duced by trypsin in the dog nor the proteolytic activity of trypsin on a hemoglobin substrate. However, heparin does protect guinea pigs against the lethal effects of intravenously injected trypsin.

The observation that fastusol, like heparin, protects rats against the lethal effects of trypsin is compatible with the notion that such a protective action on the part of heparin is related to its anticoagulant properties.

14840 P

"Lipid-Steroid" Fractions of Mouse Adrenal Lipids.

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The amount of the lipid material of the mouse adrenal gland was demonstrated by Vicari[1] to vary with the strain used. The technic and method applied was histological in nature. This report deals with initial experiments in separating the lipid material of adrenal glands of different strains of mice into 2 fractions. The purpose is to see wherein lies the true difference between strains, that is, whether the variations hold true for both fractions. The 2 fractions are designated "lipid," materials soluble in petroleum ether. These include cholesterol and cholesterol esters. The other fraction is "steroid" material not soluble in petroleum ether.

Material. Three inbred strains of mice were used. The histories of these are as follows: *C57black,* inbred for over 50 generations with a 1% incidence of mammary gland tumor in breeding females, and a 0% incidence in virgin females; *dba,* inbred for over 50 generations with a 70% incidence of mammary gland tumor in breeding females and a 50% incidence in virgin females; *ce* strain, inbred for 35 generations with less than 1% incidence of mammary gland tumor in breeding females and none in virgins. The animals used for these experiments were normal virgin females 49 days old. Tumors first appear in the tumor strains at 6 months old for breeding females and older for virgin females. The average individual body weight was 19.5 g. None of the animals used had tumors.

Procedure.† For each test 4 adrenals from 2 littermates were used. Two tests were made for each group. The glands were trimmed, weighed, homogenized with a 1:3 mixture of absolute alcohol and acetone A.R. The homogenate was refluxed for 12 hours on a steam bath. The petroleum extract yielded the "lipid" fraction while the 70% alcohol extract yielded the "steroid" fraction. Each extract was evaporated to dryness on a steam bath and the residue taken up in a 1:3 alcohol-acetone mixture and appropriate aliquots taken for analysis by the Van Slyke manometric method[2] for determination of carbon.

Results. Per adrenal gland the *C57black* strain has the highest amount of total carbon, "lipid" and "steroid" fraction, 0.73 mg, 0.61 mg, 0.12 mg respectively, while the *dba* strain, the lowest amount, 0.37 mg, 0.36 mg, 0.01 mg respectively. The *ce* strain has values in

TABLE I.
"Lipid" and "Steroid" Fractions in Adrenal Glands of Mice.

Amount of Carbon per mg of Adrenal Gland			
Strain	*C57 black*	*ce*	*dba*
	mg	mg	mg
Avg gld. wt.	2.75	4.02	2.80
	mg	mg	mg
Total carbon	0.26	0.15	0.133
"Lipid" Fr.	0.22	0.12	0.129
"Steroid" Fr.	0.04	0.03	0.003

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† This procedure was devised by Dr. K. Dobriner of the Memorial Hospital, New York City. We are deeply indebted for his assistance and suggestions.

1 Vicari, E. M., *Anat. Rec.*, 1943, **86**, 523.

2 Van Slyke, D. D., Page, I. H., and Kirk, E., *J. Biol. Chem.*, 1933, **102**, 635; Van Slyke, D. D., and Folch, I., *J. Biol. Chem.*, 1940, **136**, 509.

between, 0.60 mg, 0.48 mg and 0.12 mg respectively. Since the *ce* adrenal gland was heavier than the *C57black* and *dba's* weight, which were the same, the amount of carbon was calculated per milligram of adrenal tissue. These calculations are given in Table I. The ratio of the "steroid" to the "lipid" fraction is 1:38 for the *dba,* 1:5 for the *C57black,* and 1:4 for the *ce* strain.

The 3 strains vary not only in their amount of total lipids but also in their amount of the two fractions. The chemical analysis of the adrenal glands of genetic strains of mice indicate the existence of different amounts of "lipid" and "steroid" contents that appear at present to be associated with the incidence of mammary gland tumor.

This work is being continued and extended and the present conclusions are naturally of a preliminary and tentative nature subject to further study.

14841

Effect of Increased Protein Intake on Nitrogen Retention in Hypoproteinemic State (Meleney Ulcer).*

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Information pertinent to the protein intake requirements and some of the results obtained by means of daily feedings of large quantities of protein from two sources to a patient with a Meleney type ulcer of the anterior abdominal wall, comprise the subject matter in this presentation. K.P., age 33, University Hospital Case 740032, had a Meleney ulcer with the edges subcutaneously dissected which traversed the abdomen from one iliac crest to the opposite side, had engulfed the umbilicus, and extended nearly to the costal margin. The progress of the lesion had been associated with a large weight loss, anorexia, febrile episodes, and general bodily and mental deterioration. She was reluctant even to eat when fed by ward attendants, nor would she cry out for medication when in distress. A continuous 24-hour-a-day intragastric drip feeding program with 100 g of powdered bovine plasma protein in 500 cc of water and sufficient quantities of diet to approximate 4000 calories daily were given. After one week, these quantities were increased to 200 g of powdered bovine plasma protein and enough diet to provide more than 4800 calories daily. The hemoglobin value percentage of plasma proteins and albumin fraction were secured at the start of the feeding, during the course of the project, and at its conclusion. Blood volumes were obtained at the start and finish. This data has been recorded in Chart 1. The most striking rise in the plasma protein value occurred in the albumin fraction which increased from 2.7 g% on 6-19-44 to 3.7 g% on 7-12-44. While the hematocrit rose from 32.5% on 6-19-44 to 35.5% on 7-19-44, the blood volume was enlarged from 3.93 liters to 5.5 liters during the same interval. It is obvious that plasma protein regeneration has been effective by this feeding schedule. The magnitude of the quantities regenerated is hardly appreciated until the factor of increased blood volume is brought into the calculations. It is then apparent that the total albumin content of the plasma volume has been nearly doubled during the test period. Such data serves to emphasize both the hazard of submitting such a patient with a reduced blood volume to any additional blood-letting and the wisdom of providing for restoration of vascularly retained fluids before surgery is undertaken. Interesting also, is the seeming failure of the body to act effectively on avail-

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