

Journal of Andrology, Vol 13, Issue 4 312-317, Copyright © 1992 by The American Society of Andrology

JOURNAL ARTICLE

Oligotriche and quaking gene mutations. Phenotypic effects on mouse spermatogenesis and testicular steroidogenesis

C. Chubb

Department of Cell Biology and Neuroscience, University of Texas Southwestern Medical Center, Dallas 75235.

The phenotypic actions of the oligotriche gene mutation on testicular function have not been elucidated, although it is known that male mice homozygous for the mutation are infertile. In the present study, the effect of the oligotriche gene mutation on mouse testicular function was analyzed by comparing normal and mutant mice. Spermatogenesis was analyzed by enumerating germ cells in seminiferous tubules at specific stages of spermatogenesis and by electron microscopy. Steroidogenic potential was estimated by radioimmunoassay determination of testosterone secreted by testes perfused in vitro. Parallel studies were completed for male mice homozygous for the quaking gene mutation, a mutation known to cause male mouse sterility by disrupting sperm tail development. The experimental results suggest that the oligotriche and quaking gene mutations interfere with sperm tail formation by different mechanisms. Testicular steroidogenesis was not affected by either gene mutation. The results provide the first evidence that the oligotriche gene mutation induces male mouse sterility by effecting the complete absence of a sperm tail. This phenotypic action is different from that of the quaking gene mutation.

This article has been cited by other articles:



BIOLOGY of REPRODUCTION

[HOME](#)

P. Grzmil, D. Boinska, K. C. Kleene, I. Adham, G. Schluter, M. Kamper, B. Buyandelger, A. Meinhardt, S. Wolf, and W. Engel
Prm3, the Fourth Gene in the Mouse Protamine Gene Cluster, Encodes a Conserved Acidic Protein That Affects Sperm Motility
Biol Reprod, June 1, 2008; 78(6): 958 - 967.

[\[Abstract\]](#) [\[Full Text\]](#) [\[PDF\]](#)



Proceedings of the National Academy of Sciences

[HOME](#)

F. L. Moore, J. Jaruzelska, M. S. Fox, J. Urano, M. T. Firpo, P. J. Turek, D. M. Dorfman, and R. A. R. Pera
Human Pumilio-2 is expressed in embryonic stem cells and germ cells and interacts with DAZ (Deleted in AZoospermia) and DAZ-Like proteins

This Article

- ▶ [Full Text \(PDF\)](#)
- ▶ [Alert me when this article is cited](#)
- ▶ [Alert me if a correction is posted](#)

Services

- ▶ [Similar articles in this journal](#)
- ▶ [Similar articles in PubMed](#)
- ▶ [Alert me to new issues of the journal](#)
- ▶ [Download to citation manager](#)

Citing Articles

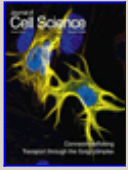
- ▶ [Citing Articles via HighWire](#)
- ▶ [Citing Articles via Google Scholar](#)

Google Scholar

- ▶ [Articles by Chubb, C.](#)
- ▶ [Search for Related Content](#)

PubMed

- ▶ [PubMed Citation](#)
- ▶ [Articles by Chubb, C.](#)



V Chesneau, A Prat, D Segretain, V Hospital, A Dupaix, T Foulon, B Jegou, and P Cohen

NRD convertase: a putative processing endoprotease associated with the axoneme and the manchette in late spermatids

J. Cell Sci., January 11, 1996; 109(11): 2737 - 2745.

[\[Abstract\]](#) [\[PDF\]](#)