References on the Administration of Agents to Primates
Using ALZET® Osmotic Pumps

1. Baboon

Q5859: P. B. Higgins*, et al.* Central GIP signaling stimulates peripheral GIP release and promotes insulin and pancreatic polypeptide secretion in nonhuman primates. Am J Physiol Endocrinol Metab 2016;311(4):E661-E670
ALZET Comments: CSF, artificial; CSF/CNS (ventricle); Monkey (baboon); 14 days, 2 weeks; Controls received mp w/ vehicle; animal info (all animals were housed in social groups in outdoor enclosures) ; ALZET pumps used to maintain the patency of the ventricular infusion line and cannula before connection to the syringe pump infusion system.

Q1517: N. S. Sunderland*, et al.* Tumor necrosis factor alpha induces a model of preeclampsia in pregnant baboons (Papio hamadryas). Cytokine 2011;56(2):192-199
ALZET Comments: Tumor necrosis factor-alpha; PBS; IV (femoral); Monkey (pregnant, baboon); 2ML4; Controls received mp w/ vehicle; animal info (female, baboon, Papio hamadryas).

Q1551: J. R. A. Sherwin*, et al.* The Endometrial Response to Chorionic Gonadotropin Is Blunted in a Baboon Model of Endometriosis. Endocrinology 2010;151(10):4982-4993
ALZET Comments: Chorionic gonadotropin hormone, human recomb.; Saline; SC; intrauterine; Monkey (baboon); 2ML1; Animal info (30 mo old, spontaneous endometriosis); tissue perfusion (oviductal lumen).

Q0042: Y. Fujimura*, et al.* Quantification of peripheral benzodiazepine receptors in human brain with 18F-PBR06. Journal of Cerebral Blood Flow and Metabolism 2010;29(S360-S375
ALZET Comments: Nicotine; Monkey (baboon); 6 months; Long-term study; animal info (Papio anubis); functionality of mp verified by plasma nicotine concentration; pumps replaced at 15 days, 2, 3, 4 and 5 months.

Q1005: J. J. Brosens*, et al.* Proteomic analysis of endometrium from fertile and infertile patients suggests a role for apolipoprotein A-I in embryo implantation failure and endometriosis. MOLECULAR HUMAN REPRODUCTION 2010;16(4):273-285
ALZET Comments: Chorionic gonadotropin hormone, human recomb.; Oviductal; Monkey (baboon); 5 days; Animal info (cycling, female, 7-12 years old, 12-18 kg); tissue perfusion (oviduct).

Q0235: J. Evans*, et al.* Prokineticin 1 mediates fetal-maternal dialogue regulating endometrial leukemia inhibitory factor. FASEB Journal 2009;23(7):2165-2175
ALZET Comments: Gonadotrophin, human chorionic; Oviductal; Monkey (baboon); 5 days; Animal info (papio annubis).

P8047: J. R. A. Sherwin*, et al.* Identification of novel genes regulated by chorionic gonadotropin in baboon endometrium during the window of implantation. Endocrinology 2007;148(2):618-626
ALZET Comments: Gonadotrophin, human chorionic; Oviductal; Monkey (baboon); 5 days; Animal info (female, adult).

Q5660: A. T. Fazleabas. A Baboon Model for Simulating Pregnancy. Methods in Molecular Medicine 2006;121(101-110
ALZET Comments: Gonadotrophin, chorionic; Oviductal lumen; Monkey (baboon); 2ML1; 7 days;

P7516: Z. Strakova*, et al.* In vivo infusion of interleukin-1 beta and chorionic gonadotropin induces endometrial changes that mimic early pregnancy events in the baboon. Endocrinology 2005;146(9):4097-4104
ALZET Comments: Gonadotrophin, human chorionic, recomb.; interleukin-1, beta, recomb. human; interleukin-1 receptor antagonist, recomb. human; Oviductal; Monkey (baboon); 10 days; Controls received no treatment; pumps replaced at day 5; animal info (female, adult).

P5475: R. E. Shade*, et al.* Synergy between angiotensin and aldosterone in evoking sodium appetite in baboons. American Journal of Physiology-Regulatory Integrative and Comparative Physiology 2002;283(5):R1070-R1078

ALZET Comments: Angiotensin II; aldosterone; Saline; ethanol; SC; CSF/CNS; Monkey (baboon); 49 days; Controls received mp w/ vehicle; long-term study, pumps replaced every 7 days (6 times); angiotensin II diluted in saline and infused ICV; aldosterone diluted in 10% ethanol in saline and infused SC; some animals implanted w/ 2 pumps.

