Recent References (2019-Present) on Extended Duration Studies Using ALZET® Osmotic Pumps

Q11032: Q. Yu*, et al.* Urotensin II Enhances Advanced Aortic Atherosclerosis Formation and Delays Plaque Regression in Hyperlipidemic Rabbits. International Journal of Molecular Sciences 2023;24(4):
Agents: Urotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Rabbit; **Pump:** 2006; **Duration:** 6 weeks; 12 weeks; 24 weeks;
ALZET Comments: Dose: 5.4 ug/kg/h; Controls received mp w/ vehicle; animal info: Male/female rabbits, six weeks old; pumps replaced every 6 weeks; Blood pressure/heart rate measured via medial auricular artery; cardiovascular; atherosclerosis

Q11030: D. Ye*, et al.* Antisense oligonucleotides targeting hepatic angiotensinogen reduce atherosclerosis and liver steatosis in hypercholesterolemic mice. Global Translational Medicine 2023;2(1):
Agents: Losartan **Vehicle:** Water; **Route:** SC; **Species:** Mice; **Strain:** LDL receptor -/-; **Pump:** 2006; **Duration:** 12 weeks;
ALZET Comments: Dose: Losartan 15 mg/kg/day; Controls received mp w/ vehicle; animal info: Male ~8 weeks old; pumps replaced after 6 weeks; Blood pressure measured via: Tail cuff; Blood pressure measurement results (see pg. 3) fig. 1; cardiovascular (liver steatosis, atherosclerosis)

Q10989: A. Sakamoto*, et al.* CD163+ macrophages restrain vascular calcification, promoting the development of high-risk plaque. JCI Insight 2023;8(5):
Agents: IKK-NBD peptide, control; NBD peptide, NFκB inhibitor **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Strain:** ApoE-/-; **Pump:** 2006; **Duration:** 18 weeks;
ALZET Comments: Dose (both peptides 100 µg/kg/day); animal info: 8 weeks old; pumps replaced every 6 weeks, total of 3 surgeries per mouse were required; peptides; cardiovascular; vascular calcification (atherosclerotic coronary artery)

Q10966: K. Nagaoka*, et al.* Acetaminophen improves tardive akathisia induced by dopamine D(2) receptor antagonists. Journal of Pharmacological Sciences 2023;151(1):9-16
Agents: Haloperidol **Vehicle:** Cyclodextrin, hydroxypropyl-b; **Route:** Not Stated; **Species:** Rat; **Strain:** Wistar; **Pump:** 2ML4; **Duration:** 21 days;
ALZET Comments: Dose: (1 mg/kg/day); animal info (Male, 9 weeks old, 200-250 g); pumps replaced: removed on the 21st day and new pumps were implanted in the same manner; behavioral testing (open field test.); akathisia

Q10964: J. M. Motherwell*, et al.* Effects of Adjunct Antifibrotic Treatment within a Regenerative Rehabilitation Paradigm for Volumetric Muscle Loss. International Molecular of Life Sciences 2023;24(4):
Agents: Losartan potassium **Vehicle:** DMSO; saline; **Route:** SC; **Species:** Rat; **Strain:** Lewis; **Pump:** 2ML4; **Duration:** 56 days;
ALZET Comments: Dose (10 mg/kg/day); (1:1 solution of DMSO and 0.9% normal saline used; animal info: Adult male Lewis rats (343 +- 25.1 g; behavioral testing (running wheel activity); pumps replaced after 28 days; fibrosis, volumetric muscle loss

Q11059: K. Momenzadeh*, et al.* Propylene glycol and Kolliphor as solvents for systemic delivery of cannabinoids via intraperitoneal and subcutaneous routes in preclinical studies: a comparative technical note. Journal of Cannabis Research 2023;5(1):24
Agents: Tetrahydrocannabinol; cannabinoids **Vehicle:** Propylene glycol; Kolliphor; ethanol; saline; **Route:** IP; SC; **Species:** Rat; **Strain:** Sprague-Dawley; **Pump:** 2ML4; **Duration:** 8 weeks;
ALZET Comments: Dose (20 mg/kg); controls received mp w/ vehicle; animal info (13-week male (approximately 330 g,); post op. care (Enrofloxacin); pumps replaced after 4 weeks; comparison of injection vs mp; stress/adverse reaction: (see pg.3-5); used sterile technique and changed solvent; "We
conclude that subcutaneous delivery utilizing osmotic pumps with Kolliphor as a solvent provides viable and consistent route of administration for long-term systemic cannabinoid delivery in the preclinical context."

Q11049: S. Kumar*, et al.* Neuroprotection of Retinal Ganglion Cells Suppresses Microglia Activation in a Mouse Model of Glaucoma. ARVO Journals 2023;64(7):24
Agents: Meclofenamic acid; **Route:** CSF/CNS; **Species:** Mice; **Strain:** C57BL/6; **Pump:** 2004; **Duration:** 4 weeks;
ALZET Comments: Dose (20 mg/kg/d;); animal info: adult, 3-4 months old, both sexes; pumps replaced after 4 weeks; cancer (glaucoma)

Q11044: B. A. Karamian, *et al.* Varenicline mitigates the increased risk of pseudarthrosis associated with nicotine. The Spine Journal 2023;23(8):1212-1222
Agents: Nicotine; varenicline **Vehicle:** Not Stated; **Route:** CSF/CNS; **Species:** Rat; **Strain:** Sprague-Dawley; **Pump:** 2ML4; **Duration:** 8 weeks;
ALZET Comments: Dose: Nicotine 15mg/kg/day, 22.5mg/kg/day, 30mg/kg/day; Varenicline 1mg/kg/day, 2mg/kg/day: animal info: eight-week-old male Sprague-Dawley rats ~300 grams; post op. care: skin closed with running sub-cuticular 4-0 Vicrylsuture, incision was dressed with triple antibiotic ointment; pumps replaced after 4 weeks; functionality of mp verified by serum levels; good methods (pump replacement) p. 2-3; therapeutic indication: (Pseudarthrosis, spinal fusion)

