Recent References (2015-Present) on Gene Therapy Research Using ALZET® Osmotic Pumps

Agents: Vascular endothelial growth factor, DNA Vehicle: Glucose; Route: CSF/CNS (medula); Species: Rat; Pump: 2001; Duration: 1 week;
ALZET Comments: 5% glucose used; Controls received mp w/ vehicle; animal info (Male, adult spontaneously hypertensive rats, 16 weeks old, 299 +- 4); Blood pressure measured via telemetry transmitters;vascular endothelial growth factor aka VEGF-A; ALZET brain infusion kit 2 used; gene therapy;

Agents: Adrenaline Vehicle: Saline; Route: SC; Species: Mice; Pump: 2002; Duration: Not Stated;
ALZET Comments: Dose (1 ug/day); 0.9% Saline used; Controls received mp w/ vehicle; animal info (MC4R deficient, C57BL/6J);

Agents: Mithramycin Vehicle: PBS supplemented with magnesium or calcium; Route: SC; Species: Mice; Pump: 1003D; Duration: 3 days;
ALZET Comments: Dose (2.4 mg/kg); Controls received mp w/ vehicle; gene therapy;

Agents: WNT1-inducible-signaling pathway protein 1 Vehicle: IgG; Route: SC; Species: Mice; Pump: 1007D; Duration: 7 days;
ALZET Comments: Dose (5 ug/g/day); Controls received mp w/ vehicle; animal info (Male, C57BL/6, 20-25 g);

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: Cyclohexedrin; 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;

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;

Agents: Insulin Vehicle: Saline; Route: SC; Species: Mice; Pump: 1002; Duration: 14 days;
ALZET Comments: Dose (0.2 or 0.3 U/day); Controls received mp w/ vehicle; animal info (C57BL/6J, Female, 8-10 weeks old);

Agents: Isoprotenol Vehicle: Saline; Route: SC; Species: Mice; Pump: 2001; Duration: 7 days;
ALZET Comments: Dose (10 mg/kg/day); 0.9% Saline used; Controls received mp w/ vehicle; animal info (16-20 weeks old); Isoprotenol aka ISO ; gene therapy;

**Agents:** LPA **Vehicle:** PBS, Albumin, Bovine Serum; **Route:** CNS/CSF (right lateral ventricle); **Species:** Mice; **Pump:** 1004; **Duration:** 21 days;

**ALZET Comments:** Dose (0.93 ng/kg/day); 3% Bovine Serum Albumin used; Controls received mp w/ vehicle; animal info (3-month-old male mice, 28 g); behavioral testing (Saccharin preference test; Forced swim test); LPA aka G protein-coupled receptors; Brain coordinates (0.34 mm posterior to bregma, 1 mm lateral to the midline, and 2.3 mm deep from the dura); gene therapy;


**Agents:** Z-DON **Vehicle:** CSF, artificial; DMSO; **Route:** CNS/CSF (intracerebral); IV; **Species:** Mice; **Pump:** 2001; **Duration:** 7 days;

**ALZET Comments:** Dose (100 uM); 0.4% DMSO used; Controls received mp w/ vehicle; animal info (male C57BL/6J mice, 8-10 weeks old); Z-DON aka Transglutaminase 2 inhibitor; ALZET brain infusion kit 2 used; Brain coordinates (1.2 mm laterally to and 0.5 mm posterior to the bregma (right side)); gene therapy;


**Agents:** Ara-C; **Vehicle:** Not stated; **Route:** CSF/CNS (intracerebral); IV; **Species:** Mice; **Pump:** 1007D; **Duration:** 7 days;

**ALZET Comments:** Controls received mp w/ vehicle; animal info (male mice); ALZET brain infusion kit 3 used; Brain coordinates (0 mm AP and −0.9 mm ML to the bregm); gene therapy;

Q8887: S. Jana, et al. ADAM (a Disintegrin and Metalloproteinase) 15 Deficiency Exacerbates Ang II (Angiotensin II)-Induced Aortic Remodeling Leading to Abdominal Aortic Aneurysm. Arteriosclerosis, Thrombosis, and Vascular Biology 2020;40(8):1918-1934

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 1002; **Duration:** 2 weeks; 4 weeks;

