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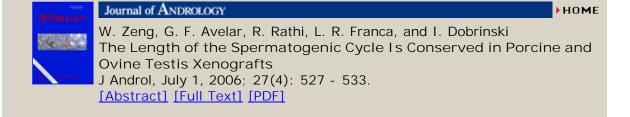
# The duration of the cycle of the seminiferous epithelium is altered by administration of 2,5-hexanedione in the adult Sprague-Dawley rat

G. Rosiepen, R. E. Chapin and G. F. Weinbauer Institute of Reproductive Medicine, University, Munster, Germany.

The duration of the cycle of the seminiferous epithelium is believed to be under genetic control rather than being influenced by other factors. However, the frequencies of certain spermatogenic stages-reflecting their relative durations--can be altered under various conditions including treatment with the n-hexane metabolite, 2,5hexanedione (HD). To investigate whether HD administration alters the

duration of the spermatogenic process, adult Sprague-Dawley rats were exposed to vehicle (n = 20) or 1% HD dissolved in the drinking water (n = 40) throughout a period of 29 days. On day 17, 100 mg/kg of 5-bromodeoxyuridine (BrdU) was given intraperitoneally; 3 hours later one testis was removed, and the remaining testis was excised 12 days later. BrdU was localized in Bouin's-fixed, Paraplastembedded testes using immunogold-silver-staining, and sections were counterstained with periodic acid--Schiff and hematoxylin to permit identification of the spermatogenic stages. HD treatment reduced weights of body, testis, and epididymis (P < 0.05) but had no effects on serum levels of follicle-stimulating hormone or testosterone. The seminiferous epithelium was vacuolized, and spermatogenesis was affected to various degrees. HD significantly reduced the frequency of stage VII tubules (P < 0.01) and increased the frequency of stage IX and stage X tubules (P < 0.05). Furthermore, HD reduced the stage-dependent progression of BrdU-labeled germ cells. (ABSTRACT TRUNCATED AT 250 WORDS)

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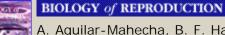
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[Abstract] [Full Text] [PDF]



# **BIOLOGY** of REPRODUCTION

K. Neubauer, K. Jewgenow, S. Blottner, D. E. Wildt, and B. S. Pukazhenthi Quantity Rather Than Quality in Teratospermic Males: A Histomorphometric and Flow Cytometric Evaluation of Spermatogenesis in the Domestic Cat (Felis catus) Biol Reprod, November 1, 2004; 71(5): 1517 - 1524. [Abstract] [Full Text] [PDF]



# BIOLOGY of REPRODUCTION

J. Wistuba, A. Schrod, B. Greve, J. K. Hodges, H. Aslam, G. F. Weinbauer, and C. M. Luetjens Organization of Seminiferous Epithelium in Primates: Relationship to Spermatogenic Efficiency, Phylogeny, and Mating System Biol Reprod, August 1, 2003; 69(2): 582 - 591. [Abstract] [Full Text] [PDF]

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