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Total Synthesis of Vilmoraconitine

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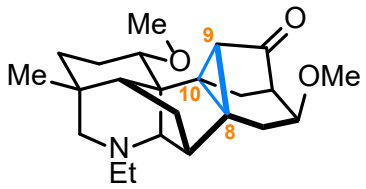
The *Aconitum* plants have been used as traditional medicines in China for the treatment of pain, rheumatism, and injuries, the effective components of which are an array of diterpenoid alkaloids with complex chemical structures.[1] These natural compounds exhibited significant bioactivities but suffered from low natural abundance and limited sources. Chemical synthesis provides a vital approach to the preparation of diterpenoid alkaloid natural compounds, access of new derivatives, and investigation of biological functions.[2]

Vilmoraconitine, isolated from the medicinal plant *Aconitum vilmorinianum*, is a C_{19}-diterpenoid alkaloid with a rearranged skeleton.[3] This compound features a congested heptacyclic core including a unique cyclopropane unit and 11 stereogenic centers. These structural characters render vilmoraconitine a challenging target for synthetic chemists. In this talk, our efforts resulting in the first total synthesis of vilmoraconitine will be present.[4]



vilmoraconitine

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