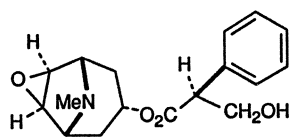


### 55.1 Introduction

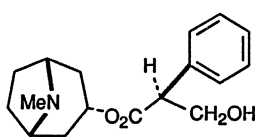
Yangjinhua, Flos Daturae, is the dry flowers of *Datura metel* L. (Solanaceae) collected from April to November when the plants are blooming. It is officially listed in the Chinese Pharmacopoeia and is used as an antiasthmatic, spasmolytic, and anesthetic in surgical treatment. It should not be used for patients with glaucoma or hypertension.

### 55.2 Chemical Constituents

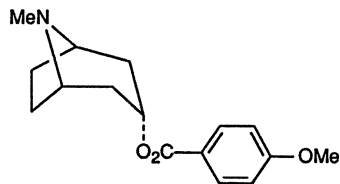
The major alkaloid constituents in the flower of *D. metel* are scopolamine (55-1) and hyoscyamine (55-2) [1]. The scopolamine content in the flowers was found to be 0.26% by thin-layer chromatography and densitometry [2]. The highest scopolamine contents in *D. metel* were 1.1% in branches and 0.6% in the leaves during the flowering period [3]. A new tropane alkaloid named datumetine (55-3) was isolated from the leaves of *D. metel* [4]. Atropine is the racemic mixture of L- and D-hyoscyamine.



Scopolamine (55-1)



Hyoscyamine (55-2)



Datumetine (55-3)

The leaves of *Datura* species are rich with withanolides [5]. Withanolides are steroidal compounds of plant origin with a 22-hydroxy-ergostan-26-oic acid  $\delta$ -lactone (withanolide, 55-4) skeleton. Recently, a series of withanolides were isolated from the leaves of *D. metel* and structurally determined. They are datumetelin (55-5)