**Histomorphometry of Dromedary Camel Epididymis and its Correlation with Spermatozoa Characteristics during their Epididymal Transport**

**Rashad D.E.M1, Kandiel M.M.M.1, Agag M.A.1, El-Khawagah A.R.M.1, Karima Gh.M. Mahmoud2, Ahmed Y.F.2, Abou El-Roos M.E.A.1, Sosa G.A.M.1**

1 Theriogenology Department, Faculty Veterinary Medicine, Benha University

2 Animal Reproduction and Artificial Insemination, National Research Centre, Dokki, Giza.

**Abstract**

This study aimed to assess the relation between the morphometric and histological attributes of the epididymis, and epididymal semen features in mature dromedary camels. The testes with the attached epididymis (n=50) were collected from adult camels along the rutting season from December to April. The separated epididymis was evaluated for weight and length prior to the dissection. Samples from each epididymal segment were processed for histomorphometric examination. Epithelial height, luminal diameter, tubular diameter, stereocilia height, muscular coat thickness and histogram of the intra luminal content were measured. The harvested epididymal semen was evaluated for motility, concentration and livability. The intra-luminal cellular contents (histogram in pixels), epithelial and stereocilia heights, and muscular coat thickness were maximal in the epididymal head. The epididymal tail showed wider luminal and tubular diameters than head and body. The tubular diameter and histogram were positively correlated (p<0.05) with sperm motility in the head and body segments.The length of head epididymal segment was negatively correlated with sperm concentration. epithelial height, stereocilia height were negatively correlated with sperm motility in epididymal body. In conclusion, the histomorphometry aspects of the epididymis eminently impacts spermatozoa features in dromedary camel.