**ALZET Comments:** Dose (1.5 mg/kg per day); Controls received mp w/ vehicle; animal info (Male Adam15-deficient and WT (wild type) mice (10 weeks old)); Blood pressure measured via telemetry;Angiotensin II aka Ang II; gene therapy

Q8486: O. Gawrys, et al. Polyprenol-Based Lipofecting Agents for In Vivo Delivery of Therapeutic DNA to Treat Hypertensive Rats. Biochem Genet 2020;

**Agents:** vascular endothelial growth factor, DNA **Vehicle:** Glucose; **Route:** CSF/CNS (medula); **Species:** Rat; **Pump:** 2001; **Duration:** 1 week;

**ALZET Comments:** 5% glucose used; Controls received mp w/ vehicle; animal info (Male, adult spontaneously hypertensive rats, 16 weeks old, 299 +- 4); Blood pressure measured via telemetry transmitters;vascular endothelial growth factor aka VEGF-A; ALZET brain infusion kit 2 used; gene therapy;


**Agents:** GDGRGDACK **Vehicle:** Dextran, sulfate; **Route:** SC; **Species:** Mice; **Pump:** 1003D; **Duration:** 3 days;

**ALZET Comments:** Dose (2.4 mg/mouse/day); 1% Dextran Sulfate used; animal info (C57BL/6 wild-type mice, 8-20 weeks old); peptides; gene therapy;


**Agents:** EOF2 **Vehicle:** DMSO; PBS; **Route:** CSF/CNS; **Species:** Mice; **Pump:** Not stated; **Duration:** 14 days;

**ALZET Comments:** Dose (5μM); 0.4% DMSO used; Controls received mp w/ vehicle; animal info (CD1 male mice, 2 months old); EOF2 aka plant derived diterpene; ALZET brain infusion kit II used; gene therapy;

**Agents:** APY-d3 **Vehicle:** CSF, artificial; **Route:** CSF/CNS (ipsilesional lateral ventricle); **Species:** Mice; **Pump:** 1002; **Duration:** 2 weeks;

**ALZET Comments:** Dose (5 mm); animal info (In-bred C57BL/6J male mice, 10–12 weeks of age); behavioral testing (accelerating rotaror; horizontal ladder task); APY-d3 aka peptide solution, β APYCVYR β ASWSC; peptides; ALZET brain infusion kit 3 used; Brain coordinates (0.1 mm caudal and 1.0 mm lateral of bregma); cyanoacrylate adhesive; gene therapy;


**Agents:** Anti-Ly6G Antibody **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 1004; **Duration:** 21 days;

**ALZET Comments:** Dose (0.4 mg/kg/day); Controls received mp w/ vehicle; gene therapy;

Q8712: M. D. Carpenter, et al. Adolescent oxycodone exposure inhibits withdrawal-induced expression of genes associated with the dopamine transmission. Addiction Biology 2020;e12994

**Agents:** Oxycodone **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 1004; **Duration:** 28 days;

**ALZET Comments:** Dose (3 mg/kg/day); 0.9% Saline used; Controls received mp w/ vehicle; animal info (C57Bl/6NTac); gene therapy; Industry authored (University of Pennsylvania, blendy@mail.med.upenn.edu);


**Agents:** Selective oxytocin antagonist **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** Not stated; **Duration:** 5 weeks;

**ALZET Comments:** Dose (1 ug/kg/hr); animal info (C57BL/6J); Blood pressure measured via Tail Cuff Plethysmography; gene therapy;


**Agents:** Lithium chloride **Vehicle:** Not Stated; **Route:** SC; **Species:** Rat; **Pump:** 2ML4; **Duration:** 4 days;

**ALZET Comments:** Dose (84.8 mg/kg/day); Controls received mp w/ vehicle; animal info (Female, Sprague Dawley); gene therapy;

Q9058: F. Wang, et al. Site-1 protease-derived soluble (pro)renin receptor targets vasopressin receptor 2 to enhance urine concentrating capability. JCI Insight 2019;4(7):

**Agents:** Soluble (pro)renin receptor- Histidine **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** 1007D; **Duration:** 7 days;

**ALZET Comments:** Dose (30 ug/kg/day); Controls received mp w/ vehicle; animal info (10–12 weeks old, Male, C57BL6); Soluble (pro)renin receptor- Histidine aka sPRR-His; gene therapy;


