The Cause of Indole Convulsions in Warm-blooded Animals. (Tohoku Journ. Exper. Med., vol. xxv, pp. 401–6, 1935.) Yanai, B.

The increased excitability is due to the stimulating effect on the motor elements in the spinal cord and the pontine ganglia. There is a simultaneous decrease in sensory excitability. HARRY EAGLE (Chem. Abstr.).

## Effect of Morphine on the Oxygen Consumption of Brain Tissue in the Rat. (Journ. Pharmacol., vol. liii, pp. 156–68, 1935.) Gross, E. G., and Pierce, I. H.

Morphine added to hashed brain tissue decreases the oxygen consumption due to added glucose. Brain from non-tolerant animals killed one hour after a subcutaneous injection of morphine shows an increased oxygen consumption rate due to increased glucose. Brain from tolerant animals has the same metabolic rate as that from normal animals. T. H. RIDER (Chem. Abstr.).

#### The Inorganic Composition of Blood-serum in Schizophrenics. (Arch. Sci. Biol. [U.S.S.R.], vol. xxxviB, pp. 339–43 [in English, pp. 343–4], 1934.) Minker-Bogdanova, E. T., Povorinskaya, S. A., and Povorinskii, Y. A.

Analyses of sodium, potassium, calcium, magnesium, inorganic phosphorus and chlorine of the blood-serum of 18 schizophrenics are presented. Greater variations were found than in normal individuals. In the average figures the serum calcium is higher, while the sodium and chlorine are lower than in normal individuals. The serum potassium tends to be increased in the initial stages of the disease; if the disease is very much prolonged the calcium decreases to subnormal levels. The potassium/calcium and sodium/calcium ratios are considerably lower than normal. W. A. PERLZWEIG (Chem. Abstr.).

# Serological Studies in Multiple Sclerosis. (Klin. Wochenschr., vol. xiii, pp. 1714–17, 1934.) Sachs, H., and Steiner, G.

Alcoholic extracts of brains of patients with multiple sclerosis give a positive complement-fixation reaction with the serum of patients with multiple sclerosis. The reaction is adjudged positive when the serum gives a negative reaction with similar extracts of other types of brain. So evaluated, 41% of patients gave a positive reaction, as against 3% of a control group.

## HARRY EAGLE (Chem. Abstr.).

#### Does the Blood Contain Acetylcholine? (Klin. Wochenschr., vol. xiv, pp. 453-6, 1935.) Ammon, R.

The blood of horses, human beings and cows does not contain biologically demonstrable acetylcholine. The experiment is complicated by the presence of other substances which may simulate acetylcholine.

# HARRY EAGLE (Chem. Abstr.).

Vagotonin and the Heart-slowing Action of Acetylcholine. (Compt. Rend. Soc. Biol., vol. cxviii, pp. 1562–5, 1935.) Merklen, L., Franck, C., and Grandpierre, R.

Ordinarily 0.1-0.2 mgrm./kgrm. acetylcholine is required to produce a noticeable slowing of the heart of a chloralosed dog. But if vagotonin is first injected the threshold is lowered and 0.01-0.02 mgrm./kgrm. produces an effect.

#### L. E. GILSON (Chem. Abstr.).

The Choline, Acetylcholine and Carnitine Contents in Muscle. (Zeitschr. Physiol. Chem., vol. ccxxxiii, pp. 189–203, 1935.) Strack, E., Wördehoff, P., Neubaur, E., and Geissendörfer, H.

Neither free choline nor acetylcholine could be demonstrated chemically or biologically in the skeletal muscles of the steer and dog. No choline could be obtained from fresh muscle, from muscle incubated 5 hours at  $37^{\circ}$ , from boiled muscle or from the aqueous extract after hydrolysis. On the other hand, added choline was recovered without difficulty. Carnitine was quite regularly obtained

LXXXI.

63