

Because of the nuclear changes in the lens of young animals it was important to determine the effect of a similar diet on older animals. Two albino rats, 64 days old and weighing 150 and 157 gm. respectively, and 2 animals 78 days old, weighing 144 and 159 gm. respectively, were placed on the aforementioned galactose diet. They continued to grow and maintain good health. Between the 18th and 23rd day, they developed changes in the lens. Daily examination of the eyes revealed opacities in the periphery of the lens. When allowed to continue on the diet, the nucleus of the lens also became opaque or cataractous. Two of the 4 animals were sacrificed for histological study of the eyes and the internal organs. On gross examination, no pathological changes were noted. A study of the urine output of the animals showed a marked reduction of Benedict's quantitative sugar reagent. It was calculated that 1 cc. of urine showed 52 mg. of galactose.³

A new group of animals have been placed on diets of varying amounts of galactose to determine whether the blood chemistry is similar to that found in rats on a high lactose diet. A more detailed histological study of the ocular changes is contemplated.

It is safe to speculate that galactose given in the diet interferes with the metabolism of the lens. The changes take place in the growing areas of the tissue—in the young albino rat the nucleus is altered whereas in the adult rat, the periphery of the lens is involved.

7878 P

Nature of Nitrogenous Constituents in Petroleum Ether Extract of Plasma.

D. D. VAN SLYKE, I. H. PAGE, E. KIRK AND L. E. FARR.

From the Hospital of the Rockefeller Institute for Medical Research, New York.

Neither the amino nor the non-amino nitrogen obtained in the petroleum ether extract of plasma by the technique of Kirk, Page, and Van Slyke¹ derives entirely from phosphatides. The N:P ratio for lecithin and cephalin is 1, while the Amino N:P ratios are 0 and 1 respectively. In a mixture of these phosphatides the N:P ratio would accordingly be 1, and the Amino N:P ratio between 0 and 1, according to the proportion of cephalin present. Petroleum ether

³ Roe, J. H., and Schwartzman, A. S., *Am. J. M. S.*, 1933, **186**, 455.

¹ Kirk, E., Page, I. H., and Van Slyke, D. D., *J. Biol. Chem.*, 1934, **106**, 203.

extracts from 10 normal plasmas were prepared and analyzed according to the method of Kirk, Page, and Van Slyke. The N:P ratios varied from 1.7 to 5.5, and averaged 3.4. The Amino N:P ratios varied from 0.6 to 1.7, and averaged 1.7. There was accordingly more of both total N and amino N present in the extract than could be combined in these phosphatides. In extracts from plasma of uremic patients the excess of N and NH_2 was still greater. The N:P ratio in 8 cases varied from 3 to 18, and averaged 9, while the Amino N:P ratio ranged from 0.9 to 4.7 and averaged 2.5. Part of both the amino and the non-amino nitrogen is removable from the petroleum ether by shaking with acidified water. The nature of the material is being studied further.

7879 C

Infection of Monkeys with the Virus of Poliomyelitis in Human Spinal Cords.*

MAURICE BRODIE.

From the Department of Bacteriology, New York University and Bellevue Hospital Medical School, and the Bureau of Laboratories, Department of Health, New York City.

With 4 out of 5 human cords taken from acute cases of poliomyelitis at autopsy the virus was successfully transmitted to *Macacus rhesus* monkeys. All 5 individuals had died of respiratory paralysis in the acute stage of the disease. Histopathological study showed intense infiltration and considerable nerve cell destruction.

The first of these, strain B, was obtained from a child who died of bulbar paralysis, 5 days after the onset of paralysis, during an outbreak in Montreal, in 1931. More than 3 years later, during which interval the cord and tonsils were left in glycerine, at ice box temperature, a single intracerebral and intraperitoneal injection of each tissue was given to a monkey. The cord produced paralysis in 13 days and the animal was prostrate 4 days later, while the tonsil gave complete paralysis within 6 days.

The second strain, 1049, from a case occurring in New York in 1933, and had been in glycerine for a year when tested, was given in combined intracerebral and intraperitoneal inoculations over 3

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