**Agents:** Phencyclidine **Vehicle:** Saline; **Route:** SC; **Species:** Rat; **Pump:** 2ML2; **Duration:** 14 days;

**ALZET Comments:** Dose (5 mg/kg/day); 0.9% Saline used; Controls received mp w/ vehicle; animal info (Male, Sprague Dawley, 250–300 g, 3 months old); Phencyclidine aka PCP; gene therapy;


**Agents:** Phencyclidine **Vehicle:** Saline; **Route:** SC; **Species:** Rat; **Pump:** 2ML2; **Duration:** 14 days;

**ALZET Comments:** Dose (5 mg/kg/day); 0.9% Saline used; Controls received mp w/ vehicle; animal info (Male, Sprague Dawley, 250–300 g, 3 months old); Phencyclidine aka PCP; gene therapy;


**Agents:** Human Follicle-Stimulating Hormone **Route:** SC; **Species:** Monkey; **Pump:** Not Stated; **Duration:** 10 days;

**ALZET Comments:** Dose (15 IU/kg); animal info (Female, 4 years old, 2.0–3.8 kg); gene therapy;
Q8953: Y. Seita, et al. Poor second ovarian stimulation in cynomolgus monkeys (Macaca fascicularis) is associated with the production of antibodies against human follicle-stimulating hormone. Journal of Reproduction and Development 2019; Agents: Human Follicle-Stimulating Hormone Route: SC; Species: Monkey; Pump: iPRECIO SMP-200; Duration: 10 days; ALZET Comments: Dose (15 IU/kg); animal info (Female, 4-10 years, 2.1-3.9 kg); gene therapy;

Q8946: Y. Sawai, et al. In vivo evaluation of the effect of lithium on peripheral circadian clocks by real-time monitoring of clock gene expression in near-freely moving mice. Scientific Reports 2019;9(1):10909 Agents: Luciferin Vehicle: Not Stated; Route: SC; Species: Mice; Pump: 2001; Duration: 1 week; ALZET Comments: Dose (157 mM); animal info (Male, C57BL/6); gene therapy;

Q8935: J. Poupart, et al. Application of N-Dodecyl L-Peptide to Enhance Serum Stability while Maintaining Inhibitory Effects on Myometrial Contractions Ex Vivo. Molecules 2019;24(22); Agents: N-dodecyl L-peptide Vehicle: Saline; Route: SC; Species: Mice; Duration: 3 days; ALZET Comments: Dose (20 mg/day/animal); Controls received mp w/ vehicle; animal info (Timed-pregnant CD-1 mice); N-dodecyl L-peptide aka L-4D; peptides; gene therapy;


Q8289: F. M. Mir, et al. Paired Utility of Aza-Amino Acyl Proline and Indolizidinone Amino Acid Residues for Peptide Mimicry: Conception of Prostaglandin F2alpha Receptor Allosteric Modulators That Delay Preterm Birth. J Med Chem 2019;62(9):4500-4525 Agents: Azapeptide 2a and 2b Vehicle: Saline; Route: SC; Species: Mice; Pump: Not stated; Duration: Not stated; ALZET Comments: Dose (20 mg/day/animal); Controls received mp w/ vehicle; animal info (CD-1, Female, Pregnant); peptides; gene therapy;

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: Protein arginine methyltransferase 3 inhibitor Vehicle: DMSO; Route: SC; Species: Mice; Pump: 2002; Duration: 2, 4, or 6 weeks; ALZET Comments: Dose (20 mg/kg/day); animal info (8 weeks old, C57BL/6); Multiple pumps per animal (1, 2, or 3); Protein arginine methyltransferase 3 inhibitor aka SGC707; enzyme inhibitor (Protein arginine methyltransferase 3 inhibitor);

Q9798: C. Lisci, et al. Photoperiodic changes in adiposity increase sensitivity of female Siberian hamsters to systemic VGF derived peptide TLQP-21. PLoS One 2019;14(8):e0221517 Agents: Rat--TLQP-21 Vehicle: Saline; Route: CSF/CNS; Species: Hamster; Pump: 1007D; Duration: 7 days; ALZET Comments: Dose (1 mg/kg/day); Controls received mp w/ vehicle; animal info (Female, Siberian, 3 months old);

