



Recent References (2022-Present) on the Intracerebroventricular Administration of Agents
Using ALZET® Osmotic Pumps

Q11354: H. Liu, *et al.* Restoring carboxypeptidase E rescues BDNF maturation and neurogenesis in aged brains. *Life Medicine* 2023;2(2):

Agents: Carboxypeptidase E **Vehicle:** Not Stated; **Route:** CSF/CNS (left lateral ventricle); **Species:** Mice; **Strain:** Not Stated; **Pump:** 1007D; **Duration:** 24 hours;

ALZET Comments: animal info (18 months old); brain coordinates: (antero-posterior, 0.5 mm; lateral, 1.3 mm; depth, 2.9 mm relative to bregma and the surface of the brain); neurodegenerative (neurogenesis); aging

Q11351: X. Li, *et al.* Isoquercitrin Played a Neuroprotective Role in Rats After Cerebral Ischemia/Reperfusion Through Up-Regulating Neuroglobin and Anti-Oxidative Stress. *Transplantation Proceedings* 2023;55(7):1751-1761

Agents: oligonucleotides, antisense; artificial cerebrospinal fluid **Vehicle:** Cerebrospinal fluid, artificial; **Route:** CSF/CNS (lateral ventricle); **Species:** Rat; **Strain:** Sprague Dawley; **Pump:** 2002; **Duration:** 72 hours;

ALZET Comments: controls received mp w/ vehicle; sham operation; animal info (200 +/- 20 g); cerebral ischemia

Q11326: S. Kitaoka, *et al.* Repeated Social Defeat Stress Induces HMGB1 Nuclear Export in Prefrontal Neurons, Leading to Social Avoidance in Mice. *Cells* 2023;12(13):

Agents: IgG, control; antibody, monoclonal HMGB1 **Vehicle:** PBS; **Route:** CSF/CNS (right lateral ventricle); **Species:** Mice; **Strain:** C57BL/6N; **Pump:** 1002; **Duration:** 11 days;

ALZET Comments: Dose: 5 ng/day, 22.5 ng/day; animal info (9-week-old male); ALZET brain infusion kit 3 used; brain coordinates (0.2 mm posterior from the bregma, 1.0 mm lateral from the midline, and 2.3 mm below the skull surface at the bregma); dental cement used; behavioral testing (Repeated Social Defeat Stress and Social Interaction Test);

Q11312: H. Hong, *et al.* A novel role of lactate: Promotion of Akt-dependent elongation of microglial process. *International Immunopharmacology* 2023;119(110136)

Agents: LY294002 **Vehicle:** DMSO; **Route:** CSF/CNS (left lateral ventricle); **Species:** Mice; **Strain:** C57BL/J; **Pump:** 2002; 1003D; **Duration:** Not Stated;

ALZET Comments: Dose (5 ug/ml); Controls received mp w/ vehicle; 3% DMSO used; animal info (Male; 8 weeks old); behavioral testing (Tail Suspension; Forced Swim); brain coordinates: (-0.2 mm anteriorly, 1.0 mm laterally relative to bregma, 2.3 mm below the cranial surface); immunology; "The results showed that intracerebroventricular infusion of LY294002 abolished the preventive effect of lactate on LPS-induced increase in immobility time in TST (Fig. 9I) and FST (Fig. 9J)

Q11300: J. E. Kim, *et al.* Epigallocatechin-3-Gallate Attenuates Leukocyte Infiltration in 67-kDa Laminin Receptor-Dependent and -Independent Pathways in the Rat Frontoparietal Cortex following Status Epilepticus. *Antioxidants* 2023;12(4):

Agents: Epigallocatechin-3-Gallate; IgG, control anti-mouse; IgG, anti-MCP; IgG control anti-rabbit; IgG anti-67LR **Vehicle:** Not Stated; **Route:** CSF/CNS (right lateral ventricle); **Species:** Rat; **Strain:** Sprague-Dawley; **Pump:** 1003D; 1007D; **Duration:** 3; 7 d

ALZET Comments: Dose (EGCG 50 uM; IgG 50 ug/mL); controls received mp w/ vehicle; animal info (Male; 7 weeks old; Weighed 200-220 g); ALZET brain infusion kit 1 used; brain coordinates (1 mm posterior; 1.5 mm lateral; 3.5 mm depth); dental cement used; cannula location verified during brain sections

Q11299: J. E. Kim, *et al.* EGCG Attenuates CA1 Neuronal Death by Regulating GPx1, NF-kappaB S536 Phosphorylation and Mitochondrial Dynamics in the Rat Hippocampus following Status Epilepticus. *Antioxidants* 2023;12(4):

Agents: Epigallocatechin-3-gallate; U0126 **Vehicle:** Not Stated; **Route:** CSF/CNS (right lateral ventricle); **Species:** Rat; **Strain:** Sprague-Dawley; **Pump:** 1007D; **Duration:** 3 days;

ALZET Comments: Dose (50 uM EGCG, 25 uM U0126); controls received mp w/ vehicle; animal info (Male; Weighed 200-220 g); post op. care (Lithium chloride); ALZET BIK 1 used; brain coordinates (1 mm posterior; 1.5 mm lateral; 3.5 mm depth);



Q11298: T. P. Kilpelainen, *et al.* Nonpeptidic Oxazole-Based Prolyl Oligopeptidase Ligands with Disease-Modifying Effects on alpha-Synuclein Mouse Models of Parkinson's Disease. *Journal of Medicinal Chemistry* 2023;66(11):7475-7496

Agents: KYP-2047; HUP-55 **Vehicle:** DMSO; PBS; **Route:** CSF/CNS (lateral ventricle); **Species:** Mice; **Strain:** Transgenic; **Pump:** 1004; **Duration:** 28 days;

ALZET Comments: Dose: 10 mg/kg/day; 0.2% dimethyl sulfoxide (DMSO); 5% Tween used; controls received mp w/ vehicle; post op care: Topical lidocaine (10 mg/ mL), buprenorphine, (0.1 mg/kg) and carprofen (5 mg/kg) s.c. injections were provided as pre- and postoperative pain management; brain coordinates: 0.7 mm anterior and 1.4 mm lateral to bregma, 2.5 mm deep; ALZET BIK 3 used; behavioral testing (Cylinder test); neurodegenerative (Parkinson's);

R0454: Q. Huang, *et al.* Biomaterial-Based bFGF Delivery for Nerve Repair. *Oxidative Medicine and Cellular Longevity* 2023;2023(8003821