Q6839: C. J. P. Jones*, et al.* Ultrastructure of epithelial plaque formation and stromal cell transformation by post-ovulatory chorionic gonadotropin treatment in the baboon (papio anubis). Human Reproduction 2001;16(12):2680-2690
ALZET Comments: Chorionic gonadotropin hormone, human; follicle stimulating hormone; Monkey (baboon); 5 days; animal info (normally cycling adult female baboon);.

P9110: S. Banaszak*, et al.* Modulation of the action of chorionic gonadotropin in the baboon (Papio anubis) uterus by a progesterone receptor antagonist (ZK 137. 316). Biol. Reprod 2000;63(3):820-825
ALZET Comments: Gonadotrophin, human chorionic; Intraovarian; Monkey (baboon); 4 days; Animal info (ovariectomized).

P5297: C. E. Hart*, et al.* PDGFbeta receptor blockade inhibits intimal hyperplasia in the baboon. Circulation 1999;99(4):564-569
ALZET Comments: Heparin, porcine; Saline; IV (femoral); Monkey (baboon); 4, 28, 56 days; Controls received mp w/ vehicle; pumps replaced after 28 days; cardiovascular; multiple pumps per animal (2); long-term study.

P4163: A. T. Fazleabas*, et al.* Modulation of the baboon (papio anubis) uterine endometrium by chorionic gonadotrophin during the period of uterine receptivity. Proc. Natl. Acad. Sci. USA 1999;96(2543-2548
ALZET Comments: Gonadotrophin, recomb. human chorionic; Intraovarian (corpus luteum); Monkey (baboon); 2ML1; 7 days; tissue perfusion (corpus luteum).

P4060: J. R. Blair-West*, et al.* Evidence that brain angiotensin II is involved in both thirst and sodium appetite in baboons. Am. J. Physiol. (Regulatory Integrative Comp. Physiol. 44) 1998;275(R1639-R1646
ALZET Comments: Angiotensin II; Losartan potassium; ZD-7155; Ethanol; CSF, artificial;; SC; CSF/CNS;; Monkey (baboon); 2ML1; 2ML2; 2ML4; no duration posted; controls received mp w/vehicle; amoxicillin and buprenorphine given post-operatively; good methods; aCSF delivered during 1-2 week surgical recovery period; vehicle and compound-filled pumps were alternated; some pumps were filled with peptide and antagonist; ZD-7155 is an AT1 receptor antagonist; peptides; antihypertensive.

P1880: I. S. Kang*, et al.* Effect of treatment with gonadotropin-releasing hormone analogues on pregnancy outcome in the baboon. Fertil. Steril 1989;52(5):846-853
ALZET Comments: Luteinizing HRH antagonist; Water; SC; Monkey (baboon, pregnant); 7 days; no comment posted.

P1465: S. Brailowsky*, et al.* Effects of localized, chronic GABA infusions into different cortical areas of the photosensitive baboon, Papio papio. Electroencephalogr. Clin. Neurophysiol 1989;72(147-156
ALZET Comments: Aminobutyric acid, Y-; Saline; CSF/CNS; Monkey (baboon); 2ML1; 7 days; functionality of mp verified by removing and opening; pumps replaced once w/ saline-filled mp.

P1023: S. Brailowsky*, et al.* Epileptogenic y-aminobutyric acid-withdrawal syndrome after chronic, intracortical infusion in baboons. Neurosci. Lett 1987;74(75-80
ALZET Comments: Aminobutyric acid, Y-; Saline; CSF/CNS (frontal cortex); Monkey (baboon); 2ML1; no duration posted; controls received mp w/vehicle; mp connected to intracerebral cannula; agent filled mp replaced after 7 days with saline filled mp; tissue perfusion (frontal cortex).

P0035: N. Hagino*, et al.* Effect of D-Trp6-LH-RH on the pituitary-gonadal axis during the luteal phase in the baboon. Acta Endocrinol 1979;91(2):217-223
ALZET Comments: Luteinizing HRH agonist; Saline; SC; Monkey (baboon); 7 days; peptides.

