rivatives (amino, methyl, methoxy, chloro) were inferior to the mono para compounds. Substitution of the hydrogen atoms of the amino groups with alkyl groups did not increase the effect. Benzil, benzanilide, and o-benzoyl benzoic acid did not inhibit in the lowest dilution. The sulfoxide and sulfone derivatives, including promin, were low in bacteriostatic action, although no analogous halogen or alkyl derivatives of these compounds were tested. 2,4'-Dichlorobenzophenone also inhibited a virulent strain of tubercle bacilli in high dilution in liquid media, but not on solid media.

13872

Lactogenic Hormone Prolongs the Time During Which Deciduomata May be Induced in Lactating Rats.*

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The ability to produce deciduomata is an indicator of corpus luteum activity. This functional test has been used as evidence that the corpora were active during lactation in the rat. Inasmuch as deciduomata can be produced as late as the sixteenth day of lactation,[1] the corpora function normally for approximately this duration. Although the corpora do not function for any appreciable period after this time, it has been possible by progesterone administration to prolong the period during which deciduomata may be produced.[2]

Recently[3] purified lactogenic hormone has been given hypophysectomized rats to produce deciduomata. This appears to demonstrate a gonadotropic function of this hormone. In these experiments the corpora lutea appeared large and healthy even when the follicles, as well as the interstitial tissue were below normal. Furthermore in this same work the effectiveness of lactogenic hormone in producing the growths in adrenalectomized rats was demonstrated.

Fifteen lactating rats were subjected to uterine stimulation as late as the twenty-fourth postpartum day and were thereafter injected subcutaneously with 100 I.U. of com-

TABLE I.
Prolongation of Luteal Function by Lactogenic Hormone.

Uterine stimulation postpartum day	Test rats	Deciduoma	Control rats	Deciduoma
20	3	3	2	0
21	3	3	2	0
22	3	3	2	0
23	4	3	2	0
24	2	1	—	—
	—	—	—	—
Total	15	13	8	0

* This study was aided by the Christine Breon Fund for Medical Research.

1 Lyon, R. A., PROC. SOC. EXP. BIOL. AND MED., 1939, **40**, 151.

2 Unpublished experiments.

3 Evans, H. M., Simpson, M. E., Lyons, W. R., and Turpeinen, K., *Endocrinology*, 1941, **28**, 933.

mercial lactogenic hormone† daily for 4 days. As shown in the table, 13 of the 15 animals, sacrificed on the 5th day, showed microscopically confirmed deciduomata, together with large robust-appearing corpora lutea. Eight uninjected control animals showed small regressive corpora and no deciduomata at the sites previously stimulated. The results are interpreted as further evidence of corpus luteum stimulation by the lactogenic hormone.

Presumably this gonadotropic function is mediated by the continued production of progestin in the corpora in sufficient concentration to permit the growth of the deciduomata well past the time when they can normally be produced.

† Acknowledgment is made of the donation of commercial lactogenic hormone of the anterior pituitary gland to Schering Corporation, Bloomfield, N.J.

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Rôle of Inositol and p-Aminobenzoic Acid in Normal Lactation.

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The fact that several members of the vitamin B complex are required for lactation in the albino rat has long been recognized. Almost every member of the complex has at one time or another been suggested for a crucial role. The list includes thiamin,[1] riboflavin,[2] pantothenic acid,[3] choline,[4] p-aminobenzoic acid,[5] and inositol.[5] Less well defined factors which have been reported as essential are factor W[6], and the filtrate factor.[7] In most cases these reports lack confirmation from other workers.

The pioneer work of Sure[5] indicated that p-aminobenzoic acid is essential for lactation in the albino rat and that inositol may be.

The conclusions drawn from the work were evidently not intended to be final, and it has seemed worthwhile to examine critically the role played by each of these substances.

Methods. Young female rats from our own breeding colony were divided into groups of 12 and placed on the following dietary regimes shortly after weaning:

Group A. Normal breeding diet* containing all known dietary elements. We have found over a period of 5 years that this diet is capable of meeting all the requirements of breeding rats.

Group B. Deficient diet† plus B-complex supplement.‡

	%
* Corn	28.0
Wheat	28.0
Whole milk powder	22.5
Linseed meal	8.0
Alfalfa	3.0
Crude casein	4.0
Calcium carbonate	0.5
Sodium chloride	0.5
Brewer's yeast	3.0
Cod liver oil	2.5
	g
† Casein[6]	25.0
Agar agar	2.0
Cystine	0.2
Butter fat	10.0
Dextrin	58.8
Salt mixture 351	4.0
Cod liver oil	2.5
Mixed toxopherols	0.25
2-methyl,1,4-naphthoquinone	0.01

(This diet was made up at 5-day intervals and kept under refrigeration until used.)

‡ Thiamin[5]	120 γ
Riboflavin	120 γ
Pyridoxine	120 γ
Calcium pantothenate	600 γ
Nicotinic acid	6 mg
Choline hydrochloride	15 mg

(The amounts indicated were the average daily supplement per rat.)

1 Evans, H. M., and Burr, G. O., *J. Biol. Chem.*, 1928, **76**, 263.

2 Hussemann, D., and Hetler, R. A., *J. Nutrition*, 1931, **4**, 127.

3 Jukes, T. H., PROC. SOC. EXP. BIOL. AND MED., 1940, **45**, 625.

4 Sure, B., *J. Nutrition*, 1940, **19**, 71.

5 Sure, B., *J. Nutrition*, 1941, **22**, 499.

6 Sure, B., *J. Nutrition*, 1940, **19**, 57.

7 Morgan, A. F., and Simms, H. D., *Science*, 1939, **89**, 565.