



**References (2010-Present) on the Administration of Parathyroid Hormone
Using ALZET® Osmotic Pumps**

Q10820: C. Le Henaff, *et al.* Abaloparatide Has the Same Catabolic Effects on Bones of Mice When Infused as PTH (1–34). *JBMR Plus* 2023;7(2):

Agents: Parathyroid hormone (1-34); Abaloparatide **Vehicle:** Acetic acid; **Route:** SC; **Species:** Mice; **Pump:** 1002; **Duration:** 2 weeks;

ALZET Comments: Dose: (Both 80 µg/kg body weight/day;) dose-response (see graphs C-F on page 4); Controls received mp w/ vehicle; animal info C57Bl/6J (Female mice; 2 months old); peptides;

Q10402: C. Aksu, *et al.* Dose-range analysis of the effects of the long-acting parathyroid hormone analog AZP-3601 versus PTH(1-34) delivered by daily injection or continuous infusion on blood calcium levels and bone metabolism in thyroparathyroidectomized (TPTX) rats. *Endocrine Abstracts* 2022;

Agents: Parathyroid hormone **Vehicle:** Not Stated; **Route:** SC; **Species:** Rat; **Pump:** Not Stated; **Duration:** 16 days;

ALZET Comments: "Dose: (1.5, 2.0 or 3.0 nmol/kg/day); animal info: Male S-D rats at age 9 weeks and 2 weeks; Parathyroid Hormone aka (PTH-134); AZP-3601, a long-acting PTH/PTHrP(1-36) analog, is a candidate new treatment option for hypoparathyroidism (HP). As compared to conventional PTH(1-34), AZP-3601 binds with higher affinity to the RO conformation of the PTH-1 receptor resulting in prolonged signaling and sustained elevations in blood calcium (Ca²⁺) in vivo, despite a very short circulating half-life. We assessed whether repeated injection of AZP-3601 into TPTX rats at doses aimed to normalize serum Ca levels would produce different effects on bone than PTH(1-34) administered either intermittently or continuously. (pg.1)"

Q9880: M. Yu, *et al.* PTH induces bone loss via microbial-dependent expansion of intestinal TNF(+) T cells and Th17 cells. *Nature Communications* 2020;11(1):468

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);

Q9780: S. Choudhary, *et al.* Prostaglandins and bone metabolism. *Principles of Bone Biology* 2020;1247-1269

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

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

Q7419: T. Sato, *et al.* Disrupted tubular parathyroid hormone/parathyroid hormone receptor signaling and damaged tubular cell viability possibly trigger postsurgical kidney injury in patients with advanced hyperparathyroidism. *Clinical Kidney Journal: Clinical and Translational Nephrology* 2019;

Agents: Parathyroid Hormone, 1-34 **Vehicle:** Vehicle not stated; **Route:** SC; **Species:** Rat; **Pump:** 2002;

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 **Route:** Not Stated; **Species:** Mice; **Pump:** 1002; **Duration:** 2 weeks;

ALZET Comments: Dose (80 µg/kg/day); Controls received mp w/ vehicle; animal info (16-week-old female IL-17RADOCY mice); replacement therapy (hyperparathyroidism);

Q7984: J. M. Diaz-Tocados, *et al.* Calcimimetics maintain bone turnover in uremic rats despite the concomitant decrease in parathyroid hormone concentration. *Kidney Int* 2019;95(5):1064-1078

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);