2. Marmoset

Q2105: K. Kitamura*, et al.* Human Hepatocyte Growth Factor Promotes Functional Recovery in Primates after Spinal Cord Injury. PLoS One 2011;6(11):U83-U95
ALZET Comments: Hepatocyte growth factor, recomb. human; PBS; CSF/CNS (intrathecal); Monkey (marmoset); 2004; 4 weeks; Controls received mp w/ vehicle; animal info (adult, female, common, 295-350 g); ALZET rat intrathecal catheter used.

Q0075: K. A. Stockwell*, et al.* Continuous rotigotine administration reduces dyskinesia resulting from pulsatile treatment with rotigotine or L-DOPA in MPTP-treated common marmosets. Experimental Neurology 2010;221(1):79-85
ALZET Comments: Rotigotine hydrochloride; DMSO; water, sterile; SC; Marmoset; 2004; 28 days; Comparison of SC injections or PO administration vs. SC mp; animal info (adult, common, male, female, 2-7 years old, 350-500); 50% DMSO used; "These data suggest that dyskinesia induced by pulsatile drug treatment may be improved by switching to continuous rotigotine delivery." pg. 79; "...this study highlights the potential benefits of continuous drug delivery." pg 84.

Q0515: T. E. Ziegler*, et al.* Prolactin's mediative role in male parenting in parentally experienced marmosets (Callithrix jacchus). Hormones and Behavior 2009;56(4):436-443
ALZET Comments: Prolactin, human, recomb.; Glycerol; NaHCO3; NaCl; SC; Monkey (marmoset); 2004; Controls received mp w/ saline; animal info (2.5-9 yrs old, male, parentally experienced); "... these pellets (from Innovative Research of America) did not raise the level of prolactin in the blood over the level of our control parentally experienced fathers... Therefore, we chose to use the osmotic minipump (Alzet, CA) for our test males." pg 439; "The position of the pumps on the lower area of a male's back precluded any interference with infant carrying since infant carrying occurs nearer the neck" pg 439; comparison of pellets vs mp.

Q0449: K. A. Stockwell*, et al.* Continuous administration of rotigotine to MPTP-treated common marmosets enhances anti-parkinsonian activity and reduces dyskinesia induction. Experimental Neurology 2009;219(2):533-542
ALZET Comments: Rotigotine; Saline, sterile; SC; Monkey (marmoset); 2004; 58 days; Controls received mp w/ vehicle; animal info (adult common, male, female, 354 g); comparison of sc injections vs. mp; neurodegenerative (Parkinson's disease); post op. care (Rimadyl, Synulox); "pumps were removed... and replaced with new minipumps implanted into the opposite flank." pg 534; "These results demonstrate that the anti-parkinsonian benefits associated with a continuous infusion of rotigotine were more sustained compared to pulsatile rotigotine or L-DOPA treatment..." pg 541; long-term study.

P8082: R. J. Hornby*, et al.* Multiple vaccine and pyridostigmine bromide interactions in the common marmoset Callithrix jacchus: Immunological and endocrinological effects. INTERNATIONAL IMMUNOPHARMACOLOGY 2006;6(12):1765-1779
ALZET Comments: Pyridostigmine bromide; Saline, sterile isotonic; SC; Marmoset; 2004; 28 days; Controls received mp w/ vehicle; no stress (see p.1776); immunology; animal info (female, vasectomized male, 331-565g. 2-5.5 yrs. old); mp primed 40 hours.

P8143: G. D. Griffiths*, et al.* Development of methods to measure humoral immune responses against selected antigens in the common marmoset (Callithrix jacchus) and the effect of pyridostigmine bromide administration. INTERNATIONAL IMMUNOPHARMACOLOGY 2006;6(12):1755-1764
ALZET Comments: Pyridostigmine bromide; Saline, sterile isotonic; SC; Marmoset; 28 days; Controls received mp w/ vehicle; no stress (see p.1759,1762); immunology; animal info (male, female, 300-500g.); mp primed 40 hours; "delivery by pump ensured the animals would receive an appropriate dose of the drug over the desired time period.", oral delivery "would introduce unacceptable stress into the experiment and presentation in food was discounted because of difficulties in estimating the dose administered." (p.1757).

P6741: H. P. M. Van Helden*, et al.* Low levels of Sarin affect the EEG in marmoset monkeys: a pilot study. Journal of Applied Toxicology 2004;24(6):475-483
ALZET Comments: Pyridostigmine bromide; Propylene glycol: ethanol; acidic acid, glacial; water, distilled; SC; Marmoset; 2002; Controls received mp w/ vehicle; toxicology; sarin vapor.