Q11079: A. Huang, *et al.* Modulation of foraging-like behaviors by cholesterol-FGF19 axis. Cell & Bioscience 2023;13(1):20
Agents: Fibroblast growth factor 19 **Vehicle:** CSF, artificial; **Route:** CSF/CNS (right lateral ventricle); **Species:** Mice; **Strain:** C57BL/6; **Pump:** 2006; **Duration:** 2 weeks;
ALZET Comments: Dose: FGF19 (15 ng/0.5 ul/h); Controls received mp w/ vehicle; animal info (Male; 5 months old); peptides; pumps replaced twice; functionality of mp verified by measuring residual volume; Brain coordinates: (Anteroposterior -0.3 mm to bregma, lateral 1 mm to bregma, -2.5 mm below skull); vinyl tubing used; behavioral testing (Open field);

Q10896: Y. Zheng, *et al.* Beta-Hydroxybutyrate Inhibits Ferroptosis-Mediated Pancreatic Damage in Acute Liver Failure Through the Increase of H3K9bhb. Cell Reports 2022;41(12):111847
Agents: Hydroxybutyrate, beta- **Vehicle:** PBS; **Route:** IP; **Species:** Mice; **Strain:** C57BL/6J; **Pump:** 2001D; **Duration:** 48 hours;
ALZET Comments: Dose (1 g/mL); Controls received mp w/ vehicle; animal info (Male mice; 8 weeks old; Hepatectomy used to remove over 70% of their livers); post op. care (Carprofen); pumps replaced after liver resection;

Q10887: Y. Zhao, *et al.* ATAD3A Oligomerization Promotes Neuropathology and Cognitive Deficits in Alzheimer's Disease Models. Nature Communications 2022;13(1):1121
Agents: TAT control peptide; DA1 peptide **Vehicle:** Not Stated; **Route:** Not Stated; **Species:** Mice; **Strain:** 5XFAD; **Pump:** 2004; **Duration:** 8.5 months;
ALZET Comments: Dose (1 mg/kg/day); Animal info: (mice); behavioral testing: (Y-maze test; Barnes maze test; Nest building performance test; Open field test); pumps replaced every 4 weeks; peptides; neurodegenerative (Alzheimer's Disease);

Q11036: C. A. Wood, *et al.* Activity disruption causes degeneration of entorhinal neurons in a mouse model of Alzheimer's circuit dysfunction. eLife 2022;11(**Agents:** Tetrodotoxin **Vehicle:** Saline; trypan blue; **Route:** CSF/CNS (right dorsal); **Species:** Mice; **Strain:** Nop-GlyCl; TeTX; **Pump:** 1003D; **Duration:** 3 days; 9 days;
ALZET Comments: Dose: 23 ul/day; 0.9% saline containing 0.04% Trypan blue used; Controls received mp w/ vehicle; pumps primed overnight; animal info: 3 to 6 months old; pumps replaced 4 and 7 days later to continue TTX administration; ALZET brain infusion kit 3 used; Brain coordinates (AP –4.5, ML +3.0, and DV –2.5 mm that targeted immediately above the right EC or at AP –3.1, ML +3.0, and DV –2.65 to target the dorsal DG); neurodegenerative (Alzheimer's); "

Q10725: J. A. Whitson, *et al.* Age-Related Disruption of the Proteome and Acetylome in Mouse Hearts is Associated With Loss of Function and Attenuated by Elamipretide (SS-31) and Nicotinamide Mononucleotide (NMN) Treatment. Geroscience 2022;44(3):1621-1639
Agents: Elamipretide **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 4 weeks;
ALZET Comments: Dose: (3 mg/kg body weight/day); animal info: C57BL/6, Male mice aged to 5–6 and 24 months; pumps replaced every 4 weeks; Elamipretide aka (SS-31); peptides; aging

Q10774: R. M. Wang, *et al.* Myocardial Matrix Hydrogel Acts as a Reactive Oxygen Species Scavenger and Supports a Proliferative Microenvironment for Cardiomyocytes. Acta Biomaterialia 2022;152(47-59
Agents: Uridine, 5-Ethynyl-2'deoxy-; Uridine, Bromodeoxy- **Vehicle:** Saline; **Route:** SC; **Species:** Rat; **Pump:** Not Stated; **Duration:** 3 weeks;
ALZET Comments: Dose: (20 mg/kg/day); Controls received mp w/ vehicle; animal info: Female sprague Dawley rats; pumps replaced after 1.5 weeks; 5-Ethynyl-2 deoxyuridine aka (EdU); Bromodeoxy,uridine aka (BrdU); cardiovascular;

Q10672: J. Santiago-Moreno*, et al.* Expression of Aquaglyceroporins in Spermatozoa from Wild Ruminants Is Influenced by Photoperiod and Thyroxine Concentrations. International Journal of Molecular Sciences 2022;23(6):
Agents: Thyroxine **Vehicle:** Saline; **Route:** SC (lateral shoulder); **Species:** Ibex (Iberian); **Pump:** 2ML2; **Duration:** 56 days;
ALZET Comments: Dose (164 µg/day); 0.9% normal saline used; T4 aka thyroxine; pumps replaced after 14 days; functionality of mp verified by plasma concentrations

Q10663: D. Rohde*, et al.* Bone Marrow Endothelial Dysfunction Promotes Myeloid Cell Expansion in Cardiovascular Disease. Nature Cardiovascular Research 2022;1(1):28-44
Agents: Angiotensin II **Vehicle:** Saline; **Route:** SC; IP; **Species:** Mice; **Pump:** 1004; 2006; 1003D; **Duration:** 8 weeks;
ALZET Comments: Dose (490 ng min/kg); Controls received mp w/ vehicle; animal info (Wild-type; Western-type diet); pumps replaced after 3 weeks; 90 mmHg - 140 mmHg; peptides; cardiovascular;

Q10658: C. F. Reese*, et al.* Multiple Subregions Within the Caveolin-1 Scaffolding Domain Inhibit Fibrosis, Microvascular Leakage, and Monocyte Migration. PLoS One 2022;17(2):e0264413
Agents: Bleomycin; Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 1007D; 1002; **Duration:** 7 days;
ALZET Comments: Dose (Bleomycin 100 U/kg; Ang II 2.1 mg/kg/day); Controls received mp w/ vehicle; animal info (10 weeks old; WT C57BL/6); pumps replaced after 8 days; peptides; cardiovascular;

