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## JOURNAL ARTICLE

# Experimental cryptorchidism inhibited growth of the rat ventral prostate

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Adult Sprague-Dawley male rats, weighing about 350 g, were rendered cryptorchid by suturing the testes to the lateral abdominal wall. Twenty-eight days later, cryptorchidism resulted in a significant decline in testis weight and suppressed spermatogenesis. The ventral prostate was significantly smaller in cryptorchid rats. There was no significant difference in serum testosterone levels between the normal and cryptorchid rats. Charcoal-stripped aqueous extracts of the testis from intact and cryptorchid animals were tested on primary cultures of rat prostatic stromal cells. Cultures treated with extract from the intact testis had a significantly increased cell proliferation as assessed by cell count and by the rate of 3H-thymidine incorporation. Additionally, extracts of seminiferous tubules significantly increased prostate stromal cell proliferation compared to extracts of testicular interstitial components. Furthermore, this proliferative effect of testicular extracts is specific to the prostate as extract of both normal and cryptorchid testis stimulated proliferation of rat footsole fibroblasts in culture, but only extracts from intact testis stimulated proliferation of prostate stromal cells. These observations demonstrate that the testis produces nonandrogenic substances that can promote growth of prostatic stromal cells and that these substances were eliminated in the cryptorchid testis.

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