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letters to nature

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Selective Retention of Dihydrotestosterone by Prostatic Nuclei

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MUCH attention is being given to the effect of gonadal hormones on various biochemical events in the cell nuclei of the target tissues[1–7]. It is not known whether steroids act directly at nuclear sites; oestradiol-17β seems to associate with nuclear components without alteration of the oestrogen molecule[8,9]. Ventral prostate can retain androgens to a somewhat greater extent than the blood[10,11], but studying the method of androgen retention is complicated by the rapid and multiple transformations of androgens injected into the experimental animals[10–12]. Consequently, we have asked two simple questions: (1) which metabolite(s) of testosterone can associate with isolated prostatic nuclei; and (2) is such association selective ? The results reported in this paper suggest to us that nuclear chromatin of prostate, but not other tissues which are insensitive to androgen, contains an androgen receptor which can selectively retain dihydrotestosterone (DHT, 5α-androstane-17β-ol-3-one)—the most potent endogenous androgen for the growth of ventral prostate of rat[13,14].

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