P6551: H. P. M. Van Helden*, et al.* Low-level exposure of guinea pigs and marmosets to sarin vapour in air: Lowest-observable-adverse-effect level (LOAEL) for miosis. Journal of Applied Toxicology 2004;24(1):59-68
ALZET Comments: Pyridostigmine bromide; Propylene glycol; ethanol; water; acetic acid, glacial; SC; Guinea pig; marmoset; 2002; 4 days; Controls received mp w/ vehicle; toxicology.

P5707: N. G. Muggleton*, et al.* Assessment of a combination of physostigmine and scopolamine as pretreatment against the behavioral effects of organophosphates in the common marmoset (Callithrix jacchus). Psychopharmacology 2003;166(3):212-220
ALZET Comments: Physostigmine salicylate; scopolamine hydrobromide; Saline; SC; Monkey (marmoset); 2002; 14 days; Controls received mp w/ vehicle; behavioral testing; agents infused via same pumps; toxicology.

P6348: J. W. B. Marshall*, et al.* Assessment of cognitive and motor deficits in a marmoset model of stroke. ILAR JOURNAL 2003;44(2):153-160
ALZET Comments: Clomethiazole; AR-R15896AR; NXY-059; Saline; SC; Monkey (marmoset); 2001D; 48 hours; Controls received mp w/ vehicle; pumps replaced every 24 hours; ischemia (cerebral); neuroprotective; post op. care (incubator); behavioral study.

P6150: J. W. B. Marshall*, et al.* Functional and histological evidence for the protective effect of NXY-059 in a primate model of stroke when given 4 hours after occlusion. Stroke 2003;34(9):2228-2233
ALZET Comments: NXY-059; Saline; IV; Monkey (marmoset); 2001D; 48 hours; Controls received mp w/ vehicle; NXY-059 plasma levels taken; pumps replaced every 24 hours; post op. care (flunixin meglumine); behavior study; neuroprotective; ischemia (cerebral).

P4851: J. W. B. Marshall*, et al.* NXY-059, a free radical-trapping agent, substantially lessens the functional disability resulting from cerebral ischemia in a primate species. Stroke 2001;32(190-198
ALZET Comments: NXY-059; Saline; SC; monkey (marmoset); 2001D; 48 hours; controls received mp w/ vehicle; functionality of mp verified by plasma drug levels; pumps replaced after 24 hours; NXY-059 is a novel free-radical trapping agent; multiple pumps per animal (2) used simultaneously; ischemia (cerebral).

P8576: P. Villoslada*, et al.* Human Nerve Growth Factor Protects Common Marmosets against Autoimmune Encephalomyelitis by Switching the Balance of T Helper Cell Type 1 and 2 Cytokines within the Central Nervous System. Journal of Experimental Medicine 2000;191(10):1799-1806
ALZET Comments: Saline; nerve growth factor, recomb. human; cytochrome C; CSF/CNS; Marmoset; 2004; 35-42 days; Controls received mp w/ cytochrome C; functionality of mp verified by CSF levels of rhNGF; pumps replaced after 7-14 days of saline; immunology; ALZET brain infusion kit used; peptides; animal info (callithrix jacchus); "we chose to use an intracranial route to ensure accurate delivery of the drug into the CNS. This resulted in sustained elevated concentrations of rhNGF in the CSF of all rhNGF-treated animals." (p. 1801).

P4292: J. W. B. Marshall*, et al.* Functional benefit from clomethiazole treatment after focal cerebral ischemia in a nonhuman primate species. Experimental Neurology 1999;156(121-129
ALZET Comments: Clomethiazole;; IP;; monkey (marmoset);; 2001D;; 24 hours;; clomethiazole is neuroprotective in rodents following ischemia; ischemia (cerebral).

P1622: J. M. Wood*, et al.* Biochemical effects of prolonged renin inhibition in marmosets. J. Hypertens 1989;7(8):615-618
ALZET Comments: CGP-29287; Methylcellulose; Saline; IP; monkey (marmoset); 2002; 7 days; dose-response; CGP-29287 is a renin inhibitor.

