

# The petrosal ganglion of the adult cat: Neuronal count, sectional area, and their respective distributions

Alcayaga, J.

Arroyo, J.

Font, M. I.

Gutierrez, O. C.

The petrosal ganglion contains most of the perikarya of sensory neurons of the glossopharyngeal nerve. We studied the number and size of neuronal somata in 4 petrosal ganglia from adult cats. Ganglia were serially sectioned in length at 8  $\mu$ m, sections drawn through a projection microscope, and those neuronal profiles presenting nuclei and nucleoli on each section were counted and their areas measured. The number of neurons ranged from 2311 to 3429 ( $2908 \pm 271$ ; mean  $\pm$  SEM). Neurons were symmetrically distributed around the longitudinal axes of most ganglia, with a skewed distribution in only one ganglion. The sectional area of most neurons (> 98%) ranged between 250 and 1725  $\mu$ m<sup>2</sup>, with median values of 667-963  $\mu$ m<sup>2</sup>. Area distributions were significantly, but differences never exceeded 8.2% in related area bins. The ganglion presenting a skewed count distribution and the highest median area departed from the rest, with differences surpassing 25%. We conclude that the neuronal population of