B. HONG, C. LI, Z. WANG, J. CHEN, H. LI,* X. LEI* (PEKING UNIVERSITY, BEIJING, TIANJIN UNIVERSITY, AND NATIONAL INSTITUTE OF BIOLOGICAL SCIENCES, BEIJING, P. R. OF CHINA)

Enantioselective Total Synthesis of (–)-Incarviatone A *J. Am. Chem. Soc.* **2015**, *137*, 11946–11949.

Synthesis of (–)-Incarviatone A

Significance: The natural product hybrid (–)-incarviatone A displays considerable potential for the treatment of depression and neurological disorders. It also features a complex polycyclic core structure with eight contiguous stereogenic centers. In this work, the authors report the first total synthesis relying on a striking biomimetic cascade reaction.

 $\begin{array}{lll} \textbf{SYNFACTS Contributors:} & Erick \ M. \ Carreira, \ Stefan \ Fischer \\ Synfacts \ 2015, \ 11(12), \ 1231 & Published \ online: \ 17.11.2015 \\ \textbf{D0I:} \ 10.1055/s-0035-1560838; \ \textbf{Reg-No.:} \ C06615SF \\ \end{array}$

Comment: The synthesis commenced with *ortho*-C–H alkylation of **A**. Thereafter, *trans*-indane acid **F** was obtained by a chiral auxiliary mediated C–H insertion with diazo compound **D**. Phenolic aldol condensation between **H** and **I** and subsequent dearomatization set the stage for a biomimetic cascade that culminated in the total synthesis of (–)-incarviatone A.

Category

Synthesis of Natural Products and Potential Drugs

Key words

(-)-incarviatone A

C-H bond
functionalization
biomimetic cascade
chiral auxiliary
aldol condensation