Agents: Fibroblast growth factor, basic **Vehicle:** Heparin; **Route:** SC; CSF/CNS (lumbar thecal sac); CSF/CNS (lateral ventricle); **Species:** Rat; **Strain:** Not Stated; **Pump:** Not Stated; **Duration:** 1 week;

ALZET Comments: neurodegenerative (spinal cord injury, facial nerve injury)

Q11272: M. D. Dorfman, *et al.* Central androgen action reverses hypothalamic astrogliosis and atherogenic risk factors induced by orchietomy and high-fat diet feeding in male mice. *American Journal of Physiology: Endocrinology and Metabolism* 2023;324(5):E461-E475

Agents: Testosterone; dihydrotestosterone **Vehicle:** Cyclodextrin, 2-hydroxypropyl-Beta-; **Route:** CSF/CNS (lateral ventricle); **Species:** Mice; **Strain:** C57BL/6J; **Pump:** 1004; **Duration:** 28 days;

ALZET Comments: Dose (Testosterone 0.9 ug/uL; DHT 0.2 ug/uL); Controls received mp w/ vehicle; animal info (Male; 12-16 weeks old); ALZET brain infusion kit used; Brain coordinates (0.7 mm posterior to bregma, 1.3 mm lateral, 2.1 mm below skull surface); "Chronic central infusion of testosterone (T) and dihydrotestosterone (DHT) reduces hypothalamic astrogliosis and peripheral risk markers in orchietomized (ORX) mice exposed to high-fat, high-sucrose diet (HFHS)." p. 10

Q11266: N. Genet, *et al.* Connexin 43-mediated neurovascular interactions regulate neurogenesis in the adult brain subventricular zone. *Cell Reports* 2023;42(4):112371

Agents: Cytosine-B-D-arabinoside **Vehicle:** Saline; **Route:** CSF/CNS (ipsilateral ventricle); **Species:** Mice; **Strain:** Cx43EC iKO; Cx43 fl/fl; **Pump:** 1007D; **Duration:** 6 days;

ALZET Comments: Controls received mp w/ vehicle; animal info (Male and female; 8 weeks old); ALZET BIK 3 used; Brain coordinates (1.4 mm lateral and 0.5 mm rostral to bregma); ICV injection coordinates verified w/ Fast Green dye injection

Q11255: A. N. Campero-Romero, *et al.* Extracellular vesicles from neural progenitor cells promote functional recovery after stroke in mice with pharmacological inhibition of neurogenesis. *Cell Death Discovery* 2023;9(1):272

Agents: Cytosine-β-D-arabinofuranosid **Vehicle:** Saline; **Route:** CSF/CNS (intracerebroventricular); **Species:** Mice; **Strain:** CD1; **Pump:** 1002; **Duration:** 16 days;

ALZET Comments: 0.9% NaCl used; controls received mp w/ vehicle; animal info: young adult 8-week old; 25 g; Brain coordinates (AP + 0.5, L + 1.1 from Bregma, and V + 2 from dura; ischemia (stroke); behavioral testing: neurological tests for body posture and movement control

Q11248: M. Bolborea, *et al.* Loss of hypothalamic MCH decreases food intake in amyotrophic lateral sclerosis. *Acta Neuropathologica* 2023;145(6):773-791

Agents: Melanin-concentrating hormone **Vehicle:** Saline; **Route:** CSF/CNS (lateral ventricle); **Species:** Mice; **Strain:** Sod1G86R; WT; **Pump:** Not Stated; **Duration:** 15 days;

ALZET Comments: Dose (1.2 µg/day); 0.9% NaCl used; Controls received mp w/ vehicle; animal info (75 days old); post op. care (Buprenorphine inject, meloxicam in water); ALZET brain infusion kit 3 used; Brain coordinates (Bregma -0.8 mm; Midline 0.4 mm; Dorsal surface -2 mm); cyanoacrylate adhesive; neurodegenerative (ALS)



Q11243: K. A. Alkadhi. A rat model of pre-clinical Alzheimer's disease. Handbook of Animal Models in Neurological Disorders 2023;43-55

Agents: Amyloid beta (1-42) **Vehicle:** Acetonitrile; trifluoroacetic acid; **Route:** CSF/CNS (lateral ventricle); **Species:** Rat; **Strain:** Wistar; **Pump:** Not Stated; **Duration:** 2 weeks;

ALZET Comments: Dose (160pmol/day); 35% acetonitrile/0.1% trifluoroacetic acid used; post op. care: wound clips used; triple antibiotic ointment; peptides; catheter; Brain coordinates (AP: -0.3, L: 1.2, V: 4.5); dental cement used; behavioral testing: Radial arm water maze task; Short term memory; Long term memory; neurodegenerative (Alzheimer's); good methods p. 44-45

Q11038: J. Zicha, *et al.* Nitric oxide and salt resistance in Dahl rats: no role of inducible NO synthase. Physiological Research 2023;72(1):123-127

Agents: Aminoguanidine; 2-amino-5,6-dihydro-6-methyl-4H-1,3-thiazine **Vehicle:** Water; saline; **Route:** CSF/CNS (lateral cerebral ventricle); **Species:** Rat; **Strain:** Wistar; **Pump:** 2004; **Duration:** 4 weeks;

ALZET Comments: Dose: AMG (2 mg/kg/day); AMT (0.5 mg/kg/day); Controls received mp w/ vehicle; animal info: Male 8-week-old outbred rats; Blood pressure measured via pressure transducer and a multichannel recorder; Blood pressure measurement see (pg.3 &4) fig.1,2,3 polyethylene catheter; AMG and AMT used as NOS II inhibitors; cardiovascular (blood pressure and high salt intake)

Q11003: H. L. Song, *et al.* Monoclonal antibody Y01 prevents tauopathy progression induced by lysine 280-acetylated tau in cell and mouse models. Journal of Clinical Investigation 2023;133(8):

Agents: Monoclonal antibody Y01 **Vehicle:** PBS; **Route:** CSF/CNS (right lateral ventricle); **Species:** Mice; **Strain:** tau-P301L; **Pump:** Not Stated; **Duration:** 28 days;

ALZET Comments: Dose (1.9 mg/ml); Controls received mp w/ vehicle; animal info: 8 months; comparison of ip injection vs mp; ALZET brain infusion kit used; Brain coordinates: 0.58 mm posterior to bregma, 1 mm lateral to the midline, and 2 mm from the skull surface; behavioral testing (Nest building test; Y maze; Morris water maze); neurodegenerative (Alzheimer's)

Q10992: A. Saoudi, *et al.* Investigating the Impact of Delivery Routes for Exon Skipping Therapies in the CNS of DMD Mouse Models. Cells 2023;12(6):