Q10651: T. Prasse*, et al.* Bisphenol A-Related Effects on Bone Morphology and Biomechanical Properties in an Animal Model. Toxics 2022;10(2):
Agents: Bisphenol A **Vehicle:** DMSO; **Route:** SC; **Species:** Rat; **Pump:** 2ML4; **Duration:** 12 weeks;
ALZET Comments: Controls received mp w/ vehicle; animal info (Wistar rats total; 10 weeks old); post op. care (Metamizole); pumps replaced every 4 weeks; long-term study; toxicology;

Q10635: A. C. M. Omoto*, et al.* Central Nervous System Actions of Leptin Improve Cardiac Function After Ischemia-Reperfusion: Roles of Sympathetic Innervation and Sex Differences. Journal of American Heart Association 2022;11(21):e027081
Agents: Leptin **Vehicle:** Saline; **Route:** SC; **Species:** Rat; **Pump:** 2002; **Duration:** 28 days;
ALZET Comments: Dose Leptin (0.62 µg/h); Controls received mp w/ vehicle; animal info (Wistar rats (12-to 14-weeks old)pumps replaced on day 14; catheter; See (p.3-4)ischemia (ischemia/reperfusion injury.);

Q10819: J. Kwon*, et al.* Continuous Administration of Mirabegron Has Advantages in Inhibition of Central Sensitization Compared with Short-Term Treatment Cessation in a Mouse Model of Overactive Bladder. Neurourology and Urodynamics 2022;41(6):1355-1363
Agents: Mirabegron **Vehicle:** DMSO; Saline; **Route:** SC; **Species:** Mice; **Pump:** 2002; 2004; **Duration:** 20 days;
ALZET Comments: Dose: 2mg/kg; Controls received mp w/ vehicle; animal info: Eight-week-old female C57BL/6 mice; pumps replaced after 10 days; Overactive bladder (Mirabegron)

Q10562: T. J. Jurrissen*, et al.* Role of Adropin in Arterial Stiffening Associated with Obesity and Type 2 Diabetes. American Journal of Physiology 2022;323(5):H879-H891
Agents: Adropin **Vehicle:** PBS; **Route:** SC; **Species:** Mice; **Pump:** 2001; **Duration:** 4 weeks;
ALZET Comments: Dose: (63 mg/kg/h)Controls received mp w/ vehicle; animal info: Db/db mice (9 wk old); resultant plasma levels (see fig. 4); Adropin is a peptide hormone expressed in liver; pumps replaced after 2 weeks; peptides; cardiovascular;

Q10385: Y. Hasuike*, et al.* CAG repeat-binding small molecule improves motor coordination impairment in a mouse model of Dentatorubral-pallidoluysian atrophy. Neurobiology of Disease 2022;163(105604
Agents: Naphthyridine-azaquinolone **Vehicle:** PBS; **Route:** CSF/CNS (right lateral ventricle); **Species:** Mice; **Pump:** 2004;
Duration: 16 weeks;
ALZET Comments: Dose (2 mM); Controls received mp w/ vehicle; animal info (6 weeks old); behavioral testing (Tested motor function with rotarod device; Beam-walking test); pumps replaced every 4 weeks; long-term study; ALZET brain infusion kit used; Brain coordinates (0.4 mm posterior; 1.0 mm right lateral; 2.5 mm ventral); neurodegenerative (Dentatorubral-pallidoluysian atrophy); Therapeutic indication (DRPLA);

Q10538: E. E. Handley, *et al.* Estrogen Enhances Dendrite Spine Function and Recovers Deficits in Neuroplasticity in the prpTDP-43(A315T) Mouse Model of Amyotrophic Lateral Sclerosis. Molecular Neurobiology 2022;59(5):2962-2976
Agents: Estradiol **Vehicle:** Saline; DMSO; **Route:** SC; **Species:** Mice; **Pump:** 2004; **Duration:** 60 days;
ALZET Comments: Dose (10 mg/ml); 50% DMSO used; Controls received mp w/ vehicle; animal info (Female; Wild-type and TDP-43; Ovariectomy); wound clips used; pumps replaced every 4 weeks; replacement therapy (Estrogen); neurodegenerative (ALS)

Q10609: C. M. Francisco, *et al.* Resveratrol Reverses Male Reproductive Damage in Rats Exposed to Nicotine During The Intrauterine Phase and Breastfeeding. Andrology 2022;10(5):951-972
Agents: Nicotine **Vehicle:** Not Stated; **Route:** SC; **Species:** Rat; **Pump:** 2ML4; **Duration:** 50 days;
ALZET Comments: Dose: Nicotine (2 mg/kg/day); Controls received mp w/ vehicle; animal info: Wistar rats pregnant female; cyanoacrylate glue used; pumps replaced after 28 days; dependence

Q10271: N. Daneshgar, *et al.* Elamipretide treatment during pregnancy ameliorates the progression of polycystic kidney disease in maternal and neonatal mice with PKD1 mutations. Kidney International 2022;101(5):906-911
Agents: Elamipretide **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** 1004; **Duration:** 10 weeks;
ALZET Comments: Dose (3 mg/kg/d); animal info (PKD1RC/null mice were generated by crossing PKD1RC/RC mice with PKD1þ/ mice. The PKD1 þ/ were generated by breeding PKD1flox/flox mice, JAX, with germline Sox2-Cre transgenic mice); pumps replaced after 5 weeks; peptides; teratology; Therapeutic indication (ADPKD);

Q10428: C. H. Cho, *et al.* Role of the JAK/STAT pathway in a streptozotocin-induced diabetic retinopathy mouse model. Graefes Archive Clinical and Experimental Ophthalmology 2022;260(11):3553-3563
Agents: CP-690550; Pyridone 6; WP1066 **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 8 weeks;
ALZET Comments: Dose: (Pyridone 6: 45 mg/kg, CP-690550: 15 mg/kg, WP1066: 40 mg/kg); Controls received mp w/ vehicle; animal info: C57BL/6 healthy male mice (18–22 g; 6 weeks old); pumps replaced after 4 weeks; CP-690550 aka tofacitinib citrate, Pyridone 6 is a JAK inhibitor, WP1066 is a STAT3 inhibitor; diabetes; Diabetic retinopathy

