

## Hormonal and Biochemical Profiles In Follicular Fluid of Unovulated Follicles in Superovulated Goats Ovaries

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### Abstract

The composition of follicular fluid (FF) varies with the cyclical hormonal changes and developmental stage of follicle. During superovulation programme, the large number of unovulated follicles is a major constraint and affects adversely the embryo recovery. An attempt was made to study the hormonal and biochemical profiles of unovulated follicles in goat superovulated with either Synthetic FSH (133 mg Folltropin) or 1000 IU PMSG (Folligon). The study revealed that Progesterone and testosterone concentrations were significantly ( $P < 0.05$ ) higher in FF of unovulated follicles of superovulated goats as compared to control. The total and free cholesterol levels were significantly ( $P < 0.05$ ) lower in FF of treated animals than control one. The Alkaline Phosphatase activity was recorded lower in treated group while Acid Phosphatase activity was observed significantly ( $P < 0.05$ ) high in FF of treated animals compared to control. Iron and zinc concentration were also recorded significantly ( $P < 0.05$ ) higher in FF of superovulated animal compared to control. The total protein concentration was observed high in FF of treated animals than control but the differences were statistically non significant. The concentration of estradiol 17  $\beta$ , Lactate dehydrogenase and Copper did not show much variation between treatment and control group.

**Key words:** Goat, Superovulation, Unovulated Follicles, Follicular Fluid Composition