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. xxxvi*B, *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°, 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

in 0·02–0·2% yield and isolated as the chloroaurate. Probably the choline reported by Kinoshita and the acetylcholine reported by Bischoff were actually carnitine.
A. W. Dox (Chem. Abstr.).

The Vitamin C Content of the Brain and of the Cerebro-spinal Fluid at Various Ages. (*Klin. Wochenschr., vol. xiii, pp.* 1744–5, 1934.) *Plaut, F., and Bülow, M.*

The liver, brain and testis of rabbits are particularly rich in ascorbic acid, containing 15, 20 and 26 mgrm.% respectively. The brains of newborn mice and rabbits contain more of the vitamin (40–50 mgrm.%) than that of one-year-old animals (20–30 mgrm.%). The cerebro-spinal fluid content of vitamin C varies widely in human beings, but averages considerably more up to the age of 35 (15 to 20 mgrm.%) than it does in later life, falling to 0·4 mgrm.% above the age of 61.
Harry Eagle (Chem. Abstr.).

Studies on the Phosphorus Compounds of Brain. I: Phosphocreatine. (*Journ. Biol. Chem., vol. cx, p.* 625, *Aug.*, 1935.) *Kerr, S. E.*

The writer froze the brain in situ with liquid air in animals under amytal anæsthesia. This procedure preserves a very labile phosphorus compound, which disappears so quickly after death that only one-tenth is left 30 seconds after excision of the brain. The writer shows this labile compound to be phosphocreatine. No significant differences were observed in the labile phosphorus content of the cerebrum and the cerebellum.
G. W. T. H. Fleming.

The Lactic Acid Content of Mammalian Brain. (*Journ. Biol. Chem., vol. cx, p.* 637, *Aug.*, 1935.) *Avery, B. F., Kerr, S. E., and Ghantus, M.*

The writers used the liquid air freezing method of preparation of the brain, and the Friedemann-Graeser procedure for determination of the lactic acid. The lactic acid content was found to range between 11·4 and 35·6 mgrm. per 100 grm., averaging 15·3 mgrm. for the cat and 22·3 for the dog. There was no significant difference between the cerebrum and the cerebellum. The highest values for lactic acid are accompanied by relatively low concentrations of phosphocreatine. As autolysis proceeds, this relationship is accentuated. The longer the freezing is delayed, the greater the content of lactic acid.
G. W. T. H. Fleming.

The Blood Fats in Schizophrenia. (*Journ. Nerv. and Ment. Dis., vol. lxxi, p.* 613, *June*, 1935.) *Brice, A. T.*

The writer examined 62 cases of schizophrenia and 25 normal individuals. Estimations of total cholesterol and total fatty acids were made by Bloor's method and for iodine absorption by the method of Gibson and Howard. Evidence of a real depression of the level of the blood fatty acids and of the blood cholesterol in schizophrenia was found. The functions of desaturation and utilization of fatty acids seem to be closely associated with motor phenomena. Variations in the absolute levels of blood cholesterol and unsaturated fatty acids seem to be closely associated with emotional phenomena.

The depression of the level of the total blood fats is most pronounced among the apathetic stuporous types of case. The iodine numbers of the blood fats in schizophrenia are generally high except in the paranoid group.
G. W. T. H. Fleming.

Pathological Changes in the Tuber Cinereum in a Group of Psychoses. (*Journ. Nerv. and Ment. Dis., vol. lxxxii, p.* 286, *Sept.*, 1935.) *Morgan, L. O., and Gregory, H. S.*

The authors compared 32 brains of various types of psychoses with 6 control cases. The cell groups in the diencephalon were examined. Significant changes were found in the substantia grisea of the third ventricle and the nucleus tuberis lateralis. Cell counts of these areas were made and compared with the normal brains.