Q10425: X. Chen, *et al.* Klotho-derived peptide 6 ameliorates diabetic kidney disease by targeting Wnt/beta-catenin signaling. Kidney International 2022;102(3):506-520
Agents: KP6 **Vehicle:** Not Stated; **Route:** Not Stated; **Species:** Mice; **Pump:** Not Stated; **Duration:** 8 weeks;
ALZET Comments: Dose: KP6 (1 mg/kg per day); Controls received mp w/ vehicle; animal info: Male CD-1 mice; SAU mice; Male db/db and db/m mice; pump replaced after 4 weeks Klothoderived peptide 6 aka (KP6); peptides; diabetes;

Q10420: S. Canovas Nunes, *et al.* Validation of a small molecule inhibitor of PDE6D-RAS interaction with favorable anti-leukemic effects. Blood Cancer Journal 2022;12(4):64
Agents: DW0254 **Vehicle:** DMSO; Ethanol; **Route:** SC; **Species:** Mice; **Pump:** 2001; **Duration:** 7 days;
ALZET Comments: Dose: (500 mg/ml); 50% DMSO and 15% Ethanol vehicle used; Controls received mp w/ vehicle; animal info: NBSGW mice; DW0254 is a small molecule RAC inhibitor; pumps replaced after one week; cancer (lymphoblastic leukemia)

Q10503: M. D. Campbell, *et al.* Elamipretide effects on the skeletal muscle phosphoproteome in aged female mice. Geroscience 2022;44(6):2913-2924
Agents: Elamipretide **Vehicle:** Saline, sterile, isotonic; **Route:** SC; **Species:** C57BL/6 mice; **Pump:** 1004; **Duration:** 8 weeks;
ALZET Comments: Dose (3 mg/kg/day); animal info (Female; Mice; 6-7 and 28-29 months old); post op. care: IP injection of meloxicam; pumps replaced every 4 weeks; peptides; wound clips used; aging; good methods (see page 2)

Q10286: E. A. L. Wozniak, *et al.* Cholecystokinin 1 receptor activation restores normal mTORC1 signaling and is protective to Purkinje cells of SCA mice. Cell Reports 2021;37(2):109831
Agents: A71623 **Vehicle:** PBS; **Route:** IP; **Species:** Mice; **Pump:** 1004; **Duration:** 30 weeks;
ALZET Comments: Dose (0.02mg/kg/day); animal info (6 weeks old, ~20g or larger); behavioral testing (tested on a rotarod apparatus, beam walk); pumps replaced every 7 weeks; Cck1 receptor agonist aka A71623; neurodegenerative (Spinocerebellar ataxia);

Q9957: T. Wakamatsu*, et al.* Type I Angiotensin II Receptor Blockade Reduces Uremia-Induced Deterioration of Bone Material Properties. Journal of Bone & Mineral Research 2021;36(1):67-79
Agents: Olmesartan, Hydralazine Hydrochloride **Vehicle:** Saline; **Route:** SC; **Species:** Rat; **Pump:** 2ML2; **Duration:** 6 weeks;
ALZET Comments: Dose (Olmesartan- 3 mg/kg/day or Hydralazine Hydrochloride- 10 mg/kg/day); Controls received mp w/ vehicle; animal info (); pumps replaced every 2 weeks; long-term study; Blood pressure measured via Tail Cuff Method; dependence;

Q9358: S. Maeda*, et al.* Notch signaling-modified mesenchymal stem cells improve tissue perfusion by induction of arteriogenesis in a rat hindlimb ischemia model. Scientific Reports 2021;11(1):2543
Agents: Cyclosporin **Vehicle:** Not Stated; **Route:** SC; **Species:** Rat; **Pump:** Not Stated; **Duration:** 28 days;
ALZET Comments: Dose (10 mg/kg/day); animal info (Female Sprague–Dawley rats, 10 weeks old); pumps replaced every 2 weeks; ischemia (rat hindlimb ischemia model);

Q9517: P. S. van Nieuwenhuijzen*, et al.* Targeting GABAC Receptors Improves Post-Stroke Motor Recovery. Brain Sciences 2021;11(3):
Agents: L655,708; (R)-4-ACPBPA; (S)-4-ACPBPA **Vehicle:** DMSO; Saline; **Route:** Not Stated; **Species:** Mice; **Pump:** 1002; **Duration:** 4 weeks;
ALZET Comments: Dose (200 ug/kg/day); 0.9% Saline used; Controls received mp w/ vehicle; animal info (male C57BL/6J mice, 2-3 months old, 27-30 g); behavioral testing (Grid-Walking test; Cylinder task); pumps replaced every 2 weeks; ischemia (Ischemic stroke);

Q9505: T. Troiano*, et al.* Inhibition of NOX1 mitigates blood pressure increases in elastin insufficiency. American Physiological Society 2021;
Agents: Apocynin **Vehicle:** DMSO; **Route:** SC; **Species:** Mice; **Pump:** 1004; **Duration:** 56 days;
ALZET Comments: Dose (3 mg/kg/day); 50% DMSO used; Controls received mp w/ vehicle; animal info (4–6 wk of age, male Eln+/+ and Eln+/- mice); functionality of mp verified by volume of solution; pumps replaced every 28 days; Blood pressure measured via angiocatheter; cardiovascular;

Q10053: J. Pajarinen*, et al.* Interleukin-4 repairs wear particle induced osteolysis by modulating macrophage polarization and bone turnover. Journal of Biomedical Material Research Part A 2021;109(8):1512-1520
Agents: Polyethylene, ultra high molecular mass weight; Interleukin-4, mouse recombinant **Vehicle:** BSA; PBS; **Route:** SC; **Species:** Mice; **Pump:** 2006; **Duration:** 8 weeks;
ALZET Comments: Dose (15 mg/ml ultra high molecular mass weight polyethylene; 10 ug/ml Interleukin-4); 1% BSA-PBS used; Controls received mp w/ vehicle; animal info (male BALB/cByJ mice, 10-12 weeks); post op. care (buprenorphine); functionality of mp verified by residual volume; pumps replaced every 4 weeks; ultra high molecular mass weight polyethylene aka UHMWPE; mouse recombinant interleukin-4 aka IL-4; dependence;

Q10620: A. Nakano*, et al.* Intrathecal Infusion of Diosgenin during the Chronic Phase of Spinal Cord Injury Ameliorates Motor Function and Axonal Density. Neurochemical Journal 2021;15(4):454-461
Agents: Diosgenin **Vehicle:** CSF, artificial; **Route:** CSF/CNS (intrathecal); **Species:** Mice; **Pump:** 1004; **Duration:** 56 days;
ALZET Comments: Dose: (0.1 µM)ethanol was 0.1% vehicle used Controls received mp w/ vehicle; animal info: Eight-week-old female ddY mice; post op. care: During and after surgery, the mice were placed on a heating pad to maintain their body temperature; behavioral testing: Climbing performance; spinal cord injury; mouse intrathecal catheter used; pumps replaced after 28 days

