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| Production et Aromatisation *in vitro* des Androgenes et des 19-Norandrogenes par le Corps Jaune Equin. | Thesis Title  |
| 1989 | Year |
|  Whereas mare corpus luteum does not produce androgens nor estrogens in vitro. However the incubation of **Human** placenta, **Bovine** and **mare** corpus luteum microsomes with progesterone and NADPH resulted in 17α-hydroxyprogesterone and estrone production with small yield of androstenedione. In the presence of an aromatase inhibitor (4-hydroxyandrostenedione) 17α- hydroxyprogesterone and androstenedione were accumulated. However, the bovine corpus luteum, which originated from both theca and granulosa cells, has not 17α- hydroxylase or 17, 20-lyase activities. Aromatisation of testosterone and androstenedione occurred via stero-specific loss of the 1β,2β hydrogen atoms and was inhibited by MgCl2 , KCl and EDTA. The *Km* of estrogen synthetase from equine corpus luteum for testosterone was 18.5±2.7 nM and for androstenedione was 11.5±1.5 nM. The 19- norandrogenes were aromatized with a slightly higher efficiency than were androgens but the affinity of the aromatase was lower for 19- norandrogens than for androgens. Our results suggest that aromatase from **equine** **testis** and **corpus luteum** are closely related enzymes. On the other hand, the question arises as to the relationship between the cell origin, the synthesizing abilities and *in vitro* production of the corpus luteum in different mammalian species. |  Abstract  |