Agents: Oligonucleotides, antisense **Vehicle:** Not Stated; **Route:** CSF/CNS (intracerebroventricular); **Species:** Mice; **Strain:** hDMD; mdx52; **Pump:** 1002; **Duration:** 2 weeks;

ALZET Comments: Dose (~700 nmol); animal info: 6–8-week-old mdx52 and WT mice; comparison of bolus injection vs mp; neurodegenerative (neurological disorder); brain tissue distribution

Q10988: J. G. Rosa, *et al.* BDNF is altered in a brain-region specific manner and rescues deficits in Spinocerebellar Ataxia Type 1. Neurobiology of Disease 2023;178(106023

Agents: Brain-derived neurotrophic factor, recombinant **Vehicle:** CSF, artificial; **Route:** CSF/CNS (right lateral ventricle); **Species:** Mice; **Strain:** Atxn154Q/2Q; **Pump:** 1004; **Duration:** 4 weeks;

ALZET Comments: Dose (0.71 µg/day); Controls received mp w/ vehicle; animal info: 7 week old mice; Brain coordinates ((A/P 1.1 mm; M/L 0.5 mm; D/V -2.5 mm from Bregma); behavioral testing (Cognitive testing; Barnes maze; Contextual fear conditioning); neurodegenerative, Spinocerebellar ataxia type-1;

Q10986: S. M. Robert, *et al.* The choroid plexus links innate immunity to CSF dysregulation in hydrocephalus. Cell 2023;186(4):764-785 e21

Agents: E. coli, wild type; E. coli, -LPS; lipopolysaccharide **Vehicle:** CSF, artificial; **Route:** CSF/CNS (right lateral ventricle); **Species:** Rat; **Strain:** Wistar; **Pump:** 1003D; **Duration:** 72 hours;

ALZET Comments: Dose (10 ng/mL); Controls received mp w/ vehicle; animal info 8-week-old; ALZET brain infusion kit 2 used; Brain coordinates ((coordinates, x= -0.8, y= -1.7 mm from bregma)cyanoacrylate adhesive; gene therapy; immunology



Q10657: M. V. Rao, *et al.* Autophagy is a Novel Pathway for Neurofilament Protein Degradation in Vivo. *Autophagy* 2023;19(4):1277-1292

Agents: 3-methyladenine **Vehicle:** DMSO; **Route:** CSF/CNS (lateral ventricle); **Species:** Mice; **Strain:** C57BL/6J; **Pump:** 2004; **Duration:** 4 weeks;

ALZET Comments: "Dose: 3-MA (09 mg/ml); 50% DMSO vehicle used; Controls received mp w/ vehicle; animal info: 9 months; 3-methyladenine aka (3-MA); Brain coordinates (placement in the lateral ventricle were AP -0.3 mm to Bregma, ML 1.0 mm to Bregma, and DV 2.5 mm to cranium);"

Q10972: P. Pakataridis, *et al.* EVIDENCE FOR BIOLOGICAL EFFECTS OF THE HEXAPEPTIDE NOVOKININ. *Journal of Chemical Technology and Metallurgy* 2023;58(3):608-614

Agents: Novokinin **Vehicle:** Saline, sterile; **Route:** CSF/CNS (right lateral ventricle); **Species:** Mice; **Strain:** SHR; **Pump:** 2002; **Duration:** 14 days;

ALZET Comments: Dose: 0.3 ug/rat/day; Controls received mp w/ vehicle; animal info: 2-month-old female 220 - 280g; receptor agonist (angiotensin AT2 receptor agonist novokinin aggravates some diabetes mellitus-induced alterations in Wistar); ALZET brain infusion kit 2 used; Brain coordinates (1.5 mm lateral (right) to the sagittal suture, 1 mm caudal to bregma, and a depth of 3 mm); behavioral testing Open field test; Elevated plus maze test; Paw pressure test; T-maze rewarded alternating test; Novel object recognition; anxiety; memory

Q10961: S. Meng, *et al.* Catalpol Mitigates Alzheimer's Disease Progression by Promoting the Expression of Neural Stem Cell Exosomes Released miR-138-5p. *Neurotoxicity Research* 2023;41(1):41-56

Agents: miR-138-5p inhibitor; scramble RNA, negative control **Vehicle:** Not Stated; **Route:** CSF/CNS (left lateral ventricle); **Species:** Mice; **Strain:** C57BL/6; **Pump:** 1004; **Duration:** Not Stated;

ALZET Comments: Dose (0.2 ml/minute); animal info: WT C57BL/6 mice; Brain coordinates (bregma: - 0.22 mm; dorsoventral: 3 mm; lateral: 1 mm); neurodegenerative (Alzheimer's disease);

Q11057: M. McNicholas, *et al.* A Compendium of Syngeneic, Transplantable Pediatric High-Grade Glioma Models Reveals Subtype-Specific Therapeutic Vulnerabilities. *Cancer Discovery* 2023;13(7):1592-1615

Agents: Trametinib; alpelisib **Vehicle:** Elacridar; saline, SBE-B-CD; **Route:** CSF/CNS (fourth ventricle); **Species:** Mice; **Strain:** C57BL/6J; **Pump:** 2002; **Duration:** 15 days;

ALZET Comments: Dose: (30mg/kg); controls received mp w/ vehicle; animal info: 8-week-old; comparison of oral gavage vs mp; ALZET brain infusion kit 2 used; brain coordinates (0.5 mm anterior and 1.8 mm lateral from bregma for striatal targeting, and 0.8 mm posterior 761 and 1.1 mm lateral from lambda for pontine targeting); cyanoacrylate adhesive; (loctite); cancer (Pediatric High-Grade Glioma);

Q11055: Y. Madokoro, *et al.* Direct Enhancement Effect of Hippocampal Cholinergic Neurostimulating Peptide on Cholinergic Activity in the Hippocampus. *International Journal of Molecular Sciences* 2023;24(10):

Agents: Hippocampal cholinergic neurostimulating peptide **Vehicle:** Bicarbonate buffer; **Route:** CSF/CNS (cerebral ventricle); **Species:** Mice; **Strain:** HCNP-pp cKO; **Pump:** 1002; **Duration:** 2 weeks;

ALZET Comments: animal info: 87-91 weeks; brain coordinates (0.6 mm posterior and 1.2 mm lateral from the bregma); dental cement used; neurodegenerative (Alzheimer's disease and Lewy body dementia.);

Q11088: A. Lozano-Urena, *et al.* IGF2 interacts with the imprinted gene Cdkn1c to promote terminal differentiation of neural stem cells. *Development* 2023;150(1):