P1292: J. M. Wood*, et al.* Sustained reduction in blood pressure during chronic administration of a renin inhibitor to normotensive marmosets. J. Cardiovasc. Pharmacol 1987;10(7):S96-S98
ALZET Comments: CGP-29287; IP; monkey (marmoset); 2002; 14 days; dose-response; only high dose affected bp; mp removed after delivery.

3. Monkey

Q6235: M. Pauthner*, et al.* Elicitation of Robust Tier 2 Neutralizing Antibody Responses in Nonhuman Primates by HIV Envelope Trimer Immunization Using Optimized Approaches. Immunity 2017;46(6):1073-1088 e6
ALZET Comments: Antigen, BG505.v5.2 SOSIP; ISCOMATRIX adjuvant; SC; Monkey (macaque); 2002; 14 days; Dose (50 ug); ISCOMATRIX adjuvant composed of cholesterol, phospholipid, and saponin in sterile PBS; animal info (3-4 year old Indian-origin rhesus macaques); Immunology (antigen immunization); "Pump delivery resulted in significantly higher nAb titers than conventional immunization, as well as shifted kinetics, after both the second and third immunizations (Figure 4G)." pg. 1081; Therapeutic indication (HIV);.

R0347: A. Ziv-Gal*, et al.* Evidence for bisphenol A-induced female infertility: a review (2007-2016). Fertil Steril 2016;106(4):827-56
ALZET Comments: Bisphenol A; Mice; monkey; 24, 28 days; animal info (mice CD-1, GD8-PND16; monkey African green); teratology; Dose (mice 25 ug/kg/day; monkey 50 ug/kg/day);.

Q5497: J. Xu*, et al.* Anti-Mullerian hormone promotes pre-antral follicle growth, but inhibits antral follicle maturation and dominant follicle selection in primates. Hum Reprod 2016;31(7):1522-30
ALZET Comments: Antibody, anti-Mullerian hormone; PBS; Intraovarian; Monkey (macaque); 2ML2; 4 weeks; animal info (female, hemi-ovariectomized, adult); pumps replaced; Dose (500 ng/h);.

Q6641: S. Petryszyn*, et al.* The number of striatal cholinergic interneurons expressing calretinin is increased in parkinsonian monkeys. Neurobiol Dis 2016;95(46-53
ALZET Comments: MPTP; SC; Monkey; 2ML4; 2 weeks; Dose (14mg); animal info (Eight, four-year-old, ovariectomized female cynomolgus monkeys); MPTP aka 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine.

Q5859: P. B. Higgins*, et al.* Central GIP signaling stimulates peripheral GIP release and promotes insulin and pancreatic polypeptide secretion in nonhuman primates. Am J Physiol Endocrinol Metab 2016;311(4):E661-E670
ALZET Comments: CSF, artificial; CSF/CNS (ventricle); Monkey (baboon); 14 days, 2 weeks; Controls received mp w/ vehicle; animal info (all animals were housed in social groups in outdoor enclosures) ; ALZET pumps used to maintain the patency of the ventricular infusion line and cannula before connection to the syringe pump infusion system.

Q5237: N. Morin*, et al.* Contribution of brain serotonin subtype 1B receptors in levodopa-induced motor complications. Neuropharmacology 2015;99(356-68
ALZET Comments: MPTP; Saline; SC; Monkey (macaque); Controls received no treatment; animal info (drug naive female ovariectomized monkeys (Macaca fascicularis) (aged 4.7e7.7 y; weight: 2.7e4.2 kg;); functionality of mp verified by observation for disability signs; neurodegenerative (Parkinson's Disease); behavioral testing (disability testing); MPTP - neurotoxin; Dose (0.5 mg/24 h);.

Q4007: N. Morin*, et al.* Effect of a chronic treatment with an mGlu5 receptor antagonist on brain serotonin markers in parkinsonian monkeys. PROGRESS IN NEURO-PSYCHOPHARMACOLOGY & BIOLOGICAL PSYCHIATRY 2015;56(27-38
ALZET Comments: MPTP; Saline; SC; Monkey (macaque); Controls received mp w/ vehicle; animal info (female, Macaca fascicularis, ovariectomized, 4.7-7.7 years old, 2.7-4.2kg); long-term study; neurodegenerative (Parkinson's disease);.