Q10254: T. Masaki*, et al.* GIP_HUMAN[22-51] is a new proatherogenic peptide identified by native plasma peptidomics. Scientific Reports 2021;11(1):14470
Agents: Glucose-dependent insulinotropic polypeptide; Glucose-dependent insulinotropic polypeptide neutralising antibody **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 1002; **Duration:** 4 weeks;
ALZET Comments: Dose: (0.6 nmol/kg/h) or (1.4 µg/kg/h); Controls received mp w/ vehicle; animal info: ApoE, 17 weeks of age, pumps replaced after 2 weeks; Glucose-dependent insulinotropic polypeptide aka (GIP)

Q10222: S. Kumar*, et al.* Neuroprotection of the Inner Retina Also Prevents Secondary Outer Retinal Pathology in a Mouse Model of Glaucoma. Investigative Ophthalmology & Visual Science, 2021;62(9):35
Agents: Meclofenamic Acid **Vehicle:** Not Stated; **Route:** SC **Species:** Mice; **Pump:** 2004; **Duration:** Not Stated;
ALZET Comments: Dose: (20 mg/kg/day); Controls received mp w/ no vehicle; animal info: C57BL/6 wild-type (WT) mice and on connexin 36 knock-out mice; pumps replaced at 4 weeks; Meclofenamic acid aka (MFA); neurodegenerative (Glaucoma);

Q9228: N. D. Fried*, et al.* Angiotensin II type 1 receptor mediates pulmonary hypertension and right ventricular remodeling induced by inhaled nicotine. American Journal of Physiology Heart Circulatory Physiology 2021;320(4):H1526-H1534
Agents: Losartan **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 1004; **Duration:** 8 weeks;
ALZET Comments: Dose (6.5, 5.0 mg/kg/day); Controls received mp w/ vehicle; animal info (Adult, male C57BL6/J mice, 8 to 12 weeks old, 23 to 30 g); post op. care (buprenorphine); pumps replaced every 4 weeks; cardiovascular;

Q10143: K. E. Chen*, et al.* Prolactin enhances T regulatory cell promotion of breast cancer through the long form prolactin receptor. Translational Oncology 2021;14(11):101195
Agents: SMO; LFPRLR SMO, mice; LFPRLR SMO, human **Vehicle:** Not Stated; **Route:** Not Stated; **Species:** Mice (NOD/SCID); **Pump:** 2004; **Duration:** 28 days;
ALZET Comments: Dose: (100 pmoles/h); Controls received mp w/ vehicle; animal info:8-week old Foxp3+EGFP Balb/c or NOD-SCID mice; pumps replaced (as needed); SMO aka splice modulating oligomer; LFPRLR aka long form prolactin receptor; cancer (Breast cancer);

Q9169: S. L. Burke*, et al.* Role of Mineralocorticoid and Angiotensin Type 1 Receptors in the Paraventricular Nucleus in Angiotensin-Induced Hypertension. Frontiers in Physiology 2021;12(640373
Agents: Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Rabbit; **Pump:** 2ML4; **Duration:** 12 weeks;
ALZET Comments: Dose (24 ng/kg/min); 0.9% NaCl used; Controls received mp w/ vehicle; animal info (male New Zealand White rabbits, 2.3-3.1 kg); pumps replaced every 4 weeks; Angiotensin II aka AngII; cardiovascular;

Q10356: A. Arnoux*, et al.* Evaluation of a 5-HT2B receptor agonist in a murine model of amyotrophic lateral sclerosis. Scientific Reports 2021;11(1):23582
Agents: BW723C86 **Vehicle:** DMSO; **Route:** SC; **Species:** Mice; **Pump:** 1004; **Duration:** Not Stated;
ALZET Comments: Dose (1 mg/kg/d; 3 mg/kg/d); 20% DMSO used; animal info (Female; Male; 75 days old); pumps replaced every month; neurodegenerative (Amyotrophic lateral sclerosis); Therapeutic indication (Amyotrophic lateral sclerosis);

Q10355: H. Arnould*, et al.* Loss of prion protein control of glucose metabolism promotes neurodegeneration in model of prion diseases. PLoS Pathogens 2021;17(10):e1009991
Agents: DCA **Vehicle:** DMEM; PIPES; HEPES; **Route:** IP; **Species:** Mice; **Pump:** Not Stated; **Duration:** Not Stated;
ALZET Comments: Dose (100 mg/kg/day); animal info (8 weeks old; Male; Inoculated intracerebrally with 20 ul of sample containing cell extracts); pumps replaced every 3 weeks; neurodegenerative (Prion diseases); Therapeutic indication (Prion diseases);

Q9889: S. Yoshida*, et al.* Syngeneic Mesenchymal Stem Cells Reduce Immune Rejection After Induced Pluripotent Stem Cell-Derived Allogeneic Cardiomyocyte Transplantation. Scientific Reports 2020;10(1):4593
Agents: Tacrolimus **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** 1002; **Duration:** 15 days;
ALZET Comments: Dose (1.5 mg/kg body weight); animal info (Adult male BALB/c mice (6–7 weeks old, 17–22 g)); pumps replaced every 13 days; immunology;

Q9902: Q. Yang*, et al.* Sirt6 deficiency aggravates angiotensin II-induced cholesterol accumulation and injury in podocytes. Theranostics 2020;10(16):7465-7479
Agents: Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 2004; **Duration:** 8 weeks;
ALZET Comments: Dose (700 ng/kg/min); Controls received mp w/ vehicle; animal info (8 weeks old, Male); pumps replaced every 4 weeks; cardiovascular;

Q9938: J. A. Whitson*, et al.* SS-31 and NMN: Two paths to improve metabolism and function in aged hearts. Aging Cell 2020;19(10):e13213
Agents: Elamipretide **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 8 weeks;
ALZET Comments: Dose (3 mg/kg/day); Controls received mp w/ vehicle; animal info (Male, C57BL/6, 24 months old); pumps replaced every 4 weeks; as Elamipretide aka SS-31 aka synthetic tetrapeptide ; peptides; cardiovascular;

