Secretory Pattern of Inhibin during Estrous Cycle and Pregnancy in African (*Loxodonta africana*) and Asian (*Elephas maximus*) elephants

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The ovary of female elephants has multiple corpora lutea (CLs) during the estrous cycle and throughout pregnancy. The previous studies suggested that CLs are the major source of circulating inhibin during the luteal phases. However, the exact mechanism for secretion of inhibin by CLs is undetermined. The aim of the present study is to clarify the pattern of inhibin secretion during the estrous cycle and the pregnancy in African and Asian elephant. Circulating levels of immunoreactive (ir-) inhibin and progesterone were measured by radioimmunoassay. Circulating levels of ir-inhibin started to increase at one or two week before the ovulation, and peaks reached three or four weeks earlier those of progesterone during the luteal phase in African and Asian elephants. Circulating ir-inhibin levels remained low throughout the pregnancy in each gestation. The mean levels of ir-inhibin during the pregnancy were lower than during the luteal phase, despite high progesterone levels maintained throughout the pregnancy. These results suggested that cyclic CLs secrete a large amount of both ir-ihnibin and progesterone, whereas pregnant CLs secrete mainly progesterone during the pregnancy in both African and Asian elephants.

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