Paper # (٥)

Ultra-differentiation of sperm tail of lesser Egyptian jerboa, *Jaculus jaculus* (Family: Dipodidae).

Osama M. Sarhan[١,٣] and Hany M. Hefny[٢,٤]

[١]Department of Zoology, Faculty of Science, Fayoum University, Egypt

[٢]Departmentof Zoology, Faculty of Science, Suez canal University, Egypt

[٣]Department of Biology, Faculty of Applied Science, Umm Al-Qura University, KSA

[٤]Department of Biology, University College, Um Al Qura University Al-Jomoum KSA.

Journal of Advanced Laboratory Research in Biology, VIII (I): ٢٧-٣٥, January, ٢٠١٦.

Summary::

In the present investigation, events of sperm tail differentiation in Lesser Egyptian Jerboa, *Jaculus jaculus* were studied for the first time. Generally, stages of sperm tail differentiation are more or less similar to that described by other studies in other rodents. In the present species, special structures were observed. These structures include:

First: The formation of a hollow large unit of microtubules that appears to surround: The nuclear envelope at its equatorial plane. The manchette microtubules (MMs) are re-oriented toward the longitudinal direction and attached along hollow large unit of microtubules.

Second: The formation of perinuclear space filled with an electron-translucent substance surrounds the posterior third of the developing nucleus.

Third: The nuclear fossa and the connecting piece were inserted in the ventro-dorsal region of the nucleus. Fourth, the fibrous sheath (FS) is formed of dextral spiral fibrous ribs.

Finally, the sperm tail of the present species has a single outer FS, however, other rodents, having additional inner fibrous units, between the outer FS and the inner developing axoneme.