
**Agents**: Human parathyroid hormone-(1-34) **Vehicle**: Not Stated; **Route**: SC; **Species**: Mice; **Pump**: 1002; **Duration**: 2 weeks;

**ALZET Comments**: Dose (80 μg/kg/day); Controls received mp w/ vehicle; animal info (16-weeks-old female mice); Human parathyroid hormone-(1-34); aka hPTH1-34; replacement therapy (parathyroid hormone);


**Agents**: Parathyroid Hormone **Vehicle**: Not Stated; **Route**: SC; **Species**: Mice; **Pump**: Not Stated; **Duration**: 12 days;

**ALZET Comments**: Dose (40 ug/kg/day); Controls received mp w/ vehicle; animal info (3 months old, Male); dependence;


**Agents**: Parathyroid Hormone, 1-34 **Vehicle**: Vehicle not stated; **Route**: SC; **Species**: Rat; **Pump**: Not Stated; **Duration**: 28 days;

**ALZET Comments**: "Dose (0.1 mg/kg/h); animal info (13-week-old male SD rats weighing 350 g); replacement therapy (parathyroidectomy); "

Q7537: J. Y. Li, et al. IL-17 Receptor Signaling in Osteoblasts/Osteocytes Mediates PTH-Induced Bone Loss and Enhances Osteocytic RANKL Production. J Bone Miner Res 2019;34(2):349-360

**Agents**: Parathyroid Hormone 1-34, human **Vehicle**: saline, isotonic, cysteine buffered; **Route**: SC; **Species**: Rat; **Pump**: 2002; **Duration**: 2 weeks;

**ALZET Comments**: Dose (100 μg/kg/day); Controls received mp w/ vehicle; animal info (16-week-old female IL-17RADOCY mice); replacement therapy (hyperparathyroidism);


**Agents**: Parathyroid hormone, rat 1-34; AMG641 **Vehicle**: saline, isotonic, cysteine buffered; **Route**: SC; **Species**: Rat; **Pump**: 2ML4; **Duration**: 28 days;

**ALZET Comments**: Dose ((PTH 0.022, 0.132, 0.198 μg/100g/h), (AMG 641 1.5 mg/kg/48 h)); saline with 2% cysteine (pH 1.4) used; Controls received sham surgery and mp w/ vehicle; animal info (male, Wistar, 200-250g); AMG 641 is a calcimimetic; Therapeutic indication (calcimimetic administration has a direct anabolic effect on bone that counteracts the decrease in PTH levels);


**Agents**: Parathyroid hormone (1-34) **Vehicle**: saline; **Route**: SC; **Species**: Mice; **Pump**: Not stated; **Duration**: 7, 14, 28 days;

**ALZET Comments**: Dose (100 μg/kg/day); Controls received SC injection of vehicle; animal info (4 months, female, C57BL/6J); comparison of SC injection vs mp; mp model not stated;


**Agents**: Parathyroid hormone 1-34 **Vehicle**: Saline; **Route**: SC; **Species**: Mice; **Pump**: 2002; **Duration**: 2 weeks;

**ALZET Comments**: Dose (40μg/kg/day); Controls received mp w/ vehicle; animal info (8 week old, male, C57BL/6J); replacement therapy (parathyroid hormone);


**Agents**: Parathyroid hormone (1-34) **Vehicle**: Saline; **Route**: SC; **Species**: Mice; **Pump**: 1002; **Duration**: 14 days;

**ALZET Comments**: Dose (80 mg/kg/d); Controls received mp w/ vehicle; animal info (8 week-old female Hdac4ob/-/- mice);

**Agents:** Parathyroid hormone (1-34), human  
**Vehicle:** Acetic acid; mouse serum  
**Route:** SC  
**Species:** Mice  
**Pump:** Not Stated  
**Duration:** 5 days  
**ALZET Comments:** Dose (0.67 pmol/g of body weight/h); 10 mM acetic acid containing 2% heat inactivated mouse serum used; Controls received mp w/ vehicle; functionality of mp verified by hypercalcemia;


**Agents:** Parathyroid hormone  
**Vehicle:** Not Stated  
**Route:** SC  
**Species:** Rat  
**Pump:** Not Stated  
**Duration:** Not Stated  


**Agents:** Parathyroid hormone (1-34), human  
**Vehicle:** PBS  
**Route:** SC  
**Species:** Mice  
**Pump:** 2ML4  
**Duration:** 8 weeks  
**ALZET Comments:** Dose (0.11 ug•100g_1•h_1); Controls received mp w/ vehicle; animal info (Tie2-Cre mice); cardiovascular;


