

to those of the hyptamines. Physiologically cino-bufolenine, which has one-tenth of the pressor action of adrenaline, is more like a derivative of tryptamine than of hypaphorine. L. F. WISE (Chem. Abstr.).

Pharmacological Action in Experimental Hyperglycæmia. (1) *Drugs of the Central Nervous System.* (Boll. Soc. Ital. Biol. Sper., vol. viii, pp. 1746-8, 1933.) Butturini, Luigi.

Rabbits made hyperglycæmic by the intravenous injection of 3-5 gm. glucose reacted like normal rabbits to various doses of strychnine nitrate, sodium santonate, apomorphine hydrochloride and calcium chloride. The duration and severity of cocaine intoxication were markedly less in the hyperglycæmic than in the normal animals. P. MASUCCI (Chem. Abstr.).

7. Pathology and Biochemistry.

Senile Plaques. (Brain, vol. lvii, p. 128, June, 1934.) Bouman, L.

The author points out that practically every brain from a case of senile dementia shows—

(a) Local spool-shaped swellings ("torpedoes") on the neurites of some of the Purkinjé cells in the cerebellar cortex.

(b) Some ganglion cells of the cerebral cortex present Alzheimer's type of fibrillary change.

(c) Some of the neurites in or in the immediate neighbourhood of a senile plaque show knots, buds, eyes, a simple splitting of their neurofibrils or a pathological increase of argyrophilia.

The torpedoes occur in all patients with senile plaques. In most cases they lie in the superficial zone of the granular layer at a relatively small distance from the Purkinjé cells. Both ends of the torpedo gradually pass into a normally impregnated neurite. In a number of these torpedoes small vacuoles can be found. The author considers these swellings to be identical with the local swellings of neurites found by Cajal in injuries of the cerebellar cortex. Torpedoes also occur in amaurotic idiocy, general paralysis, tuberculous meningitis, etc. The early stage of Alzheimer's fibrillary alteration occurs where lipoid is present, usually at a spot between the nucleus and the origin of the neurite, corresponding to the fibrillogenous zone of Held, where the first fibrils develop in the young neuroblast. The eyes, buds, etc., sometimes occur in the superficial layers of a plaque. Plaques are never found in parts where there is much atrophy of the brain, nor are torpedoes, Alzheimer's fibrillary alteration or branching of the neurofibrils. These various changes found in senile dementia closely resemble what the author has described as hyperdifferentiation, which is seen in the early stages of regeneration of nerve-fibres. He would bring them into this category. If this hyperdifferentiation occurs in a ganglion cell, the Alzheimer type of fibrillary alteration results; if it occurs in the course of a neurite a torpedo is formed; if it occurs in dendrites, dendritic swellings develop; if it is the neurites that are involved in a senile plaque, the eyes, buds, etc., result; and if it occurs in the non-differentiated protoplasmatic ground reticulum of the nervous system, a senile plaque results. The formation of plaques is probably a reaction to trauma of the tissues, a disproportionate attempt of the nervous tissue at regeneration after a primary lesion.

G. W. T. H. FLEMING.

Histopathological Observations in a Case of Dementia Præcox with Waxy Rigidity and Cataleptic Attitudes [Algunas observaciones histopatológicas en una psicosis infantil con rigidez cêrea y actitudes catalépticas]. (La Semana Méd., vol. xli, p. 1897, July 21, 1934.) Dimitri, V., and Victoria, M.

A Jewish boy, æt. 13, of good intelligence, began to exhibit alterations of character and mood, becoming depressed and weeping without cause. Fifteen