

### البحث رقم (3)

**Title:**

“Descriptive studies on the tongue of two micro□mammals inhabiting the Egyptian fauna; the Nile grass rat (*Arvicanthis niloticus*) and the Egyptian long□eared hedgehog (*Hemiechinus auritus*)”.

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<b>Journal Name</b>	Microscopy Research and Technique( IF: 1.327)
<b>Publication Date</b>	2019/9
<b>Volume</b>	٨٢
<b>Issue</b>	٩
<b>Page</b>	1584-1592
<b>Publisher</b>	Wiley & Sons, Inc

**Abstract:**

The current study aimed to describe the anatomical features of the tongues of two micro□mammals common in the Egyptian fauna; the Nile grass rat (*Arvicanthis niloticus*), and the Egyptian long□eared hedgehog (*Hemiechinus auritus*). The tongues of five adult individuals of each species were excised and processed histologically, histochemically, and morphometrically. Statistical analysis comparing the relative tongue length in both species showed that there was a significant difference, which may correlate with the difference in feeding preferences. Grossly, the Nile grass rat has a dorsal lingual prominence with bifurcated apex while, the long□eared hedgehog has a median slight elevation with rounded apex. Numerous forms of mechanical and gustatory papillae are scattered along the lingual dorsal epithelium. The histochemical detection of keratin by Holland's trichrome stain showed an intense expression in the case of *A. niloticus* and mild expression in *H. auritus*. The framework of the tongue (entoglossum) is supported by either a core of cartilage in *H. auritus* or bone in *A. niloticus* which incorporated in the lingual root. The lingual glands also showed marked variation, the Nile grass rat exhibit dense populations of mucous□secreting glands and lesser populations of serous□secreting glands, the contrary is true in *H. auritus*. In conclusion, the micro and macro□anatomical features of the tongues of both species showed adaptive changes to accommodate the feeding lifestyle. Such type of studies using mammals from different phylogenetic traits and almost have different feeding preferences