Recent References (2019-Present) on the Administration of Enzyme Inhibitors Using ALZET® Osmotic Pumps

Q10279: Y. Pan, *et al.* Myeloid cyclooxygenase-2/prostaglandin E2/E-type prostanoid receptor 4 promotes transcription factor MafB-dependent inflammatory resolution in acute kidney injury. Kidney International 2022;101(1):79-91
Agents: ONO-4819 **Vehicle:** Not Stated; **Route:** Not Stated; **Species:** Mice; **Pump:** 2004; **Duration:** Not Stated;
ALZET Comments: Dose (75 ug/kg/day); animal info (male, 8-10 weeks old myeloid knockout mice); ONO-4819 is an EP4a antagonist; enzyme inhibitor (cyclooxygenase); ischemia (renal);

Q10277: B. A. Kemp, *et al.* Renal AT2 Receptors Mediate Natriuresis via Protein Phosphatase PP2A. Circulation research 2022;130(1):96-111
Agents: Candesartan **Vehicle:** Not Stated; **Route:** SC; **Species:** Rat; **Pump:** 2001D; **Duration:** 24 hours;
ALZET Comments: Dose (0.01 mg/kg/min); 5% dextrose in water used; animal info (4/10-week old female Wistar-Kyoto rats); Blood pressure measured via direct intracarotid method with use of digital BP analyzer; enzyme inhibitor; gene therapy; Therapeutic indication (treating renal Na+ retention and hypertension);

Q9452: D. R. Seeger, *et al.* Cyclooxygenase inhibition attenuates brain angiogenesis and independently decreases mouse survival under hypoxia. Journal of Neurochemistry 2021;158(2):246-261
Agents: Ketoralac **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 2002; **Duration:** 10 days;
ALZET Comments: Dose (0.64, 1.28, 6.4 mg/kg/hr); dose-response (); Controls received mp w/ vehicle; functionality of mp verified by ketorolac and prostaglandin levels in plasma and brain;

Q8822: A. Recabal, *et al.* The FGF2-induced tanycyte proliferation involves a connexin 43 hemichannel/purinergic-dependent pathway. Journal of Neurochemistry 2021;156(2):182-199
Agents: Bromodeoxyuridine, Fibroblast Growth Factor 2, Gap27 **Vehicle:** CSF; **Route:** CSF/CNS; **Species:** Rat; **Pump:** 1007D; **Duration:** 7 days;
ALZET Comments: Dose (0.75 ug/h BrdU, 0.0125 ug/hr FGF2, 0.13 ug/h Gap27); Controls received mp w/ vehicle; animal info (Male, Sprague Dawley, 120-280 g); dental cement used

Q10366: I. D. Calma, *et al.* Mitochondrial function influences expression of methamphetamine-induced behavioral sensitization. Scientific Reports 2021;11(1):24529
Agents: Rotenone **Vehicle:** DMSO; PEG; **Route:** SC; **Species:** Rat; **Pump:** 2001; **Duration:** 6 days;
ALZET Comments: Dose (1 mg/kg/day; 3 mg/kg/day); Controls received mp w/ vehicle; animal info (Male; Weighed 225-250 g); enzyme inhibitor (Rotenone); toxicology; dependence;

Q10360: R. Babaei, *et al.* Jak-TGFβ cross-talk links transient adipose tissue inflammation to beige adipogenesis. Science Signaling 2018;11(eaai7838
Agents: CL-316243 **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 7 days;
ALZET Comments: "Dose (1mg/kg/day); equivalent volume to agent used; Controls received mp w/ vehicle; animal info (7-12wk old, female, created adipocyte specific ATGL KO mice); comparison of injection vs mp; enzyme inhibitor (β3-adrenoreceptor agonist); in vivo β-adrenergic stimulation; Our model reinforces the idea that transient inflammation promotes the induction of adaptive adipose tissue remodeling; Therapeutic indication (results provide insight into the activation of adipocyte progenitors and are relevant for the therapeutic targeting of adipose tissue inflammatory pathways); "

Q10104: R. M. B. Bell, *et al.* Carbonyl reductase 1 amplifies glucocorticoid action in adipose tissue and impairs glucose tolerance in lean mice. Molecular Metabolism 2021;48(101225
Agents: Dexamethasone; Aldosterone; 20b-DHB **Vehicle:** DMSO; Propylene glycol; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 7 days;
ALZET Comments: Dose: 20b-DHB(20 ug/day); animal info (C57BL/6J Male, Female (8 weeks of age); Dihydrocorticosterone aka (20b-DHB) is a full agonist of the mineralocorticoid receptor.; Mifepristone is a GR antagonist RU486; Spironolactone is a MR antagonist; Carbonyl reductase 1 (Cbr1),is an enzyme inhibitor; diabetes; obesity

Q9847: W. Zhang, *et al.* A blockade of microRNA-155 signal pathway has a beneficial effect on neural injury after intracerebral haemorrhage via reduction in neuroinflammation and oxidative stress. Archives of Physiology and Biochemistry 2020;1-7
Agents: miR-155 inhibitor **Vehicle:** CSF, artificial; **Route:** CSF/CNS; **Species:** Rat; **Pump:** Not Stated; **Duration:** 1 day;
ALZET Comments: Dose (0.25 ul/hr); Controls received mp w/ vehicle; animal info (Sprague Dawley, 200-250 g, Male); enzyme inhibitor (miR-155 inhibitor); ALZET brain infusion kit XX used; Brain coordinates (3.7 mm posterior to the bregma, 4.1 mm lateral to the midline, and 3.5 mm under the dura); bilateral cannula used; dental cement used;neurodegenerative (Brain Injury);

Q9881: K. Yuan, *et al.* Mural Cell SDF1 Signaling is Associated with the Pathogenesis of Pulmonary. American Journal of Respiratory Cell and Molecular Biology 2020;
Agents: AMD3100 **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 1004; **Duration:** 21 days;
ALZET Comments: Animal info (19-25 g, Male); AMD3100 aka CXCR4 Inhibitor ; enzyme inhibitor (CXCR4 Inhibitor);

Q9907: H. Yang, *et al.* TLR4/MyD88/NF-kappaB Signaling in the Rostral Ventrolateral Medulla Is Involved in the Depressor Effect of Candesartan in Stress-Induced Hypertensive Rats. ACS Chemical Neuroscience 2020;11(19):2978-2988
Agents: VIPER or Candesartan **Vehicle:** CSF, aritificial; **Route:** CNS/CSF; **Species:** Rat; **Pump:** 2002; **Duration:** 14 days;
ALZET Comments: Dose (VIPER-40 ug/kg/day or Candesartan-4 ug/day); Controls received mp w/ vehicle; animal info (7 weeks old, Male, Sprague Dawley); VIPER aka TLR4 Inhibitor Candesartan aka AT1R antagonist ; Brain coordinates (0.5 mm caudal to bregma, 1.5 mm lateral to the midline, and 2.7 mm below the skull surface); bilateral cannula used; cardiovascular;