**Agents:** Parathyroid Hormone (1-34), Human  
**Vehicle:** Saline  
**Route:** SC  
**Species:** Mice  
**Pump:** 1002  
**Duration:** Not Stated  
**ALZET Comments:** Dose (11 μg/kg/day); Controls received mp w/ vehicle; animal info (8-week-old, parathyroid hormone-supplemented, C57BL6J male mice); Parathyroid Hormone (1-34), human aka hPTH(1–34); peptides;


**Agents:** Parathyroid hormone, human  
**Vehicle:** Saline  
**Route:** SC  
**Species:** Mice  
**Pump:** 1002  
**Duration:** 2 weeks  
**ALZET Comments:** Dose (80 μg/kg/day); Controls received mp w/ vehicle; animal info (8-week-old female wild-type and MCP-1−/− mice);


**Agents:** Parathyroid hormone vehicle  
**Route:** SC  
**Species:** Mice  
**Pump:** 1002  
**Duration:** 2 weeks  
**ALZET Comments:** Controls received mp w/ vehicle; animal info (4 months)Therapeutic indication (Osteoclast differentiation); Dose (80 ug/kg/day);


**Agents:** Parathyroid hormone (1-34), human; parathyroid hormone (7-34), bovine  
**Vehicle:** PBS  
**Route:** SC  
**Species:** Mice  
**Pump:** 1004  
**Duration:** 28 days  
**ALZET Comments:** Controls received mp w/ vehicle; animal info (male, C57Bl6J, 11 weeks old); Dose (all PTH 40 ug/kg/day);


**Agents:** Human parathyroid hormone  
**Vehicle:** PBS, acetic acid  
**Route:** SC  
**Species:** Mice  
**Pump:** Not Stated  
**Duration:** 5 days  
**ALZET Comments:** Controls received mp w/ vehicle; animal info (3 months old); Dose (40 ug/kg/day);
Q4529: S. Maudsley, et al. Delineation of a Conserved Arrestin-Biased Signaling Repertoire In Vivo. MOLECULAR PHARMACOLOGY 2015;87:706-717
**Agents:** Parathyroid hormone (1-34), human; parathyroid hormone (7-34), bovine **Vehicle:** PBS, **Route:** SC; **Species:** Mice; **Pump:** 1004; **Duration:** 28 days;
**ALZET Comments:** Controls received mp w/ vehicle; animal info (male, WT or congenic arrestin3 null, 11 weeks old);

Q5222: J. Y. Li, et al. IL-17A Is Increased in Humans with Primary Hyperparathyroidism and Mediates PTH-Induced Bone Loss in Mice. Cell Metabolism 2015;22(5):799-810
**Agents:** Parathyroid hormone, human (1-34) **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** 1002; **Duration:** 2 weeks;
**ALZET Comments:** Controls received mp w/ vehicle; animal info: 16-week-old female mice, C57BL/6 WT; functionality of mp verified by flow cytometry; dose-response (pg 808); replacement therapy (human parathyroid hormone); immunology; peptides; Dose: 80 mg/kg/day

**Agents:** Parathyroid hormone (1-34) **Vehicle:** Saline, isosmotic; cysteine; **Route:** SC; **Species:** Rat; **Pump:** Not Stated; **Duration:** 6 weeks; 12 weeks;
**ALZET Comments:** Controls received mp w/ vehicle; animal info (female, Sprague Dawley, 7 weeks old); functionality of mp verified by residual volume and serum levels; 2% cysteine used; replacement therapy (parathyroid replacement); used wound clips; used 2ML size pumps; pumps primed; long-term study;

**Agents:** Parathyroid hormone, rat **Vehicle:** Not Stated; **Route:** SC; **Species:** Rat; **Pump:** 2002; **Duration:** 16 weeks;
**ALZET Comments:** Controls received sham operation; animal info: 12-week-old male Sprague-Dawley; functionality of mp verified by urine samples; pumps replaced every 2 weeks; pumps replaced every 2 weeks; long-term study; Dose: 0.1 μg/kg/h

**Agents:** Parathyroid hormone (1-34), human **Vehicle:** HCl; BSA, PBS; **Route:** SC; **Species:** Mice; **Pump:** 1004; **Duration:** 12 days; 21 days;
**ALZET Comments:** Controls received mp w/ vehicle; animal info (male, Cox2KO or wt, 3 months old); 0.1% BSA used; pumps primed for 6 hours in 37C saline;