Agents: Insulin-like growth factor 2 **Vehicle:** PBS; **Route:** CSF/CNS (lateral ventricle); **Species:** Mice; **Strain:** C57BL/6; **Pump:** 1007D; **Duration:** 7 days;

ALZET Comments: Controls received mp w/ vehicle; animal info (Male; 2-4 months old); Brain coordinates (Anteroposterior -0.1 mm; Mediolateral -0.8 mm from bregma; Dorsoventral -3 mm from skull surface);



Q11086: C.-W. Lin, *et al.* Monascus-fermented metabolites repressed amyloid β -peptide-induced neurotoxicity and inflammatory response in in vitro and in vivo studies. *Journal of Functional Foods* 2023;104(**Agents:** Amyloid beta-peptide-40 **Vehicle:** Acetonitrile; trifluoroacetic acid; **Route:** CSF/CNS (left ventricle); **Species:** Rat; **Strain:** Sprague-Dawley; **Pump:** Not Stated; **Duration:** 28 days;

ALZET Comments: 35% acetonitrile solution; Controls received mp w/ vehicle; animal info (Male; 6-8 weeks old); peptides; ALZET brain infusion kit 2 used; dental cement used; Alzheimer's

Q11134: L. Y. Li, *et al.* Brain blood vessel autoantibodies in patients with NMDA and GABA(A) receptor encephalitis: identification of unconventional Myosin-X as target antigen. *Frontiers in Cellular Neuroscience* 2023;17(1077204

Agents: 011-138 mouse antibody; GO53 control mouse antibody **Vehicle:** Not Stated; **Route:** CSF/CNS (right ventricle); **Species:** Mice; **Strain:** C57BL6/J; **Pump:** 1002; **Duration:** 7 days; 14 days;

ALZET Comments: Dose (100 ug/7 days); Controls received mp w/ vehicle; animal info (10-12 weeks old); brain coordinates: 0.2 mm posterior and \pm 1.00 mm lateral from bregma, depth 2.2 mm

Q11132: L. Li, *et al.* Downregulation of Nrf2 in the Hippocampus Contributes to Postoperative Cognitive Dysfunction in Aged Rats by Sensitizing Oxidative Stress and Neuroinflammation. *Oxidative Medicine and Cellular Longevity* 2023;2023(7272456

Agents: Bardoxolone methyl **Route:** CSF/CNS (lateral ventricle); **Species:** Rat; **Strain:** F344/BNF1; **Pump:** 2002;

ALZET Comments: Controls received mp w/ vehicle; animal info (Male; 3 and 24 months old); catheter; bilateral cannula used; dental cement used; brain coordinates used: 1.5 mm lateral to midline, 1.0 mm caudal to bregma, 3.5 mm ventral of dura; behavioral testing (Fear conditioning test; Open field test);

Q11170: J. Lee, *et al.* Noggin-mediated effects on metabolite profiles of microglia and oligodendrocytes after ischemic insult. *Journal of Pharmaceutical and Biomedical Analysis* 2023;224(115196

Agents: Noggin, recombinant human **Vehicle:** CSF, artificial; **Route:** CSF/CNS (ipsilateral lateral ventricle); **Species:** Mice; **Strain:** C57BL/6; **Pump:** Not Stated; **Duration:** 2 weeks;

ALZET Comments: Dose (1 μ g/day); Controls received mp w/ vehicle; animal info (Male mice; 10-11 weeks old); ALZET brain infusion kit 3 used; Brain coordinates (0.5 mm anterior to bregma, 1 mm lateral from midline, 3 mm below surface of skull);

Q11083: D. S. Lee, *et al.* CDDO-Me Abrogates Aberrant Mitochondrial Elongation in Clasmotodendritic Degeneration by Regulating NF-kappaB-PDI-Mediated S-Nitrosylation of DRP1. *International Journal of Molecular Sciences* 2023;24(6):

Agents: CDDO-Me; SN50; RNA, small interfering, non-targeting control; RNA, small interfering, PDI **Vehicle:** Not Stated; **Route:** CSF/CNS (right lateral ventricle); **Species:** Rat; **Strain:** Sprague-Dawley; **Pump:** 1007D; **Duration:** Not Stated;

ALZET Comments: Dose: Controls received mp w/ vehicle; animal info (Male; 7 weeks old); ALZET brain infusion kit 1 used; Brain coordinates (1 mm posterior; 1.5 mm lateral; -3.5 mm depth to bregma); SN50 is a nuclear factor-KB inhibitor; clasmotodendrosis

Q11123: J. E. Kim, *et al.* Peroxiredoxin 6 Regulates Glutathione Peroxidase 1-Medited Glutamine Synthase Preservation in the Hippocampus of Chronic Epilepsy Rats. *Antioxidants (Basel)* 2023;12(1):

Agents: MJ33 **Vehicle:** Not Stated; **Route:** CSF/CNS (right lateral ventricle); **Species:** Rat; **Strain:** Sprague-Dawley; **Pump:** 1007D; **Duration:** 7 days;

ALZET Comments: Dose (50 μ M); Controls received mp w/ vehicle; animal info (Male; 7 weeks old; Weighed 200-250 g); MJ33 is a selective inhibitor of aiPLA2 activity of Prdx6; Brain coordinates (1 mm posterior; 1.5 mm lateral; 3.5 mm depth); epilepsy

Q11082: J. E. Kim, *et al.* PLPP/CIN inhibits dopamine D1 receptor-mediated seizure activity via DARPP-32 serine 97 dephosphorylation in the mouse hippocampus. *Neuropharmacology* 2023;228(109462

Agents: TMCB **Vehicle:** Not Stated; **Route:** CSF/CNS (ventricle); **Species:** Mice; **Strain:** PLPP/CIN-/-; PLPP/CINTg; **Pump:** 1007D; **Duration:** Not Stated;

ALZET Comments: Dose (0.5 μ M); Controls received mp w/ vehicle; animal info (Male; 8 weeks old); ALZET brain infusion kit 3 used; Brain coordinates (0 mm posterior; 0 mm lateral; 2 mm depth from bregma); epilepsy (seizure)



Q11046: J. E. Kim, *et al.* Distinct Roles of CK2- and AKT-Mediated NF-kappaB Phosphorylations in Clasmotodendrosis (Autophagic Astroglial Death) within the Hippocampus of Chronic Epilepsy Rats. *Antioxidants (Basel)* 2023;12(5):

