

Hint:  
 step 11: PPh<sub>3</sub> is crucial. What happens without PPh<sub>3</sub>?

**C**

I) MeMgBr  
II) OsO<sub>4</sub>, Pyridine  
III) CDI, DMAP

**I**

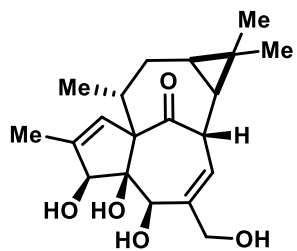
IV) BF<sub>3</sub>·OEt<sub>2</sub>  
V) SeO<sub>2</sub> then  
Ac<sub>2</sub>O

**J**

VI) HF  
VII) Martin's sulfurane  
then NaOH

**K**

VIII) SeO<sub>2</sub>,  
HCO<sub>2</sub>H



**(+)-Ingenol**