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Presence of Androgens in the Placenta.

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Although the presence of androgenic substances in the placenta is mentioned by several authors, these fail to make any specific citation to the original work, and an examination of the more common indices is no more encouraging.

Siebka[1] examined 2 placentae following operative abortion and failed to find any androgens in the 4-5-month-old organs. If there is any positive evidence of the occurrence of androgens in the placenta, it has not found its way into the current literature.

The purpose of this study was to determine whether or not the presence of androgens in the placenta could be demonstrated.

Three male and 3 female full term placentae were secured, washed as free of blood as possible and extracted according to the Gallagher and Koch method. The extracts were assayed both on capons and by the colorimetric methods.

The colorimetric assay* indicated the presence of one international unit in 60.7 g of male placenta, and one I.U. in 69.4 g of female placenta. The capon test showed for the male placentae one I. U.

TABLE I.

Placenta No.	Wt, g	Capon No.	Total comb growth		I.U.	Grams tissue per I.U.	Colorimetric grams tissue per I.U.
1 (male)	500	1	5	7.3	6.8*	226.9	60.7
2 "	470	2	2.3				
3 "	410						
Total wt	1380						
4 (female)	470	1	2.6	4.4	3.66*	371.5	69.4
5 "	425	2	1.8				
6 "	465						
Total wt	1360						

*Corrected according to McCullagh and Cuyler, *J. Pharm. and Exp. Ther.*, 1939, **66**, No. 4.

1 Siebka, H., *Arch. f. Gynäkol.*, 1931, **146**, 415.

* For which we thank W. K. Cuyler, of the Duke Hospital.

per 226.9 g of tissue; the female one I. U. per 371.5 g. Only two birds were used for each test and the difference in response was in one case about 100%, in the other about 50%. Lack of material prohibited the use of more birds.

While the experiments give positive evidence of androgens in the placenta, they may not be taken as quantitative. The wide variation between the colorimetric test and the capon assay is confusing, but may be related to the relative amounts of androgens or 17 ketosteroids. No effort was made to determine which of the 17 ketosteroids were present.

It is rather interesting, although it may not be significant, that the male placenta contains considerably more hormone, by both tests, than the female.

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Implantation Following Mating in Hypophysectomized Rats Injected with Lactogenic Hormone.*†

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In a recent article[1] the writer reported that lactogenic hormone, hypophyseal synergist, and whole anterior pituitary extract maintained pregnancy in rats hypophysectomized after implantation of fertilized ova had occurred. The data which follow may show that nidation and subsequent development of fertilized ova will occur in hypophysectomized rats under the influence of lactogenic hormone.

Fourteen experimental animals were used. Time of mating was determined by the presence of a copulation plug in the vagina or of sperm observed in the vaginal smears. Vaginal examinations were made at 4:00 p.m. and 10:00 a.m., so the exact time of coitus, which always occurred in the intervening 18-hour period, was not

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† Most of the lactogenic hormone used in this work was supplied by Dr. Erwin Schwenk, Schering Corporation, Bloomfield, New Jersey. Some of the lactogenic hormone was supplied by Dr. J. P. Schooley, Difco Laboratories, Inc., Detroit, Michigan.

1 Cutuly, E., PROC. SOC. EXP. BIOL. AND MED., 1941, 47, 126.