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Total Synthesis of the Unusual Monoterpenoid Indole Alkaloid (±)-Alstilobanine A *Angew. Chem. Int. Ed.* **2012**, *51*, 12846–12849.

Total Synthesis of (±)-Alstilobanine A

Significance: Monoterpene indole alkaloids usually consist of a tryptamine residue attached to a monoterpenoid unit. (\pm)-Alstilobanine A, however, features an intriguing rearranged skeleton. The authors based their concise synthesis on the conjugate addition of ester enolate **F** to an in situ-generated nitrosoalkene and the formation of β -lactam **L** via an intramolecular formal ketene–ketone [2+2] cycloaddition developed by Romo and coworkers (*Org. Lett.* **2006**, *8*, 4363).

Comment: The intermolecular conjugate addition of ester enolate ${\bf F}$ onto nitrosoalkene ${\bf G}$, generated in situ from α -chlorooxime ${\bf E}$, proceeded efficiently to give ${\bf H}$. This transformation highlights an interesting method to construct 1,4-dicarbonyl frameworks. Both C16-diastereomers could be used to access ${\bf I}$, which then underwent a formal [2+2] cycloaddition to afford the desired syn-2-azadecalin ${\bf L}$ in excellent yield and diastereoselectivity. The synthesis was completed in eight steps from ${\bf L}$ to generate the natural product in an impressive 14% overall yield.

SYNFACTS Contributors: Erick M. Carreira, Simon Breitler Synfacts 2013, 9(2), 0121 Published online: 18.01.2013 DOI: 10.1055/s-0032-1317999; Reg-No.: C03512SF