Q3984: J. O. Lo*, et al.* Vitamin C supplementation ameliorates the adverse effects of nicotine on placental hemodynamics and histology in nonhuman primates. American Journal of Obstetrics and Gynecology 2015;212(U271-U278
ALZET Comments: Nicotine bitartrate; Water, bacteriostatic; SC; Monkey (macaque, pregnant); 2ML4; 134 days; Controls received mp w/ vehicle; animal info (female, Rhesus, pregnant, GD26); functionality of mp verified by blood levels; pumps replaced every 3 weeks; post op. care (cefazolin 150 mg BID); long-term study; teratology; dependence;.

Q3874: J. D. Elsworth*, et al.* Low Circulating Levels of Bisphenol-A Induce Cognitive Deficits and Loss of Asymmetric Spine Synapses in Dorsolateral Prefrontal Cortex and Hippocampus of Adult Male Monkeys. Journal of Comparative Neurology 2015;523(1248-1257
ALZET Comments: Bisphenol A, deuterium-labeled; SC; Monkey (African velvet); 2ML4; 30 days; Controls received mp w/ vehicle; animal info (male, St, Kitts African vervet S. sabaeus, young); functionality of mp verified by plasma levels; behavioral testing (working memory performance); toxicology; "we administered BPA from a subcutaneous minipump that ensured a constant and reliable delivery of BPA" pg 1249; pumps removed after 30 days;.

Q3748: T. Negishi*, et al.* Altered social interactions in male juvenile cynomolgus monkeys prenatally exposed to bisphenol A. NEUROTOXICOLOGY AND TERATOLOGY 2014;44(46-52
ALZET Comments: Bisphenol A; DMA; PEG; SC; Monkey (Cynomolgus - pregnant); 2004; 28 days; Control animals received mp w/ vehicle; animal info (cynomolgus, 2.5-4.0 kg, 5-13 years old, GD20); "We administered BPA in pregnant females on gestational day 20 at 10 µg/kg/day through pumps implanted to produce an exposure regimen with a steady level of circulating BPA without the stress of daily restraint essential for oral administration." pg 50; teratology; 50% DMA used; 50% PEG used.

Q3572: N. Morin*, et al.* Long-term treatment with L-DOPA and an mGlu5 receptor antagonist prevents changes in brain basal ganglia dopamine receptors, their associated signaling proteins and neuropeptides in parkinsonian monkeys. Neuropharmacology 2014;79(;):688-706
ALZET Comments: MPTP; Saline; SC; Monkey (Macaca fascicularis); 6 months; Controls received mp w/ vehicle; animal info (female, OVX, 4.7-7.7 years old, 2.7-4.2 kg); neurodegenerative (Parkinson's); long-term study; MPTP aka 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine; monkeys treated until parkinsonian features were achieved;.

Q3859: L. L. Dugan*, et al.* Carboxyfullerene Neuroprotection Postinjury in Parkinsonian Nonhuman Primates. Annals of Neurology 2014;76(393-402
ALZET Comments: C3; SC; IP; Monkey (macaque); 2ML4; 30 days; Controls received mp w/ placebo; animal info (Macaca facicularis); Multiple pumps per animal (2); neurodegenerative (Parkinson's disease); behavioral testing (locomotor activity); stability verified by (testing at 37C, C3 is stable for >40 days); Carboxyfullerine aka C3;.

Q4715: C. S. Cunningham*, et al.* The discriminative stimulus effects of mecamylamine in nicotine-treated and untreated rhesus monkeys
1734. BEHAVIOURAL PHARMACOLOGY 2014;25(296-305
ALZET Comments: Nicotine; Saline; SC; Monkey (Rhesus); 2ML4; Controls received mp w/ vehicle; animal info (Macaca mulatta, rhesus monkey, adult); pumps replaced every 28 days; behavioral testing (stimulus-shock termination);.

Q3819: B. M. Braunger*, et al.* Identification of Adult Stem Cells in Schwalbe's Line Region of the Primate Eye. INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE 2014;55(7499-7507
ALZET Comments: Uridine, bromodeoxy-; SC; Monkey (macaque); 2ML4; 4 weeks; Animal info (Macaca fascicularis); pumps removed after 4 weeks;.