Agents: 2-[4,5,6,7-Tetrabromo-2-(dimethylamino)-1H-benzo[d]imidazole-1-yl]acetic acid; 3-chloroacetyl-indole **Vehicle:** Not Stated; **Route:** CSF/CNS (right lateral ventricle); **Species:** Rat; **Strain:** Sprague-Dawley; **Pump:** 1007D; **Duration:** 7 days; **ALZET Comments:** Dose: TMCB 0.5 ul, 3CAI 25 uM; animal info: Male 200–250 g; ALZET brain infusion kit 1 used; brain coordinates (coordinates: 1 mm posterior; 1.5 mm lateral; 3.5 mm depth); TMCB is a selective CK2 inhibitor; 3CAI is an AKT inhibitor; seizure

Q11045: T. P. Kilpelainen, *et al.* Nonpeptidic Oxazole-Based Prolyl Oligopeptidase Ligands with Disease-Modifying Effects on alpha-Synuclein Mouse Models of Parkinson's Disease. *Journal of Medicinal Chemistry* 2023;66(11):7475-7496

Agents: KYP-2047; HUP-55 **Vehicle:** DMSO; Tween 20; **Route:** IP; CSF/CNS (lateral ventricle); **Species:** Mice; **Strain:** C57BL/6JRccHsd; **Pump:** 1004; **Duration:** 28 days; **ALZET Comments:** Dose: 10 mg/kg/day; 0.2% dimethyl sulfoxide; 5% Tween in saline used; animal info (10 to 11 weeks old male C57BL/6JRccHsd mice); post op. care: Topical lidocaine (10 mg/mL), buprenorphine, (0.1 mg/kg) and carprofen (5 mg/kg) s.c.injections; KYP-2047 is a peptide-like PREP inhibitor; ALZET brain infusion kit 3 used; brain coordinates: 0.7 mm anterior and 1.4 mm lateral to bregma; behavioral testing (Cylinder Test.); neurodegenerative (Parkinson's);

Q10955: A. Kaur, *et al.* A protocol for collection and infusion of cerebrospinal fluid in mice. *STAR Protocols* 2023;4(1):102015

Agents: CSF, artificial **Vehicle:** Not Stated; **Route:** CSF/CNS (lateral ventricle); **Species:** Mice; **Strain:** C57BL/6; **Pump:** 1007D; **Duration:** 7 days; **ALZET Comments:** animal info: (18–22 months old) post op. care: (Buprenorphine slow release (analgesic, 1 mg/kg) and Baytril (antibiotic, 5 mg/kg) prior to surgery per animal protocol.); keep the mouse on a warm surface area (37degC); lynch coil method: catheter; 1.5 cm catheter to connect to the pump; ALZET brain infusion kit 3 used; cyanoacrylate adhesive; Loctite glue; good methods: detailed, includes troubleshooting tips

Q10954: K. Karino, *et al.* Inhibitor of NF-kappaB Kinase Subunit epsilon Contributes to Neuropsychiatric Manifestations in Lupus-Prone Mice Through Microglial Activation. *Arthritis & Rheumatology* 2023;75(3):411-423

Agents: MCCK1 **Vehicle:** PBS; **Route:** CSF/CNS (right lateral ventricle); **Species:** Mice; **Strain:** MRL/lpr; **Pump:** Not Stated; **Duration:** 14 days; **ALZET Comments:** Controls received mp w/ vehicle; animal info: 6 week old; ALZET BIK III used; Brain coordinates (1.1 mm lateral, -0.5 mm anterioposterior to the bregma, and 2.5 mm deep to target the right lateral ventricle); behavioral testing (Open field test; Novel objective recognition test; Object location test); MCCK1 is an IKK β inhibitor; immunology; (lupus)

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);

Q10534: C. Grijota-Martinez, *et al.* Intracerebroventricular High Doses of 3,3',5-Triiodothyroacetic Acid at Juvenile Stages Improve Peripheral Hyperthyroidism and Mediate Thyromimetic Effects in Limited Brain Regions in a Mouse Model of Monocarboxylate Transporter 8 Deficiency. *Thyroid* 2023;

Agents: Artificial cerebrospinal fluid **Vehicle:** Not Stated; **Route:** CSF/CNS (lateral ventricle); **Species:** Mice; **Strain:** MCT8-DIO2-deficient; Wild-type; **Pump:** 2002; **Duration:** Not Stated; **ALZET Comments:** Controls received mp w/ vehicle; animal info (Male; Mice; 3 months old;); catheter; ALZET brain infusion kit 3 used; Brain coordinates (Bregma -0.5 mm; 1 mm lateral in skull);