Q6966: S. Kroller-Schon, et al. Endothelial alpha1AMPK modulates angiotensin II-mediated vascular inflammation and dysfunction. Behavior Genetics 2019;114(2):8 Agents: Angiotensin II Vehicle: Saline; Route: SC; Species: Mice; Pump: 1007D; Duration: 7 days; ALZET Comments: Dose (0.5 mg/kg/day); 0.9% NaCl used; Controls received mp w/ vehicle; animal info (6 week old mice)

Q8043: S. Ikeda, et al. Blockade of L-type Ca(2+) channel attenuates doxorubicin-induced cardiomyopathy via suppression of CaMKII-NF-kappaB pathway. Sci Rep 2019;9(1):9850 Agents: Nifedipine Vehicle: Saline; Route: SC; Species: Mice; Pump: 2002; Duration: 14 days; ALZET Comments: Dose (10 mg/kg/day); Controls received mp w/ vehicle; animal info (9-10 weeks, C57BL/6J);

R0372: J. Hong, et al. Relaxin gene therapy: A promising new treatment option for various diseases with aberrant fibrosis or irregular angiogenesis. Mol Cell Endocrinol 2019; Agents: Relaxin, human recomb. Vehicle: Not Stated; Route: SC; Species: Rat (pregnant); Pump: Not Stated; ALZET Comments: Dose (2000 ng/h); Resultant plasma level (RLX level close to 0.5 ng/mL); gene therapy;
ALZET®
Bibliography

Agents: Bortezomib Vehicle: Not stated; Route: SC; Species: Mice; Pump: Not stated; Duration: 2 days;
ALZET Comments: Dose (0.49 mg/kg/day); animal info (Tg-R336C Cbs−/−); gene therapy;

Agents: FK-506, SEW2871 Vehicle: Saline; Route: SC; Species: Rat; Pump: 2002; Duration: 14 days;
ALZET Comments: Dose (0.15 mg/kg/day- FK-506, 0.075 mg/kg/day- SEW2871); Controls received mp w/ vehicle; animal info (Male, 14 weeks old, Fischer-344); gene therapy;

Agents: Plasmid; Recombinant Neuregulin-1; Lipofectamine 2000 Vehicle: PBS; Route: CSF/CNS (spinal cord); Species: Rat; Pump: 2004; Duration: 4 weeks;
ALZET Comments: Dose ((plasmid 5 μg), (Lipofectamine 15 μL)); Controls received sham surgery and mp w/ blank plasmid and vehicle; animal info (male, Sprague-Dawley, 160-180g); post op. care (bladders were pressed for urination every morning and every night until the rats recovered automatic urination.); spinal cord injury; gene therapy; plasmids mixed with Lipofectamine at a 1:3 ratio. pcDNA4/myc/A-NRG-1 plasmid constructed to overexpress NRG-1 protein; Therapeutic indication (NRG-1 promotes the recovery of nerve function in brachial plexus injury after contralateral C7 nerve root transfer in rat.);

Agents: Tumor necrosis factor, alpha Vehicle: Saline; Route: Not Stated; Species: Mice; Pump: Not Stated; Duration: 2 weeks;
ALZET Comments: Dose (15 μg/ml at 0.5 μl/h); Controls received mp w/ vehicle; animal info (16 weeks, male, C57BL/6J, 30g);

Agents: Virus, recombinant adeno-associated Vehicle: Saline; Route: CSF/CNS (subarachnoid space); CSF/CNS (lateral ventricle); Species: Mice; Pump: 2001D; Duration: 40, 42 hours;
ALZET Comments: Dose (1·10^11, 2·10^12 GC in 200 μL); Controls received mp w/ vehicle; animal info (6 weeks, male and female, C57BL/6/L, 20g); post op. care (200 μL of 0.9% saline by i.p. injection); comparison of IT injection vs mp; recombinant adeno-associated viruses (rAAVs) packaged in several serotypes such as AAV9 and AAV.rh10 can cross the BBB and transduce neurons and glia in rodents and nonhuman primates; Brain coordinates ((-0.9,-0.2) for the left ventricle, or (+0.9, -0.2) for the right ventricle); Cannula placement verified via stereotaxic frame; cyanoacrylate adhesive for icv delivery (Loctite); gene therapy; good methods (detailed pump installation instructions for IT and ICV delivery of agent on p.77-83); “IT pump infusion resulted in more widespread and higher transduction of the spinal cord than a bolus IT injection” pg.83; recombinant adeno-associated virus serotype 9 (rAAV9) used for examples;