Q9538: X. Wang*, et al.* Nogo receptor decoy promotes recovery and corticospinal growth in non-human primate spinal cord injury. Brain 2020;143(6):1697-1713
Agents: NgR1(310)–Fc **Vehicle:** Not Stated; **Route:** CSF/CNS (spinal cord); **Species:** Monkey; **Pump:** 2ML4; **Duration:** 4 months;
ALZET Comments: Dose (0.10-0.17 mg/kg/day); Controls received mp w/ vehicle; animal info (Adult African green monkeys (vervets, female, baseline body weight 4.2–7.2 kg)); pumps replaced every month; long-term study; NgR1(310)–Fc aka Nogo receptor decoy protein; spinal cord injury;

Q9536: L. Wang*, et al.* Treatment With Treprostinil and Metformin Normalizes Hyperglycemia and Improves Cardiac Function in Pulmonary Hypertension Associated With Heart Failure With Preserved Ejection Fraction. Arteriosclerosis, Thrombosis, and Vascular Biology 2020;40(6):1543-1558
Agents: Treprostinil **Vehicle:** Not Stated; **Route:** SC; **Species:** Rat, Mice; **Pump:** 2ML4, 2006; **Duration:** 16 weeks;
ALZET Comments: Dose (40, 300, and 900 ng/kg/min); animal info (8-week old male obese ZSF1 rats; 8-week old male C57BL/6J mice); pumps replaced every 28 or 42 days; long-term study; cardiovascular;

Q9526: G. Wang*, et al.* The study of targeted blocking SDF-1/CXCR4 signaling pathway with three antagonists on MMPs, type II collagen, and aggrecan levels in articular cartilage of guinea pigs. Journal of Orthopaedic Surgery and Research 2020;15(1):195
Agents: T140; AMD3100; TN14003 **Vehicle:** PBS; **Route:** SC; **Species:** Guinea Pig; **Pump:** Not Stated; **Duration:** 12 weeks;
ALZET Comments: Dose (180 ug/ml); Controls received mp w/ vehicle; animal info (male Duncan-Hartley guinea pigs (6-month-old, weight = 600 ± 50g)); pumps replaced every 6 weeks; long-term study; dependence;

Q9514: M. A. Ulleryd*, et al.* RNA sequencing data describing transcriptional changes in aorta of ApoE-/- mice after alpha 7 nicotinic acetylcholine receptor (alpha7nAChR) stimulation. Data in Brief 2020;30(105415
Agents: Alpha 7 nicotinic acetylcholine receptor agonist **Vehicle:** Cyclodextrin; Saline; **Route:** SC; **Species:** Mice; **Pump:** 2004; **Duration:** 8 weeks;
ALZET Comments: Dose (50 µmo/kg/day); 28% cyclodextrin used; Controls received mp w/ vehicle; animal info (Male apoE-/- mice, 10 weeks old); pumps replaced every 4 weeks; Alpha 7 nicotinic acetylcholine receptor agonist aka α7nAChR agonist; gene therapy;

Q9500: W. M. Tierney*, et al.* Transplanted Human Neural Progenitor Cells Attenuate Motor Dysfunction and Lengthen Longevity in a Rat Model of Ataxia. Cell Transplantation 2020;29(963689720920275
Agents: Cyclosporine **Vehicle:** Not Stated; **Route:** SC; **Species:** Rat; **Pump:** 2ML4; **Duration:** 28 days;
ALZET Comments: Dose (15 mg/ kg/d); animal info (spastic Han Wistar rat); behavioral testing (Motor Activity Testing); pumps replaced every 23 days; gene therapy;

Q9978: A. Szeto*, et al.* Oxytocin reduces adipose tissue inflammation in obese mice. Lipids in Health and Disease 2020;19(1):188
Agents: Oxytocin **Vehicle:** Sodium Citrate; **Route:** SC; **Species:** Mice; **Pump:** 1004; **Duration:** 8 weeks;
ALZET Comments: Dose (4.22 ug/day); Controls received mp w/ vehicle; animal info (Male, C57BLKS/J); pumps replaced every 6 weeks; immunology;

Q9473: K. Shibata*, et al.* Lipocalin-2 exerts pro-atherosclerotic effects as evidenced by in vitro and in vivo experiments. Heart and Vessels 2020;35(7):1012-1024
Agents: Lipocalin-2 **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 1002; **Duration:** 4 weeks;
ALZET Comments: Dose (5 µg/kg/h); Controls received mp w/ vehicle; animal info (male spontaneously hyperlipidemic Apoe−/− mice, 13 weeks old); pumps replaced every 2 weeks; Blood pressure measured via tail-cuff method;92.1 mmHg - 92.6 mmHg; Resultant plasma level (282.7 mg/dL Glucose; 27.4 pM Insulin); Lipocalin-2 aka LCN2; cardiovascular;

Q10050: N. Osaka*, et al.* Anti-inflammatory and atheroprotective properties of glucagon. Diabetes & Vascular Disease Research 2020;17(5):1479164120965183
Agents: Glucagon **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** 1002; **Duration:** 4 weeks;
ALZET Comments: Dose (138 or 413 nmol/kg/day); Controls received mp w/ vehicle; animal info (Male ApoE-/- mice, 6 weeks old); pumps replaced every 2 weeks; Blood pressure measured via tail-cuff method;103 mmHg - 115 mmHg; Resultant plasma level (81 mg/dl Plasma glucose); diabetes;

Q8920: T. Okano*, et al.* Beta-Endorphin Mediates the Development and Instability of Atherosclerotic Plaques. International Journal of Endocrinology 2020;2020(4139093
Agents: Endorphin, B-; **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 1002; **Duration:** 4 weeks;
ALZET Comments: Controls received mp w/ vehicle; animal info (male spontaneously hyperlipidemic Apoe−/− mice, 13 weeks of age); pumps replaced every 2 weeks; Blood pressure measured via tail-cuff method;91.4 mmHg - 92.1 mmHg; Resultant plasma level (294.3 mg/dL Glucose); peptides; dependence;