- Q7951:** R. Caire, *et al.* Parathyroid Hormone Remodels Bone Transitional Vessels and the Leptin Receptor-Positive Pericyte Network in Mice. *J Bone Miner Res* 2019;34(8):1487-1501
Agents: Parathyroid hormone (1-84) **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;
- Q7327:** K. Yukata, *et al.* Continuous infusion of PTH1-34 delayed fracture healing in mice. *Sci Rep* 2018;8(1):13175
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);
- Q6906:** T. Nakatani, *et al.* The Deletion of Hdac4 in Mouse Osteoblasts Influences Both Catabolic and Anabolic Effects in Bone. *J Bone Miner Res* 2018;33(7):1362-1375
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);
- Q7011:** Koduru SV, *et al.* The contribution of cross-talk between the cell-surface proteins CD36 and CD47-TSP-1 in osteoclast formation and function. *The Journal of Biological Chemistry* 2018;293(39):15055-15069
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;
- R0390:** J. Bover, *et al.* Alkaline Phosphatases in the Complex Chronic Kidney Disease-Mineral and Bone Disorders. *Calcif Tissue Int* 2018;103(2):111-124
Agents: Parathyroid hormone **Vehicle:** Not Stated; **Route:** SC; **Species:** Rat; **Pump:** Not Stated; **Duration:** Not Stated;
ALZET Comments: Controls received sham surgery; studies referenced include Bover J, Jara A, Trinidad P, Rodriguez M, Martin-Malo A, Felsenfeld AJ (1994) The calcemic response to PTH in the rat: effect of elevated PTH levels and uremia. *Kidney Int* 46(2):310-317 and Bover J, Jara A, Trinidad P, Rodriguez M, Felsenfeld A (1999) Dynamics of skeletal resistance to parathyroid hormone in the rat: effect of renal failure and dietary phosphorus. *Bone* 25(3):279 – 85;
- Q6543:** M. Wu, *et al.* Elevated PTH induces endothelial-to-chondrogenic transition in aortic endothelial cells. *American Journal of Physiology Renal Physiology* 2017;312(3):F436-F444
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
- Q6515:** N. Tokonami, *et al.* Endothelin-1 mediates natriuresis but not polyuria during vitamin D-induced acute hypercalcemia. *J Physiol* 2017;595(8):2535-2550
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;
- Q6118:** J. A. Siddiqui, *et al.* Catabolic Effects of Human PTH (1-34) on Bone: Requirement of Monocyte Chemoattractant Protein-1 in Murine Model of Hyperparathyroidism. *Sci Rep* 2017;7(1):15300
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);
- Q5943:** Y. Alippe, *et al.* Bone matrix components activate the NLRP3 inflammasome and promote osteoclast differentiation. *Sci Rep* 2017;7(1):6630
Agents: Parathyroid hormone **Vehicle:** Not Stated; **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);



Q4861: S. Maudsley, *et al.* Informatic deconvolution of biased GPCR signaling mechanisms from in vivo pharmacological experimentation. *Methods* 2016;92(51-63

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);

Q5946: O. Andrukhova, *et al.* Fgf23 and parathyroid hormone signaling interact in kidney and bone. *Mol Cell Endocrinol* 2016;436(224-39

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

Q4487: V. Lam, *et al.* The Vitamin D, Ionised Calcium and Parathyroid Hormone Axis of Cerebral Capillary Function: Therapeutic Considerations for Vascular-Based Neurodegenerative Disorders. *PLoS One* 2015;10(U4547-U4566

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;

Q5214: Y. Iwasaki, *et al.* Altered material properties are responsible for bone fragility in rats with chronic kidney injury. *Bone* 2015;81(247-54

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

Q4378: S. Choudhary, *et al.* Cyclooxygenase-2 Suppresses the Anabolic Response to PTH Infusion in Mice. *PLoS One* 2015;10(U2183-U2203

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:** 1004; **Duration:** 4 weeks;

ALZET Comments: Controls received mp w/ vehicle; animal info (FVN/B12 weeks old); functionality of mp verified by serum PTH levels; cardiovascular;



Q3715: A. Shimomura, *et al.* Dietary L-Lysine Prevents Arterial Calcification in Adenine-Induced Uremic Rats. *Journal of the American Society of Nephrology* 2014;25(1954-1965

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 nephrocalcinosis

Q4069: B. Roche, *et al.* Parathyroid Hormone 1-84 Targets Bone Vascular Structure and Perfusion in Mice: Impacts of Its Administration Regimen and of Ovariectomy. *Journal of Bone and Mineral Research* 2014;29(1608-1618