Q9939: M. D. Wetzel, *et al.* Selective inhibition of arginase-2 in endothelial cells but not proximal tubules reduces renal fibrosis. JCI Insight 2020;5(19):
Agents: Nonselective arginase inhibitor S-(2-boronoeth- yl)-L-cysteine **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Duration:** 7 days;
ALZET Comments: Dose (2.3 mg/kg/day); Controls received mp w/ vehicle; animal info (Male, 8 weeks old, C57Bl/6J); Nonselective arginase inhibitor S-(2-boronoeth- yl)-L-cysteine aka BEC ; enzyme inhibitor (Nonselective arginase inhibitor);

Q9951: Y. Wang, *et al.* Calpain-2 as a therapeutic target in repeated concussion–induced neuropathy and behavioral impairment. Neuroscience 2020;
Agents: Selective Calpain 2 Inhibitor **Vehicle:** Not stated; **Route:** CNS/CSF; **Species:** Mice; **Pump:** 2002; **Duration:** 10 days;
ALZET Comments: Dose (0.3 mg/kg/day); Controls received mp w/ vehicle; animal info (C57Bl/6); Selective Calpain 2 Inhibitor aka C21 ; enzyme inhibitor (Selective Calpain 2 Inhibitor); neurodegenerative (Traumatic Brain Injury);

Q9090: V. Tsvankin, *et al.* ABC Transporter Inhibition Plus Dexamethasone Enhances the Efficacy of Convection Enhanced Delivery in H3.3K27M Mutant Diffuse Intrinsic Pontine Glioma. Neurosurgery 2020;86(5):742-751
Agents: Dasatinib **Vehicle:** Not Stated; **Route:** CSF/CNS; **Species:** Mice; **Pump:** 2002; **Duration:** 14 days;
ALZET Comments: Dose (2 uM); Dasatinib aka Tyrosine Kinase Inhibitor; enzyme inhibitor (Tyrosine Kinase Inhibitor)

Q8813: Y. Qin, *et al.* Estradiol Replacement at the Critical Period Protects Hippocampal Neural Stem Cells to Improve Cognition in APP/PS1 Mice. Frontiers in Aging Neuroscience 2020;12(240
Agents: p75 NTR metalloprotease inhibitor **Vehicle:** Saline; **Route:** CSF/CNS; **Species:** Mice; **Duration:** 7 days;
ALZET Comments: Dose (0.25 ul/hr); Controls received mp w/ vehicle; animal info (APP/PS1, 4-10 months old); p75 NTR metalloprotease inhibitor aka TAPI-2 ; enzyme inhibitor (p75 NTR metalloprotease inhibitor); Brain coordinates (0.3 mm posterior, 1.0 mm lateral, and 2.3 mm ventral to Bregma); bilateral cannula used; neurodegenerative (Alzheimer's Disease);

Q8369: G. Pirovano, *et al.* Targeted Brain Tumor Radiotherapy Using an Auger Emitter. Clin Cancer Res 2020;26(12):2871-2881
Agents: (Iodine-123 Meitner-Auger PARP1 inhibitor **Vehicle:** PEG; PBS; **Route:** CNS/CSF; **Species:** MICE; **Pump:** 1003D;
Duration: 3 days;
ALZET Comments: 30% PEG/PBS used; (Iodine-123 Meitner-Auger PARP1 inhibitor aka 123 I-MAPi;

Q8494: L. Park, *et al.* tPA Deficiency Underlies Neurovascular Coupling Dysfunction by Amyloid-beta. J Neurosci 2020;40(42):8160-8173
Agents: PAI-039 **Vehicle:** Not stated; **Route:** CNS/CSF; **Species:** Mice; **Pump:** 1004; **Duration:** 4 weeks;
ALZET Comments: Dose (42 ng/kg/min); Controls received mp w/ vehicle; animal info (10-11 months old); behavioral testing (Maze Test, Novel Object Recognition Test);); Brain coordinates (-0.22 mm lateral, 0.8 mm, dorsal 2 mm); neurodegenerative

Q9783: R. Dhaher, *et al.* Oral glutamine supplementation increases seizure severity in a rodent model of mesial temporal lobe epilepsy. Nutritional Neuroscience 2020;1-6
Agents: Methionine Sulfoximine **Vehicle:** Saline; **Route:** CSF/CNS; **Species:** Rat; **Pump:** 2004; **Duration:** 28 days;
ALZET Comments: Dose (0.625 ug/hr); Controls received mp w/ vehicle; animal info (Male, Sprague Dawley, 280-400 g); Methionine Sulfoxine aka MSO; Brain coordinates (AP 7.8 mm, ML 5.2 mm, DV −6.5 mm); bilateral cannula used;

Q9154: N. Bengoa-Vergniory, *et al.* CLR01 protects dopaminergic neurons in vitro and in mouse models of Parkinson's disease. Nature Communications 2020;11(1):4885
Agents: CLR01 **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 1004; **Duration:** 28 days;
ALZET Comments: Dose (40 ug/kg/day); Controls received mp w/ vehicle; animal info (C57BL/6, 17 month old); CLR01 aka amyloid inhibitor; enzyme inhibitor (CLR01); neurodegenerative (Parkinson's Disease);

Q6948: Y. Zhang, *et al.* Hyperbaric oxygen produces a nitric oxide synthase-regulated anti-allodynic effect in rats with paclitaxel-induced neuropathic pain. Brain Research 2019;
Agents: S-Methyl-L-thiocitrulline **Vehicle:** Saline; **Route:** SC; **Species:** Rat; **Pump:** 1007D; **Duration:** 7 days;
ALZET Comments: Dose (0.5 ± 0.1 µL/hr/day); 0.9% saline used; animal info (male Sprague Dawley); post op. care (Ampicillin, meloxicam); enzyme inhibitor (S-Methyl-L-thiocitrulline is a neuronal nitric oxide synthase (nNOS) inhibitor); Brain coordinates (AP–1.0 mm, ML –2.0 mm, DV –3.5mm from bregma); bilateral cannula used; dependence;

Q9864: H. Zhang, *et al.* PDE1 inhibition facilitates proteasomal degradation of misfolded proteins and protects against cardiac proteinopathy. Science Advances 2019;
Agents: PDE1-selective inhibitor **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 2004; **Duration:** 4 weeks;
ALZET Comments: Dose (3 mg/kg/day); Controls received mp w/ vehicle; animal info (4 months old,);