- Q11077:** A. G. George, *et al.* Sudden unexpected death in epilepsy is prevented by blocking postictal hypoxia. *Neuropharmacology* 2023;231(109513)
Agents: Nicardipine **Vehicle:** DMSO; PEG; EtOH; **Route:** CSF/CNS (left lateral ventricle); **Species:** Mice; **Strain:** Kcna1-/-; **Pump:** 2006; **Duration:** 42 days;
ALZET Comments: Dose (2 mg/mL); 50:40:10 DMSO:PEG:EtOH; Controls received mp w/ vehicle; animal info (Male and female; 4-10 weeks old; Weighed 23-31 g); post op. care: buprenorphine injection (0.05 mg/kg) every 12 h for 3 days; Cannula placement verified via methylene blue dye; Brain coordinates: (AP) +0.3, (ML) -1.0, (DV) -3.0; epilepsy
- Q11073:** L. Dias, *et al.* Increased Synaptic ATP Release and CD73-Mediated Formation of Extracellular Adenosine in the Control of Behavioral and Electrophysiological Modifications Caused by Chronic Stress. *ACS Chem Neuroscience* 2023;14(7):1299-1309
Agents: Alpha, beta-methylene ADP **Vehicle:** Saline; **Route:** CSF/CNS (right lateral ventricle); **Species:** Rat; **Strain:** Wistar; **Pump:** 1004; **Duration:** 14 days;
ALZET Comments: Controls received mp w/ vehicle; animal info (Male; Weighed 220-250 g); enzyme inhibitor (CD73); ALZET brain infusion kit 2 used; Brain coordinates (anter-posterior = 0 relative to bregma; lateral = 1.5 mm to midline; depth = 4.5 mm down from surface of skull); behavioral testing (restraint test, open-field test, object displacement, elevated-plus maze, forced swimming test); stress, memory
- Q11099:** F. De Lorenzo, *et al.* CDFN rescues motor neurons in models of amyotrophic lateral sclerosis by targeting endoplasmic reticulum stress. *Brain* 2023;146(9):3783-3799
Agents: Cerebral dopamine neurotrophic factor **Vehicle:** PBS; **Route:** CSF/CNS (lateral ventricle); **Species:** Rat; **Strain:** TDP43-M337V **Pump:** Not Stated; **Duration:** 28 days;
ALZET Comments: Dose (6 ug/day); Controls received mp w/ vehicle; catheter; behavioral testing (Rotarod test); neurodegenerative (Amyotrophic lateral sclerosis);
- Q10927:** M. M. A. de Almeida, *et al.* Fractalkine enhances oligodendrocyte regeneration and remyelination in a demyelination mouse model. *Stem Cell Reports* 2023;18(2):519-533
Agents: FKN-647 **Vehicle:** BSA; PBS; **Route:** CSF/CNS (right lateral ventricle); **Species:** Mice; **Strain:** Wildtype, C57BL/6J; **Pump:** 1007D; 1004; **Duration:** 3 days; 7 days;
ALZET Comments: 200 ng/day; Controls received mp w/ vehicle; animal info (2- to 3-month-old mice); Brain coordinates (coordinates relative to bregma: -1.0 ML, -0.3 AP, -2.5 DV.); cyanoacrylate glue; brain tissue distribution;
- Q11072:** V. Csikos, *et al.* Microglia depletion prevents lactation by inhibition of prolactin secretion. *iScience* 2023;26(3):106264
Agents: Pexidartinib 3397 **Vehicle:** CSF, artificial; **Route:** CSF/CNS (lateral ventricle); **Species:** Rat; **Strain:** Wistar; **Pump:** 2004; **Duration:** 28 days;
ALZET Comments: Dose (0.5 mg/ml); Controls received mp w/ vehicle; animal info (Female; Wild-type; 2-4 months old; Pregnant); comparison of oral treatment vs mp; post op. care (Antibiotics III 0.1 ml/kg); ALZET BIK 2 used; Brain coordinates (-0.5 mm anteroposterior to bregma; 1.4 mm lateral to bregma; 3.6 mm ventral to brain surface); dental cement used; behavioral testing (Pup retrieval test; Spontaneous maternal behavior); PLX3397 inhibits colony stimulating factor 1 receptor
- R0438:** G. Canet, *et al.* The pathomimetic oAβ(25)-(-)(35) model of Alzheimer's disease: Potential for screening of new therapeutic agents. *Pharmacology & Therapeutics* 2023;245(108398)
Agents: Galantamine memantine hybrid **Vehicle:** Not Stated; **Route:** CSF/CNS (lateral ventricle); **Species:** Mice; **Strain:** Not Stated; **Pump:** Not Stated; **Duration:** 7 days;
ALZET Comments: Dose (2.5. or 7.5 μg/day); peptides; Alzheimer's disease; review of different approaches for AD prevention and therapy
- Q11069:** J. A. Bonds, *et al.* Why Some Mice Are Smarter than Others: The Impact of Bone Morphogenetic Protein Signaling on Cognition. *eNeuro* 2023;10(1):
Agents: Noggin; BMP4 **Vehicle:** Not Stated; **Route:** CSF/CNS (lateral ventricle); **Species:** Mice; **Strain:** C57BL/6; **Pump:** 1002; **Duration:** 15 days;
ALZET Comments: Dose (Noggin 50 ng/ul; BMP4 30 ng/ul); animal info (Wild-type; Male); Brain coordinates (-0.4 mm and 1 mm lateral to bregma); behavioral testing (Novel object recognition; Y-maze); neurodegenerative (cognition)



Q11091: K. Barth, *et al.* EGFL7 loss correlates with increased VEGF-D expression, upregulating hippocampal adult neurogenesis and improving spatial learning and memory. *Cellular and Molecular Life Sciences* 2023;80(2):54

Agents: VEGF-D, recombinant purified **Vehicle:** Not Stated; **Route:** CSF/CNS (lateral ventricle); **Species:** Mice; **Strain:** C57BL/6J; **Pump:** 2001; **Duration:** 7 days;

ALZET Comments: Dose (1 µg/d); animal info (Male; 8 weeks old); catheter; Brain coordinates (0 mm anteroposterior, 0.8 mm lateral to bregma); behavioral testing (Morris Water Maze; Barnes Maze);

Q11065: Y. Bai, *et al.* Single-nucleus RNA sequencing unveils critical regulators in various hippocampal neurons for anti-N-methyl-D-aspartate receptor encephalitis. *Brain Pathology* 2023;33(4):e13156

Agents: Anti-N-methyl-D-aspartate receptor antibody **Vehicle:** Saline; **Route:** CSF/CNS (lateral ventricle); **Species:** Mice; **Strain:** C57BL/6J; **Pump:** 2002; **Duration:** Not Stated;

ALZET Comments: Dose (2 µg/ml); animal info (Female; 8-10 weeks old); behavioral testing (Shuttle box active escape experiment; Elevated plus-maze test; Open-field test; 3 chamber test; Forced swimming test; Marble burying test; Novel object recognition; Nest building test); ALZET brain infusion kit 3 used; good methods pg. 3; immunology

Q11227: J. E. Kim, *et al.* PLPP/CIN-mediated DARPP-32 serine 97 dephosphorylation delays the seizure onset in response to kainic acid in the mouse hippocampus. *Neuropharmacology* 2022;219(109238)

Agents: TCMB **Vehicle:** DMSO; saline; **Route:** CSF/CNS (lateral cerebral ventricle); **Species:** Mice; **Strain:** PLPP/CIN-/-; PLPP/CIN Tg; C57BL/6J; **Pump:** 1007D; **Duration:** 7 days;

ALZET Comments: Dose: (0.5 µM); 0.1% DMSO/saline vehicle used; Controls received mp w/ vehicle; animal info: 8 weeks old; behavioral testing: seizure severity evaluated based on a score; TMCB is a CK2 inhibitor; ALZET brain infusion kit 3 used; epilepsy

Q10895: J. Zheng, *et al.* cPKCgamma Deficiency Exacerbates Autophagy Impairment and Hyperphosphorylated Tau Buildup through the AMPK/mTOR Pathway in Mice with Type 1 Diabetes Mellitus. *Neuroscience Bulletin* 2022;38(10):1153-1169

Agents: Rapamycin **Vehicle:** DMSO; **Route:** CSF/CNS (right lateral ventricle); **Species:** Mice; **Strain:** Wild-type (cPKCy-/-); cPKCc knockout (cPKCc-/-) C57BL/6J; **Pump:** Not Stated; **Duration:** 14 days;

