

Journal of Andrology, Vol 15, Issue 3 200-211, Copyright © 1994 by The American Society of Andrology

## JOURNAL ARTICLE

# Thanatogen expression during involution of the rat ventral prostate after castration

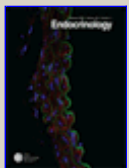
R. S. Guenette, L. Daehlin, M. Mooibroek, K. Wong and M. Tenniswood

Department of Biochemistry, University of Ottawa, Ontario, Canada.

After castration the rat ventral prostate undergoes regression. This process occurs due to the induction of apoptosis, or active cell death, in the epithelial cells of the gland. Several genes, including TRPM-2, (testosterone repressed prostate message), RVP.1, fos, and myc, have been shown to be induced in the prostate during this process. We have investigated the expression of several other genes that may be associated with apoptosis, including tissue

transglutaminase (TGase), poly(ADP)ribose polymerase (PARP), and heat shock protein 27 (Hsp27). Northern hybridization has been used to determine the steady-state mRNA levels of these genes in the ventral prostate after castration, and the time course of induction has been compared to the changes in the steady-state levels of prostate steroid binding protein (PSBP), alpha-tubulin, and TRPM-2 mRNAs. The results show that the mRNAs for PARP, transglutaminase, and Hsp27, in addition to TRPM-2, are induced by androgen ablation in the rat ventral prostate and reach maximum levels between days 3 and 4 after castration. Using in situ hybridization we have established that these genes are expressed in the epithelial cells of the prostate that are known to undergo active cell death; this result suggests that their gene products may be required in the dying cells to ensure that the biochemical and morphological processes of apoptosis are completed appropriately.

This article has been cited by other articles:



### Endocrinology

[HOME](#)

N. Ezer and B. Robaire  
Gene Expression Is Differentially Regulated in the Epididymis after Orchidectomy  
Endocrinology, March 1, 2003; 144(3): 975 - 988.  
[\[Abstract\]](#) [\[Full Text\]](#) [\[PDF\]](#)



### HUMAN REPRODUCTION

[HOME](#)

P. Diel, K. Smolnikar, T. Schulz, U. Laudenschlag-Leschowski, H. Michna, and G. Vollmer  
Phytoestrogens and carcinogenesis--differential effects of genistein in experimental models of normal and malignant rat endometrium

### 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

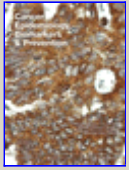
- ▶ [Articles by Guenette, R. S.](#)
- ▶ [Articles by Tenniswood, M.](#)
- ▶ [Search for Related Content](#)

### PubMed

- ▶ [PubMed Citation](#)
- ▶ [Articles by Guenette, R. S.](#)
- ▶ [Articles by Tenniswood, M.](#)

Hum. Reprod., May 1, 2001; 16(5): 997 - 1006.

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



### Cancer Epidemiology Biomarkers & Prevention

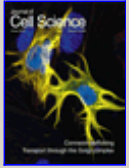
[▶ HOME](#)

D. G. Menter, A. L. Sabichi, and S. M. Lippman

Selenium Effects on Prostate Cell Growth

Cancer Epidemiol. Biomarkers Prev., November 1, 2000; 9(11): 1171 - 1182.

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



### Journal of Cell Science

[▶ HOME](#)

D Michel, E Moyse, A Trembleau, F Jourdan, and G Brun

Clusterin/ApoJ expression is associated with neuronal apoptosis in the olfactory mucosa of the adult mouse

J. Cell Sci., January 7, 1997; 110(14): 1635 - 1645.

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

[HOME](#) [HELP](#) [FEEDBACK](#) [SUBSCRIPTIONS](#) [ARCHIVE](#) [SEARCH](#) [TABLE OF CONTENTS](#)

[Copyright © 1994 by The American Society of Andrology.](#)