Q8982: H. Zhang, *et al.* PDE1 inhibition facilitates proteasomal degradation of misfolded proteins and protects against cardiac proteinopathy. Science Advances 2019;
Agents: PDE1-selective inhibitor **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 2004; **Duration:** 4 weeks;
ALZET Comments: Dose (3 mg/kg/day); Controls received mp w/ vehicle; animal info (4 months old,); PDE1-selective inhibitor aka IC86430 ; enzyme inhibitor (PDE1-selective inhibitor); cardiovascular;

Q9126: H. Zhang, *et al.* Duo-activation of PKA and PKG by PDE1 inhibition facilitates proteasomal degradation of misfolded proteins and protects against proteinopathy. BioRxiv 2019;
Agents: PDE1-selective inhibitor **Vehicle:** DMSO/Saline; **Route:** SC; **Species:** Mice; **Pump:** 2004; **Duration:** 4 weeks;
ALZET Comments: Dose (3 mg/kg/day); Controls received mp w/ vehicle; animal info (4 months old,);

Q7647: D. D. Zhang, *et al.* Carbon Monoxide Attenuates High Salt-Induced Hypertension While Reducing Pro-inflammatory Cytokines and Oxidative Stress in the Paraventricular Nucleus. Cardiovascular Toxicology 2019;
Agents: Carbon monoxide-releasing molecule-2; Zinc protoporphyrin IX **Vehicle:** CSF, Artificial; DMSO, Buffered; **Route:** CSF/CNS (paraventricular nucleus); **Species:** Rat; **Pump:** 2006; **Duration:** 6 weeks;
ALZET Comments: Dose ((CORM-2 2 nmol/h),(ZnPP IX 2 nmol/h)); 0.5% DMSO in aCSF used; Controls received normal-salt diet and mp w/ vehicle; animal info (male, Dahl Salt-Sensitive, 250-275g); post op. care (buprenorphine 0.01 mg/kg SC immediately after and 12 h postoperatively); Carbon monoxide-releasing molecule-2 (aka CORM-2) is an agent that releases CO from tricarbonyldichlororuthenium (II) dimer; Brain coordinates (1.8 mm posterior to the bregma, 0.4 mm lateral to the central line, and 7.9 mm ventral to the zero level); Pump implantation occured at week 4 of study. Cannulae were secured using dental acrylic. Author states "The success rate of bilateral PVN microinjection was 75%." p.2; Therapeutic indication (exogenous or endogenous CO within the PVN might have potential antihypertensive treatment by downregulating COX2 and PICs in the PVN and by reducing PVN oxidative stress-mediated sympathetic activity in high salt-induced hypertension);

Q6949: T. Zera*, et al.* Microglia and brain angiotensin type 1 receptors are involved in desensitising baroreflex by intracerebroventricular hypertonic saline in male Sprague-Dawley rats. Autonomic Neuroscience: Basic and Clinical 2019;217(49-57
Agents: Minocycline, Losartan **Vehicle:** Saline, iso-osmotic, Saline, hyperosmotic; **Route:** CSF/CNS (lateral ventricle); **Species:** Rat; **Pump:** 2ML2; **Duration:** 2 weeks;
ALZET Comments: Dose (Minocycline-5 µg/h; Losartan- 12.5 µg/h); 0.9% isosmotic saline with minocycline, 5% Hyperosmotic saline with Losartan used; animal info (Normotensive adult male Sprague-Dawley rats); Brain coordinates (1.2mm posterior to bregma, −1.8mm laterolateral from sagittal suture, diameter 0.5 mm) bilateral cannula used; cyanoacrylate adhesive;

Q9043: J. P. Zepecki*, et al.* Regulation of human glioma cell migration, tumor growth, and stemness gene expression using a Lck targeted inhibitor. Oncogene 2019;38(10):1734-1750
Agents: Lck inhibitor **Vehicle:** DMSO, Kolliphor; **Route:** CSF/CNS; **Species:** Mice; **Pump:** 1004; **Duration:** 4 weeks;
ALZET Comments: Controls received mp w/ vehicle; animal info (8 weeks old, Nu/J, Male); Lck-I aka Lck Inhibitor; enzyme inhibitor (Lck Inhibitor); ALZET brain infusion kit 3 used; Brain coordinates (+0.5 mm and +1.1 mm ML relative to Bregma);

Q7038: G. Zadra*, et al.* Inhibition of de novo lipogenesis targets androgen receptor signaling in castration-resistant prostate cancer. Proc Natl Acad Sci U S A 2019;116(2):631-640
Agents: IPI-9119 **Vehicle:** 1-methyl-2-pyrrolidinone; sodium phosphate buffer; **Route:** SC; **Species:** Mice; **Pump:** 2002; **Duration:** 4 weeks;
ALZET Comments: Dose (100 mg/mL); 20% 1-methyl-2-pyrrolidinone used; cancer (prostate); no stress: Mice did not show any signs of toxicity, stress, weight loss, or changes in feeding behavior. (see pg. 635);

Q7645: A. Yoshida*, et al.* (Pro)renin Receptor Blockade Ameliorates Heart Failure Caused by Chronic Kidney Disease. J Card Fail 2019;25(4):286-300
Agents: handle region peptide **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 4 weeks;
ALZET Comments: Dose (0.01, 0.3 mg/kg/d); Controls received sham surgery and mp w/ vehicle; animal info (8 weeks, C57BL/6J); Therapeutic indication (candidate to treat heart failure in CKD due to inhibition of unfavorable signaling pathways via both AT1R and (P)RR);

Q9118: S. W. Yoo*, et al.* Inhibition of neutral sphingomyelinase-2 facilitates remyelination. BioRxiv 2019;
Agents: Cambinol **Vehicle:** Not stated; **Route:** CSF/CNS; **Species:** Mice; **Pump:** Not Stated; **Duration:** 28 days;
ALZET Comments: Dose (0.31 ug/kg/day); animal info (Male, C57BL/6, 8-10 wk); Brain coordinates (AP, -.0.5 mm; ML, 1.0 mm; DV, 2.5 mm);

Q9041: W. Xiong*, et al.* Astrocytic Epoxyeicosatrienoic Acid Signaling in the Medial Prefrontal Cortex Modulates Depressive-like Behaviors. Journal of Neuroscience 2019;39(23):4606-4623
Agents: TPPU **Vehicle:** Not Stated; **Route:** CSF/CNS; **Species:** Mice; **Pump:** 1007D; **Duration:** 7 days;
ALZET Comments: Dose (1 uM); Controls received mp w/ vehicle; animal info (Male, C57BL/6, 10-12 weeks old); TPPU aka Soluble epoxide hydrolase (sEH) inhibitor; enzyme inhibitor (Soluble epoxide hydrolase inhibitor); Brain coordinates (anteroposterior=-0.6 mm, mediolateral=1.5 mm dorsoventral= 2.0 mm); neurodegenerative (Depressive Disorder);

