SUMMARY.

It has been shown that the duration of life of nephrectomized rats is not affected by injections of the same typhoid vaccine which regularly shortens the life of suprarenalectomized rats. It has also been shown that suprarenalectomized rats have a refractory period of approximately four days before any marked drop in resistance is manifest. These findings, together with the fact that the suprarenalectomized animals fully retain their ability to form antibodies and to regenerate the thymus and lymph tissues, suggest that suprarenalectomy exerts a specific physiologic influence on resistance.

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Fractionation of Irradiated Cholesterol: Chemical Observations.

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One of us recently reported[1] that cholesterol, as a result of exposure in air to light from the mercury-vapor quartz lamp, reacted differently from the untreated cholesterol towards a reagent consisting of aniline and concentrated hydrochloric acid. With the aid of this color reaction, fractionation of irradiated

cholesterol was undertaken. It was hoped that in this way an antirachitically active fraction might be obtained.

After repeatedly recrystallizing irradiated cholesterol, it gave a negative color reaction, while the mother liquor, from the first recrystallization, gave a more intense reaction than did the irradiated cholesterol itself. The mother liquor was concentrated by evaporation and filtered. The final filtrate was yellow, removal of the remaining solvents on a water bath left a yellow oil. Recrystallization of purified cholesterol gave no such product. For convenience, it will be referred to as "U. V. oil of cholesterol" until a more suitable name is proposed.

The yield of crude oil was about 10 per cent when the cholesterol was irradiated for two hours, and about 5 per cent when irradiated for one hour. The irradiation was performed in air at a distance of 18 inches, using a Hanovia lamp. The cholesterol was removed by the digitonin precipitation method. About 40 per cent of the crude oil was recovered as cholesterol-free oil.

The color reactions usually used for the detection of cholesterol were tried on the cholesterol-free oil. With 1 mg. of this oil, a positive Salkowski test was obtained; with 1 mg. of purified cholesterol the upper layer was yellow, and very little green was obtained in the lower layer. Apparently the Salkowski[2] test is not given by purified cholesterol in small quantities while it is given intensely by one or more of its derivatives. The U. V. oil, both crude and cholesterol-free, gave a positive Liebermann-Burchard reaction, although the green was of a somewhat different tint from that given by cholesterol. Cholesterol gave a negative Lifshütz test for oxycholesterol, while a positive test was obtained with irradiated cholesterol and with both the crude and cholesterol-free U. V. oils. With the aniline-hydrochloric acid reagent, both the crude and the cholesterol-free U. V. oils gave positive tests for the chromogenic substance.

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