Q10048: M. A. Nunes*, et al.* Kinin B2 Receptor Activation Prevents the Evolution of Alzheimer's Disease Pathological Characteristics in a Transgenic Mouse Model. Pharmaceuticals (Basel) 2020;13(10):
Agents: Amyloid Beta 1-42 **Vehicle:** CSF, Artificial; **Route:** CSF/CNS; **Species:** Mice; **Pump:** 1004; **Duration:** 8 weeks;
ALZET Comments: Dose (10 nmol/kg/h); Controls received mp w/ vehicle; animal info (Twelve-month-old transgenic mice); pumps replaced every 4 weeks; Amyloid Beta 1-42 aka AB peptide; peptides; neurodegenerative (Alzheimer's Disease);

Q8651: A. Maqbool*, et al.* Divergent effects of genetic and pharmacological inhibition of Nox2 NADPH oxidase on insulin resistance-related vascular damage. American Journal of Physiology-Cell Physiology 2020;319(1):C64-C74
Agents: Peptide, Gp91ds-tat **Vehicle:** Not Stated; **Route:** Not Stated; **Species:** Mice; **Pump:** 1004; **Duration:** 8 weeks;
ALZET Comments: Dose (10 mg/kg/day); animal info (Mice, 8 weeks old); pumps replaced every 4 weeks; Peptide, Gp91ds-tat aka gp91dstat; peptides; diabetes;

Q8628: A. Levit*, et al.* Hypertension and Pathogenic hAPP Independently Induce White Matter Astrocytosis and Cognitive Impairment in the Rat. Frontiers in Aging Neuroscience 2020;12(82
Agents: Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Rat; **Pump:** 2004; **Duration:** 8 weeks;
ALZET Comments: Dose (10,000 ng/kg/h); Controls received mp w/ vehicle; animal info (male Rats, 7.25 months old, 367 g); behavioral testing (Morris Water Maze, Open Field Test); pumps replaced every 4 weeks; Blood pressure measured via tail cuff method;120 mmHg - 170 mmHg; Angiotensin II aka Ang II; cardiovascular;

Q8618: J. Kwun*, et al.* Cultured thymus tissue implantation promotes donor-specific tolerance to allogeneic heart transplants. JCI Insight 2020;5(11):
Agents: Cyclosporine A **Vehicle:** Not Stated; **Route:** SC; **Species:** Rat; **Pump:** 2ML4; **Duration:** 4 months;
ALZET Comments: Dose (2.5 mg/kg/d); animal info (LW (RT-1l) and BN (RT-1n) rats); pumps replaced every month; Cyclosporine A aka CsA; immunology;

Q10319: M. Krishnan*, et al.* beta-hydroxybutyrate Impedes the Progression of Alzheimer's Disease and Atherosclerosis in ApoE-Deficient Mice. Nutrients 2020;12(2):
Agents: PBS; Beta-hydroxybutyrate **Vehicle:** PBS; **Route:** SC; **Species:** Mice; **Pump:** 1004; **Duration:** 8 weeks;
ALZET Comments: Dose: (1.5 mmol/kg/day in PBS); Controls received mp w/ vehicle; animal info: Six-week-old male ApoE?/? (C57BL/6J background) and C57BL/6J mice; pumps replaced every 4 weeks; half-life (p.10); Beta-hydroxybutyrate aka (B-OHB); neurodegenerative (Alzheimer's disease);

Q8611: M. Krishnan, *et al.* beta-hydroxybutyrate Impedes the Progression of Alzheimer's Disease and Atherosclerosis in ApoE-Deficient Mice. Nutrients 2020;12(2):
Agents: Beta-hydroxybutyrate **Vehicle:** PBS; **Route:** SC; **Species:** Mice; **Pump:** 1004; **Duration:** 8 weeks;
ALZET Comments: Dose (1.5 mmol/kg/day); Controls received mp w/ vehicle; animal info (Six-week-old male ApoE−/− and C57BL/6J mice); pumps replaced every 4 weeks; Beta-hydroxybutyrate aka B-OHB; neurodegenerative (Alzheimer's Disease);

Q8572: E. Kim, *et al.* Preventative, but not post-stroke, inhibition of CD36 attenuates brain swelling in hyperlipidemic stroke. Journal of Cerebral Blood Flow & Metabolism 2020;40(4):885-894
Agents: Salvianolic acid B **Vehicle:** PBS; **Route:** SC; **Species:** Mice; **Pump:** Not stated; **Duration:** 8 weeks;
ALZET Comments: Dose (100 mg/kg/day); Controls received mp w/ vehicle; animal info (Six-week-old ApoE KO mice); pumps replaced every 4 weeks; salvianolic acid B aka SAB; neurodegenerative (Stroke);

Q8603: D. Kerkhofs, *et al.* Pharmacological depletion of microglia and perivascular macrophages prevents Vascular Cognitive Impairment in Ang II-induced hypertension. Theranostics 2020;10(21):9512-9527
Agents: Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 2006; **Duration:** 12 weeks;
ALZET Comments: Dose (1 ug/kg/min); Controls received mp w/ vehicle; animal info (3 month old male Tg mice); pumps replaced every 12 weeks; Blood pressure measured via tail-cuff; Angiotensin II aka Ang II; cardiovascular;

Q8854: R. H. Isaacson, *et al.* Olanzapine-induced liver injury in mice: aggravation by high-fat diet and protection with sulforaphane. Journal of Nutritional Biochemistry 2020;81(108399
Agents: Olanzapine **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 4 weeks;
ALZET Comments: Dose (8 mg/kg/d); Controls received mp w/ vehicle; animal info (Female C57BL/6 J mice (8 weeks old)); pumps replaced every 2 weeks; dependence;

Q10162: J. J. Fuster, *et al.* TET2-Loss-of-Function-Driven Clonal Hematopoiesis Exacerbates Experimental Insulin Resistance in Aging and Obesity. Cell Reports 2020;33(4):108326
Agents: MCC950 **Vehicle:** PBS; **Route:** SC; **Species:** Mice; **Pump:** 2006; **Duration:** 6 weeks;
ALZET Comments: Dose:(10 mg/kg/day); Controls received mp w/ vehicle; animal info:10 week-old unconditioned (i.e., non-irradiated) C57BL/6 Pep Boy CD45; pumps replaced at week 10; MCC950 is a specific NLRP3 blocker; diabetes; Type 2 diabetes

