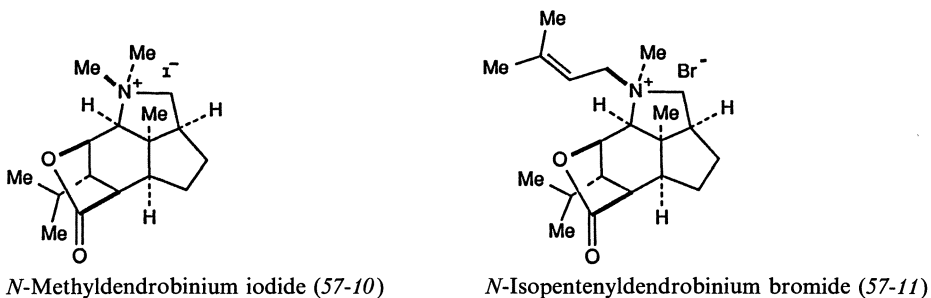
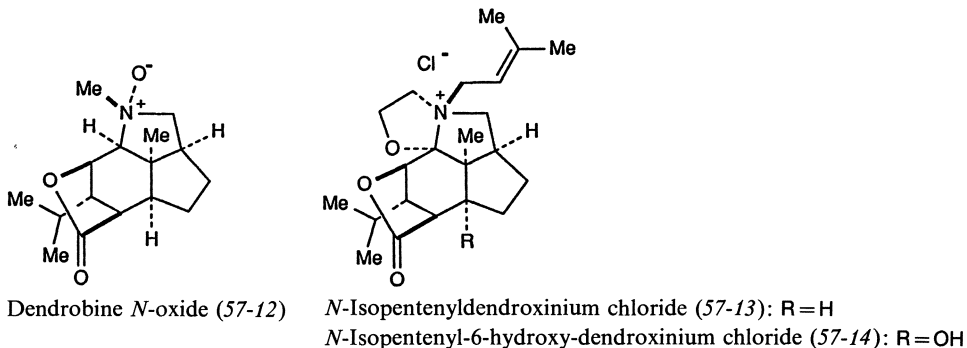


8-Hydroxydendroxine (57-7) 3-Hydroxy-2-oxodendrobine (57-8) 6-Hydroxydendroxine (57-9)

*Dendrobium nobile* can be cultivated on trees. *Sapium sebiferum*, *Prunus salicina*, *Pyrus* sp., *Phoebe nanmu*, *Camptotheca acuminata*, *Aleurites fardii*, *Toona sinensis*, *Pterocarya stenoptera*, *Diaspyros kaki*, *Zizyphus jujuba*, and *Prunus armeniaca* were used as host trees. *D. nobile* cultivated on *P. armeniaca* and on *C. acuminata* contained one to three unknown alkaloids not found in wild *D. nobile*, indicating that the host trees have some effect on alkaloids of *D. nobile* grown on them and could be useful in the investigation of methods of cultivation of *D. nobile* for medicinal use. The dendrobine contents were lower in *D. nobile* cultivated on trees than in wild plants [13]. The average contents of dendrobine in stems and leaves of *D. nobile* cultivated on trees were 0.58% and 0.6%, respectively, and the contents in wild *D. nobile* were 3.2% in stems, 0.8% in leaves and 0.08% in roots [14].

Besides the sesquiterpene alkaloids mentioned above, some related quaternary salts of the dendrobine type *N*-methyldendrobinium iodide (57-10), *N*-isopentenyldendrobinium bromide (57-11), dendrobine *N*-oxide (57-12), *N*-isopentenyldendroxinium chloride (57-13), and *N*-isopentenyl-6-hydroxydendroxinium chloride (57-14) were also isolated from *D. nobile* [15].

*N*-Methyldendrobinium iodide (57-10)*N*-Isopentenyldendrobinium bromide (57-11)Dendrobine *N*-oxide (57-12)*N*-Isopentenyldendroxinium chloride (57-13): R=H*N*-Isopentenyl-6-hydroxy-dendroxinium chloride (57-14): R=OH