Q7242: Y. Takeda, et al. Epigenetic Regulation of Aldosterone Synthase Gene by Sodium and Angiotensin II. J Am Heart Assoc 2018;7(10);
Agents: Angiotensin II, Candesartan Vehicle: Not Stated; Route: SC; Species: Rat; Pump: Not Stated; Duration: 4 weeks;
ALZET Comments: Dose (Ang II 200 ng/kg/min, Candesartan 1mg/kg/day); animal info (Male, Wistar, 6 weeks old);

Agents: DNA aptamer (RAGE) Vehicle: Not Stated; Route: SC; Species: Mice; Pump: 2006; Duration: 21 days;
ALZET Comments: Dose (2 x10^4 - 4 μg/day); Controls received mp w/ vehicle; animal info (8 week old, male, C57BL/6J);

Agents: Angiotensin II Vehicle: Saline; Route: SC; Species: Mice; Pump: 1002; Duration: Not Stated;
ALZET Comments: Dose (1.5 mg/kg/day); Controls received mp w/ vehicle; animal info (Male, 12 weeks old, 20-25 g, C57BL/6);
Agents: SNX5-specific or non silencing snRNA Vehicle: Not stated; Route: SC; Species: Mice; Pump: 1007D; Duration: 7 days;
ALZET Comments: Dose (3 ug/day); animal info (Male, C57BL/6J, 1 year old); gene therapy;

Agents: Minocycline Vehicle: Saline; Route: CSF/CNS (Lateral ventricle); Species: Mice; Pump: 1007; Duration: 7 days;
ALZET Comments: "Dose (0.6 uL/h); Controls received mp w/ vehicle; animal info (20-30 weeks old, Male); Brain coordinates (0.3 mm posterior to Bregma, 0.8 mm lateral, and 2.7 mm below the surface of the skull); bilateral cannula used; cyanoacrylate adhesive; gene therapy;"

Agents: Bleomycin Vehicle: Saline; Route: SC; Species: Mice; Pump: 2001; Duration: 7 days;
ALZET Comments: Dose (100 mg/kg/day); Controls received mp w/ vehicle; animal info (C57BL/6); gene therapy;

Agents: EPZ5676 Vehicle: DMSO, Water; Route: SC; Species: Mouse; Pump: 2002; Duration: 8 weeks;
ALZET Comments: Dose (1.6 mg/d); 50% DMSO used; Controls received mp w/ vehicle; animal info (Eight-week-old, female, FVB/N); Model 2006 pumps replaced with Model 2002 after six weeks; long-term study; gene therapy;

Q7138: S. Galic, et al. AMPK signaling to acetyl-CoA carboxylase is required for fasting- and cold-induced appetite but not thermogenesis. eLife Journal 2018;7
Agents: Ghrelin, N-octanoylated Vehicle: Ghrelin, N-octanoylated; Route: SC; Species: Mouse; Pump: 2002; Duration: 14 days;
ALZET Comments: Dose (30 ug/day); Controls received mp w/ vehicle; animal info (Male, ACC DKI); Peptide, recombinant protein aka N-octanoylated murine ghrelin; gene therapy;

Agents: Dexamethasone Vehicle: Ethanol; Route: SC; Species: Rat; Pump: 2ML1; Duration: 7 days;
ALZET Comments: Dose (200 ug/kg/day); 10% ethanol used; Controls received mp w/ vehicle; animal info (Sprague Dawley, 8-10 weeks old); gene therapy;

