Axon Action Potentials in Nerve. (*Cold Spring Harbor Symposium Quant. Biol., vol. i, pp.* 138–45, 1933.) *Gasser, H. S.*

The spike of nerve potential following stimulation is only slightly affected by the addition or subtraction of H^+, ions of the alkali metal or alkaline earth groups, by asphyxia or by drugs of the veratrine group. The after-potential is prolonged and augmented by veratrine, protoveratrine, aconitine and excess of Ba^{++}, Ca^{++} or Mg^{++}.

Conversely, the after-potential is depressed by the univalent cations, particularly K^+, Rb^+ and NH_4^+, by the aliphatic narcotics, and by asphyxia. The spike is related to incomplete depolarization of the plasma membrane.

J. C. MUNCH (Chem. Abstr.).

The Occurrence of an Acetylcholine-like Substance in the Portal Vein Blood of Cats. (*Arch. ges. Physiol.* [*Pflüger's*], *vol. ccxxxiv, pp.* 318–24, 1934.) *Donomae, I.*

Injection of physostigmine or prostigmine causes the appearance of an acetylcholine-like substance in the blood of the portal vein.

A. GROLLMAN (Chem. Abstr.).

The Fate of Indole Introduced in the Organism. (*Biochem. terap. sper., vol. xx, p.* 382, 1933.) *de Gaetani, G. F.*

Indole injected intravenously into the guinea-pig is at first evenly distributed through the whole body, but after 10–20 minutes it was found only in the brain, and in small quantities in the lungs, liver, heart and muscle.

A. E. MEYER (Chem. Abstr.).

The Story of the Development of Our Ideas of Chemical Mediation of Nerve Impulses. (*Amer. Journ. Med. Sci., vol. clxxxviii, p.* 145, *Aug.*, 1934.) *Cannon, W. B.*

The author reviews the history of the chemical mediation of nerve impulses. He points out that the evidence is now quite conclusive that stimulation of smooth muscle and likewise glands causes the appearance of sympathomimetic and parasympathomimetic substances in neighbouring fluids. The sympathomimetic substance is called sympathin; it resembles adrenaline both chemically and clinically, but is not identical with it, for in some ways its action is the opposite. There are two kinds of sympathin—sympathin E, given off from smooth muscle which is excited to contract by sympathetic impulses, and sympathin I, from smooth muscle inhibited or relaxed by such impulses. Acetylcholine, the representative of parasympathetic impulses, is much less stable than sympathin. Evidence has been brought forward for the view that the transfer of nerve impulses from neuron to neuron in sympathetic ganglia is mediated by acetylcholine. The writer looks forward to the day when it may be shown that the depression of manic-depressive insanity results from excess of inhibitory substance in some region of the brain, while exaltation means excess of some excitatory substance.

G. W. T. H. FLEMING.

The Action of Bulbocapnine on Muscular Contraction "in vivo" [*Azione della bulbocapnina sulla contrazione muscolare "in vivo"*]. (*Riv. di Neur., vol. vi, p.* 503, *Oct.*, 1933.) *Sarno, D.*

The author studied the action of bulbocapnine on simple and tetanic muscular contractions in neuro-muscular preparations in frogs, rats and cats. From these investigations he found a decrease in the amplitude of the simple and tetanic muscular contractions and an increase in the residual muscular tone. In rats bulbocapnine produced an increase in tremor. The author concludes that there is some doubt as to the value of bulbocapnine in therapy.

G. W. T. H. FLEMING.