane
- 4) Potassium phthalimide
- 5) HBr
- 6) **1**, Na_2CO_3

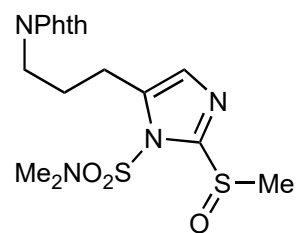


- 1** R = H
- 2** R = SEM

Step 5: global deprotection.

- 7) $\text{PhI}(\text{CN})\text{OTf}$, $\text{EtN}(i\text{-Pr})_2$
- 8) CAN, H_2O

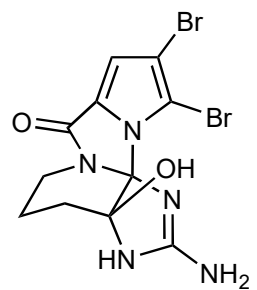
Step 7: name the reagent and come up with a mechanism.



9-12



13-18



dibromoangelaspongine

- 9) $\text{H}_2\text{N}-\text{NH}_2$
- 10) **2**, Na_2CO_3
- 11) Tf_2O , 2,6-lutidine
- 12) TBAF

Step 11: come up with a mechanism.

- 13) NCS
- 14) HCl, MeOH
- 15) *m*-CPBA (1 equiv)
- 16) TMSN_3 , ZnI_2
- 17) H_2/Pd then TFA
- 18) H_2O

Step 13: come up with a mechanism.