Q3656: A. F. Wyss*, et al.* Long-term motor cortical map changes following unilateral lesion of the hand representation in the motor cortex in macaque monkeys showing functional recovery of hand functions. RESTORATIVE NEUROLOGY AND NEUROSCIENCE 2013;31(6):733-760
ALZET Comments: Antibody, anti-Nogo-A 11C7; CSF/CNS; CSF/CNS (intrathecal); Monkey (macaque); 2ML2; 4 weeks; Controls received no pump treatment; animal info (macaca fascicularis, 1 female, 7 male, 4-6 years old, 3.5-6.5 kg); Multiple pumps per animal (2); behavioral testing (modified Brinkman board task, rotative Brainkman board task, Brinkman box task); One pump delivered IT, other delivered CSF/CNS using catheter; no cannula used, see pg.741; pumps removed after 4 weeks; used antibody concentration of 3 mg/ml;.

Q6766: M. G. Sanchez*, et al.* Estradiol and brain serotonin reuptake transporter in long-term ovariectomized parkinsonian monkeys. Prog Neuropsychopharmacol Biol Psychiatry 2013;45(170-7

ALZET Comments: MPTP; Saline; gelatin; CSF/CNS (left substantia nigra); Monkey; 1-2 weeks; Dose (3 mg); animal info (7 hemiparkinsonian female Macaca fascicularis monkeys OVX for four years weighing 2.8–6.5 kg of an average age of twelve years.); MPTP aka 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine; neurodegenerative (Parkinson's Disease);.

Q3161: G. Riahi*, et al.* Basal ganglia serotonin 1B receptors in parkinsonian monkeys with L-DOPA-induced dyskinesia. Biochemical Pharmacology 2013;86(7):970-978
ALZET Comments: MPTP; Saline; SC; Monkey (Macaca fascicularis); 5 months; 6 months; Animal info (female, adult, 2.5-4.3kg, ovariectomized); neurodegenerative (Parkinson's disease); long-term study; immunology; Used to induce PD in macaques.

Q3247: N. Morin*, et al.* Chronic treatment with MPEP, an mGlu5 receptor antagonist, normalizes basal ganglia glutamate neurotransmission in L-DOPA-treated parkinsonian monkeys. Neuropharmacology 2013;73(;):216-231
ALZET Comments: 2-methyl-6-(phenylethynyl)pyridine; Saline; SC; Monkey (Macaca fascicularis); Controls received mp w/ vehicle; animal info (Female, MPTP, ovarectomized, 4.7-7.7 years old, 2.7-4.2kg); neurodegenerative (Parkinson's disease); long-term study; 2-methyl-6-(phenylethynyl)pyridine aka MPEP; MPEP used to induce PD symptoms.

Q2632: N. Morin*, et al.* MPEP, an mGlu5 receptor antagonist, reduces the development of L-DOPA-induced motor complications in de novo parkinsonian monkeys: Biochemical correlates. Neuropharmacology 2013;66(;):355-364
ALZET Comments: MPTP; SC; Monkey; Animal info (female, cynomolgus, OVX); neurodegenerative (Parkinson's disease).

Q2568: P. Kievit*, et al.* Chronic Treatment With a Melanocortin-4 Receptor Agonist Causes Weight Loss, Reduces Insulin Resistance, and Improves Cardiovascular Function in Diet-Induced Obese Rhesus Macaques. Diabetes 2013;62(2):490-497
ALZET Comments: BIM-22493; Saline; dimethylacetamide; serum, non-human primate; SC; Monkey (macaque); 2ML2; 8 weeks; Control animals received mp w/ vehicle; animal info (rhesus macaque, 9-11 years old, mature, adult, 9-19 kg); long-term study; pumps replaced biweekly; BIM-22493 is a novel MC4R, melanocortin 4 receptor, antagonist; 5% DMA used;.

Q2945: L. Gregoire*, et al.* Safinamide reduces dyskinesias and prolongs L-DOPA antiparkinsonian effect in parkinsonian monkeys. PARKINSONISM & RELATED DISORDERS 2013;19(5):508-514
ALZET Comments: MPTP; SC; Monkey (cynomolgus); Animal info (ovariectomized cynomolgus, 2.8-4.4kg); neurodegenerative (Parkinson's disease).

Q2009: P. Poignard*, et al.* Protection against High-Dose Highly Pathogenic Mucosal SIV Challenge at Very Low Serum Neutralizing Titers of the Antibody-Like Molecule CD4-IgG2. PLoS One 2012;7(7):U1813-U1818
ALZET Comments: Immunoglobulin G2, CD4; SC; Monkey (macaque); 14 days; Animal info (male, Indian, rhesus, macaques); CD4-IgG2 is an antibody-like molecule; "Owing to the relatively rapid decay of CD4-IgG2, we chose to deliver it subcutaneously and continuously by an osmotic pump" pg e42209.

