



# Ovarian Follicular Fluid Constituents in Relation to Stage of Estrus Cycle and Size of the Follicle in Buffalo Cows.

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## Abstract:

The goal of the present study was to evaluate the difference in constituent of the ovarian follicular fluid in different stages of the estrus cycle and in medium and large sized follicle and also to evaluate the relation between serum and follicular fluid constituents in cyclic buffalos. A total of 34 clinically healthy buffalo (Bubals bubals), aged 7-10 years, were sent for slaughter in Moesha Abattoir, Assiut province in winter 2009. Blood samples and the whole genital tract of each animal were collected. The stage of the cycle (proestrus n= 8, estrus n= 7, metestrus n= 7 and diestrus n= 12) was determined post mortem. Biochemical analysis of serum and follicular fluid was performed through measuring total protein, albumin, chloride, potassium, phosphorus, magnesium, glucose, cholesterol, triglyceride, urea, creatinine levels and lactate dehydrogenase (LDH) activity. Results of the present study revealed that during the estrus cycle, only follicular triglyceride, urea, creatinine and phosphorus level showed significant changes. A positive correlation was found between follicular albumin, phosphorus levels and follicular diameter. Total protein, albumin, globulins, glucose, chloride and creatinine were significantly higher in the serum than that in the follicular fluid. Follicular triglyceride level and potassium level were significantly higher than serum level. Follicular LDH activity was higher in large sized follicle than small sized one. Further studies are required to elucidate the relation between concentration of urea and creatinine in the follicular fluid and oocyte viability.

## Keywords:

estrus, buffalo, follicular fluid, serum.

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