

Sum. wy. A wide variety of bacterial species and several molds grown in synthetic biotin-free media have been shown to synthesize biotin to a greater or lesser degree as measured by the yeast-growth biotin assay method. This evidence suggests that biotin may be of widespread importance in microbial nutrition.

12025 P

Inactivation of Testosterone Propionate by Normal Female Rats.

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The presence of androgens in normal female animals predicates a system for their inactivation and removal. The origin of these androgens is considered to be in either the ovary¹ or the adrenal.² The following experiment shows that one site of inactivation for these substances is the liver, just as it is for estrogens^{3, 4} and androgens^{3, 5} in female and male castrate rats respectively.

Pellets of testosterone propionate* produce anestrus in adult female rats when implanted in the subcutaneous tissues.⁶ The duration of production of anestrus, as determined by daily vaginal smears, coincides with the presence of the pellet in the tissues. Anestrus results from inhibition of the hypophysis leading to suppression of the gonadotropic factor.² After the pellets are removed estrus cycles resume their normal pattern; however, occasional periods of estrus may predominate. This effect of the pellets of testosterone propionate on the estrous cycle was tested in 5 normal adult female rats for a period of 60 days. The average absorption from the pellets was .050 mg per day.

A pellet of testosterone propionate implanted in the spleen of an adult normal female rat causes no significant change in the cyclic

¹ Hill, R. T., *Endocrinology*, 1937, **21**, 495.

² Koch, F. C., *Physiol. Rev.*, 1937, **17**, 153.

³ Biskind, G. R., and Mark, J., *Bull. Johns Hopkins Hosp.*, 1939, **65**, 212.

⁴ Biskind, G. R., *Endocrinology*, in press.

⁵ Biskind, G. R., *PROC. SOC. EXP. BIOL. AND MED.*, 1940, **43**, 259.

* Supplied as Perandren through the courtesy of the Ciba Pharmaceutical Products, Inc., Summit, N.J.

⁶ Mark, J., and Biskind, G. R., *J. Clin. Endocrinol.*, in press.

appearance of estrus, except for slight dominance of the estrified phase in some animals. This procedure was observed in 10 normal adult female rats for a period of 60 days, by means of daily vaginal smears. The average absorption from each pellet of testosterone propionate was .072 mg per day.

Collateral anastomotic circulation from the spleen into the systemic circulation may be established by transplanting it between the overlying muscles and skin. Return of any blood into the portal system may then be prevented by ligation of the splenic vessels. A pellet of testosterone propionate implanted in such a spleen produces anestrus exactly comparable to that produced by the pellet in the subcutaneous tissues. This effect was observed in 4 normal adult female rats for a period of 30 days, by means of daily vaginal smears. The average absorption from each pellet was .081 mg per day.

Summary. Anestrus occurred as long as a pellet of testosterone propionate was present in the subcutaneous tissues of normal female rats. No significant changes occurred in the estrous cycles of normal adult female rats when pellets of testosterone propionate were implanted in the spleen in which the normal portal circulation was intact. When the blood from the spleen containing a pellet of testosterone propionate entered the systemic circulation without passing through the liver, estrus was inhibited.

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Rabbit Test for Thermal Reactions Caused by Concentrated Horse Serum.

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Since tests in rabbits for pyrogenic activity of therapeutic antipneumococcal rabbit serum processed with heat and Kaolin have proven useful in indicating which preparations will produce thermal (chill) reactions when given intravenously in man,¹ the possibility of applying this method to concentrated antipneumococcal horse

¹ Goodner, K., Horsfall, F. L., and Dubos, R. J., *J. Immunol.*, 1937, **33**, 279.