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The effect of thyroid products on Paramecium.

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Studies of Nowikoff, Shumway, and Budington and Harvey on the influence of thyroid products on Paramecium have apparently shown a marked increase in the rate of reproduction, and their results have been generally cited as a corroboration of the view that the active principle of the thyroid directly accelerates cell metabolism.[1] Recently Riddle and Torrey have failed to find an increased reproduction in Paramecium following subjection to thyroxin.[2]

We have reinvestigated the influence of thyroid products by a series of experiments on a pedigree race of Paramecium, using the organism as a "biological indicator" and following the general technique employed in other studies on Paramecium in this laboratory.[3]

The results, which will be published in detail elsewhere,[4] show in a clear cut manner that neither thyroxin (Squibb's) nor commercial dessicated thyroid, or fresh dessicated thyroid of the turtle produce any significant acceleration of the division rate of Paramecium.

Data to the contrary published by previous investigators apparently are attributable chiefly to variations in the bacterial food supply which the different media afforded the Paramecia.

Accordingly, all the evidence from studies on Paramecium to the effect that thyroid products accelerate cell anabolism is, we believe, erroneous.

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1 Nowikoff, M., *Arch. f. Protistenkunde,* 1908, xi; Shumway, W., *Jour. Exper. Zool.,* 1914, xvii; *Ibid.,* 1917, xxii; Budington, R. A., and Harvey, H. F., *Biol. Bull.,* 1915, xxviii.

2 Riddle, M. C., and Torrey, H. B., *Proc. Amer. Soc. Zool., Anat. Rec.,* 1923, xxiv.

3 Woodruff, L. L., *Biochem. Bull.,* 1912, i; Woodruff, L. L., and Underhill, F. P., *Jour. Biol. Chem.,* 1913, xv.

4 *Journal of Biological Chemistry.*