survivals are not uncommon in untreated animals following inoculation by the intranasal route. In the other monkeys, as tabulated, there is no significant difference in the time of onset of paralysis, in the time of occurrence of complete paralysis of the extremities, or in the day of death, between the 2 groups. The results of these experiments fail to indicate any therapeutic value of sulphanilamide in experimental poliomyelitis.

9371 P

Beneficial Effect of Non-Saponifiable Fraction of Soy Bean Oil on Chicks Fed a Simplified Diet.

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Pappenheimer and Goettsch[1] have described a syndrome in chicks fed certain simplified diets. The syndrome was characterized by paralytic symptoms, and post mortem examination revealed definite lesions in the cerebellum. Recently Goettsch and Pappenheimer[2] stated that protection against the syndrome ("nutritional encephalomalacia") was afforded by the non-saponifiable fraction of certain vegetable oils, including soy bean oil.

It has been found possible to obtain confirmatory evidence of a beneficial effect of the non-saponifiable matter of soy bean oil when fed to chicks receiving a simplified diet. Crude soy bean oil* was treated as follows: To 500 cc. of boiling methyl alcohol (freshly distilled from potassium hydroxide) were added in order 1250 gm. of potassium hydroxide and 1000 gm. of crude soy bean oil. Heating was continued under reflux for one hour, whereupon 2500 cc. of boiling water was added. When cool, the resulting solution was first saturated with 3500 cc. of peroxide-free ether (prepared by shaking with 5% aqueous stannous chloride, until a sample gave no color with a colorless ferrous sulfate + potassium thiocyanate solution, and distilling), then extracted with 5 2-liter portions of the same solvent. Throughout the entire process, all apparatus was flushed with natural gas. The extracts were combined, washed first

[1] Pappenheimer, A. M., and Goettsch, M., *J. Exp. Med.*, 1931, **53**, 11.

[2] Goettsch, M., and Pappenheimer, A. M., *J. Biol. Chem.*, 1936, **114**, 673.

* Kindly supplied by Allied Mills, Peoria, Ill., through the cooperation of Dr. E. M. Hasbrouck.

TABLE I.
Protective Effect on Chicks Afforded by Soy Bean Oil and Non-saponifiable Matter of Soy Bean Oil. Results Taken at 28 Days.

Supplement to basal diet	No. of birds	No. developing definite paralysis	No. dying without paralysis being observed
None	30	16	6
Ether solution of non-saponifiable matter of soy bean oil corresponding to 15% of original oil	28	0	1
10% of soy bean oil	25	0	1

with 5% sulfuric acid, then with water until neutral, concentrated and used to supplement the diet described below.

The basal diet consisted of corn starch, 65%; fat-extracted whole sardine meal,† 25; rice bran extract,[3] 7; whey adsorbate,[4] 2; alfalfa hexane extract,[5] equivalent to 0.5% of alfalfa meal; cod liver oil, 1. In some experiments a purified antihemorrhagic concentrate, kindly supplied by Dr. H. J. Almquist, replaced the alfalfa hexane extract without perceptible alteration of the results. Single-comb White Leghorn chicks were placed on this diet at hatching. On the basal diet, paralytic symptoms, accompanied by loss of weight and shortly followed in most cases by death, appeared at 20 days of age. By the 28th day, the results summarized in Table I were obtained.

The chicks on the supplemented diets appeared normal, but were definitely below normal weight. This observation of the protective effect of the non-saponifiable fraction of soy bean oil is in accord with the results of Goettsch and Pappenheimer.[2]

9372 P

Non-Transmissibility *in utero* of Trichinosis in the Rat.

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For several weeks after the maturation of ingested larvae of *Trichinella spiralis* in the intestine, those of the next generation enter the circulating blood of the host. Although the presence of

† Furnished by the F. E. Booth Co., San Francisco, by the courtesy of Mr. T. D. Sanford.

3 Lepkovsky, S., and Jukes, T. H., *J. Biol. Chem.*, 1935, **111**, 119.

4 Lepkovsky, S., and Jukes, T. H., *J. Biol. Chem.*, 1936, **114**, 109; Jukes, T. H., *J. Biol. Chem.*, 1937, **117**, 11.

5 Almquist, H. J., *J. Biol. Chem.*, 1936, **114**, 241.