

Gary R. Klinefelter

Education

- B.S., Pennsylvania State University, University Park, PA; Animal Science, 1976.
- M.S., Pennsylvania State University, University Park, PA; Dairy Science, 1979.
- Ph.D., University of Minnesota, Minneapolis, MN; Anatomy, 1984.

Professional Experience

- 1988-1991: Research Scientist, Man Tech Environmental Technology, Inc., Contractor to EPA.
- 1991-present: Research Biologist, EPA.

Research Interests

- Development of novel biomarkers of reproductive development and fertility.
- Characterization of effects of disinfection byproducts of drinking water on the male reproductive system.
- Biochemical and morphological characterization of epididymal epithelial cell and Leydig cell function.

Professional Activities

- Editorial Boards: Journal of Andrology, Toxicological Sciences.
- Associate editor, Toxicological Sciences.
- Contact person/Research Team Leader for drinking water research in the Reproductive Toxicology Division, National Health and Environmental Effects Research Laboratory, EPA. 1996-2005.
- Participant in RTD's response to the Endocrine Disrupting Chemicals Implementation Plan Committee. 2000-present.
- RTD representative on Steering Committee for Drinking Water Implementation Plans, National Health and Environmental Research Laboratory, EPA. 2000-2004.

Invited Lectures/Symposia

- American Society of Andrology Symposium: Saga of a novel sperm biomarker: Discovery to proof of concept. 2003.
- Society of Toxicology Symposium: Saga of a novel sperm biomarker: Discovery to proof of concept. 2003.
- North Carolina State University, Department of Toxicology: Saga of a novel sperm biomarker: Discovery to proof of concept. 2002.

- Epididymis III: Third International Conference on the Epididymis: Insights from Toxicologic Disruption of Epididymal Function. 2002.
- Society of Toxicology Workshop, chair and speaker: Reproductive risk associated with exposure to disinfection by-products of drinking water. 2002

Selected Publications

Veeramachaneni D, Palmer JS, Klinefelter GR. 2007. Chronic exposure to low levels of dibromoacetic acid, a water disinfection by-product, adversely affects reproductive function in male rabbits. *J Androl.* 28:565-577. [Abstract](#)

De Andrade S, Oliva FS, Klinefelter GR, Kempinas WG. 2006. Epididymis-specific pathologic disorders in rats exposed to gossypol from weaning through puberty. *Toxicol Pathol.* 34:730-737. [Abstract](#)

Scarano WR, Messias AG, Oliva SU, Klinefelter GR, Kempinas WG. 2006. Sexual behavior, sperm quantity and quality after short-term streptozotocin-induced hyperglycemia in rats. *Int J Androl.* 29:482-488. [Abstract](#)

Andrews JE, Nichols HP, Schmid JE, Mole LM, Hunter ES, Klinefelter GR. 2004. Developmental toxicity of mixtures: The water disinfection by-products dichloro-, dibromo- and bromochloro acetic acid in rat embryo culture. *Reprod Toxicol.* 19:111-6. [Abstract](#)

Kaydos E, Suarez JD, Roberts NL, Bobseine KL, Zucker RM, Laskey JW, Klinefelter GR. 2004. Haloacid induced alterations in fertility and the sperm biomarker SP22 in the rat are additive: Validation of an ELISA. *Toxicol Sci.* 81:430-42. [Abstract](#)

Klinefelter GR, Strader LF, Suarez JD, Roberts NL, Goldman JM, Murr AS. 2004. Continuous exposure to dibromoacetic acid delays pubertal development and compromises sperm quality in the rat. *Toxicological Sciences* 81:419-29. [Abstract](#)

Bodensteiner KJ, Sawyer HR, Moeller CL, Kane CM, Pau K, Klinefelter GR, Veeramachaneni D. 2004. Chronic exposure to dibromoacetic acid, a water disinfection by-product, diminishes primordial follicle populations in the rabbit. *Toxicol Sci.* 80:83-91. [Abstract](#)

Akingbemi BT, Ge R, Klinefelter GR, Zirkin BR, Hardy MP. 2004. Phthalate-induced Leydig cell hyperplasia is associated with multiple endocrine disturbances. *Proc Natl Acad Sci U S A.* 101:775-80. [Abstract](#)

Tarka-Leeds DK, Herr DW, Klinefelter GR, Rogers JM. 2003. Effects of gestational exposure to ethane dimethanesulfonate in CD-1 mice: Microtia and preliminary hearing tests. *Birth Defects Res B Dev Reprod Toxicol.* 68:383-90. [Abstract](#)

Akingbemi BT, Sottas CM, Koulova AI, Klinefelter GR, Hardy MP. 2004. Inhibition of testicular steroidogenesis by the xenoestrogen bisphenol A is associated with

reduced pituitary luteinizing hormone secretion and decreased steroidogenic enzyme gene expression in rat Leydig cells. *Endocrinology*. 145:592-603. [Abstract](#)

Tarka-Leeds DK, Suarez JD, Roberts NL, Rogers JM, Hardy MP, Klinefelter GR. 2003. Gestational exposure to ethane dimethanesulfonate permanently alters reproductive competence in the CD-1 mouse. *Biol Reprod*. 69:959-67. [Abstract](#)

Miller DW, Ahmad R, Hague S, Baptista MJ, Canet-Aviles R, McLendon C, Carter DM, Zhu P-P, Stadler J, Chandran J, Klinefelter GR, Blackstone C, Cookson MR. 2003. L166p mutant DJ-1, causative for recessive Parkinson's disease, is degraded through the ubiquitin-proteasome system. *J Biol Chem*. 278:36588-36595. [Abstract](#)

Monetti C, Vigetti D, Gornati R, Prati M, Klinefelter GR, Bernardini G. 2002. Identification and molecular cloning of xenopus laevis SP-22, a protein associated with fertilization in mammals. *Comp Biochem Physiol B Biochem Mol Biol*. 132:761-7. [Abstract](#)

Klinefelter GR, Strader LF, Suarez JD, Roberts NL. 2002. Bromochloroacetic acid exerts qualitative effects on rat sperm: Implications for a novel biomarker. *Toxicol Sci*. 68:164-73. [Abstract](#)

Romualdo GS, Klinefelter GR. 2002. Postweaning exposure to gossypol results in epididymis-specific effects throughout puberty and adulthood in rats. *J Androl*. 23:220-8. [Abstract](#)

Klinefelter GR, Welch JE, Perreault SD, Moore HD, Zucker RM, Suarez JD, Roberts NL, Bobseine K, Jeffay S. 2002. Localization of the sperm protein SP-22 and inhibition of fertility *in vivo* and *in vitro*. *J Androl*. 23:48-63. [Abstract](#)