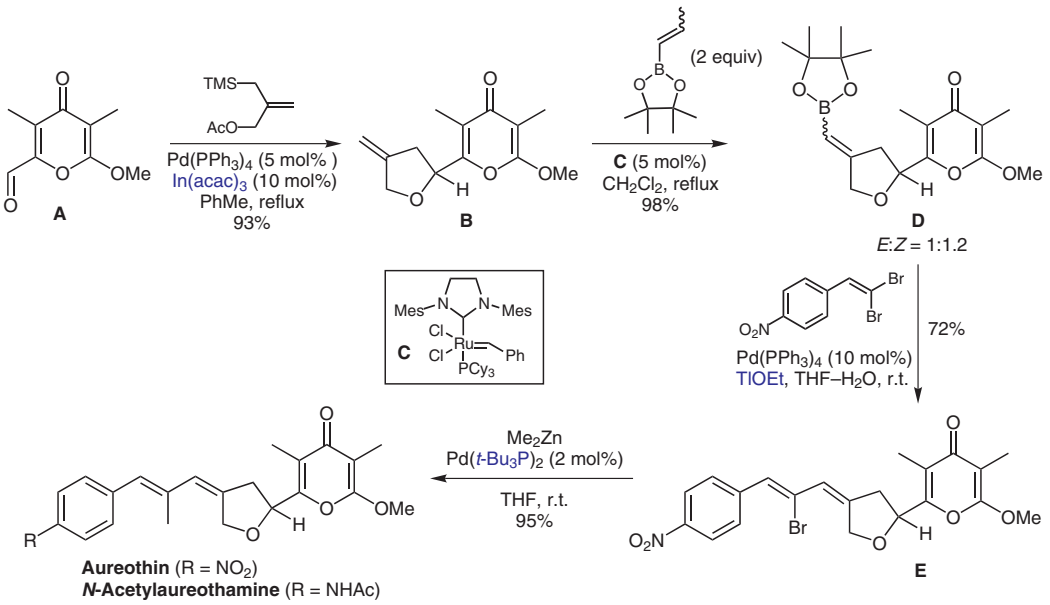
M. F. JACOBSEN, J. E. MOSES, R. M. ADLINGTON, J. E. BALDWIN* (OXFORD UNIVERSITY, UK)

A Short Total Synthesis of Aureothin and *N*-Acetylaureothamine
Org. Lett. **2005**, *7*, 641-644.

Total Synthesis of Aureothin and *N*-Acetylaureothamine



Significance: Aureothin is an unusual nitroaryl metabolite of *Streptomyces netropis*. It has antitumor, antifungal and pesticidal activity. *N*-Acetylaureothamine is active against *Helicobacter pylori*, the cause of chronic gastritis.

Comment: A remarkably short and efficient synthesis of (±)-Aureothin (23% overall) features three Pd-catalyzed reactions and a Ru-catalyzed cross metathesis. The precipice of failure in the three Pd-catalyzed reactions was avoided by deft use of additives: $In(acac)_3$ for the [3+2] cycloaddition leading to tetrahydrofuran **B**; TlOEt for the Suzuki cross-coupling to form **E**; the highly hindered ligand *t*-Bu_3P for the final Negishi cross-coupling.

SYNFACTS Contributors: Philip Kocienski
Synfacts 2005, 0, 0009-0009
DOI: 10.1055/s-2005-865349; **Reg-No.:** K01005SF

Category

Synthesis of Natural Products and Drugs

Key Words

[3+2] cycloaddition
cross-coupling
metathesis