

# Morphologic study of the prostate and vesicular glands of the guinea pig (*Cavia porcellus*) [Estudio morfológico de la próstata y glándulas vesiculares de cobayo (*Cavia porcellus*)]

Vázquez B.

del Sol M.

The objective of this investigation was to study the morphology of the prostate and vesicular gland of the guinea pig (*Cavia porcellus*), describing the mesoscopic, histological and histochemical aspects. Five healthy adult male guinea pigs (*Cavia porcellus*) were used. The animals received pellets, carrots and fruit ad libitum in the Biotherium of the Universidad de La Frontera. Once the animals were sacrificed the structures which ducts ended in the urethra, (vas deferens, vesicular glands, coagulator glands, prostate and bulbourethral glands) were isolated. The prostate and vesicular gland were fixed in buffered formalin during 24 hours and processed for their inclusion in paraplast. Serial cuts 4  $\mu$ m thick were realized and stained for histological and histochemical studies, using a Carl Zeiss, Axiolab microscope with a Cannon G6 camera. The prostate is located dorsal to the urethra and is constituted by a mass of glandular tissue covered by a thin capsule of fibrous tissue and smooth muscular cells presenting two lobes, right and left joined to the urethra by a dorsal isthmus. Emerging through the ventral surface of each lobe are 8 to 10 small excretory ducts. Histologically it is composed by alveolar tubular units covered by a simple cubical secretor epithelium. The vesicular glands are two tubular lobular structures located dorsal to the urethra and are connected ventrally with the vas deferens and the dorsal surface of the bladder. Histologically presenting a mucous layer with a secretor type cylindrical epithelium, a medium layer namely constituted by smooth muscular tissue and a serous external layer. Histochemical reaction in both glands was negative for glycogen, for neutral and acid mucins, both sulfate and non sulfate, in the glandular tissue as well as the secretor product. The prostate and vesicular glands of the guinea pig are related to morphological aspects of other mammals. However, the differences found in the histochemical results suggest that these glands could have different effects in the reproductive

process.

Anatomy

Guinea pig

Histochemistry

Histology

Prostate

Vesicular gland