



## References (2015-2020) on the Administration of Testosterone Using ALZET® Osmotic Pumps

**Q8612:** A. Krishnan, *et al.* Effect of DHT-Induced Hyperandrogenism on the Pro-Inflammatory Cytokines in a Rat Model of Polycystic Ovary Morphology. *Medicina (Kaunas)* 2020;56(3):

**Agents:** Dihydrotestosterone **Vehicle:** Not stated; **Route:** SC; **Species:** Rat; **Pump:** Not stated; **Duration:** 90 days;  
**ALZET Comments:** Dose (83 µg/day); Controls received mp w/ vehicle; animal info (female Wistar albino rats, 21 days old); long-term study; Dihydrotestosterone aka DHT; dependence;

**Q7505:** B. M. Warner, *et al.* Development and Characterization of a Sin Nombre Virus Transmission Model in *Peromyscus maniculatus*. *Viruses* 2019;11(2):

**Agents:** Testosterone enanthate **Vehicle:** Propylene Glycol; **Route:** SC; **Species:** Mice; **Pump:** 1004; **Duration:** 28 days;  
**ALZET Comments:** Dose (200 µg/day); Controls received mp w/ vehicle; animal info (deer mice); post op. care (meloxicam 2mg/kg);

**Q8024:** M. Hanoun, *et al.* Nestin(+)NG2(+) Cells Form a Reserve Stem Cell Population in the Mouse Prostate. *Stem Cell Reports* 2019;12(6):1201-1211

**Agents:** Testosterone **Vehicle:** Not stated; **Route:** SC; **Species:** Mice; **Pump:** Not stated; **Duration:** 3-4 weeks;  
**ALZET Comments:** Dose (1.875 µg/hour); animal info (Male, C57BL6);

**Q7651:** H. Zhao, *et al.* Chemokine-like receptor 1 deficiency leads to lower bone mass in male mice. *Cellular and Molecular Life Sciences* 2018;76(2):355-367

**Agents:** dihydrotestosterone, 5alpha-; ethyltrimethylammonium iodide, 2-(alpha-naphthoyl)- **Vehicle:** Not stated; **Route:** SC; **Species:** Mice; **Pump:** 1004; **Duration:** 28 days;  
**ALZET Comments:** Dose ((DHT 83.3 µg/day), (alpha-NETA 33 µg/day)); Controls received empty mp; animal info (8 or 10 weeks, male, C57BL/6 or CMKLR1-/-); DHT is a nonaromatizable androgen. Alpha-NETA is a small molecule reported to function as a CMKLR1 antagonist; replacement therapy (testosterone);

**Q8144:** G. Navarro, *et al.* Androgen excess in pancreatic beta cells and neurons predisposes female mice to type 2 diabetes. *JCI Insight* 2018;3(12):

**Agents:** Dihydrotestosterone **Vehicle:** Not stated; **Route:** CSF/CNS (lateral ventricle); **Species:** Mice; **Pump:** Not stated; **Duration:** 4 weeks;  
**ALZET Comments:** Controls received mp w/ vehicle; animal info (8 weeks old, Female, C57BL/6J); Dihydrotestosterone aka DHT, nonaromatizable AR agonist ; Brain coordinates (L +1 mm, AP -0.2 mm, DV -2 mm); bilateral cannula used; diabetes;

**Q7730:** G. Navarro, *et al.* Androgen excess in pancreatic beta cells and neurons predisposes female mice to type 2 diabetes. *JCI Insight* 2018;3(12):

**Agents:** Dihydrotestosterone **Vehicle:** Not Stated; **Route:** CSF/CNS (lateral ventricle); **Species:** Mice; **Pump:** Not Stated; **Duration:** Not Stated;  
**ALZET Comments:** Controls received mp w/ vehicle; animal info (littermate mice aged 10-16 weeks.); dihydrotestosterone aka DHT; Brain coordinates ((coordinates compared with the bregma L +1 mm, AP -0.2 mm, DV -2 mm)); diabetes;

**Q7922:** H. Ito, *et al.* Castration increases PGE2 release from the bladder epithelium in male rats. *Life Sci* 2018;193(252-256)

