

OP18. STUDY ON THE DITERPENOID ALKALOIDS FROM *ACONITUM BARBATUM* VAR. *PUBERULUM* AND *DELPHINIUM AEMULANS*

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Diterpenoid alkaloids are a kind of nitrogen-containing organic compounds with wide range of biological activities and medicinal value, especially in the aspects of antiarrhythmic and analgesia. Four diterpenoid alkaloids have been used in clinical. At present, more than one thousand natural diterpenoid alkaloids have been found, which are mainly from genera *Delphinium* and *Aconitum* of Ranunculaceae family. It was found that the diterpenoid alkaloids from the characteristic *Delphinium* and *Aconitum* plants in Central Asia have the characteristics of diverse skeleton types, high novelty and great potential for medicine, which have a great value for in-depth research and development.

On the basis of the existing research, *Aconitum barbatum* var. *puberulum* and *Delphinium aemulans* grown in Central Asia were chosen as the research objects. The isolation, purification, structure identification and bioactivity screening of diterpenoid alkaloids were carried out. 60 compounds, including 37 diterpenoid alkaloids were isolated from these two plants. Of which 13 of diterpenoid alkaloids were new compounds, see Fig. 1. Compound **AB-1** is the first discovered new skeleton type of C₂₀-diterpenoid alkaloid, while compounds **AB-6** and **AB-7** are the first discovered rearranged of C₁₈-diterpenoid alkaloids. The isolated diterpenoid alkaloids involve 3 types of skeletons and 9 subtypes of skeletons. The activity screening results showed that some compounds exhibited moderate potential for antiarrhythmia, anti-tumor, and antibacterial activities.

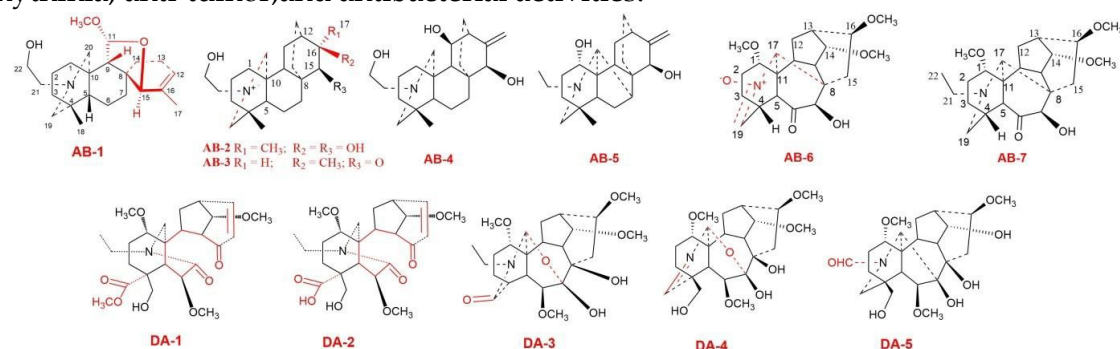


Fig. 1 Structures of new diterpenoid alkaloids

Keywords: Alkaloid; Aconitum; Delphinium

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