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FSH Stimulation of cAMP Accumulation in Hamster Sertoli Cells: Effect of Age and Optic Enucleation

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Sertoli cells isolated from immature, adult, and adult optic-enucleated hamsters respond to FSH, but not to LH, with an increase in cAMP accumulation. There is an age-related decline in responsiveness of Sertoli cells to FSH. Sertoli cells cultured from optic-enucleated adult hamsters with regressed testes respond to FSH with an increased accumulation of cAMP similar in magnitude to that of immature Sertoli cells. These data indicate that optic enucleatlon results in a reversal of the sensitivity of Sertoli cells to FSH, an effect which may be important for the re-initiation of spermatogenesis, which naturally follows the regressed state.

Key words: cAMP, Sertoli cells, hamsters, optic enucleation

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