Total Synthesis of Isochrysohermidin

**Significance:** In 1993, Boger and Baldino described a concise synthesis of isochrysohermidin, a 2-oxo-3-pyrroline dimer first isolated from *Mercurialis leiocarpa*. Through their synthetic efforts, they were able to show the interstrand DNA cross-linking capabilities of isochrysohermidin.

**Comment:** C is accessed from A by an inverse-electron-demand Diels–Alder cycloaddition with B and is further elaborated to D by reductive ring contraction. *meso*- and *d,l*-isochrysohermidin are obtained by a singlet oxygen cycloaddition, followed by in situ decarboxylation.

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**Category**

Synthesis of Natural Products and Potential Drugs

**Key words**

isochrysohermidin 2-oxo-3-pyrroline dimer inverse electron-demand Diels–Alder reaction \(^{1}O_2\) cycloaddition