Q7685: Y. Wu*, et al.* Sulforaphane triggers a functional elongation of microglial process via the Akt signal. J Nutr Biochem 2019;67(51-62
Agents: LY294002 **Vehicle:** CSF, artificial; **Route:** CSF/CNS (left lateral ventricle); **Species:** Mice; **Pump:** 1003D; 2002;
ALZET Comments: Dose (5 ug/ml); Controls received mp w/ vehicle; animal info (Eight-week-old male C57BL6/J mice);

Q7509: C. M. Wilkinson*, et al.* Glibenclamide, a Sur1-Trpm4 antagonist, does not improve outcome after collagenase-induced intracerebral hemorrhage. PLoS One 2019;14(5):e0215952
Agents: Glibenclamide **Vehicle:** DMSO, NaOH, Saline; **Route:** SC; **Species:** Rat; **Pump:** 2001; **Duration:** Not Stated;
ALZET Comments: Dose (200ng/hour); animal info (80 male Sprague Dawley rats (275–450 g, ~2–4 months old));

Q9061: L. T. Weckbach, *et al.* Midkine drives cardiac inflammation by promoting neutrophil trafficking and NETosis in myocarditis. Journal of Experimental Medicine 2019;216(2):350-368
Agents: Inhibitor receptor-associated protein **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 2004; **Duration:** 21 days;
ALZET Comments: Dose (0.25 ul/h); Controls received mp w/ vehicle; animal info (8-12 weeks old, C57BL/6);

Q7681: Y. Wang, *et al.* C-X-C Motif Chemokine Receptor 4 Blockade Promotes Tissue Repair After Myocardial Infarction by Enhancing Regulatory T Cell Mobilization and Immune-Regulatory Function. Circulation 2019;139(15):1798-1812
Agents: POL5551; POL6326 **Vehicle:** Saline; **Route:** SC; **Species:** Mice; Pigs; **Pump:** 1007D; **Duration:** 7 days;
ALZET Comments: Dose (8mg/kg/dose); Controls received mp w/ vehicle; animal info (female pigs; 8-10 wk male mice);

Q6890: X. Wang, *et al.* Liver-Selective MMP-9 Inhibition in the Rat Eliminates Ischemia-Reperfusion Injury and Accelerates Liver Regeneration. Hepatology 2019;69(1):314-328
Agents: 2-[(4-biphenylsulfonyl)amino]-3-phenyl-propionic acid **Vehicle:** Not Stated; **Route:** IV (inferior mesenteric vein); IP;
Species: Rat (transgenic); **Pump:** 2ML1; 2001; **Duration:** 7 days;
ALZET Comments: Dose (100 µg/h); animal info (Male Lew-Tg(CAG-EGFP)ys rats); (Matrix metalloproteinases 2/9);

Q7677: R. Wang, *et al.* Photobiomodulation for Global Cerebral Ischemia: Targeting Mitochondrial Dynamics and Functions. Mol Neurobiol 2019;56(3):1852-1869
Agents: Mdivi-1 **Vehicle:** Not Stated; **Route:** Not Stated; **Species:** Rat; **Pump:** 1003D; **Duration:** Not Stated;
ALZET Comments: Dose (1 mg/kg/day); Controls received mp w/ vehicle; animal info (Adult male Sprague-Dawley rats 250–300 g); behavioral testing (Bames Maze Task, Morris Water Maze Test);

Q7675: D. C. Walters, *et al.* Metabolomic analyses of vigabatrin (VGB)-treated mice: GABA-transaminase inhibition significantly alters amino acid profiles in murine neural and non-neural tissues. Neurochem Int 2019;125(151-162
Agents: Vigabatrin **Vehicle:** PBS; **Route:** SC; **Species:** Mice; **Pump:** 2002; **Duration:** 14 days;
ALZET Comments: Dose (35, 70 and 140 mg/kg/d); dose-response (dose escalation); animal info (8–10 weeks of age and 20.8–26.1 g); Bigabatrin aka VGB; enzyme inhibitor (Vigabatrin inhibits GABA transaminase);

Q7494: B. Ulmasov, *et al.* An Inhibitor of aArginine-Glycine-Aspartate-Binding Integrins Reverses Fibrosis in a Mouse Model of Nonalcoholic Steatohepatitis. Hepatol Commun 2019;3(2):246-261
Agents: Propanoic acid,
(3S)-3-(3-bromo-5-(tert-butyl)phenyl)-3-(2-(3-hydroxy-5-((5-Hydroxy-1,4,5,6-tetrahydropyrimidin-2-yl)amino)benzamido)acetamido) **Vehicle:** DMSO, Water; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 4 weeks;
ALZET Comments: Dose (100 mg/kg/day); 50% DMSO used; animal info (C57BL/6J 5-week-old male mice); enzyme inhibitor (integrin inhibitor); Therapeutic indication (nonalcoholic steatohepatitis; liver fibrosis);

Q7635: L. M. Toomey, *et al.* Comparison of ion channel inhibitor combinations for limiting secondary degeneration following partial optic nerve transection. Experimental Brain Research 2019;237(1):161-171
Agents: oxATP; BBG; YM872 **Vehicle:** PBS; **Route:** Not stated; **Species:** Rat; **Pump:** Not stated; **Duration:** Not Stated;
ALZET Comments: "Dose (oxATP (1 mM), BBG (540 µM) and YM872
(240 µM)); Controls received mp w/ vehicle; animal info (Thirty-eight adult, female PVG rats); post op. care (2.8mg/kg carprofen); behavioral testing (optokinetic nystagmus assessment);

Q7671: L. Sun, *et al.* MicroRNA-211-5p Enhances Analgesic Effect of Dexmedetomidine on Inflammatory Visceral Pain in Rats by Suppressing ERK Signaling. J Mol Neurosci 2019;68(1):19-28
Agents: Dexmedetomidine **Vehicle:** Saline; **Route:** SC; **Species:** Rat; **Pump:** Not Stated; **Duration:** 1 week;
ALZET Comments: Dose (25 ug/mL); Controls received mp w/ vehicle; animal info (Sprague Dawley, Male, 400 g); Dexmedetomidine aka DEX; enzyme inhibitor (a2 adrenergic receptor agonist); bilateral cannula used; dependence;

Q7669: I. C. Stancu, *et al.* Aggregated Tau activates NLRP3-ASC inflammasome exacerbating exogenously seeded and non-exogenously seeded Tau pathology in vivo. Acta Neuropathologica 2019;137(4):599-617
Agents: MCC950 **Vehicle:** Saline; **Route:** CSF/CNS (right lateral ventricle); **Species:** Mice; **Pump:** 2006; **Duration:** 6 weeks;
ALZET Comments: Dose (0.15 ul/h); Controls received mp w/ vehicle; enzyme inhibitor (inflammasome inhibitor); ALZET brain infusion kit 3 used; Brain coordinates (A/P, − 0.5; L, − 1.1; relative to bregma); cyanoacrylate adhesive; neurodegenerative (Alzheimer's Disease);

