

## Dr. Hari Goyal

### Publications :

- 1) Low androgen induced penile maldevelopment involves altered gene expression of biomarkers of smooth muscle differentiation and a key enzyme regulating cavernous smooth muscle cell tone. Okumu LA, Braden TD, Vail K, Simon L, Goyal HO. *J Urol*. 2014 Jul;192(1):267-73. doi: 10.1016/j.juro.2013.11.101. Epub 2013 Dec 6. PMID: 24316094 [PubMed - indexed for MEDLINE]
- 2) Estrogen-induced maldevelopment of the penis involves down-regulation of myosin heavy chain 11 (MYH11) expression, a biomarker for smooth muscle cell differentiation. Okumu LA, Brinton S, Braden TD, Simon L, Goyal HO. *Biol Reprod*. 2012 Nov 8;87(5):109. doi: 10.1095/biolreprod.112.103556. Print 2012 November. PMID: 22976277 [PubMed - indexed for MEDLINE] Free PMC Article
- 3) Exposure of neonatal rats to anti-androgens induces penile mal-developments and infertility comparable to those induced by oestrogens. Simon L, Avery L, Braden TD, Williams CS, Okumu LA, Williams JW, Goyal HO. *Int J Androl*. 2012 Jun;35(3):364-76. doi: 10.1111/j.1365-2605.2011.01232.x. Epub 2011 Dec 13. PMID: 22150386 [PubMed - indexed for MEDLINE]
- 4) The effects of chronic ingestion of mercuric chloride on fertility and testosterone levels in male Sprague Dawley rats. Heath JC, Abdelmageed Y, Braden TD, Goyal HO. *J Biomed Biotechnol*. 2012;2012:815186. doi: 10.1155/2012/815186. Epub 2012 Jul 4. PMID: 22829750 [PubMed - indexed for MEDLINE] Free PMC Article
- 5) \* H Q H W L F D O O \ L Q G X F H G H V W U R J H Q U H F H S W R U . P 5 1 \$ ( V U adversely affect fertility or penile development in male mice. Heath J, Abdelmageed Y, Braden TD, Williams CS, Williams JW, Paulose T, Hernandez-Ochoa I, Gupta R, Flaws JA, Goyal HO. *J Androl*. 2011 May-Jun;32(3):282-94. doi: 10.2164/jandrol.110.010769. Epub 2010 Oct 7. PMID: 20930192 [PubMed - indexed for MEDLINE] Free PMC Article
- 6) Mal-development of the penis and loss of fertility in male rats treated neonatally with female contraceptive 17alpha-ethinyl estradiol: a dose-response study and a comparative study with a known estrogenic teratogen diethylstilbestrol. Mathews E, Braden TD, Williams CS, Williams JW, Bolden-Tiller O, Goyal HO. *Toxicol Sci*. 2009 Dec;112(2):331-43. doi: 10.1093/toxsci/kfp207. Epub 2009 Sep 3. PMID: 19729556 [PubMed - indexed for MEDLINE] Free PMC Article
- 7) Estrogen-induced developmental disorders of the rat penis involve both estrogen receptor (ESR)- and androgen receptor (AR)-mediated pathways. Goyal HO, Braden TD, Williams CS, Williams JW. *Biol Reprod*. 2009 Sep;81(3):507-16. doi: 10.1095/biolreprod.108.071951. Epub 2009 May 6. PMID: 19420389 [PubMed - indexed for MEDLINE] Free PMC Article

- 8) Activation of Penile Proadipogenic Peroxisome Proliferator-Activated Receptor gamma with an Estrogen: Interaction with Estrogen Receptor Alpha during Postnatal Development. Mansour MM, Goyal HO, Braden TD, Dennis JC, Schwartz DD, Judd RL, Bartol FF, Coleman ES, Morrison EE. PPAR Res. 2008;2008:651419. doi: 10.1155/2008/651419. PMID: 18769493 [PubMed] Free PMC Article
- 9) Role of estrogen in induction of penile dysmorphogenesis: a review. Goyal HO, Braden TD, Williams CS, Williams JW. Reproduction. 2007 Aug;134(2):199-208. Review. PMID: 17660230 [PubMed - indexed for MEDLINE] Free Article
- 10) Estrogen receptor alpha mediates estrogen-inducible abnormalities in the developing penis. Goyal HO, Braden TD, Cooke PS, Szewczykowski MA, Williams CS, Dalvi P, Williams JW. Reproduction. 2007 May;133(5):1057-67. PMID: 17616734 [PubMed - indexed for MEDLINE] Free Article

Presentations:

1. Goyal, H., T. Braden, C. Williams, and J. Williams, Role of estrogen in inducing penile dysmorphogenesis and loss of fertility, a review. National Symposium on ~~2006-12-09 12:00:00 (UTC) through 2006-12-09 12:00:00 (UTC)~~ (e)

male and female Sprague Dawley Rats. 48<sup>th</sup> Annual Teratology Society Meeting. Monterey, CA, June 28<sup>th</sup> – July 2<sup>nd</sup> 2008

7. Goyal H.O., Environmental Estrogens and Reproductive Disorders. Invited lecture at Raising the Bar: Celebrating 28 Years of Scholastic Achievement, Distinguished Faculty and Cutting-Edge Research: A Program in Honor of President Benjamin F. Payton's Retirement and His Legacy of Outstanding Leadership. Tuskegee University, Tuskegee, AL, April 14, 2010
8. Mathews, Ensa\*, O. Bolden-Tiller, C. Williams, and H.O. Goyal, The effect of estrogen analogues on the testis, epididymis and penis in rats. Society for the Study of Reproduction, Pittsburgh, PA, July 20, 2009
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24. Goyal HO, Braden TD, and Okumu LA : Mechanism of Estrogen- or Antiandrogen-Induced Penile Development: Presented at the European Congress of Andrology, Barcelona, Spain, October 15-17, 2014

25. Goyal HO, Braden TD, and Okumu LA : Mechanism of Estrogen-Induced Penile