acini; instead it is at least partly retained in the gland. (2) The stimulation of the acini does not necessarily lead to an excess production of thyroxin. (3) Peripheral effects counteract the stimulating effect of the thyroid hormone.

Of these assumptions, the first seems to be the most probable. However, further experimental studies must be made before we can accept this interpretation as definite.

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Effect of Irradiated Ergosterol on Mammalian Thrombocyte Counts.*

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The suggestion for this work was found in the observations of F. D. Gunn,[1] who found that by exposing young rabbits to radiations from the mercury vapor lamp, a distinct increase in the number of thrombocytes was obtained in one week. Brougher[2] had demonstrated that large doses of cod liver oil administered to dogs with an experimental obstructive jaundice caused a return to normal of the coagulation time, which had been prolonged. Moise and Sooy[3] showed a rise in the thrombocyte count in thrombocytopenic purpura in human beings following irradiation with ultra violet rays over a period of 3 weeks.

The question arose in our minds as to whether or not irradiated ergosterol would produce a similar rise in thrombocytes. We did not concern ourselves with the coagulation time at the beginning of these experiments.

We chose rats, since Laurens and Sooy[4] had described a simple method for thrombocyte counts in these animals and charted what they found to be the normal counts. Five rats, male and female, of unknown age, were selected at random, and the erythrocytes and

* We wish to acknowledge our indebtedness to the Department of Medicine and particularly to Dr. Thompson, whose timely advice and assistance has been invaluable.

[1] Gunn, F. D., PROC. SOC. EXP. BIOL. AND MED., 1926, xxiv, 120.

[2] Brougher, J. C., *Science*, 1928, lxviii, 256.

[3] Sooy, J. W., and Moise, T. S., *J. Am. Med. Assn.*, 1926, lxxxvii, 94.

[4] Sooy, J. W., and Laurens, H., PROC. SOC. EXP. BIOL. AND MED., 1924, xxii, 116.

thrombocytes were counted for several successive days until we obtained what we considered normal variations. The indirect method we used is as follows: The tail of the rat is carefully cleansed with soap and water and coated with vaseline. A small piece is snipped from the tip with vaseline coated scissors. The cut end is immediately immersed in the diluting fluid and a suspension of sufficient concentration obtained. The suspension of thrombocytes and red cells is then carefully shaken for 2 minutes and the counting chamber loaded therewith. The number of thrombocytes per cc. is determined from the ratio of reds to thrombocytes and the actual red count. Each thrombocyte count was done in duplicate, thus checking one against the other.

The preparation of irradiated ergosterol used was furnished to us through the courtesy of Mead, Johnson & Company, called "Acterol." They state that one drop is equivalent to 6 cc. of cod liver oil, but the actual amount of irradiated ergosterol per unit volume is not given. This material was given in drop doses by mouth.

The thrombocyte counts in rats receiving Acterol showed an immediate rise. With a dosage of 3 drops the thrombocyte count was double in 48 hours. Rats receiving 10 drops per day showed a similar rise in 48 hours, but the rise was not so high and with continued dosage dropped again after 2 days.

Our series of animals is very small and we do not, therefore, draw any sweeping conclusions. However, Dr. L. D. Thompson has kindly consented to let us report some of the results that he and his assistants have obtained using rabbits. They have been using a solution of irradiated ergosterol in olive oil, the content of the former being known, and have obtained similar results. We have been checking our first series of rats with a second and to date the results are the same. Consequently, we believe that our point has been proven, namely, that irradiated ergosterol increases the thrombocyte count in normal animals.

It is to be anticipated that the coagulation time, the bleeding time, and perhaps even the healing of wounds will be coincidentally affected and work on this point will be reported later. Some of the clinical aspects, particularly the reaction in purpura and other hemorrhagic conditions, are now being studied by Dr. Barr and Dr. Thompson of the Department of Medicine.