Q7668: S. Song, *et al.* Loss of Brain Norepinephrine Elicits Neuroinflammation-Mediated Oxidative Injury and Selective Caudo-Rostral Neurodegeneration. Mol Neurobiol 2019;56(4):2653-2669
Agents: Diphenyleneiodonium **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 3 months;
ALZET Comments: Dose (10 ng/kg/day); Controls received mp w/ vehicle; animal info (C57/BL, 3 months old, Male); DPI aka Diphenyleneiodonium ; enzyme inhibitor (NOX2 inhibitor); neurodegenerative (Parkinson's Disease);

Q9045: A. D. Snow, *et al.* The Amazon rain forest plant Uncaria tomentosa (cat's claw) and its specific proanthocyanidin constituents are potent inhibitors and reducers of both brain plaques and tangles. Scientific Reports 2019;9(1):561
Agents: B-amyloid inhibitor **Vehicle:** Saline; **Route:** CSF/CNS; **Species:** Mice; **Pump:** 2002; **Duration:** 2 weeks;
ALZET Comments: Dose (8 mg/ml); Controls received mp w/ vehicle; animal info (6-8 months old); B-amyloid inhibitor aka PTI-777; enzyme inhibitor (B-amyloid inhibitor); Brain coordinates (AP -1.7; ML 3.0; DV -3.0); bilateral cannula used; neurodegenerative (Alzheimer's Disease);

Q9070: A. K. Short, *et al.* Short-term block of CRH receptor in adults mitigates age-related memory impairments provoked by early-life adversity. BioRxiv 2019;
Agents: Corticotropin-releasing factor receptor type 1 antagonist; **Route:** SC; **Species:** Rat; **Pump:** 2001; **Duration:** 7 days;
ALZET Comments: Dose (4 mg/kg/day); Controls received mp w/ vehicle; animal info (Sprague Dawley, 2 months old); behavioral testing (Object Recognition Test, Object Location Test); CRFR1 antagonist aka Corticotropin-releasing factor receptor type 1 antagonist; enzyme inhibitor (CRFR1 inhibitor); Brain coordinates (AP-1.3, L 2.0, V 3.5 mm); dependence;

R0374: C. Shimbori, *et al.* The Role of Mast Cells in the Pathophysiology of Pulmonary Fibrosis. Not Stated 2019;135-173
Agents: TY-51469, H4R antagonist, MK-571 , PD123319 **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice;
ALZET Comments: Dose: TY-51469 (0.1 or 1.0 mg/kg/day), H4R antagonist (40 mg/kg); PD123319 (0.5 or 5 mg/kg/d); animal info (ICR, C57BL/6 mice);

Q8367: C. S. Piao, *et al.* Depression following traumatic brain injury in mice is associated with down-regulation of hippocampal astrocyte glutamate transporters by thrombin. J Cereb Blood Flow Metab 2019;39(1):58-73
Agents: Fasudil **Vehicle:** Not stated; **Route:** CNS/CSF; **Species:** Mice; **Pump:** 2001; **Duration:** 7 days;
ALZET Comments: Dose (25 gm/kg/day); Controls received mp w/ vehicle; animal info (CD1, Male, 25-30 g);

Q7604: S. Perveen, *et al.* MIF inhibition enhances pulmonary angiogenesis and lung development in congenital diaphragmatic hernia. Pediatr Res 2019;85(5):711-718
Agents: MIF inhibitor, Nitrofen **Vehicle:** Not Stated; **Route:** SC; **Species:** Rat; **Pump:** Not Stated; **Duration:** 21 days;
ALZET Comments: Dose (200 mg- Nitrofen, 1.8 mg/kg/day- MIF inhibitor); animal info (Adult,);

Q8727: A. Pasquier, *et al.* Lysosomal degradation of newly formed insulin granules contributes to beta cell failure in diabetes. Nature Communications 2019;10(1):3312
Agents: Compound A **Vehicle:** DMSO; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 2 weeks;
ALZET Comments: Controls received mp w/ vehicle; animal info (4 weeks old, C57BL/6, Male);

Q9807: L. Pang, *et al.* Amiloride Alleviates Neurological Deficits Following Transient Global Ischemia and Engagement of Central IL-6 and TNF-alpha Signal. Current Molecular Medicine 2019;19(8):597-604
Agents: Amiloride, SC144, Etanercept **Vehicle:** CSF, artificial; **Route:** CSF/CNS; **Species:** Rat **Duration:** 72 hours;
ALZET Comments: Dose (Amiloride- 50 ug, SC144- 10 ug, ETAN-10 uM); Controls received mp w/ vehicle; animal info (Male, Sprague Dawley, 200-250 g); Brain coordinates (3.7 mm posterior to the bregma, 4.1 mm lateral to the midline, and 3.5 mm under the dura); ischemia (Global);

Q8924: H. Oshima, *et al.* Empagliflozin, an SGLT2 Inhibitor, Reduced the Mortality Rate after Acute Myocardial Infarction with Modification of Cardiac Metabolomes and Antioxidants in Diabetic Rats. The Journal of Pharmacology and Experimental Therapeutics 2019;368(3):524-534
Agents: Empagliflozin **Vehicle:** DMSO; **Route:** SC; **Species:** Rat; **Pump:** Not Stated; **Duration:** 2 weeks;
ALZET Comments: Dose (10 mg/kg/day); animal info (Male, 25-30 weeks);

Q7610: T. Odaira, *et al.* Mechanisms underpinning AMP-activated protein kinase-related effects on behavior and hippocampal neurogenesis in an animal model of depression. Neuropharmacology 2019;150(121-133
Agents: Peptide, zeta-inhibitor **Vehicle:** Saline; **Route:** CSF/CNS; **Species:** Mice; **Pump:** 2002; **Duration:** 14 days;
ALZET Comments: Dose (5 ug/12 uL/day); animal info (6- weeks old, 26-28 g); behavioral testing (Forced Swim Test, Tail-Suspension Test); ZIP aka zeta-inhibitory peptide; enzyme inhibitor (zeta-inhibtor); ALZET brain infusion kit 3 used; Brain coordinates (1.00 L, 0.22 P, 3.00 to bregma); bilateral cannula used; cyanoacrylate adhesive; dependence;

Q7611: A. Obeidat, *et al.* Nociceptive neuroplasticity of the murine knee joint precedes severe structural joint damage in a surgical model of OA. Osteoarthritis and Cartilage 2019;27(
Agents: Clozapine N-oxide **Vehicle:** Vehicle; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 6 weeks;
ALZET Comments: Controls received mp w/ vehicle; animal info (10 weeks old, Male); behavioral testing (Pressure Application Measurement, Up-Down staircase Test);

