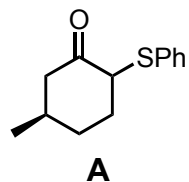


# Totalsynthesis of (+)-Complanadine A

Rita Fürst, 14.10.2010



1.) NaH, I(CH<sub>2</sub>)<sub>3</sub>OAc,  
DMF, 23°C, 63%

2.) m-CPBA, CH<sub>2</sub>Cl<sub>2</sub>,  
-78°C → 23°C, 77%

**B**

1.) TMSCH<sub>2</sub>CN, n-BuLi  
then ethyl salicylate  
Et<sub>2</sub>O, -78°C

2.) CsF, MeCN, 23°C

45% over 2 steps

**C**

1.) HC<sub>2</sub>MgCl, THF,  
23°C, 97%

2.) Mg(ClO<sub>4</sub>)<sub>2</sub>, Ac<sub>2</sub>O  
23°C, 97%

PPh<sub>3</sub>, imidazole,  
CCl<sub>4</sub>, 77°C, 75%

**F**

1.) PhCH<sub>2</sub>NH<sub>2</sub>, CuCl  
THF, 66°C, 92%

2.) K<sub>2</sub>CO<sub>3</sub>, MeOH,  
23°C, 99%

**E**

**D**

TMS—≡≡—TMS  
CpCo(CO)<sub>2</sub>, THF,  
140°C, 82%

+

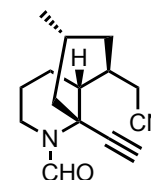
1.) TBAF, THF,  
66°C, 85%

2.) LiHMDS, TMS-Cl  
THF, 23°C, 90%

**G**

**H**

mixture of regioisomers,  
25:1 of the desired one



CpCo(CO)<sub>2</sub>, PPh<sub>3</sub>,  
dioxane, 140°C

**I**

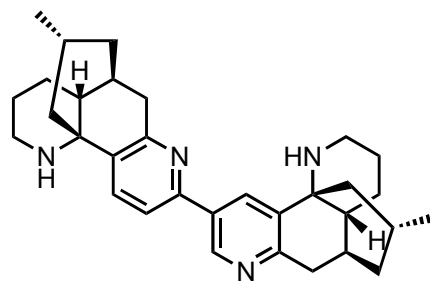
- 1.) TBAF, dioxane,  
101°C, 99%
- 2.) Pd/C, H<sub>2</sub>,  
23°C, MeOH, 78%
- 3.) HCl, MeOH  
50°C, 90%

+

**J**

**K**

mixture of regioisomers,  
3:1 of the desired one



Complanadine A

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