**Agents:** Testosterone **Vehicle:** Not Stated; **Route:** SC; **Species:** Rat; **Pump:** Not Stated; **Duration:** 2 weeks;  
**ALZET Comments:** Dose (1 mg/kg/day); animal info (Male, 10 week old, Sprague Dawley, 31-330 g); dependence;

**Q7117:** C. W. Chua, *et al.* Differential requirements of androgen receptor in luminal progenitors during prostate regeneration and tumor initiation. *eLife Journal* 2018;7(**Agents:** Testosterone **Vehicle:** Ethanol; **Route:** SC; **Species:** Mice; **Pump:** 2004; **Duration:** 28 days;

**ALZET Comments:** Dose (1.875 µg/hr/day); animal info (Nkx3.1); cancer (Prostate);



**Q5923:** Q. Xie, *et al.* Transcriptional regulation of the Nkx3.1 gene in prostate luminal stem cell specification and cancer initiation via its 3' genomic region. *J Biol Chem* 2017;292(33):13521-13530

**Agents:** Testosterone **Vehicle:** Ethanol, PEG-400; **Route:** SC; **Species:** mice (transgenic); **Pump:** Not Stated; **Duration:** 4 weeks;

**ALZET Comments:** animal info (CK18-CreERT2 transgenic, Nkx3.1, C57BL/6N); cancer (prostate); replacement therapy (testosterone infusion); Dose (1.875 ug/h);

**Q5712:** Q. Xie, *et al.* Dissecting cell-type-specific roles of androgen receptor in prostate homeostasis and regeneration through lineage tracing. *Nat Commun* 2017;8(14284)

**Agents:** Testosterone **Vehicle:** Ethanol; PEG 400; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 4 weeks;

**ALZET Comments:** animal info (male, adult, castrated); Dose (1.875 ug/hr);

**Q6568:** T. Kaniyas, *et al.* Testosterone-dependent sex differences in red blood cell hemolysis in storage, stress, and disease. *Transfusion* 2016;56(10):2571-2583

**Agents:** Testosterone **Vehicle:** Propylene glycol; **Route:** SC; **Species:** Mice; **Pump:** 2004; **Duration:** 32 days;

**ALZET Comments:** Dose (1 mg/kg/day); Controls received mp w/ vehicle; animal info (15-16 week old Orchiectomy FVB/NJ mice); replacement therapy (orchietomized);

**Q4821:** Daniel G. Donner, *et al.* Trenbolone Improves Cardiometabolic Risk Factors and Myocardial Tolerance to Ischemia-Reperfusion in Male Rats With Testosterone-Deficient Metabolic Syndrome. *Endocrinology* 2016;157(1):368-381

**Agents:** Testosterone; trenbolone **Vehicle:** Cyclodextrin, 2-hydroxypropyl-b-; **Route:** SC; **Species:** Rat; **Pump:** 2004;

**Duration:** 8 weeks;

**ALZET Comments:** Controls received mp w/ vehicle; animal info (male, Wistar, 12 weeks old, 300g); functionality of mp verified by plasma; pumps replaced every 4 weeks; 45% cyclodextrin used; ischemia (cardiac); post op. care (buprenorphine 10 ug/kg/day IM; enrofloxacin 5 mg/kg ip for 3 days); long-term study; Dose (2 mg/kg/day);

**Q4252:** R. E. Sorge, *et al.* Different immune cells mediate mechanical pain hypersensitivity in male and female mice. *NATURE NEUROSCIENCE* 2015;18(1081-+)

**Agents:** Testosterone **Vehicle:** Polyethylene glycol; **Route:** SC; **Species:** Mice (nude); **Pump:** 2002; **Duration:** 14 days;

**ALZET Comments:** animal info (naive, adult, young, 7-12 wks old, male, female, CD-1, nude CD-1)

**Q4285:** Y. Reizel, *et al.* Gender-specific postnatal demethylation and establishment of epigenetic memory. *GENES & DEVELOPMENT* 2015;29(923-933)

**Agents:** Testosterone **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** 2004; **Duration:** 3 months;

**ALZET Comments:** Controls received mp w/ vehicle; animal info (C57BL6, 3 or 20 weeks old); pumps replaced every 28 days; replacement therapy (testosterone replacement); long-term study; pumps primed for 48 hours in 37C saline;