

- 8) MeNHOMe · HCl, *i*-PrMgCl
 9) MeLi
 10) *p*-TsOH

- 11) LiDBB
 12) DMP
 13) Ph₃PC(Me)CO₂Et, PhMe, Δ
 14) DIBAL-H
 15) TIPS-Cl, imidazole, DMAP
 16) LiAlH₄

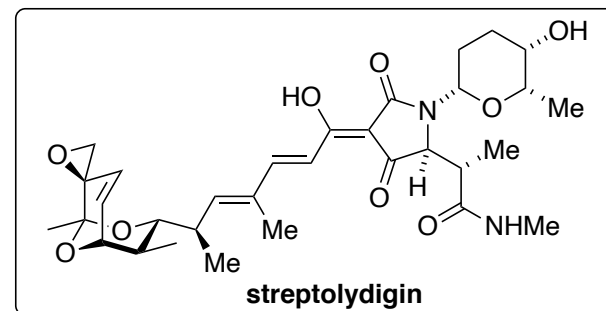
- 17) Tf₂O, pyridine, DBU
 18) TBAF
 19) DMP

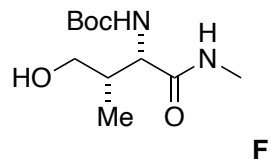
How could you access **1** from **X**?



What is the structure of LiDBB?

Hint: Step 16 is a selective monodeprotection

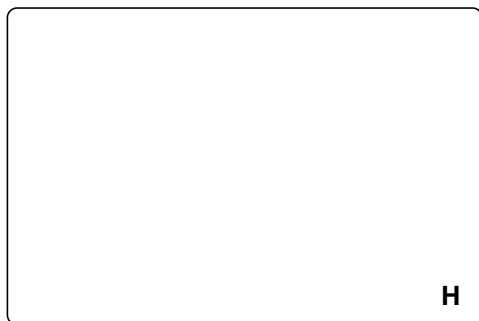




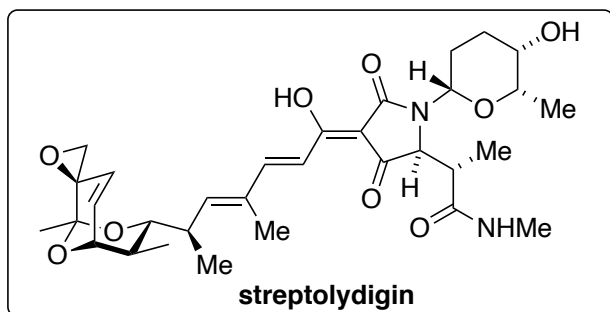
↓ 20, 21



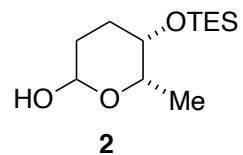
↓ 22, 23



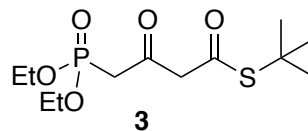
↓ 24



20) TEMPO, PIDA
21) TFA, basic alumina



22) **2**, MeOH
23) **3**, CF₃CO₂Ag, 5Å MS



24) *t*-BuOK, THF, then **E**, then aq. HCl

How would you prepare **F** from a common chiral building block?

Hint: In step 20 a cyclization takes place

Name at least one alternative method to synthesize α -amino acids.

Key step: please provide a mechanism