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Enantioselective Total Synthesis of (-)-Artatrovirenol A

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## Synthesis of (-)-Artatrovirenol A

Significance: Zhu and co-workers report the enantioselective total synthesis of the structurally unprecedented, caged sesquiterpenoid (-)-artatrovirenol A. Key to their approach is an intramolecular De Mayo cycloaddition/retro-aldol sequence.

Comment: Epoxidation of enone F to epoxide G enabled the subsequent intramolecular De Mayo reaction, leading to cycloaddition product H under UV irradiation. Deprotection initiated a retro-aldol reaction to form bromohydrin I, which was then closed to key epoxide I upon treatment with DBU.

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(-)-artatrovirenol A sesquiterpenoid Mukaiyama-Michael

reaction De Mayo reaction

Chugaev elimination