Q7614: J. Nie, *et al.* Ranolazine prevents pressure overload-induced cardiac hypertrophy and heart failure by restoring aberrant Na(+) and Ca(2+) handling. J Cell Physiol 2019;234(7):11587-11601
Agents: Ranolazine **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 1004; **Duration:** 4 weeks;
ALZET Comments: Dose (40 mg/kg/d); Controls received mp w/ vehicle; animal info (C57BL/6J, 8 week old, Male);

Q6168: R. C. Nayak, *et al.* The signaling axis atypical protein kinase C lambda/iota-Satb2 mediates leukemic transformation of B-cell progenitors. Nat Commun 2019;10(1):1-16
Agents: Ro-31-8220; imatinib **Vehicle:** PBS; **Route:** SC; **Species:** Mice (transgenic); **Pump:** 2002; **Duration:** 14 days;
ALZET Comments: Dose (Ro-31-8220 (1 mM); imatinib (0.5 mM)); Controls received mp w/ vehicle; animal info (6-12 week old transgenic mice); enzyme inhibitor (Protein Kinase C);

Q7376: I. Miyazaki, *et al.* Effects of Enteric Environmental Modification by Coffee Components on Neurodegeneration in Rotenone-Treated Mice. Cells 2019;8(3):
Agents: Rotenone **Vehicle:** DMSO, PEG; **Route:** SC; **Species:** Mice; **Pump:** 2004; **Duration:** 4 weeks;
ALZET Comments: Dose (2.5 mg/kg/day); 50 DMSO: 50 PEG used; Controls received mp w/ vehicle; animal info (male C57BL/6J mice nine weeks old; approximately 25 g);

Q8288: C. M. Minutti, *et al.* A Macrophage-Pericyte Axis Directs Tissue Restoration via Amphiregulin-Induced Transforming Growth Factor Beta Activation. Immunity 2019;50(3):645-654 e6
Agents: Integrin-av inhbitor **Vehicle:** DMSO; **Route:** SC; **Species:** Mice; **Pump:** 1007D; **Duration:** Not stated;
ALZET Comments: Dose (100 mg/kg/day); 50% DMSO used; Controls received mp w/ vehicle; Integrin-av inhbitor aka CHWM12; enzyme inhibitor (Integrin-av inhbitor); immunology;

Q8287: Z. Min, *et al.* Asymmetrical methyltransferase PRMT3 regulates human mesenchymal stem cell osteogenesis via miR-3648. Cell Death Dis 2019;10(8):581
Agents: arginine methyltransferase 3 inhibitor **Vehicle:** DMSO; **Route:** SC; **Species:** Mice; **Pump:** 2002; **Duration:** 2, 4, 6 wks
ALZET Comments: Dose (20 mg/kg/day); animal info (8 weeks old, C57BL/6); Multiple pumps per animal (1, 2, or 3);

Q7563: A. Mietelska-Porowska, *et al.* Pore-former enabled seeding of tau in rats: Alleviation by memantine and lithium chloride. J Neurosci Methods 2019;319(47-59
Agents: Okadaic acid **Vehicle:** CSF, artificial; **Route:** SC; **Species:** Rat; **Pump:** 2002; **Duration:** 14 days;
ALZET Comments: Dose (2.4 nm); animal info (Male, Wistar rat, 2 months old); okadaic acid aka OA; enzyme inhibitor (non-specific phosphatase inhibitor); ALZET brain infusion kit 1 used; bilateral cannula used; (Alzheiemer's Disease);

Q7557: S. Martinez-Martinez*, et al.* Cardiomyocyte calcineurin is required for the onset and progression of cardiac hypertrophy and fibrosis in adult mice. FEBS J 2019;286(1):46-65
Agents: Angiotensin II, Cyclosporin A **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** 2001, 2004; **Duration:** 21 days;
ALZET Comments: Dose (60 ug/kg/h-Ang II, 0.208 mg/kg/h- CsA); animal info (C57BL/6J, 8-12 weeks old);

Q7006: R. Malik*, et al.* The molecular tweezer CLR01 inhibits aberrant superoxide dismutase 1 (SOD1) self-assembly in vitro and in the G93A-SOD1 mouse model of ALS. J Biol Chem 2019;294(10):3501-3513
Agents: CLR01 **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 1004; **Duration:** 6 weeks;
ALZET Comments: Dose (0, 0.5, or 5.0 mg/kg); 0.9% saline used; Controls received mp w/ vehicle; animal info (Transgenic B6SJL-Tg mice); behavioral testing (grip-strength test, rotarod test); half-life: 1-2 hours (p.5);

Q8271: R. Luwor*, et al.* Targeting Glioma Stem Cells by Functional Inhibition of Dynamin 2: A Novel Treatment Strategy for Glioblastoma. Cancer Invest 2019;37(3):144-155
Agents: Cydn-4-36, Temozolomide, or both **Vehicle:** DMSO; **Route:** SC; **Species:** Mice; **Pump:** Not stated; **Duration:** 14 days;
ALZET Comments: Dose (Cydn- 150 mg/kg/day or TMZ-20 mg/kg/day); animal info (8-10 weeks old, BALB/c nu/nu);

Q8246: J. W. Lee*, et al.* Chemical Control of Mammalian Circadian Behavior through Dual Inhibition of Casein Kinase Ialpha and delta. J Med Chem 2019;62(4):1989-1998
Agents: Casein kinase I inhibitors **Vehicle:** Not stated; **Route:** CNS/CSF; **Species:** Mice; **Pump:** 1004 or 1002;
ALZET Comments: animal info (8 weeks old, Male, C57BL/6J); Casein kinase I inhibitors aka NCC007 and londaysin; Brain coordinates (0.2 mm anterior, 1.4 mm lateral, and 2.2 mm from the surface of the skull); dental cement used;dependence;

Q8244: J. H. Lee*, et al.* Transgenic expression of a ratiometric autophagy probe specifically in neurons enables the interrogation of brain autophagy in vivo. Autophagy 2019;15(3):543-557
Agents: Chloroquine, Pan-MTOR inhibitor-21 mg/ml, or leupeptin **Vehicle:** DMSO; **Route:** CSF/CNS; **Species:** Mice; **Pump:** 1007D; **Duration:** 5 days (Pan-MTOR inhibitor) or 7 days (leupeptin);
ALZET Comments: Dose (Chloroquine-5 mg/kg/day, Pan-MTOR inhibitor-50 mg/kg/day, or leupeptin-4 mg/kg/day); 4% DMSO used; animal info (TRGL6, 4 months old); Brain coordinates (lateral ventricle: AP – 0.3mmto bregma,ML 1.0mmto bregma, and DV 2.5 mm to cranium); neurodegenerative (Autophagy-Lysosome Pathway);

