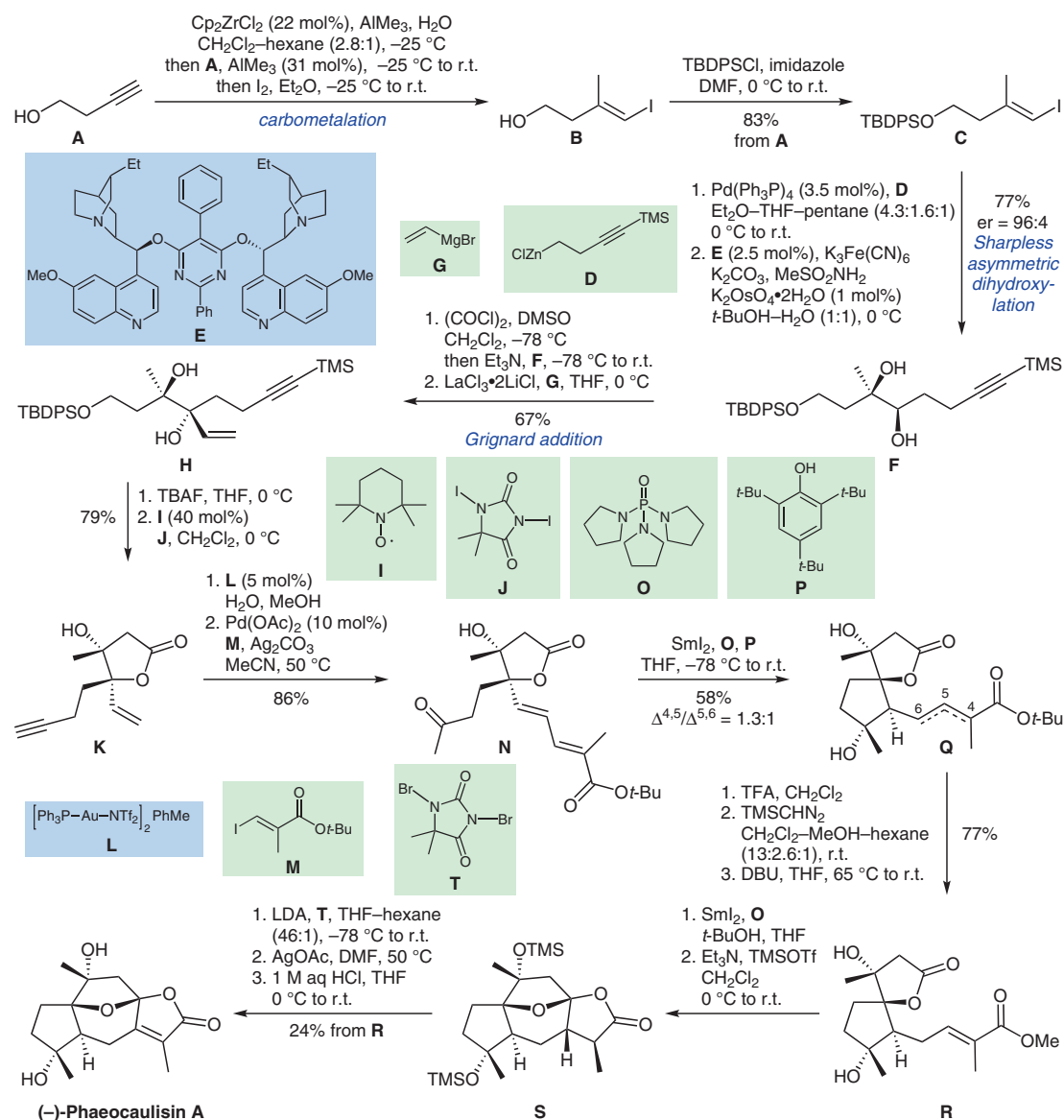


## Total Synthesis of (–)-Phaeocaulisin A



**Significance:** Procter and co-workers report the first total synthesis of the guaianes type sesquiterpene (–)-phaeocaulisin A in 19 steps. The natural product exhibits anti-inflammatory and anticancer activity which is likely linked to the bridged acetal moiety.

**Comment:** On the one hand, chemoselective reduction of the ketone in **N** requires a *tert*-butyl ester to render the latter unresponsive for SET. On the other hand,  $\text{Sml}_2$ -mediated cyclization of **R** requires the methyl ester, otherwise the lactone in **S** does not form. Desaturation of **S** is achieved by  $\alpha$ -bromination of the  $\gamma$ -lactone and elimination with silver acetate.