References on the Administration of Vitamins Using ALZET® Osmotic Pumps

1. RO-23-7553

ALZET Comments: RO-23-7553; PBS; IP; mice; 1007D; 7 days; controls received sham mp; cancer.

2. Vitamin A

ALZET Comments: Dipyridamole; Lazaroids; Retinoic acid; Review of adhesion formation and prevention; mentions the use of mini-osmotic pumps to evaluate new agents to reduce experimental pelvic adhesions (p. 125).

ALZET Comments: Retinoic acid, 13-cis-; Ethanol; SC; Mice (transgenic); 1007D; 5 weeks; Controls received mp w/ vehicle; dose-response (fig. 1); no stress (see pg. 312-13); cancer (neuroblastoma).

ALZET Comments: Retinoic acid; uridine, bromodeoxy-; SC; Mice; 1, 3, 6 days; Controls received mp w/ vehicle; comparison of SC injections vs. mp; cancer (gastric); multiple pumps per animal (2).

ALZET Comments: Transforming growth factor; insulin-like growth factor I; retinoic acid; brain-derived neurotrophic factor; PBS; BSA; Ear (vestibule); Guinea pig; 2002; 4 weeks; Controls received mp w/ vehicle; pumps replaced after 2 weeks; peptides; IntraEAR catheter used; GFI group pumps filled with TGF, IGF and Retinoic acid; GFII group pumps filled with TGF, IGF, BDNF and retinoic acid; tissue perfusion (vestibule).

ALZET Comments: Retinoic acid; Quinacrine; Dipyridamole; PBS; Ethanol; injury site; rabbit; 2ML1; 1, 2, 3, 7 days; controls received mp w/vehicle; tissue perfusion (surgical injury site); animals given morphine i.m. for post-operative pain; catheter stabilized in sidewall w/suture; in some studies, catheter tubing was disconnected to halt flow at specific times; immunology.

3. Vitamin B12

ALZET Comments: Vitamin b12; Cobalamin, ethylphenyl-; saline; SC; mice; 2004; 4 weeks; controls received mp w saline; animal info: 7 wks old, female, strain 129.S6; mp used to infuse EtPhCbI in mice to see if it causes Cbl (cobalamin) deficiency; EtPhCbI (3.5 nmol/24 h), CNCbI.

ALZET Comments: Cobinamide; vitamin B12; Saline; SC; Mice; 2004; 27 days; Control animals received mp w/ vehicle; animal info (129.56, 8 wks old, female); "To avoid wound biting between mice, the mice were housed in individual cages for 3 days after surgery."; post op. care (buprenorphine in the water); cobinamide is a vitamin B12 analogue.

ALZET Comments: Vitamin B12; IP; Rat; 2002; 15 days; controls received mp w/saline.

ALZET Comments: Vitamin B12 analog; SC; Rat; 2002; no duration posted; controls received pumps with saline only; pumps replaced after three weeks; cobalamin analog.

4. Vitamin B12 analog

ALZET Comments: Vitamin B12 analog; SC; Rat; 2002; no duration posted; controls received pumps with saline only; pumps replaced after three weeks; cobalamin analog.

5. Vitamin D

Agents: 1a,25-dihydroxyvitamin D; Vehicle: Not Stated; Route: SC; Species: Mice; Pump: Not Stated; Duration: 3 weeks;
ALZET Comments: animal info (137 day old, C57BL/6J ); 1a,25-dihydroxyvitamin D; aka 1, 25D ; dependence;

Agents: Vitamin D3, 1,25-dihydroxy Vehicle: Cyclodextrin; hydroxypropyl-B; Route: CSF/CNS (third ventricle); Species: Rat; Pump: 1004; Duration: 28 days;
ALZET Comments: Controls received mp w/ vehicle; animal info (male, Long Evans, adult); dose-response (Supplementary Figure 3); obesity; Dose (-.264 ug/day); Brain coordinates (i3vt 2.2A/P, 7.8D/V);

Agents: Vitamin D, 1,25-Dihydroxy- Vehicle: Not Stated; Route: Not Stated; Species: Mice; Pump: Not Stated; Duration: 4 weeks;
ALZET Comments: animal info (Hyp mice); “In contrast, Alzet minipump infusion of 1,25D into Hyp mice for 4 weeks after weaning, along with a diet rich in phosphate, normalizes the growth plate and dramatically improves osteoid thickness” pg 936; Oral vs. minipump (pg. 936);

Agents: Hydroxyvitamin D3, 1a- Vehicle: Not Stated; Route: SC; Species: Sheep (ewe); Pump: 2002; Duration: 6 days;
ALZET Comments: Animal info (merino, mature); functionality of mp verified by plasma 1,125-dihydroxycholecalciferol levels;

Q3900: S. K. Halder, et al. Paricalcitol, a Vitamin D Receptor Activator, Inhibits Tumor Formation in a Murine Model of Uterine Fibroids. REPRODUCTIVE SCIENCES 2014;21(1108-1119
Agents: Vitamin D3, 1,25-dihydroxy
Vehicle: PEG; ethanol; Route: SC; Species: Mice (nude); Pump: Not Stated; Duration: 28 days;
ALZET Comments: Controls received mp w/ vehicle; animal info (female, athymic, nude, 5-6 weeks old); 95% PEG used; 5% ethanol used; cancer (uterine fibroid tumor);