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**THE CHINCHILLA RABBIT, A USEFUL TOOL IN BIOMEDICINE TO STUDY
TESTICULAR ALTERATIONS**

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ABSTRACT

The experimental animal models in biomedical research continue being an irreplaceable tool for technological development and data generation which will be used how information validated. In male children and teenagers, successful fertility is marked by an adequate gonadal differentiation, establishment of the hypothalamic hypophyseal testicular axis, timely proliferation and differentiation of neonatal testicular cells, the descent of testes, and the beginning of puberty coupled with proliferation and maturity of testicular cells. The alterations in this process induce reproductive pathologies in the adult. The rabbit (*Oryctolagus cuniculus*) is an ideal model to study these kind of diseases and better than the rodents because the rabbit have a longer period of testicular development where is very simple to distinguish both an infantile and/or pubertal stage. On the other hand, the buck rabbits are easy to train for semen collection with artificial vagina, so it can be programmed into protocols to confirm in an indirect way, the effects of different interventions (surgery, drug administration, etc.) on the male fertility, and therefore permits longitudinal evaluation of semen. There are various breeds of rabbits that have been widely used as models for morphological and physiological studies.

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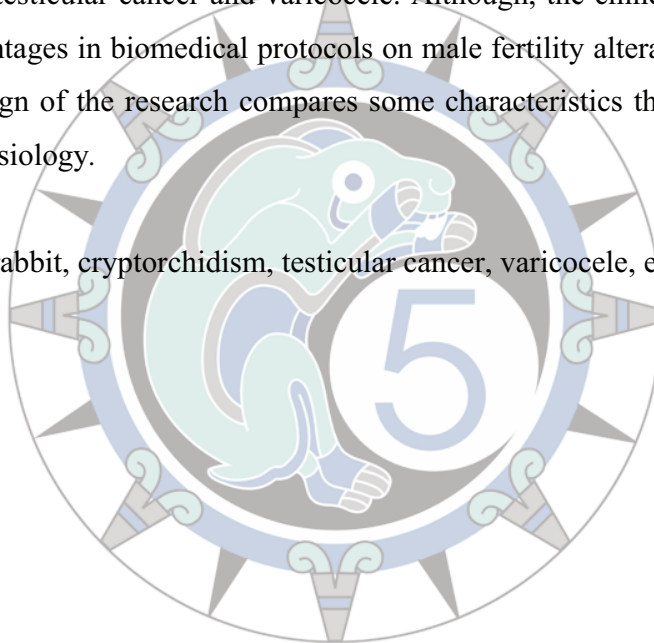
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The most common is the New Zealand rabbit; however it is known that this breed has a tendency to develop Diabetes mellitus in the long term, which could interfere with the reproductive function. In contrast, there have been no reports of pathological developments in Chinchilla rabbits in the long term that could interfere with the reproductive function.

Moreover, the Chinchilla rabbit is smaller and less expensive to maintain than the New Zealand rabbit. Therefore, the authors recommend the use of this breed as a model to study undescended testis (cryptorchidism), testicular cancer and varicocele. Although, the chinchilla rabbit presents advantages and disadvantages in biomedical protocols on male fertility alterations, the advantage is greater when the design of the research compares some characteristics that correspond to the human reproductive physiology.

Key words: Chinchilla rabbit, cryptorchidism, testicular cancer, varicocele, experimental model.

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