Q4313: M. Babey, et al. Gender-Specific Differences in the Skeletal Response to Continuous PTH in Mice Lacking the IGF1 Receptor in Mature Osteoblasts. JOURNAL OF BONE AND MINERAL RESEARCH 2015;30(1064-1076
**Agents:** Parathyroid hormone (1-34) **Vehicle:** NaCl; HCl; serum, heat-inactivated mouse; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 4 weeks;
**ALZET Comments:** Controls received mp w/ vehicle; animal info (FVN/B12 weeks old); comparison of injection vs mp; cardiovascular;

**Agents:** Parathyroid hormone (1-34) **Vehicle:** Not Stated; **Route:** Not Stated; **Species:** Rat; **Pump:** Not Stated; **Duration:** 50 days;
**ALZET Comments:** animal info (6 wks old, male, Wistar); induction of neophrocalcinosis

**Agents:** Parathyroid hormone (1-84) **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 14 days;
**ALZET Comments:** Controls received mp w/ vehicle; animal info (female, C57BL6, 4 months old, ovariectomized); comparison of injection vs mp; cardiovascular;

 Agents: Parathyroid hormone (1-34), rat Vehicle: Not Stated; Route: Not Stated; Species: Rat; Pump: 2004; Duration: 8 weeks;

 ALZET Comments: Controls received sham surgery; animal info (male, Sprague Dawley, 8 weeks old); long-term study;


 Agents: Parathyroid hormone (1-34), human; vitamin D3, 1,25-dihydroxy Vehicle: Not Stated; Route: SC; Species: Rat; Pump: Not Stated; Duration: 3 days;

 ALZET Comments: Controls received mp w/ vehicle; animal info (male, Sprague Dawley, 3 months old);

Q3818: M. Bozic, et al. High phosphate diet increases arterial blood pressure via a parathyroid hormone mediated increase of renin. Journal of Hypertension 2014;32(1822-1832

 Agents: Parathyroid hormone (1-34), recombinant rat Vehicle: Not Stated; Route: SC; Species: Rat; Pump: 2002; Duration: 4 weeks;

 ALZET Comments: Animal info (Sprague Dawley, 200-225g); functionality of mp verified by calcium serum levels;

Q2929: V. Saini, et al. Parathyroid Hormone (PTH)/PTH-related Peptide Type 1 Receptor (PPR) Signaling in Osteocytes Regulates Anabolic and Catabolic Skeletal Responses to PTH. Journal of Biological Chemistry 2013;288(28):20122-20134

 Agents: Parathyroid hormone Vehicle: Not Stated; Route: SC; Species: Mice; Pump: 1002; Duration: 2 weeks;

 ALZET Comments: Animal info (8-12 week old)


 Agents: Parathyroid hormone (1-34) Vehicle: Saline, acidified; serum, rat, heat-activated; Route: Not Stated; Species: Rat; Pump: Not Stated; Duration: 48 hours;

 ALZET Comments: Animal info (Wistar, male, 6 wks old);


 Agents: Parathyroid hormone, human (1-34) Vehicle: Saline; Route: Not Stated; Species: Mice (NSG); Pump: Not Stated; Duration: 4 weeks; 14 weeks;

 ALZET Comments: Controls received mp w/ vehicle; animal info (NSG; BALB/c); pumps replaced every 2 weeks; cancer (leukemia); immunology; peptides


 Agents: Parathyroid hormone (1-34) Vehicle: Not Stated; Route: SC; Species: Rat; Pump: 2002; Duration: Not Stated;

 ALZET Comments: Animal info (male, Sprague Dawley, 13 weeks old, 350g); peptides


 Agents: Parathyroid hormone (1-34), human Vehicle: NaCl; HCl; serum, mouse, heat-activated; Route: SC; Species: Mice; Pump: 1002; Duration: 8 days;

 ALZET Comments: Control animals received mp w/ vehicle; animal info (wt, DD, Npt 2a -/-, Npt2c -/-)


 Agents: Parathyroid hormone (1-34) Vehicle: Not Stated; Route: SC; Species: Mice; Pump: Not Stated; Duration: 4 weeks;

 ALZET Comments: Controls received mp w/ vehicle; animal info (Gcm2-/-); functionality of mp verified by PTH serum levels;

Agents: Parathyroid hormone (1-34)  
Vehicle: Saline, sterile;  
Route: Not Stated;  
Species: Mice;  
Pump: 1004;  
Duration: 3 weeks;  

