Synthesis of (±)-Chartelline C

Significance: Baran and co-workers previously postulated the biosynthetic origins of the chartellines (P. S. Baran et al. *Angew. Chem. Int. Ed.* **2005**, 44, 3714-3717), and have now disclosed a bio-inspired approach to (±)-chartelline C, the scarcest member of the group. Noteworthy in this synthesis is a remarkable four-step, one-pot cascade sequence that affords the spiro-β-lactam system characteristic of the chartellines.

Comment: A Heck-Sonogashira reaction between indolyl iodide **A** and terminal alkyne **B** gave **C**, which was converted into macrocycle **E**, comprising the entire carbon scaffold of (±)-chartelline C. Thermolysis of **E** liberated the free indole that was treated sequentially with NBS and $\text{K}_2\text{CO}_3/18\text{-C-6}$ giving **G**. A [1,5]-sigmatropic N-shift ensued giving the ring-contracted spiro-β-lactam **H**, that, upon treatment with brine, underwent halogen exchange affording **I**. Silyl cleavage followed by thermal decarboxylation gave the target molecule.