105. TEEL, *Endocrinology* **13:** 521, 1930.
106. VOGT, *Med. Klin.* **25:** 1725, 1929.
107. VOSS AND LOEWE, *Arch. ges. Physiol.* **218:** 604, 1928.
108. WAGNER, *Monatschr. Geburtsh.* **82:** 1, 1929.
109. WALKER, *Am. J. Physiol.* **74:** 249, 1925.
110. WIESNER AND CREW, *Proc. Roy. Soc. Edin.* **50:** 79 (read Dec. 3, 1928), 1930.
111. WIESNER AND PATEL, *Nature* **123:** 449, 1929.
112. WIESNER, *Edin. M. J.* **37:** 73, 1930.
113. ZONDEK AND ASCHHEIM, *Zeitschr. Geburtsch. Gynäkol.* **90:** 372, 387, 1926.
114. ZONDEK AND ASCHHEIM, *Klin. Woch.* **6:** 248, 1927.
115. ZONDEK AND ASCHHEIM, *Arch. Gynäkol.* **130:** 1, 1927.
116. ZONDEK, *Ibid.* **132:** 1927.
117. ZONDEK AND ASCHHEIM, *Endokrinol.* **1:** 10, 1928.
118. ZONDEK AND ASCHHEIM, *Klin. Woch.* **7:** 485, 831, 1928.
119. ZONDEK AND ASCHHEIM, *Klin. Woch.* **8:** 157, 1929.
120. ZONDEK, *Zeitschr. Geburts. Gynäkol.* **95:** 361, 1929.
121. ZONDEK, *Zentralbl. Gynäkol.* **53:** 834, 1929.
122. ZONDEK, *Endokrinol.* **5:** 425, 1929.
123. ZONDEK, *Klin. Woch.* **9:** 245, 393, 1930.
124. ZONDEK, *Deutsche. med. Woch.* **56:** 300, 1930.

NOTE

[The following details were received too late for incorporation in the body of the paper.—ED.]

It is of interest to note that an active fraction has been obtained from the precipitates removed from the original acetone extract of human placentas during the alcohol fractionation processes. This active fraction has been precipitated from aqueous solution between the ranges of 65 to 85 per cent concentration of alcohol. It has been further purified by repeated solution in water and reprecipitation by alcohol. Other methods are also being tested.

The physiological properties of this extract are such as to indicate that it contains a hormone or hormones distinctly different from emmēnin. The chief physiological property of this active fraction appears to be that of a stimulant in the female to hypertrophy of the ovary, and in the male to hypertrophy of the seminal vesicles and associated glands. The hypertrophy of the ovary is due, for the most part, to the formation of corpora lutea. The effects of long-continued administration of this particular extract are now being studied along the same lines as has previously been done with the emmēnin extract.

The chemical properties of this active fraction suggest that the hormone is of protein-like nature. Boiling of the extract has been found to result in marked loss of potency and the effect of oral administration in the dosage which has thus far been used has been negligible. A puzzling fact which will need further elucidation is the production of œstrus phenomena in the immature rat associated with the first appearance of corpora lutea in the ovaries following treatment with this luteinizing extract.

The active fraction with properties as outlined above may be readily prepared for subcutaneous administration. One realizes, however, that the use of this particular hormone can be undertaken only with the greatest of care until more is known about the ultimate effect which it will produce. There is a possibility that over-dosage phenomena may be encountered and that actual harmful end results may be produced.

The physiological properties of this luteinizing hormone are quite similar to those of the so-called anterior pituitary principle of pregnancy urine, and it is our opinion that this principle also is derived from the placenta.

We would like to emphasize that the data which have been submitted have been obtained by the use of extracts of human placentas, and we are not at all satisfied as yet that similar findings can be obtained by the use of extracts made from animal placentas, such as those of the cow or pig. The fact that certain workers have been unable to obtain the Aschheim-Zondek reactions from the pregnancy urine of these animals[30] may be of significance in this connection.

It has been suggested to the writer in certain criticism which has been made of our results, that œstrin or "theelin," as Doisy has now named the ovarian hormone, has not been entirely removed from our extract, and that the œstrus effects which have been obtained by its use may be attributable to traces of this hormone. Due to the consistent negative results which extracts of human placenta have given when tested on oöphorectomized animals, it was felt that this interfering factor had been adequately controlled. Larger doses will have to be given in the œstrin assay, over longer periods of time, to make this point clearer.