ALZET Comments: Controls received mp w/ vehicle; animal info (KI -/-, PTH +/- 3 wks old); peptides


Agents: Parathyroid hormone, related peptide (1-36)  
Vehicle: Not Stated;  
Route: SC;  
Species: Mice;  
Pump: 2002;  
Duration: 12 days;  

ALZET Comments: Animal info (CD-1, 12 wks old); peptides


Agents: Parathyroid hormone (1-34), rat  
Vehicle: Cysteine;  
Route: SC;  
Species: Rat;  
Pump: 2ML4;  
Duration: 8 weeks;  

ALZET Comments: Controls received mp w/ vehicle; animal info (Wistar, male, 280-320 g); pumps replaced after 28 days


Agents: Parathyroid hormone related protein (1-34), rat  
Vehicle: Cysteine HCl; saline;  
Route: SC;  
Species: Rat;  
Pump: 2001;  
Duration: 5 days;  

ALZET Comments: Controls received mp w/ vehicle; animal info (Sprague Dawley, male, 200-250 g); wound clips used

Q1497: Q. Yuan, et al. PTH Ablation Ameliorates the Anomalies of Fgf23-Deficient Mice by Suppressing the Elevated Vitamin D and Calcium Levels. Endocrinology 2011;152(11):4053-4061

Agents: Parathyroid hormone (1-34)  
Vehicle: Saline, sterile;  
Route: SC;  
Species: Mice;  
Pump: 1004;  
Duration: 3 weeks;  

ALZET Comments: Controls received mp w/ vehicle; animal info (Fgf -/-, Pth -/-, wt); peptides


Agents: Parathyroid hormone  
Vehicle: Not Stated;  
Route: SC;  
Species: Mice;  
Pump: Not Stated;  
Duration: 6 weeks;  

ALZET Comments: Controls received mp w/ no treatment; animal info (8 wks old, HJVKO); no stress “Animals in all groups seemed to tolerate treatments well.” pg 94; stress/adverse effects “One animal with a PTH pump implant died unexpectedly 2 weeks postsurgery” pg 94


Agents: Parathyroid hormone (1-34)  
Vehicle: PBS, sterile; acetic acid;  
Route: SC;  
Species: Mice;  
Pump: 1004;  
Duration: 28 days;  

ALZET Comments: Controls received mp w/ vehicle; animal info (C57BL/6, female, 8-12 wks old); functionality of mp verified by PTH 1-34 levels in the blood serum; post op. care (Baytril and Rimadyl)


Agents: Parathyroid hormone  
Vehicle: Saline, isosmotic;  
Route: SC;  
Species: Rat;  
Pump: 2ML4;  
Duration: 28 days;  

ALZET Comments: Controls received mp w/ vehicle; animal info (male, Wistar, 200 g); replacement therapy (parathyroidectomy)


Agents: Parathyroid hormone-related peptide (1-34)  
Vehicle: Saline, physiological; cysteine, L-;  
Route: SC;  
Species: Mice (nude);  
Pump: 1007D;  
Duration: Not Stated;  

ALZET Comments: Controls received mp w/ vehicle; animal info (5 wls old, male, BALB/c); cancer; peptides
Q1737: S. Kudo, et al. Cartilaginous repair of full-thickness articular cartilage defects is induced by the intermittent activation of PTH/PTHrP signaling. OSTEOARTHRITIS AND CARTILAGE 2011;19(7):886-894
Agents: Parathyroid hormone (1-84), recomb. human Vehicle: Saline, sterile; Route: Knee (articular cavity); Species: Rabbit; Pump: 2002; Duration: 14 days;
ALZET Comments: Controls received mp w/ vehicle; animal info (male, white, adolescent, Japanese, 3-3.4 kg); pulsatile delivery; "The program consisted of alternating segments of 5 ul PTH (50 ug/ml) solution and 5 ul sterile saline interrupted by 1 ul air bubbles." pg 888

Agents: Parathyroid hormone (1-34) Vehicle: Not Stated; Route: SC; Species: Rat; Pump: 2002; Duration: 6 weeks;
ALZET Comments: Animal info (Sprague Dawley, male, 13 wks old, 350 g); pumps replaced every 2 weeks

Agents: Parathyroid hormone (1-34) Vehicle: Not Stated; Route: SC; Species: Rat; Pump: Not Stated; Duration: Not Stated;
ALZET Comments: Animal info (female, Sprague-Dawley, 225-250 g); replacement therapy (parathyroidectomy); functionality of mp verified by plasma PTH levels