SYNFACTS

Highlights in Current
Synthetic Organic
Chemistry

REPRINT

Thieme

Category

Synthesis of Natural Products and Potential Drugs

Key words

(–)-leuconolam

(–)-mersicarpine

indole alkaloids

cascade reaction

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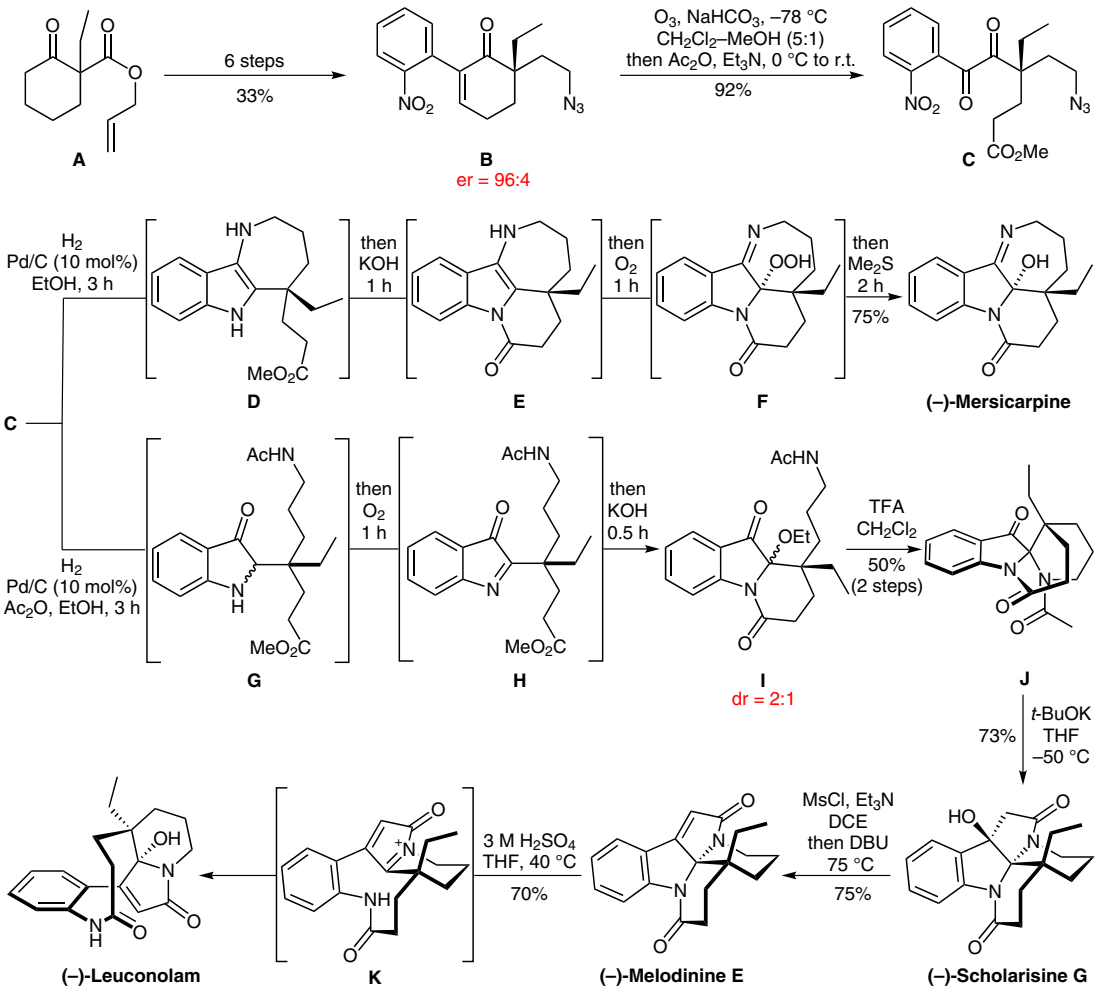
Enantioselective Total Syntheses of Leuconolam–Leuconoxine–Mersicarpine Group Monoterpene Indole Alkaloids
J. Am. Chem. Soc. **2013**, *135*, 19127–19130.

Syntheses of Leuconolam–Leuconoxine–Mersicarpine Group Indole Alkaloids



Significance: The leuconolam, leuconoxine, and mersicarpine indole alkaloids form a subfamily of the *Aspidosperma* alkaloids and, whilst possessing entirely different core structures, all arise from a common precursor: the *vinca* alkaloid vincadifformine. Herein, the authors describe access to several natural products of the three groups through a common intermediate (**C**).

Comment: Diketone **C** could be transformed into (–)-mersicarpine in a highly efficient one-pot process initiated by catalytic hydrogenation. Hydrogenation of **C** in the presence of acetic anhydride yielded intermediate **G** that, in situ, was carried on to **I**. Treatment of **I** with TFA gave **J**, which was further elaborated into (–)-scholarisine G, (–)-melodinine E, and (–)-leuconolam.

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Synfacts 2014, 10(3), 0232 Published online: 17.02.2014
DOI: 10.1055/s-0033-1340713; **Reg-No.:** C00714SF