Q1929: E. C. Muly*, et al.* Relationship between Dose, Drug Levels, and D2 Receptor Occupancy for the Atypical Antipsychotics Risperidone and Paliperidone. Journal of Pharmacology and Experimental Therapeutics 2012;341(1):81-89
ALZET Comments: Risperidone; paliperidone; Intragastric; Monkey (macaca mulata); 2 weeks; Animal info (male, Rhesus, 4.2-6.3 years old); pumps replaced; 2-week pump replaced with 4-week pump containing saline for a washout period. 4-week pump was then replaced with 2-week pump to continue dosing.

Q1421: M. B. Zelinski*, et al.* In vivo delivery of FTY720 prevents radiation-induced ovarian failure and infertility in adult female nonhuman primates. Fertility and Sterility 2011;95(4):1440-U289
ALZET Comments: Sphingosine-1-phosphate; FTY720; Polyethylene glycol; ethanol; Tween 20; Intraovarian; Monkey (macaque); 1 weeks; Controls received mp w/ vehicle; animal info (Adult, female, rhesus, 8-14 years old); good methods, pg 1445 e.1); "Using an intraovarian catheter-osmotic, miniature pump system, we showed that direct and controlled long-term delivery of S1P or FTY720 to the ovaries of adult female primates can be achieved successfully." pg 1444; FTY720 is a sphingosine-1-phosphate (S1P) mimetic.

Q0641: P. S. Suresh*, et al.* The effect of progesterone replacement on gene expression in the corpus luteum during induced regression and late luteal phase in the bonnet monkey (Macaca radiata). Reproductive Biology and Endocrinology 2011;9(;):U1-U16
ALZET Comments: Progesterone; Ethanol; propylene glycol; Monkey (macaca radiata); 2ML1; 24 hours; Animal info (adult, female, bonnet, macaca radiata, 3.3-5.1 kg); multiple pumps per animal (3); replacement therapy (corpus leuteum); endocrinology.

Q1517: N. S. Sunderland*, et al.* Tumor necrosis factor alpha induces a model of preeclampsia in pregnant baboons (Papio hamadryas). Cytokine 2011;56(2):192-199
ALZET Comments: Tumor necrosis factor-alpha; PBS; IV (femoral); Monkey (pregnant, baboon); 2ML4; Controls received mp w/ vehicle; animal info (female, baboon, Papio hamadryas).

Q1738: T. A. Slotkin*, et al.* Prenatal nicotine exposure in rhesus monkeys compromises development of brainstem and cardiac monoamine pathways involved in perinatal adaptation and sudden infant death syndrome: Amelioration by Vitamin C. NEUROTOXICOLOGY AND TERATOLOGY 2011;33(3):431-434
ALZET Comments: Nicotine bitartrate; Water, bacteriostatic; SC; Monkey (pregnant); 2ML4; 120 days; Animal info (rhesus macaque); pumps replaced every 3 weeks.

Q0736: M. G. Sanchez*, et al.* Estradiol modulation of cortical, striatal and raphe nucleus 5-HT(1A) and 5-HT(2A) receptors of female hemiparkinsonian monkeys after long-term ovariectomy. Neuropharmacology 2011;60(4):642-652
ALZET Comments: MPTP; CSF/CNS (substantia nigra); Monkey (macaque); 1-2 weeks; Animal info (hemiparkinsonian, OVX, female, Macaca fascicularis); neurodegenerative (Parkinson's disease).

Q2105: K. Kitamura*, et al.* Human Hepatocyte Growth Factor Promotes Functional Recovery in Primates after Spinal Cord Injury. PLoS One 2011;6(11):U83-U95
ALZET Comments: Hepatocyte growth factor, recomb. human; PBS; CSF/CNS (intrathecal); Monkey (marmoset); 2004; 4 weeks; Controls received mp w/ vehicle; animal info (adult, female, common, 295-350 g); ALZET rat intrathecal catheter used.

Q0960: T. S. Aldad*, et al.* Bisphenol-A exposure alters endometrial progesterone receptor expression in the nonhuman primate. Fertility and Sterility 2011;96(1):175-179
ALZET Comments: Bisphenol A; SC; Monkey (African green); 2ML4; 29 days; Controls received mp w/ vehicle; animal info (green, African, adult, female, 4-5 kg).