Q8467: E. Fielder, *et al.* Anti-inflammatory treatment rescues memory deficits during aging in nfkb1(-/-) mice. Aging Cell 2020;19(10):e13188
Agents: Ibuprofen **Vehicle:** DMSO; PEG; **Route:** SC; **Species:** Mice; **Pump:** 2004; **Duration:** 2 months;
ALZET Comments: Dose (50 mg/kg/day); Controls received mp w/ vehicle; animal info (male C57BL/6 mice, 6 months old); pumps replaced every 28 days; dependence;

Q8463: A. K. Evans, *et al.* Beta-adrenergic receptor antagonism is proinflammatory and exacerbates neuroinflammation in a mouse model of Alzheimer's Disease. Neurobiology of Disease 2020;146(105089
Agents: Metoprolol **Vehicle:** Not stated; **Route:** SC; **Species:** Mice; **Pump:** 1004; **Duration:** 3 months; 2 months;
ALZET Comments: Dose (5 mg/kg/day); Controls received mp w/ vehicle; animal info (male mice, 3.5 months old; female mice, 6 months old); behavioral testing (Morris Water Maze; Fear Conditioning); pumps replaced every 4 weeks; long-term study; neurodegenerative (Alzheimer's);

Q8439: T. Develi, *et al.* Preventive and therapeutic effects of relaxin on bisphosphonaterelated osteonecrosis of the jaw: an experimental study in rats. Brazilian Dental Science 2020;23(1):
Agents: Relaxin **Vehicle:** Saline; **Route:** IP; **Species:** Rat; **Pump:** Not stated; **Duration:** 12 weeks;
ALZET Comments: Dose (0.17 µg/hr); Controls received mp w/ vehicle; animal info (Sprague Dawley rats); pumps replaced every 4 weeks; long-term study; dependence;

Q9841: Y. Zhao*, et al.* ATAD3A oligomerization causes neurodegeneration by coupling mitochondrial fragmentation and bioenergetics defects. Nature Communications 2019;10(1):1371
Agents: TAT control peptide or DA1 peptide **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** 2004; **Duration:** 6,8 weeks; **ALZET Comments:** Dose (1 mg/kg/day); animal info (Male, YAC128, 3 month old); behavioral testing (Tail Suspension Test); pumps replaced every 4 weeks; peptides; neurodegenerative (Huntington's Disease);

Q8971: Y. Zhao*, et al.* ATAD3A oligomerization causes neurodegeneration by coupling mitochondrial fragmentation and bioenergetics defects. Nature Communications 2019;10(1):1371
Agents: TAT control peptide; DA1 peptide **Vehicle:** Not stated; **Route:** SC; **Species:** Mice; **Pump:** 2004; **Duration:** 6, 8 weeks; **ALZET Comments:** Dose (1 mg/kg/day); animal info (Male, YAC128, 3 month old); behavioral testing (Tail Suspension Test); pumps replaced every 4 weeks; peptides; neurodegenerative (Huntington's Disease);

Q9120: T. Yotsumoto*, et al.* Foramen magnum stenosis and midface hypoplasia in C-type natriuretic peptide-deficient rats and restoration by the administration of human C-type natriuretic peptide with 53 amino acids. PLoS One 2019;14(5):e0216340
Agents: C-type natriuretic peptide 53 **Vehicle:** Not Stated; **Route:** SC; **Species:** Rat; **Pump:** 2004; **Duration:** 4 weeks; **ALZET Comments:** Dose (0.5 mg/kg/day); Controls received mp w/ vehicle; animal info (CNP-KO, 5-9 weeks old); pumps replaced every 2 weeks; peptides; dependence;

Q7516: W. Yin*, et al.* Protein kinase C and protein kinase A are involved in the protection of recombinant human glucagon-like peptide-1 on glomeruli and tubules in diabetic rats. Journal of Diabetes Investigation 2019;10(3):613-625
Agents: Peptide-1, recomb. human glucagon-like **Vehicle:** Saline; **Route:** IV; **Species:** Rat; **Pump:** 2004; **Duration:** 12 weeks; **ALZET Comments:** "Dose (1.5 pmol/kg/min); 0.9% saline; Controls received mp w/ vehicle; animal info (Eight-week-old male/female Wistar rats weighing 300 – 10 g); pumps replaced at 4 weeks; half-life (p.614 half-life in blood is approx 2 h.); peptides; diabetes; "

Q7642: W. Yan*, et al.* Treatment with a brain-selective prodrug of 17beta-estradiol improves cognitive function in Alzheimer's disease mice by regulating klf5-NF-kappaB pathway. Naunyn-Schmiedeberg's Archives of Pharmacology 2019;392(7):879-886
Agents: dihydroxyestra-1,4-dien-3-one, 10β,17β- **Vehicle:** propylene glycol; **Route:** SC; **Species:** Mice; **Pump:** 2004; **Duration:** 8 weeks;
ALZET Comments: Dose (2 µg/day); Controls received sham surgery and mp w/ vehicle; animal info (6 months, female, Tg2576); behavioral testing (Morris Water Maze); pumps replaced every 4 weeks; 17beta-dihydroxyestra-1,4-diene-3-one (DHED) is a brain-selective prodrug of 17beta-estradiol; neurodegenerative (Alzheimer's); replacement therapy (estradiol); treatment groups received bilateral ovariectomies; Therapeutic indication (hinder the progression of AD and improving cognitive functions through inhibiting klf5-NF-κB pathway and restraining oxidative and inflammatory stress in the hippocampus);

Q9100: M. D. Wetzel*, et al.* l-Homoarginine supplementation prevents diabetic kidney damage. Physiological Reports 2019;7(18):e14235
Agents: Arginine, L-homoarginine **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 12 weeks; **ALZET Comments:** Dose (0.72 mg/kg/day); animal info (6-week-old Ins2Akita mice); pumps replaced every 6 weeks; Resultant plasma level (1.4 umol/L); cardiovascular;

Q9094: P. Varma*, et al.* Targeting Seizure-Induced Neurogenesis in a Clinically Relevant Time Period Leads to Transient But Not Persistent Seizure Reduction. Journal of Neuroscience 2019;39(35):7019-7028
Agents: Ganciclovir **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 2004; **Duration:** 8 weeks;
ALZET Comments: Dose (150 mg/kg/day); Controls received mp w/ vehicle; animal info (6 weeks old); pumps replaced every 4 weeks; neurodegenerative (Seizure);