Personal Copy
Synthesis of Nominal Trichodermatide A

**Significance:** Trichodermatide A was isolated from the fungus *Trichoderma reesei* in 2008, and its structure was proposed to be J by NMR analysis. After the Trauner group synthesized J, they noticed slight but significant deviations from the NMR spectra of the isolated natural product. More interestingly, the Hiroya group synthesized trichodermatide A recently (*Angew. Chem. Int. Ed.* 2013, 52, 3646; *Synfacts* 2013, 9, 467). Although their NMR spectra matched with the authentic sample, it is possible that an unnoticed epimerization occurred at some point during their synthesis.

**Comment:** To start out, silyl ether B was oxidized under Swern conditions to give aldehyde C. Condensation with two equivalents of diketone D and subsequent dehydration yielded hexahydroxanthenedione F. Diastereoselective α-hydroxylation set the stage for a deprotection–isomerization–acetalization cascade to give I. Treatment with pyrrolidine induced an equilibration of I and J, and they were separated by chromatography. X-ray crystallographic analysis of J showed the correct assignment as nominal trichodermatide A, but NMR analysis revealed significant differences to the isolated natural product.