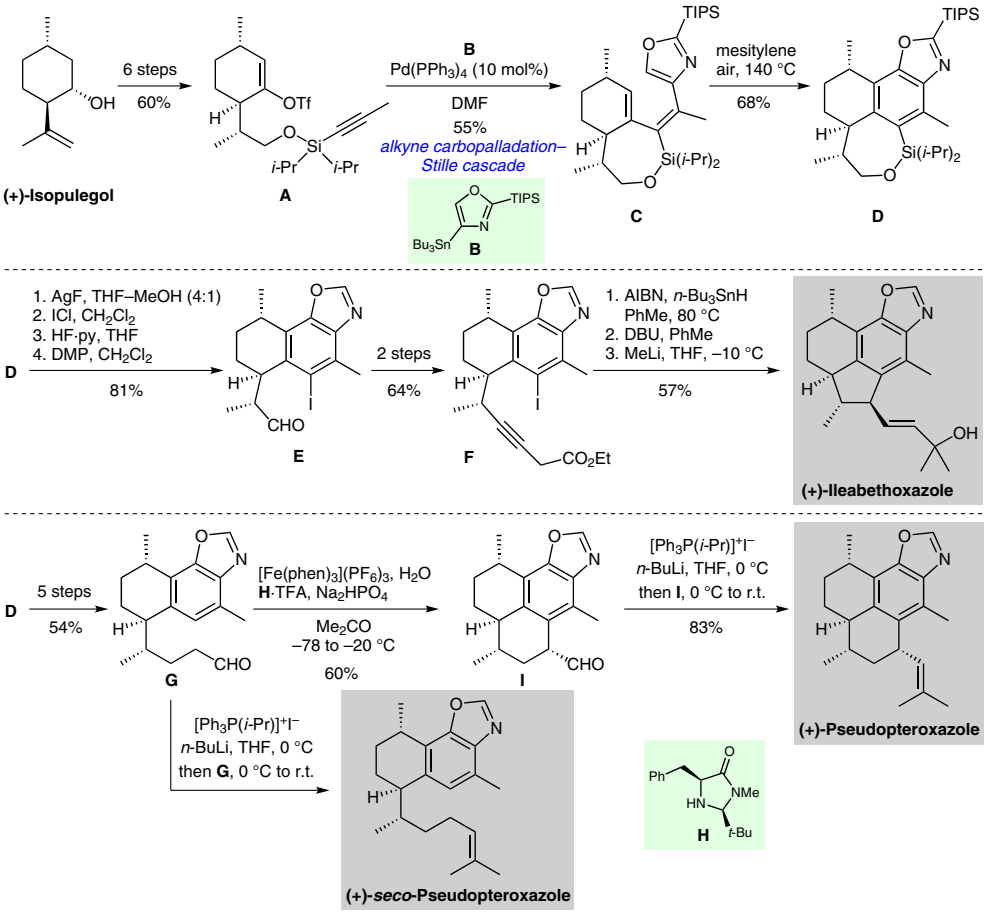
M. YANG, X. YANG, H. SUN, A. LI* (SHANGHAI INSTITUTE OF ORGANIC CHEMISTRY AND CHINA PHARMACEUTICAL UNIVERSITY, NANJING, P. R. OF CHINA)

Total Synthesis of Ileabethoxazole, Pseudopteroxazole, and *seco*-Pseudopteroxazole
Angew. Chem. Int. Ed. **2016**, *55*, 2851–2855.

Synthesis of Ileabethoxazole, Pseudopteroxazole, and *seco*-Pseudopteroxazole



Significance: The oxazole diterpenoids ileabethoxazole, pseudopteroxazole and *seco*-pseudopteroxazole, isolated from *Pseudopterogorgia elisabethae,* possess potent inhibitory activity against *Mycobacterium tuberculosis*. Structurally, these natural products are characterized by a hexasubstituted benzene connected to an oxazole. Li and co-workers achieved the total syntheses of these targets relying on a palladium cascade reaction followed by a 6π-electrocyclization.

Comment: Alkyne **A**, available in six steps from (+)-isopulegol, undergoes a palladium-catalyzed cascade reaction to give **C** in 55% yield. Upon heating in the presence of air, the desired 6π-electrocyclization occurred, providing key intermediate **D**. Later, alkyne **F** was obtained, which underwent a radical cyclization ultimately leading to (+)-ileabethoxazole. Furthermore, both (+)-pseudopteroxazole and (+)-*seco*-pseudopteroxazole could be accessed from **D**.

SYNFACTS Contributors: Erick M. Carreira, Christian Ebner
Synfacts 2016, 12(4), 0329 Published online: 15.03.2016
DOI: 10.1055/s-0035-1561834; **Reg-No.:** C01416SF