ALZET Comments: Dose: (0.2 mg/kg); Controls received mp w/ vehicle; animal info: Adult male mice (18 g–22 g, 6–8 weeks) diabetes mellitus; behavioral testing: Morris Water Maze (MWM) Test; Brain coordinates (AP - 0.5 mm, ML + 1.0 mm, and DV - 2.8 mm relative to bregma); diabetes;

Q10831: L. Xu, *et al.* Fibroblasts Repair Blood-Brain Barrier Damage and Hemorrhagic Brain Injury Via TIMP2. *Cell Reports* 2022;41(8):111709

Agents: Diphtheria toxin; TIMP2 **Vehicle:** Saline, sterile; **Route:** CSF/CNS (lateral ventricle); **Species:** Mice; **Strain:** FKO; **Pump:** 1002; **Duration:** 5 days; 4 days;

ALZET Comments: Dose: 1500ng DT; Controls received mp w/ vehicle; animal info (mice); post op. care (Treated with carprofen (5mg/kg of body weight subcutaneously); Diphtheria toxin aka (DT);ALZET brain infusion kit used; Brain coordinates (0.2mm posterior to bregma, 2.4mm lateral from the midline, and 3.7mm in depth);

Q10803: P. Xiao, *et al.* RTN4/Nogo-A-S1PR2 Negatively Regulates Angiogenesis and Secondary Neural Repair Through Enhancing Vascular Autophagy in the Thalamus After Cerebral Cortical Infarction. *Autophagy* 2022;18(11):2711-2730

Agents: RTN4-d20-Fc; Immunoglobulin G, recombinant **Vehicle:** PBS; PEG 300; **Route:** CSF/CNS (right lateral ventricle); **Species:** Rat; **Strain:** Sprague-Dawley; **Pump:** 1003D; **Duration:** 24 hours;

ALZET Comments: Dose: (40 µg/kg); 2% DMSO; 40% PEG300 vehicle used Controls received mp w/ vehicle; animal info: rats weighting 90–110 g; Recombinant human IgG Fc aka (IgG Fc); Brain coordinates (into the right lateral ventricle under a stereotaxic apparatus (-1.0 mm anteroposterior, 1.4 mm mediolateral, -4.0 mm dorsoventral relative to the bregma); neurodegenerative (cerebral cortical infarction);



Q10284: H. Tran, *et al.* Suppression of mutant C9orf72 expression by a potent mixed backbone antisense oligonucleotide. *Nature Medicine* 2022;28(1):117-124

Agents: Oligonucleotide, antisense **Vehicle:** PBS; **Route:** CSF/CNS (right lateral ventricle); **Species:** Mice; **Strain:** C9BAC; **Pump:** 1007D; **Duration:** 10 days;

ALZET Comments: Dose (2.5-20 nmol/day); dose-response (dose-dependent reduction in V1 and V3 repeat-containing transcripts in both the cortex and spinal cord regions after being treated with ASO3 and ASO5); animal info (transgenic mice); antisense oligonucleotides aka ASO; antisense (oligonucleotide); ALZET brain infusion kit 3 used; bilateral cannula used; 2.5-20 nmol/day of each ASO were continuously infused over 10 d into the right lateral ventricle of age-matched heterozygous C9BAC mice through a cannula using an implanted Alzet osmotic pump tissue perfusion (brain); neurodegenerative (ALS); (FTD) Therapeutic indication (ALS, FTD); "In our C9BAC mice, we were not able to safely perform ICV bolus injections with more than 10 nmol of LNA-modified ASO3 due to induction of severe motor phenotypes. To overcome this limitation, we use osmotic pumps to compare the potency of ASO3 and ASO5" pg3; gene therapy

Q10696: S. A. Tapanes, *et al.* Inhibition of Glial D-Serine Release Rescues Synaptic Damage After Brain Injury. *Glia* 2022;70(6):1133-1152

Agents: BMS-466442; L-4-Chlorophenylglycine **Vehicle:** PBS; **Route:** CSF/CNS (contralateral lateral ventricle); **Species:** Mice; **Strain:** Not Stated; **Pump:** 1007D; 2002; **Duration:** 7 days; 14 days;

ALZET Comments: Dose (250 uM); Controls received mp w/ vehicle; animal info (Male; 2-4 months old); behavioral testing (Fear-conditioning); (L-4-chlorophenylglycine is a selective Slc1a4 inhibitor; BMS is selective noncompetitive Slc7a10 inhibitor); Brain infusion kit 3 used; Brain coordinates (-2.0 mm from dura); gene therapy; Therapeutic indication (Traumatic brain injury);

Q10653: M. Radosevic, *et al.* Allosteric Modulation of NMDARs Reverses Patients' Autoantibody Effects in Mice. *Neurology Neuroimmunology & Neuroinflammation* 2022;9(1):

Agents: CSF, patient; CSF, control **Vehicle:** Not Stated; **Route:** CSF/CNS (intracerebroventricular); **Species:** Mice; **Strain:** C57BL/6J; **Pump:** 1002; **Duration:** 14 days;

ALZET Comments: animal info (141 male ; 8-10 weeks old); immunology; Therapeutic indication (Anti-NMDAR encephalitis);

Q10680: P. K. Singh, *et al.* Specific Inhibition of NADPH Oxidase 2 Modifies Chronic Epilepsy. *Redox Biology* 2022;58(10):2549

Agents: Gp91ds-tat **Vehicle:** Not Stated; **Route:** CSF/CNS (right lateral ventricle); **Species:** Rat; **Strain:** Sprague-Dawley; **Pump:** 2002; **Duration:** 2 weeks;

ALZET Comments: "Dose (800 ng/kg/day); Controls received mp w/ vehicle; animal info (Naïve male and female rats (200–250 g); post op. care (Before initiating the surgery, rats were injected with buprenorphine (0.2 mg/kg; SC) and Metacam (1 mg/kg; SC) for pain relief); After surgery rats were injected with 3–5 ml of warmed Ringer's solution and amoxicillin (Betamox LA, 100 mg/kg); peptides; catheter; ALZET brain infusion kit 2 used; Brain coordinates (vinyl catheter tube was implanted into the right lateral ventricle of brain [1 mm posterior, 1.2 mm lateral, 4.5 mm ventral from the bregma); dental cement used; neurodegenerative (Epilepsy); "

Q10675: G. Sekerci, *et al.* Effects of Meteorin-Like Hormone on Endocrine Function of Hypothalamo-Hypophysial System and Peripheral Uncoupling Proteins in Rats. *Molecular Biology Reports* 2022;49(7):5919-5925

