yielding 40 g of green residue which was extracted with $CHCl_3$. The latter extract was chromatographed on a silicic acid column, with $CHCl_3$-EtOAc mixtures giving sinicuichine and cryogenine, and two yellowish solids which designated as *ALC*-1 and *ALC*-2 and gave positive the usual alkaloid tests [12].

ALC-1 (*lythridine stereomer*) white crystals, mp 335–345° dec., $C_{26}H_{29}NO_5$. MS, *m/e* (%), M^+ 435 (15), 418 (3), 350 (8), 308 (4), 269 (5), 267 (9), 217·5 (1) 185 (5), 166 (5), 149 (17), 136 (10), 129 (10), 105 (8), 97 (15), 95 (15), 91 (25), 83 (20), 81 (20), 77 (8), 73 (21), 69 (40), 60 (16), 57 (32), 55 (33) 45 (35), 44 (50), 28 (100). IR $\tilde{\nu}_{max}$ 3400 (OH), 3100, 2900, 2776, 2700, 2500 (C-N), 1700 (CO), 1600, 1500 (Ar−) 1430 (CH_2), 1260 (C–O), 1110, 990 cm^{-1}; ORD in $CHCl_3$; $(\alpha)^{22}_{589}$ + 115·6° $(\alpha)_{578}$ + 124·5°; $(\alpha)_{546}$ + 139·0; $(\alpha)_{436}$ + 235·0, $(\alpha)_{365}$ and $(\alpha)_{326}$. NMR in $CHCl_3$, δ, 7·04–7·4 (*m*, 6H), 6·09 (*d*, 1H), 5·75 (*d*, 1H), 5·1 (*m*, 1H), 4·08–4·02 (*s*, 6H), 1·7 (*m*, 1H), 3·4–1·8 (14 H). *ALC*-1-*monoacetate*, $C_{28}H_{31}O_6N$, mp 126 128°; *ALC*-1-*monomethyl ether*, $C_{27}H_{29}O_5N$, mp 230–233°; $(\alpha)^{26}_{589}$ + 56·6°; $(\alpha)_{578}$ + 59·4°; $(\alpha)_{546}$ + 67·7°; $(\alpha)_{436}$ + 100·1°; $(\alpha)_{365}$ + 1146°; M^+ 449 (100), 434 (15), 418 (22), 374 (34), 364 (30), 350 (6), 322 (14), 308 (11), 291 (17), 281 (21), 270 (15), 267 (10), 225 (7), 136 (16), 84 (29). NMR, three singlets at 3·94 (3H), 3·88 (3H), 3·80 (3H).

ALC-2, white crystals, mp 309–10°, $C_{26}H_{29}O_5N$; MS; M^+ 435 (100), 418 (14), 391 (14), 374 (18), 350 (35), 308 (20), 367 (39), 217·5 (1), 199·5 (4), 197·5 (1), 126 (16), 74 (40). IR ν_{max} 3400 (OH), 3070, 2900, 2790, 2600, 1700 (CO), 1590, 1500, 1430, 1310, 1260, 1250, 1110, 1040, 970 cm^{-1}. $(\alpha)_{589}$ + 72·3°; $(\alpha)_{578}$ + 75·2°; $(\alpha)_{546}$ + 87·2°; $(\alpha)_{436}$ + 154·6°; $(\alpha)_{365}$ + 115·2°; $(\alpha)_{310}$ + 46·6°. NMR, 8·1 (*m*, 1H), 7·3 (broad, 5H), 3·87 (*d*, 1H), 5·4 (*d*, 1H), 5·18 (*m*, 1H), 4·06 (*s*, 3H), 3·92 (*s*, 3H), 2·9–1·2 (*m*, 14H). *ALC*-2 *methyl ether*. $C_{37}H_{31}O_5N$, mp 235–237°; NMR, four singlets at 4·02 (3H), 3·92 (3H), 3·88 (3H), 3·72 (3H).

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LIRIODENINE FROM *TALAUMA MEXICANA*

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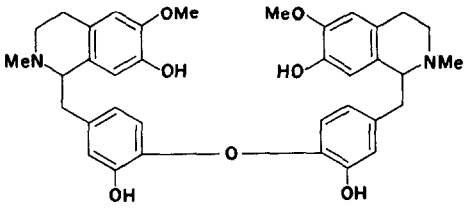
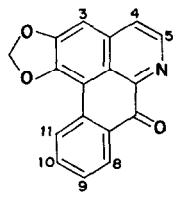
Key Word Index—*Talauma mexicana*; Magnoliaceae; liriodenine; acetamide.

In 1947, Pallares and Garza isolated an alkaloid, mp 176°, aztequine, from *Talauma mexicana* (DC.) Don, which is called Yoloxochitl, "the flower of the heart" in Mexico and used as a remedy for fevers, heart affections, paralysis and epilepsy. They proposed structure (**1**) for aztequine on the basis of results obtained by classical methods [1].

Previously, we synthesized (**1**), which could not be directly compared with the natural product because no aztequine was available [2]. The proposed structure (**1**) is questionable from the biogenetical point of view [3]. Therefore, we attempted to isolate aztequine from *T. mexicana*, but no compound corresponding to it could be found; instead we obtained liriodenine (**2**).



(1)



(2)

First, the crude alkaloid extract [4] from the plant was chromatographed on Si gel. The fraction eluted with C_6H_6–$CHCl_3$ (1:1) was recrystallized from MeOH to give liriodenine mp 275° (**2**) (CHN analysis, $[\alpha]_D$, IR, UV, MS, NMR). A small peak was observed at *m/e* 305 in the MS of crude liriodenine and the NMR showed an *O*-methyl group at 4·16 ppm as a tiny signal, suggesting the presence of a trace of a monomethoxy liriodenine, as an impurity [6]. The fraction eluted with $CHCl_3$ gave acetamide, mp 80–81° (IR, NMR). No other alkaloids were eluted from the column with $CHCl_3$–MeOH (99:1).

Secondly, the crude extract, according to Pallares and Garza's procedure [4]. The benzene-insoluble fraction, from which they isolated azequine, was extracted with dil. HCl and separation of phenolic and non-phenolic fractions was carried out in a usual manner. The non-phenolic fraction gave only liriodenine (**2**) in a small amount, but the phenolic fraction could not be purified because of its small quantity. When the whole fraction was methylated (CH_2N_2 in MeOH) there was no peak above *m/e* 400, in the MS suggesting that bisbenzylisoquinoline alkaloids were absent. The aqueous solution obtained during the extraction was treated with ammonium reineckate, but the precipitate of quaternary salts was not obtained in a sufficient amount. The benzene soluble fraction, after removal of acetamide by sublimation, was purified by chromatography on silica gel and again afforded only liriodenine (**2**).

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THE STRUCTURE OF ESCULENTIC ACID: A NEW TRITERPENE FROM *PHYTOLACCA ESCULENTA*

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Key Word Index—*Phytolacca esculenta*; Phytolaccaceae; new triterpene; esculentic acid.

Roots of *Phytolacca esculenta* van Houtte (Phytolaccaceae) have long been used as an indigenous medicine against edema and rheumatism. It was previously reported that sterols, sterol glucosides, acylated sterol glucosides, and terpenes, such as jaligonic acid and its methylester, phytolaccagenin were isolated from the roots [1, 2]. As mentioned in preliminary report [3], continuing study