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A Convergent Total Synthesis of (±)-Colchicine and (±)-Desacetamidoisocolchicine J. Am. Chem. Soc. 1981, 103, 5813-5821, DOI: 10.1021/ja00409a032.

Total Synthesis of (±)-Desacetylcolchicine and Formal Synthesis of (±)-Colchicine

Significance: In 1981, Evans and co-workers reported the total synthesis of colchicine, a natural product that attracted the interest of chemists for decades. Their route featured a highly convergent approach, giving quick access to the tropolone scaffold present in colchicine. The approach furthermore solved the problem of introducing the amido side chain via a Curtius rearrangement.

Comment: Saturated ester D and ketal G are coupled via an aldol reaction to yield aldol adduct H as a 1:1 mixture of diastereomers. Acid-induced spirocyclization followed by in situ rearrangement yielded the desired tropolone I, from which (±)-desacetylcolchicine was accessible by a Curtius rearrangement.

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Synthesis of Natural Products and **Potential Drugs**

Key words

(±)-colchicine

Corey-Chaykovsky cyclopropanation

rearrangement