Q5331: H. A. Lee*, et al.* Histone deacetylase inhibitor MGCD0103 protects the pancreas from streptozotocin-induced oxidative stress and beta-cell death. Biomedicine & Pharmacotherapy 2019;109(921-929
Agents: MGCD0103 **Vehicle:** Not Stated; **Route:** SC; **Species:** Rat; **Pump:** Not Stated; **Duration:** 4 weeks;
ALZET Comments: Dose (10 µg/day); animal info (Male Sprague-Dawley rats (6-week old and about 200 g));

Q7531: R. M. Lataro*, et al.* Chronic Treatment With Acetylcholinesterase Inhibitors Attenuates Vascular Dysfunction in Spontaneously Hypertensive Rats. American Journal of Hypertension 2019;32(6):579-587
Agents: Pyridostigmine Bromide; Donepezil **Vehicle:** Not Stated; **Route:** SC; **Species:** Rat; **Pump:** 2004; **Duration:** 16 weeks;
ALZET Comments: Dose (Pyridostigmine bromide at 1.5 mg/kg/day; Donepzeil at 1.4 mg/kg/day); animal info (5 week old male SHR and Wistar Kyoto rats); pumps replaced every 4 weeks; long-term study; BP measured via Tail-cuff method;

Q8241: A. Larionov*, et al.* Cathepsin B increases ENaC activity leading to hypertension early in nephrotic syndrome. J Cell Mol Med 2019;23(10):6543-6553
Agents: Cathepsin B inhibitor **Vehicle:** Dimethyl sulfoxide; **Route:** SC; **Species:** Mice; **Pump:** 1002; **Duration:** 14 days;
ALZET Comments: Dose (2.5 mL/hr); 1.5% DMSO used; animal info (6 weeks old);

Q8231: S. M. Krishnan*, et al.* Pharmacological inhibition of the NLRP3 inflammasome reduces blood pressure, renal damage, and dysfunction in salt-sensitive hypertension. Cardiovasc Res 2019;115(4):776-787
Agents: NLRP3 inhibitor **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** Not stated; **Duration:** 25 days;
ALZET Comments: Dose (10 kg/mg/day); 0.9% Saline used; animal info (Male, C57BL/6J, 10-12 weeks old, 25-30 g);

Q7618: M. Koshibu*, et al.* Antiatherogenic effects of liraglutide in hyperglycemic apolipoprotein E-null mice via AMP-activated protein kinase-independent mechanisms. American Journal of Physiology Gastrointestinal and Liver Physiology 2019;316(5):E895-E907
Agents: liraglutide; dorsomorphin **Vehicle:** Saline; **Route:** SC; **Species:** Mice (hyperglycemic); **Pump:** 1002; **Duration:** 4 weeks; **ALZET Comments:** Dose ((liraglutide 17, 107 nmol/kg/day), (dorsomorphin 52.9 µmol/kg/day); Controls were normoglycemic and received mp w/ vehicle; animal info (20 week, male, ApoE-/-); pumps replaced every 2 weeks;

Q8225: N. Kondo*, et al.* DNA methylation inhibitor attenuates polyglutamine-induced neurodegeneration by regulating Hes5. EMBO Mol Med 2019;11(5):
Agents: DNMT inhibitor **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 2002; **Duration:** 2 weeks;
ALZET Comments: Dose (0.5 or 2 mg/dl); Controls received mp w/ vehicle; animal info (6 weeks old, Male, C57BL/6J);

Q7349: J. E. Kim*, et al.* Perampanel Affects Up-Stream Regulatory Signaling Pathways of GluA1 Phosphorylation in Normal and Epileptic Rats. Front Cell Neurosci 2019;13(80
Agents: Bisindolylmaleimide; KN-93; H-89; U0126; SP600125; okadaic acid; cyclosporin A **Route:** CSF/CNS (right lateral ventricle); **Species:** Rat; **Pump:** 1003D; **Duration:** 3 days;
ALZET Comments: Dose (BIM 25uM, KN-93 25uM, H-89 10uM, U0126 25uM, okadaic acid 10uM, cyclosporine A 250uM); animal info (male SD rats 7 wk old)); behavioral testing (Morris Water maze test); Brain coordinates (1 mm posterior; 1.5 mm lateral; 3.5 mm depth to the bregma);

Q7624: B. A. Kemp*, et al.* Defective Renal Angiotensin III and AT2 Receptor Signaling in Prehypertensive Spontaneously Hypertensive Rats. J Am Heart Assoc 2019;8(9):e012016
Agents: candesartan **Vehicle:** Not Stated; **Route:** SC; **Species:** Rat; **Pump:** 2001D; **Duration:** 24 hours;
ALZET Comments: Dose (0.01 mg/kg/min); Controls received mp w/ agent; animal info (4 weeks, male and female, Wistar-Kyoto (WKY) and spontaneously hypertensive (SHR); all animals received pump with candesartan 24h prior to experiments to block systemic AT1Rs.;

Q6780: Y. Izawa-Ishizawa*, et al.* Development of a novel aortic dissection mouse model and evaluation of drug efficacy using in-vivo assays and database analyses. J Hypertens 2019;37(1):73-83
Agents: Angiotensin II; B-aminopropionitrile **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 1002; **Duration:** 1,6 weeks;
ALZET Comments: Dose (Angiotensin II (1000 ng/kg per day); B-aminopropionitrile (150 mg/kg/day)); Controls received mp w/ vehicle; animal info (Male C57BL/6J mice (10–12 weeks; 25–30 g)); Multiple pumps per animal (2); B-aminopropionitrile is an enzyme inhibitor (lysyl oxidase inhibitor); cardiovascular;

Q8044: S. I. Inoue*, et al.* C-type natriuretic peptide improves growth retardation in a mouse model of cardio-facio-cutaneous syndrome. Hum Mol Genet 2019;28(1):74-83
Agents: C-type natriuretic peptide **Vehicle:** Ultra-pure water; **Route:** SC; **Species:** Mice; **Pump:** Not stated; **Duration:** 4 weeks;
ALZET Comments: Dose (0.33 or 1 mg/kg/day); Controls received mp w/ vehicle; animal info (5 weeks old, Braf Q341R/+); C-type natriuretic peptide aka inhibitor of the FGFR3-RAF1-MEK/ERK signaling ; enzyme inhibitor (inhibitor of the FGFR3-RAF1-MEK/ERK signaling); antihypertensive;