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;

Q3883: T. Fumoto, *et al.* Lanthanum carbonate stimulates bone formation in a rat model of renal insufficiency with low bone turnover. *JOURNAL OF BONE AND MINERAL METABOLISM* 2014;32(484-493

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;

Q4711: T. Chaichanasakul, *et al.* Diverse Osteoclastogenesis of Bone Marrow From Mandible Versus Long Bone 1116. *JOURNAL OF PERIODONTOLOGY* 2014;85(829-836

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; replacement therapy (parathyroidectomy); cardiovascular;

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)

Q2709: I. Matsui, *et al.* Retention of fetuin-A in renal tubular lumen protects the kidney from nephrocalcinosis in rats. *American Journal of Physiology Renal Physiology* 2013;304(6):F751-F760

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);

Q3100: D. S. Krause, *et al.* Differential regulation of myeloid leukemias by the bone marrow microenvironment. *Nature Medicine* 2013;19(11):1513-+

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

Q3088: Y. Iwasaki, *et al.* Accumulated uremic toxins attenuate bone mechanical properties in rats with chronic kidney disease. *Bone* 2013;57(2):477-483

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



- Q2760:** J. Guo, *et al.* Activation of a Non-cAMP/PKA Signaling Pathway Downstream of the PTH/PTHrP Receptor Is Essential for a Sustained Hypophosphatemic Response to PTH Infusion in Male Mice. *Endocrinology* 2013;154(5):1680-1689
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 -/-)
- Q3068:** V. David, *et al.* Calcium Regulates FGF-23 Expression in Bone. *Endocrinology* 2013;154(12):4469-4482
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;
- Q2008:** Q. Yuan, *et al.* Deletion of PTH Rescues Skeletal Abnormalities and High Osteopontin Levels in Klotho(-/-) Mice. *PLoS Genetics* 2012;8(5):U694-U703
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
- Q2295:** H. Qing, *et al.* Demonstration of osteocytic perilacunar/canalicular remodeling in mice during lactation. *Journal of Bone and Mineral Research* 2012;27(5):1018-1029
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
- Q1809:** M. R. Custodio, *et al.* Parathyroid hormone and phosphorus overload in uremia: impact on cardiovascular system. *NEPHROLOGY DIALYSIS TRANSPLANTATION* 2012;27(4):1437-1445
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
- Q2287:** D. K. Atchison, *et al.* Parathyroid hormone-related protein stimulates plasma renin activity via its anorexic effects on sodium chloride intake. *American Journal of Physiology Endocrinology and Metabolism* 2012;303(4):E457-E463
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
- Q1448:** M. Otto-Duessel, *et al.* Interdependence of cardiac iron and calcium in a murine model of iron overload. *Translational Research* 2011;157(2):92-99
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
- Q1225:** S. Lymperi, *et al.* Inhibition of osteoclast function reduces hematopoietic stem cell numbers in vivo. *Blood* 2011;117(5):1540-1549
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)



Q1216: I. Lopez, *et al.* Direct and indirect effects of parathyroid hormone on circulating levels of fibroblast growth factor 23 in vivo. *Kidney International* 2011;80(5):475-482

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)

Q0709: N. Kurio, *et al.* Anti-tumor effect in human breast cancer by TAE226, a dual inhibitor for FAX and IGF-IR in vitro and in vivo. *Experimental Cell Research* 2011;317(8):1134-1146

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 wks 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

Q1708: Y. Iwasaki, *et al.* Changes in chemical composition of cortical bone associated with bone fragility in rat model with chronic kidney disease. *Bone* 2011;48(6):1260-1267

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

Q1473: A. J. Brown, *et al.* The Vitamin D Analog 1-alpha,25-Dihydroxy-2-beta-(3-Hydroxypropyloxy) Vitamin D₃ (Eldecalcitol) is a Potent Regulator of Calcium and Phosphate Metabolism. *Calcified Tissue International* 2011;89(5):372-378

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