Convallaria majalis

Common Names:

conval lily; convallaria; Eischaupe; Jacob's-ladder; lady's-tears; lèrio-do-vale; lily-of-the-valley; liricon fancy; Maiblume; Maiglöckchen; Maischellchen; májusi gyöngyvirág; May blossom; May lily; Mayflower; mugget; muguet; muguet-de-mai; Nieskraut; our-lady's-tears; Zauke

Citations:

Edgerton PHP (1989) Symptoms of digitalis-like toxicity in a family after accidental ingestion of lily of the valley plant. J Emerg Nurs 15:220-223.

Falk W, Weikmann E (1969) Vergiftungen im Kindesalter - Eine Analyse von 642 stationär behandelten kindlichen Vergiftungsfällen.Wien Klin Wochenschr 81(48):867-873.

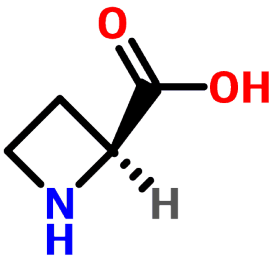
Haugen S, Bryne E, Falke M, et al. (2001) Grade I-II atrioventricular block following lily-of-the-valley (Convallaria majalis) intake: A report of three cases. J Toxicol Clin Toxicol 39(3):303-304.
Krenzelok EP, Jacobsen TD, Aronis JM (1996) Lily-of-the-valley (Convallaria majalis) exposures: Are the outcomes consistent with the reputation? J Toxicol Clin Toxicol 34:601.
Lamminpaa A, Kinos M (1996) Plant poisonings in children. Hum Exp Toxicol 15(3):245-249.
Moxley RA, Schneider NR, Steinegger DH, et al. (1989) Apparent toxicosis associated with lily-of-the-valley (Convallaria majalis) ingestion in a dog. J Am Vet Med Assoc 195(4):485-487.
Štěrba B, Meissner V (1962) Sušené rostliy s obsahem srdečních glyosidů a alkaloidů jako příčina uhynuté hospodářských zvířat. Veteriarstvi 12:83-86.

Links:

http://en.wikipedia.org/wiki/Lily_of_the_Valley
http://www.missouribotanicalgarden.org/gardens-gardening/your-garden/plant-finder/plant-details/kc/c250/convallaria-majalis.aspx
http://www.bbc.co.uk/gardening/plants/plant_finder/plant_pages/2516.shtml
http://plants.usda.gov/java/profile?symbol=coma7
http://www.pfaf.org/user/Plant.aspx?LatinName=Convallaria+majalis
http://www.webhomeopath.com/homeopathy/homeopathic-remedies/homeopathy-remedy-Convallaria_majalis.html

Alkaloids:

L-Azetidine 2-carboxylic acid



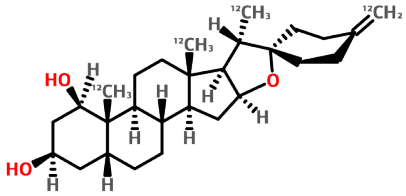
L-Azetidine carboxylic acid

$C_4H_7NO_2$
[2133-34-8]
Mol. wt 101.11

Occurs in the rhizome and fresh foliage of many Liliaceous plants, inlcuding Solomon's seal, *Polygonatum multiflorum*, lily-of-the-valley, *Convallaria majalis*, and squill, *Drimia maritima*; it occurs in sugar beet, *Beta vulgaris* (Chenopodiaceae),*Delonix regia* (Leguminosae), and other plants.

Larvicide, microbial growth retardant, e.g., in Escherichia coli, and causes development aberration in chick embryos. These effects are thought to be due to competitive inhibition of proline uptake and incorporation, with particular reference to collagen synthesis.

Convallamarogenin



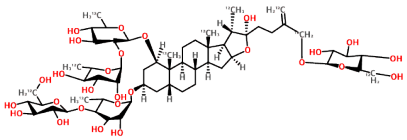
$C_{27}H_{42}O_4$

[16683-27-5]

Mol. wt 430.63

Obtained by acid hydrolysis of convallamaroside (q.v.), which is present in the roots of *Convallaria majalis* (Liliaceae).

Convallamaroside



Convallamarin

$C_{57}H_{94}O_{27}$

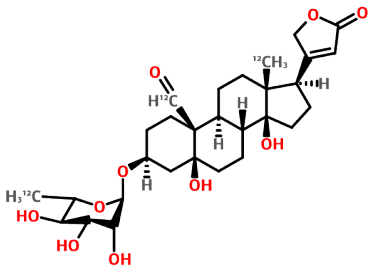
[52591-05-6]

Mol. wt 1211.36

Occurs in the roots of *Convallaria majalis* (Liliaceae).

Strong haemolytic activity.

Convallatoxin



Cardenolide

Strophanthidin 3-*O*-α-L-rhamnoside; Convallaton; Corglykon; Korglykon

$C_{29}H_{42}O_{10}$

[508-75-8]

Mol. wt 550.65

The major cardiac glycoside from the flowers and leaves of the lily-of-the-valley,*Convallaria majalis*, found also in star of Bethlehem, *Ornithogalum umbellatum* (both Liliaceae) and in *Antiaris toxicaria* (Moraceae).

Very toxic to vertebrates (minimum lethal dose intravenously in frogs 0.3 mg/kg body-weight). It is used as a cardiotonic.