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THE ISOLATION OF CRYSTALLINE PROGESTIN[1]

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THE actual isolation of a hormone in pure form, determination of its chemical formula or even its synthesis is oftentimes simpler than the basic researches necessary to show that a given physiological condition exists only when a certain hormone is acting. The hormonal rôle of the corpus luteum and the isolation and synthesis of its hormone are no exceptions to this dictum, and for this reason I must describe briefly some of the work, already classical, showing that this little structure is a gland of great importance in the propagation of the race.

In all the higher forms of animal life reproduction is brought about by union of specialized cells of the two sexes, but the development of the fertilized ovum into a new animal is carried out in a variety of ways, depending on the type of individual. In birds, for example, the fertilized egg is incubated outside the mother's body and hence there can be no direct effect of the mother on her offspring after the egg has been laid. With mammals, on the other hand, the early development of the embryo is quite different, for in them the embryo must first be nourished within the body of the mother for a considerable length of time before it reaches a stage of development such that it can be born, and even then the young are so premature as to require suckling for some time. It is not surprising, therefore, that we find highly specialized structures in the mammalian female designed exclusively for use in rearing the young.

The differences between the reproductive organs and the reproductive processes of the lower animals and

[1] Address at the meeting of the American Chemical Society, New York, April, 1935, on the occasion of the presentation of the first Eli Lilly and Company award in biological chemistry.