Agents: Control antagonirs; GTN; miR 199a/b Vehicle: Not Stated; Route: SC; Species: Mice; Pump: 1003D; Duration: 3 days;
ALZET Comments: Dose (antagonirs/miR 199 a/b 80mg/kg body weight; GTN 100mg/kg/day); Controls received mp w/ control antagonirs or control antagonirs + GTN; animal info (male Apoe+, 8-12wks old, 20-30g); GTN aka Nitroglycerin; antagonir aka RNA complimentary to specific miRNA; gene therapy; cardiovascular; pumps were used in part 1,2,5 and 6 of the study, this study identified PTGIS mRNA as a new target of miR-199a/b, and discovered a novel mechanism by which nitric esters cause nitrate tolerance. Mechanistically, NO derived from organic nitrates induces the endogenous expression of miR-199a/b in endothelial cells, which represses PTGIS gene expression, resulting in PGI2 deficiency and thromboxane receptor activation. Consequently, organic nitrates induce nitrate tolerance and nitrovasodilator resistance;
Agents: Lentivirus, ER beta Vehicle: CSF, artificial; Route: CSF/CNS (amygdala); Species: Rat; Pump: 2002; Duration: 2 weeks;
ALZET Comments: Controls received mp w/ empty lentivirus; animal info (male, Sprague Dawley, 8 weeks old); functionality of mp verified by India ink injection; behavioral testing (marbles burying test, social interaction, elevated plus maze, open-field test); gene therapy; Used Plastics One cannula;

Agents: Thyroxin, L-, Adenovirus vector; Gene, green fluorescent protein; Gene, AMP-activated protein kinase Vehicle: Saline; Route: CSF/CNS (hypothalamus); Species: Rat; Pump: 1007D; Duration: 7, 21 days;
ALZET Comments: bilateral cannula used; animal info (200-250g); gene therapy; Therapeutic indication (Browning, thyroid hormones);

Agents: Viral vector, adeno-associated (AAV9, AAV2g0); Gene, CBh-ScGFP Vehicle: Not Stated; Route: CSF/CNS (intrathecal); Species: Mice; Pump: 2001D; Duration: 24 hrs;
ALZET Comments: animal info (8 weeks old C57/Bl6 male mice); comparison of IT bolus injections vs mp; ALZET mouse intrathecal catheter used (lumbar cannulation); gene therapy;

Agents: RNA, small interfering/EHCO; PEGylated EHCO Species: Mice (nude); Duration: 14 days;
ALZET Comments: Controls received treated with nonspecific PEGylated EHCO/siGFP nanoparticles (PEGGFP) and non-PEGylated EHCO/HIF-1α; cancer; gene therapy, RNA nanoparticle infusion; peptides; “These results indicate that PEGylation can significantly improve the stability of EHCO/siRNA nanoparticles during storage in solution, possibly by preventing the aggregation of the nanoparticles and providing better protection to the siRNA cargo from degradation” (pg 31);

Agents: Granulocyte-colony stimulating factor; AMD3100 Route: IP; Species: Mice (NOD/SCID); Pump: 1007D; Duration: 1 week;
ALZET Comments: animal info (NOD-scid humanized (huNSG) mice); gene therapy; immunology; Engraftment of human CD45+ cells; viral persistence; Dose (300mg/ml Colony-stim; 125 ug AMD3100);

Agents: Trichostatin A Vehicle: DMSO, water; Route: SC; Species: Mice; Pump: 2002; Duration: 14 days, 28 days;
ALZET Comments: Controls received mp w/ vehicle; animal info (6 months old); Subset of pumps replaced every 2 weeks;

Agents: Oligonucleotide, antisense MECP2 Vehicle: Saline; Route: CSF/CNS; Species: mice; Pump: 1004; Duration: 28 days;
ALZET Comments: Controls received mp w/ vehicle; animal info (FVB/N pure background); functionality of mp verified by EEG; ALZET brain infusion kit 3 used; ALZET brain infusion kit 3 used; good methods (pg. 6); gene therapy; Dose (500 ug); Brain coordinates; AP = – 0.2 mm, ML = 1 mm, DV = – 3 mm

Agents: CpGB DNA Vehicle: Not Stated; Route: SC; Species: Mice; Pump: Not Stated; Duration: 7 days; 28 days;
ALZET Comments: Controls received mp w/ PBS; animal info (male, C57BL6 or TNFa -/- or IFNg -/- or CXCR3 -/- or CCR5 -/- or CCL2 -/- or TLR9 -/-); functionality of mp verified by immunoflorescence at pump outlet; gene therapy; immunology; CpGB DNA is a TLR9 ligand