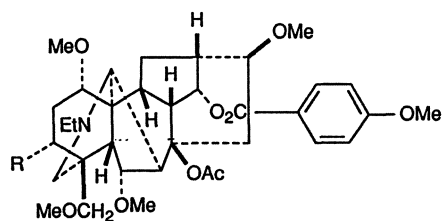


### 3.2.3.6 *Aconitum vilmorrianum*

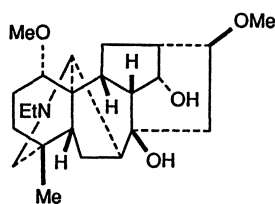
Three alkaloids, vilmorrianine A (3-38), B, and C (3-39), were isolated from *A. vilmorrianum*, a folk medicine used in China for treatment of traumas. Vilmorrianine B was shown to be identical with yunaconitine, vilmorrianine C with foresaconitine. The structure of vilmorrianine A was determined [24]; isolation of the fourth alkaloid, vilmorrianine D (3-40), was also reported [25]. Vilmorrianine D is identical to sachaconitine.



Vilmorrianine A (3-38): R = OH

Vilmorrianine C (3-39): R = H

(Foresaconitine)

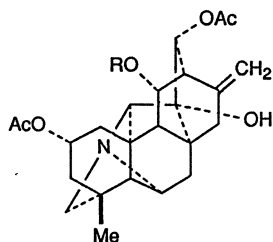


Vilmorrianine D (3-40)

(Sachaconitine)

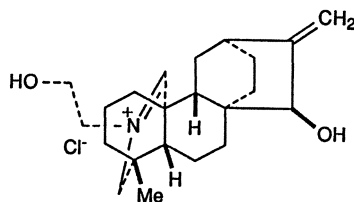
### 3.2.3.7 *Aconitum koreanum*

Guan-fu bases A–G are alkaloids isolated from *A. koreanum* [26, 27]. The structure of guan-fu base G (3-41) was determined on the basis of spectral analyses and X-ray analysis of the methyl iodide to be a C<sub>20</sub> diterpene alkaloid of the hetisan type. Guan-fu bases A (3-42) and G gave the same aminoalcohol and acetic acid on hydrolysis. Guan-fu base G was then proven to be identical with acetyl guan-fu base A. Spectroscopic evidence revealed that an additional acetyl group was located at position C-12. Guan-fu base G thus represents the first example of a hetisan type alkaloid with a C-14 tertiary alcohol and a missing oxygen group at C-15 [1]. Recently, alkaloid guan-fu base H (3-43) [28], 2-isobutyryl-14-hydroxyhetisine (3-44), 2-acetyl-14-hydroxyhetisine (3-45), and isoatisine (3-46) [29] were obtained from *A. koreanum*. Guan-fu base H was identified as atisinium chloride; 2-isobutyryl-14-hydroxyhetisine was designated as guan-fu base Z [30]; and the 2-acetyl analogues as guan-fu base Y [31]. *A. koreanum* has been used in folk medicine as an expectorant and as an analgesic.



Guan-fu base A (3-42): R = H

Guan-fu base G (3-41): R = Ac



Atisinium chloride (guan-fu base H) (3-43)