THE BIOACTIVITY OF ECDYSTERONE

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Ecdysterone and related steroids, termed ecdysteroids are the moulting hormones of arthropods. Ecdysterone is an ecdysteroid obtained from both plants and arthropods.

Ecdysterone was isolated in a yield of 0.46% from the seeds[1], 0.5% from the roots[2] and 3.2% from the mature stem[3] of Diploclisia glaucescens (MENISPERMACEAE).

We report a procedure for the isolation of ecdysterone on a large scale by subjecting the methanol extract of the mature stem to vacuum liquid chromatography (VLC), combining the fractions containing ecdysterone and then purifying by medium pressure liquid chromatography (MPLC) and recrystallisation. The procedure was used successfully to prepare 100 g of ecdysterone in four 25g batches.

Ecdysterone has been shown by us to have froth, hemolysis, insecticidal and spermicidal activity[3]. It did not have molluscicidal, antifungal, antibacterial, anti-inflammatory[3] or hypotensive activity[2]. Ecdysterone was tested for anticancer and anti-AIDS activity, but found to have no activity.

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[1]Miller, R.W. et alia (1985) Planta Medica 51, 40.
[2]Shah, V.C. et alia (1989) Steroids, 53/3-5,559.
[3]Bandara, B.M.R. et alia (1989) Phytochemistry, 28, 1073.