

Since it is known that the action of many antibiotics can be reversed by cysteine, it was thought that this enzyme system might be affected. However, cysteine reduction was not inhibited by streptomycin, fradicin (10), or penicillin.

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Veralbidine, a New Alkaloid from *Veratrum album*

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After cautious extraction of *Veratrum album* and working up of the alkaloids, it was possible to isolate the already known bases protoveratrine, jervine, and rubijervine. From the mother liquors, by crystallization from ether, we were able to separate a new alkaloid for which we propose the name "veralbidine." Pure veralbidine crystallizes from dilute acetone in pentagonal plates, from dilute methanol in prisms, and from ether in bunches of fine needles. The crystals melt between 181° and 183° C and exhibit a specific rotation of $[\alpha]_D^{20} = -11.7^\circ$ in pyridine and $[\alpha]_D^{20} = +5.4^\circ$ in chloroform. In 84% sulfuric acid, veralbidine gives a colorless solution. It is sparingly soluble in ether, alcohol, and acetone and insoluble in water. It dissolves readily in chloroform. Veralbidine is irritating to the nasal mucosa, causing sneezing.

The empirical formula of the new alkaloid, as determined by chemical analysis, is $C_{37}H_{61}O_{12}N$. For analytical purposes the alkaloid was dried at 110°.

Required: C, 62.44%; H, 8.57%; N, 1.97%.
Found: C, 62.21%; H, 8.53%; N, 2.14%.

Veralbidine yields a crystalline thiocyanate which melts at 235°–236° with decomposition and frothing. It is readily soluble in methanol and acetone, but sparingly soluble in water. The analytical figures obtained after drying at 110° agreed with the empirical formula $C_{37}H_{61}O_{12}N \cdot HNCN$.

Required: C, 59.26%; H, 8.05%; N, 3.64%; S, 4.16%.
Found: C, 59.04%; H, 8.09%; N, 3.59%; S, 4.09%.
C, 59.10%; H, 8.17%; N, 3.54%.

Veralbidine also yields a crystalline hydrochloride which is readily soluble in alcohol and water. The

hydrochloride melts at 250°–251° with decomposition and frothing. Empirical formula, $C_{37}H_{61}O_{12}N \cdot HCl$.

Required: C, 59.43%; H, 8.29%; Cl, 4.73%.
Found: C, 59.32%; H, 8.45%; Cl, 4.61%.

It is intended to give a more detailed report on the constitution and pharmacological action of veralbidine at a later date.

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The Effect of Experimental Stress upon the Photically Activated EEG¹

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In the search for neurophysiological concomitants of mental processes it has seemed worth while to augment electroencephalographic investigation with the use of the stimulus of intermittently flashing light (1). The ability of such photic stimulation to drive the brain waves was described in 1934 by Adrian and Matthews (2). Such stimulation produces visual sensations (Prevost-Fechner-Benham effect) and a variable dysphoria. Walter (3) has made the observation that the type of brain response produced seems at times to vary in a complex manner with alterations in the subject's mood and that EEG responses appearing at a harmonic of the stimulus frequency might increase at the expense of the primary response. The ability of photic stimulation itself to produce mood changes (1, 3), however, renders such isolated disclosures difficult of interpretation, and hence prompted our investigation of changes in the photically stimulated EEG in subjects whose mental state was deliberately altered under laboratory conditions.

Ninety-six subjects 18–35 years of age were used in this procedure. They were divided into three groups. Groups I and II were selected from a larger sample studied for "anxiety-proneness" by psychiatric and psychological examination (4). Group I consisted of 30 subjects judged least likely to develop symptoms of anxiety under stress. Group II was composed of 25 psychiatric patients with diagnoses of psychoneurosis or character disorder in which anxiety was the predominant symptom. These two groups were placed under an experimental anxiety-producing situation in an attempt to determine whether such stress could affect the photically driven EEG and whether the two groups might react differently.

Group III (41 subjects) was the control group, consisting of experimentally sophisticated medical

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