



# Microscopic and histochemical characterization of the bovine uterine tube during the follicular and luteal phases of estrous cycle

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## Abstract:

The morphometrical and morphological features of the infundibulum and ampulla of the uterine tubes of adult cattle were studied. The materials used in this study were consisted of 12 pairs of uterine tube of healthy cows at age of 16-36 months, collected from Assiut slaughterhouses. Through observations of the ovaries, follicular and luteal phases of estrous cycle of each cattle were specified. Semithin sections of ampulla and infundibulum at follicular and luteal phases were made and histochemical analysis of the ampulla by use of PAS, Alcian Blue, Sudan Black B was also done. In addition, acid phosphatase activity of the ampullar epithelium was demonstrated. Histological analysis of the epithelium of bovine oviduct revealed that it was consisted of non-ciliated secretory cells, two populations of ciliated cells (CC), basal cells and Peg cells. At the luteal phase, the secretory cells possessed many cytoplasmic protrusions that extended beyond the luminal borders of the ciliated cells and exocytosis of secretory materials was observed. While at the follicular phase, the ciliated cells were predominated. The histochemistry of the ampullar epithelium revealed increase in secretions of neutral, acidic mucopolysaccharides and lipid from the secretory cells at the luteal phase with moderate acid phosphatase activity. Histomorphometric examinations of infundibulum and ampulla indicated that the mean number and height of primary folds as well as the thickness of the epithelium were increased significantly at the follicular phase.

## Keywords:

Uterine tube Estrous cycle Morphology Morphometry Histochemistry Cattle

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