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JOURNAL ARTICLE

Testosterone metabolism by testicular tissue

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Teased testicular tissue with defined cell populations from experimental rats, as well as testicular tissue from normal rats, was incubated in an environment that insured the morphologic integrity of the tissue at the conclusion of the experiment. In cryptorchid animals, conversion of available substrate to various metabolites by testicular tissue comprised of Leydig and Sertoli cells was comparable to that of intact controls. Using hypophysectomized and hypophysectomized-cryptorchid rats, reliably measurable androgen metabolites were produced by testicular tissue that had specific populations of intact cell types. The reported methodology shows that defined cell populations, capable of testosterone metabolism, can be obtained in vivo by surgical procedures. Histologic monitoring of the tissue at the conclusion of the incubation has helped define the best environment for the maintenance of morphologic integrity throughout the incubation period. These techniques will allow future work on quantitative assessment of testosterone metabolism by defined cell populations of the testis.