

Journal of Andrology, Vol 18, Issue 3 305-311, Copyright © 1997 by The American Society of Andrology

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## JOURNAL ARTICLE

# Copulatory behavior and fertility in transgenic male mice expressing human placental growth hormone gene

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Male transgenic (TG) mice overexpressing the human placental growth hormone (GH) variant gene (hGH-V) exhibit reproductive deficits in spite of normal testosterone levels and normal sperm counts. To evaluate the relationship of copulatory behaviors to fertility, we first measured mount, intromission, and ejaculation indices in 2-5-month-old mice (10 TG and 10 normal litter mate controls) during 1 hour tests with ovariectomized, estrogen-, and progesterone-primed females. After eight tests, each male was housed with three intact females for 27 consecutive days. Females were checked daily for vaginal plugs and sacrificed 14 days after insemination to determine the numbers of corpora lutea and live and dead fetuses. Relative to their normal siblings, TG mice mounted less often and intromitted sooner after the initial mount, made marginally more intromissions (with and without ejaculation), and were slower to ejaculate. In subsequent fertility tests, TG males inseminated fewer females and sired fewer live fetuses per insemination than non-TG controls. Across TG and normal males, the length of interval between initial mount and initial intromission was inversely correlated with the number of live offspring sired. This suggests that reduced fertility in hGH-V transgenic male mice may be related to altered copulatory behavior, including a rapid progression from first mount to first intromission.

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