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In Vitro Gonadotropin Stimulation of Bovine Sertoli Cell Ornithine Decarboxylase Activity

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The activity of ornithine decarboxylase (ODC) was determined in primary cultures of bovine Sertoli cells after gonadotropin stimulation *in vitro*. A significant increase in both ODC activity and putrescine content was noted 4 hours after FSH stimulation of cells derived from animals 7 to 14 days of age. Response in cells derived from animals 2 months of age was significantly less. Additionally, it was noted that both LH and hCG stimulated the ODC activity in bovine Sertoli cell preparations. These findings suggest that ODC activity in bovine Sertoli cells may be under FSH control and that LH or hCG may have significant FSH-like effects in this system. Also, it is suggested that ODC responsiveness decreases during bovine Sertoli cell maturation.

Key words: ornithine decarboxylase, Sertoli cell, gonadotropins, bovine, calf

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