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JOURNAL ARTICLE

Inhibin production by Sertoli cells during testicular regression in the golden hamster

A. S. Berkowitz and J. J. Heindel

The objective of this study was to determine if testicular regression in the hamster results in changes in Sertoli cell function that reflect altered pituitary function. Inhibin-like activity was measured in spent media from Sertoli cells cultured from adult control and optically enucleated hamsters with regressed testes using a homologous hamster Sertoli cell/hamster pituitary cell bioassay. The inhibin activity resulted in a dose-related decrease in FSH release from both normal and "regressed" pituitary cultures but maximal inhibition occurred at a 3- to 4-fold lower dose with media from Sertoli cells obtained from regressed hamsters. When pituitary cells from control adult or adult hamsters with regressed testes were incubated with Sertoli cell spent media, pituitary cells from regressed hamsters were more sensitive than normal pituitary cells to both normal and "regressed" inhibin. This greater production of inhibin-like activity and/or an enhanced sensitivity to inhibin in the regressed hamster may contribute to the decline in FSH levels during testicular regression. This data lends further support to a physiologic role for inhibin.

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