ments on tryptophane and cystine.[5, 6, 7, 8]) The formyl derivatives of the 2 optical isomers of methionine also were tested. The administration of formyl *l*-methionine causes increments of body weight similar to those produced by both *l*- and *d*-methionine. On the other hand, formyl *d*-methionine apparently cannot be utilized by the animal organism for growth under the conditions of our experiments. Analogous observations have been made on the physiological availability of the acetyl derivatives of *d*- and *l*-tryptophane.[6]

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Anterior Pituitary and Lactation.

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By injection of the anterior-pituitary-like hormone (A.P.L.) of pregnancy urine Evans and Simpson[1] were successful in producing marked development of the mammary glands in virgin rats, but were unable to produce milk secretion; Bradbury[2] obtained similar results in mice. We have confirmed these results by histological examination, which shows that no secretion takes place in the glands, although the alveoli are as numerous as in late pregnancy. We further observed that the development of the mammary gland in these animals runs parallel to the increase in the weight of their ovaries.

We found, however, that removal of the intensely luteinized ovaries of these rats will lead to abundant milk secretion in their mammary glands within 36 hours (13 experiments, all positive). We further observed that if the pituitary was removed simultaneously with the ovaries, milk secretion did not set in (4 experiments).

These experiments seem to indicate that removal of the luteinized ovaries will lead to milk secretion in the fully developed mammary

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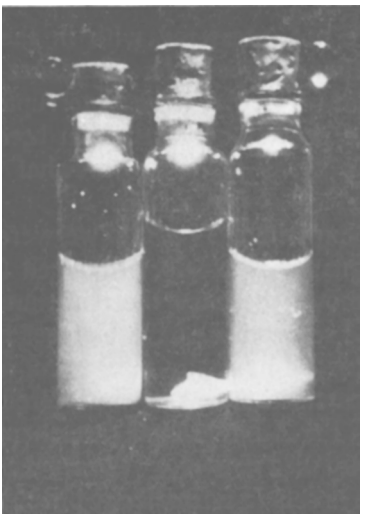

FIG. 1. *Milk Secretion.*

Mammary glands were removed from rats and dropped into dilute formalin. On the right is seen a gland from a normal lactating rat, the milk having made the solution turbid. The gland in the center bottle was removed from a virgin rat injected daily with 200-day units of A.P.L., starting when the rat was 27 days old and continuing for 26 days. Although great development has taken place, there is no milk secretion. The gland on the left was taken from a rat similarly treated and then castrated, showing abundant milk production.

gland of the A.P.L. treated rat, but only in the presence of the pituitary.

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Effect of Hypophysectomy Upon Pregnancy and Lactation.

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The considerable enlargement and structural changes of the pituitary during pregnancy and lactation seem to indicate that the internal secretion of this organ plays a very important rôle during this period. Therefore repeated attempts have been made to determine whether pregnancy can be maintained after hypophysectomy, but the results of such experiments are contradictory.

Whereas Aschner[1] found that abortion takes place in hypophysectomized pregnant dogs, Allan and Wiles[2] observed that pregnancy

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