Q7600: K. A. Hyndman*, et al.* Dynamic changes in histone deacetylases following kidney ischemia-reperfusion injury are critical for promoting proximal tubule proliferation. American Journal of Physiology Renal Physiology 2019;316(5):F875-F888
Agents: MS-275; trichostatin A **Vehicle:** Acetic Acid, Buffered; **Route:** IP; **Species:** Mice; **Pump:** 1007D; **Duration:** 3 days;
ALZET Comments: Dose ((MS275 20 mg/kg/day), (TSA; 1 mg/kg/day)); Acetic acid (pH 5.0) used; Controls received sham surgery and mp w/ vehicle; animal info (10-week, male, C57BL/6J); enzyme inhibitor (MS275 for class I HDAC, TSA for pan-HDAC); "Often in rodent model studies, HDACi are delivered by single or daily i.p. injections (30, 32, 47, 62). Our study used i.p. osmotic minipumps to deliver a constant concentration of HDACi, to mimic pharmacokinetics of humans better, and this may partially explain the difference in findings among these studies. For example, in the cisplatin model of nephrotoxicity, when TSA was given via i.p. daily, there was a significant enhancement of tubular autophagy and renoprotection (32). In our study of bilateral IRI, we found increased autophagy marker expression in the cortex, but continuous HDACi did not further enhance autophagy, and in some cases the autophagy markers (e.g., beclin) were reduced compared with the vehicle-treated mice." pg.F885;

Q7343: X. Huang*, et al.* Resveratrol Promotes Diabetic Wound Healing via SIRT1-FOXO1-c-Myc Signaling Pathway-Mediated Angiogenesis. Front Pharmacol 2019;10(421
Agents: EX-527; 10068-F4 **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** 1002; **Duration:** 4 weeks;
ALZET Comments: Dose (EX-527 5 mg/kg/day, 10068-F4 30mg/kg/day); Controls received mp w/ vehicle; animal info (BKS.Cg-Dock7mC=CLeprdb=J mice, 8 weeks old); enzyme inhibitor (EX-527 is an SIRT1 inhibitor, 10058-F$ is a c-Myc inhibitor); diabetes;

Q8039: H. J. Huang*, et al.* MGCD0103, a selective histone deacetylase inhibitor, coameliorates oligomeric Abeta25-35 -induced anxiety and cognitive deficits in a mouse model. CNS Neurosci Ther 2019;25(2):175-186
Agents: MGCD0103 **Vehicle:** Not Stated; **Route:** CSF/CNS (Intrathecal); **Species:** Mice; **Pump:** Not stated; **Duration:** 4 weeks;
ALZET Comments: Dose (30 or 60 nmol/day); animal info (C57BL/6J); Selective histone deacetylase inhibitor aka MGCD0103 ; enzyme inhibitor (selective histone deacetylase inhibitor); neurodegenerative (Alzheimer's Disease);

Q7530: R. J. Henry*, et al.* Inhibition of miR-155 Limits Neuroinflammation and Improves Functional Recovery After Experimental Traumatic Brain Injury in Mice. Neurotherapeutics 2019;16(1):216-230
Agents: miR-155 antagomir **Vehicle:** CSF, artificial; **Route:** CSF/CNS; **Species:** Mice; **Pump:** 1004D; **Duration:** 7 days;
ALZET Comments: Dose (0.5 nmol/day); 0.9% Saline used; Controls received mp w/ vehicle; animal info (C57Bl/6J, Male, 10-12 weeks old); behavioral testing (Motor function test); miR-155 antagomir aka micro-RNA hairpin inhibitor ; enzyme inhibitor (miR-155 hairpin inhibitor); ALZET brain infusion kit 3 used; neurodegenerative ();

Q7528: D. J. Heidenberg*, et al.* Pioglitazone's beneficial effects on erectile function preservation after cavernosal nerve injury in the rat are negated by inhibition of the insulin-like growth factor-1 receptor: a preclinical study. Int J Impot Res 2019;31(1):1-8
Agents: JB-1 trifluroacetate **Vehicle:** Saline; **Route:** SC; **Species:** Rat; **Pump:** Not Stated; **Duration:** 14 days;
ALZET Comments: Dose (100 ug/kg/day); Controls received mp w/ vehicle; animal info (Sprague-Dawley, Male, 350-400 g); JB-1 trifluroacetate aka small molecular antagonist; enzyme inhibitor (IGF-1 inhibitor); neurodegenerative (Nerve crush injury);

Q8026: T. Hashimoto*, et al.* Antipruritic Effects of Janus Kinase Inhibitor Tofacitinib in a Mouse Model of Psoriasis. Acta Derm Venereol 2019;99(3):298-303
Agents: Tofactinib **Vehicle:** DMSO; **Route:** SC; **Species:** Mice; **Pump:** Not stated; **Duration:** 7 days;
ALZET Comments: Dose (15 mg/kg/day); Controls received mp w/ vehicle; animal info (C57BL/6J, Male, 24-29 g); behavioral testing (Scratch Test); enzyme inhibitor (Janus kinases 1 and 3 inhibitor); dependence;

Q8736: M. Hamaguchi*, et al.* Circulating transforming growth factor-beta1 facilitates remyelination in the adult central nervous system. 2019;8(**Agents:** Transforming Growth Factor-BI Inhibitor **Vehicle:** Saline; **Route:** CSF/CNS; **Species:** Mice; **Pump:** 1002; **Duration:** Not Stated;
ALZET Comments: Dose (7.25 ug/kg/day); animal info (Female, 8-10 weeks old); Transforming growth factor-BRI Inhibitor aka TGF0BRI ; enzyme inhibitor (Transforming growth factor-BI Inhibitor); neurodegenerative (Myelination);

Q8012: A. E. Govier-Cole*, et al.* Inhibiting Bone Morphogenetic Protein 4 Type I Receptor Signaling Promotes Remyelination by Potentiating Oligodendrocyte Differentiation. eNeuro 2019;6(2):
Agents: LDN-193189 **Vehicle:** CSF, artificial; **Route:** CSF/CNS (ventricle); **Species:** Mice; **Pump:** 1007D; **Duration:** 7 days;
ALZET Comments: Dose (400 ng/day); Controls received mp w/ vehicle; animal info (7-8 weeks old, C57BL/6); Pharmacological inhibitor aka LDN-193189 ; enzyme inhibitor (Bone morphogenetic protein 4 inhibitor); ALZET brain infusion kit 3 used; Brain coordinates (0.5 mm anterior to bregma, 0.7 mm laterally from the longitudinal midline);

Q7082: Gartung A*, et al.* Suppression of chemotherapy-induced cytokine/lipid mediator surge and ovarian cancer by a dual COX-2/sEH inhibitor. Proceedings of the National Academy of Sciences 2019;116(5):1698-1703
Agents: PTUPB **Vehicle:** Not Stated; **Route:** IP; **Species:** Mice (SCID); **Pump:** Not Stated; **Duration:** 4 weeks;
ALZET Comments: Dose (30 mg/kg/d); animal info (6-wk-old female C57BL/6 or SCID mice); PTUPB aka 4-(5-phenyl-3-{3-[3-(4-trifluoromethyl-phenyl)-ureido]-propyl}-pyrazol-1-yl) benzenesulfonamide is a dual COX-2/sEH inhibitor; enzyme inhibitor (cyclooxygenase-2 and soluble epoxide hydrolase); cancer (ovarian);