Agents: Meteorin-like hormone **Vehicle:** CSF, artificial; **Route:** CSF/CNS (right lateral ventricle); **Species:** Rat; **Strain:** Sprague-Dawley; **Pump:** 2ML2; **Duration:** 14 days;

ALZET Comments: Dose: 10 nM, 100 nM; Controls received mp w/ vehicle; animal info: male rats with approximate body weight of 432 g; CSF aka (Artificial cerebrospinal fluid) ALZET BIK used; Brain coordinates (The right lateral ventricle coordinates (1.40 mm lateral, 0.8 mm posterior and 4.8 mm vertical from the bregma); dental cement used; (Thyroid hormones); "

Q10671: A. Sancho-Balsells, *et al.* Meridianins Inhibit GSK3beta In Vivo and Improve Behavioral Alterations Induced by Chronic Stress. *Marine Drugs* 2022;20(10):

Agents: Meridianins **Vehicle:** Saline; **Route:** CSF/CNS (left lateral ventricle); **Species:** Mice; **Strain:** C57BL/6J OlaHsd; **Pump:** 1002; **Duration:** 28 days;

ALZET Comments: "Dose (0.11 uL/hr); Controls received mp w/ vehicle; ALZET brain infusion kit 2 used; Brain coordinates ((0.1 mm posterior to bregma, 0.8 mm lateral to the midline, and -2.5 mm ventral to the parenchyma surface); cyanoacrylate adhesive; (Loctite 454); behavioral testing (Open-field; Forced swim test); Therapeutic indication (Chronic stress);



Q10665: A. Romero-Pico, *et al.* Kappa-Opioid Receptor Blockade Ameliorates Obesity Caused by Estrogen Withdrawal via Promotion of Energy Expenditure through mTOR Pathway. *International Journal of Molecular Sciences* 2022;23(6):

Agents: PF-04455242 **Vehicle:** Not Stated; **Route:** CSF/CNS (intracerebroventricular); **Species:** Mice; **Strain:** C57/BL6 Wild-type; Oprk1-/-; **Pump:** 1007D; **Duration:** 7 days;

ALZET Comments: Dose (3.4 nmol/day); Controls received mp w/ vehicle; animal info (Female 8-10 weeks old); ALZET brain infusion kit 3 used; Therapeutic indication (Metabolic disorders);

Q10660: L. Rezacova, *et al.* Both Central Sympathoexcitation and Peripheral Angiotensin II-Dependent Vasoconstriction Contribute to Hypertension Development in Immature Heterozygous Ren-2 Transgenic Rats. *Hypertension Research* 2022;45(3):414-423

Agents: Losartan **Vehicle:** Not Stated; **Route:** IP; CSF/CNS (lateral ventricle); **Species:** Rat (transgenic); **Strain:** mRen-2; **Pump:** 2004; **Duration:** Not Stated;

ALZET Comments: Dose (1 or 2 mg/kg/day); animal info (immature Male heterozygous)27 transgenic; 6 weeks old; Fed Sniff diet); Blood pressure measured via pressure transducer and multichannel recorder; Brain coordinates: (AP = -1.0, L= 1.5, V= 4.1); polyethylene catheter used; antihypertensive; cardiovascular;

Q10637: N. Orti-Casan, *et al.* A TNF Receptor 2 Agonist Ameliorates Neuropathology and Improves Cognition in an Alzheimer's Disease Mouse Model. *Proceedings of the National Academy of Sciences* 2022;119(37):e2201137119

Agents: NewStar2 **Vehicle:** PBS; **Route:** CSF/CNS (lateral ventricle); **Species:** Mice; **Strain:** C57BL/6 (background); **Pump:** 2006; **Duration:** 6 weeks;

ALZET Comments: Controls received mp w/ vehicle; animal info; Male mice 6 mo of age behavioral testing: EPM; Y-Maze spontaneous alternation; MWM; stability of compound verified by cytotoxicity assay; Brain coordinates (anteroposterior, 0.05 mm; lateral, 0.1 mm; dorsoventral, 0.25 mm); dental cement used; neurodegenerative (Alzheimer's disease); "

Q11208: L. G. Niu, *et al.* Genistein Alleviates Oxidative Stress and Inflammation in the Hypothalamic Paraventricular Nucleus by Activating the Sirt1/Nrf2 Pathway in High Salt-Induced Hypertension. *Cardiovascular Toxicology* 2022;22(10-11):898-909

Agents: Genistein; nicotinamide **Vehicle:** Saline; **Route:** CSF/CNS (hypothalamic paraventricular nucleus); **Species:** Rat; **Strain:** Wistar; **Pump:** 1004; **Duration:** 4 weeks;

ALZET Comments: Dose (20 µg/h); (0.3% NaCl); (8% NaCl) used; Controls received mp w/ vehicle; animal info: Four-week-old male 100–120 g; blood pressure measured via: Tail cuff; Blood pressure measurement results (see pg.900) fig.1 b; Brain coordinates (1.8 mm caudal to the bregma, 0.4 mm lateral to the central line, and 7.9 mm ventral to the dorsal surface); bilateral cannula used; cardiovascular;

Q10593: B. Lv, *et al.* Exenatide improves the luteinizing hormone pulse in obese polycystic ovary

syndrome rats by upregulating sirtuin-1 in the hypothalamus. *The American Journal of Drug and Alcohol Abuse* 2022;

Agents: EX527 **Vehicle:** DMSO; **Route:** CSF/CNS (third ventricle); **Species:** Rat; **Strain:** PCOS; **Duration:** 3 weeks;

ALZET Comments: Dose: EX527 (5 µg/24 h) Controls received mp w/ vehicle; animal info: Obese, EX-527 is an SIRT1 inhibitor;

Q11193: L. L. Liu, *et al.* Copper Modulates Adult Neurogenesis in Brain Subventricular Zone. *International Journal of Molecular Sciences* 2022;23(17):

Agents: D-penicillamine **Vehicle:** Saline; **Route:** CSF/CNS (lateral ventricle); **Species:** Mice; **Strain:** C57BL/6; **Pump:** 1007D; 1004; **Duration:** 7 days; 28 days;

ALZET Comments: Dose: 0.075 ug/hr, 0.75 ug/h; Controls received mp w/ vehicle; animal info: 3 months; post op. care: heat pad; ALZET brain infusion kit 3 used; Brain coordinates: 1.0 mm left and 0.2 mm posterior to the bregma, lateral/medial: 1.0 mm; anterior/posterior: -0.2 mm; neurodegenerative; good methods (icv cannulation) pg. 25-26