

# Stereology of the bulbourethral gland of the rabbit (*Oryctolagus cuniculus*) and guinea pig (*Cavia porcellus*) [Estereologia das glândulas bulbouretrais do coelho (*Oryctolagus cuniculus*) e da cobaia (*Cavia porcellus*)]

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The bulbourethral glands (GBU) in the rabbit (*Oryctolagus cuniculus*) and guinea pig (*Cavia porcellus*) play an important role in reproductive physiology. However, histological and stereological aspects are scarce. Thus, the objective of this research was to compare stereological characteristics between the rabbit and guinea pig GBU as a first approximation in the understanding of morphometric variables involved in reproductive processes. Five rabbits were used and five adult male guinea pigs, healthy, obtained from the Vivarium of the Universidad de La Frontera, Temuco, Chile. Pelvic region was dissected, isolating the GBU of each animal. Was determined weight and volume of each gland. These were fixed in buffered formalin for 24 hours and embedded in paraplast. Serial sections of 4 microns thick, were stained with HE, for stereological analysis. The average glandular cells in the rabbit's GBU was  $19.50 \times 10^5 \text{mm}^3$  (SD 2.35), and for the guinea pig  $10.57 \times 10^5 \text{mm}^3$  (SD 2.07), and the average percentage of glandular tissue was 25.52% (SD 2.20) and 17.20% (SD 3.33) respectively. All stereological parameters were compared statistically significant difference ( $p < 0.0001$ ). These differences could be explained because there is a closer epithelial cell secretory acinar, smaller lumen diameter and nucleus to cytoplasm ratio in the rabbit's GBU. Thus, the acini of the GBU had a greater number of cells per  $\text{mm}^3$  in the rabbit's GBU. These parameters can be influenced by hormonal factors, age, seasonal and environmental among others. Consider the morphological characteristics of the GBU in these animals could affect the successful reproduction by the male.

Bulbourethral gland

Guinea pig

Rabbit

Stereology

Animalia

Cavia

*Cavia porcellus*

*Oryctolagus cuniculus*