

## **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) Genetically induced estrogen receptor mRNA (Esr1) overexpression does not 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, ~~-r43.do(et)290~~ 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 **Wpos4(ollia0(h2 o9ge--24,o-)6(ug)nEs**

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