References on the Administration of Neuropeptide Y Using ALZET® Osmotic Pumps

Q4685: R. Zhang, et al. Long-Term Administration of Neuropeptide Y in the Subcutaneous Infusion Results in Cardiac Dysfunction and Hypertrophy in Rats. Experimental Neurology 2015;37(94-104)

**Agents:** Neuropeptide Y  
**Vehicle:** PBS;  
**Route:** SC;  
**Species:** Rat;  
**Pump:** 2004;  
**Duration:** 30 days;  
**ALZET Comments:** Controls received mp w/ vehicle; animal info (male, Wistar, 250-300 g); functionality of mp verified by plasma levels; cardiovascular; peptides; pumps primed in 37C saline for 40 hours;

Q1862: F. Xie, et al. Long-term Neuropeptide Y Administration in the Periphery Induces Abnormal Baroreflex Sensitivity and Obesity in Rats. Cellular Physiology and Biochemistry 2012;29(1-2):111-120

**Agents:** Neuropeptide Y  
**Vehicle:** PBS;  
**Route:** SC;  
**Species:** Rat;  
**Pump:** 2004;  
**Duration:** 4 months;  
**ALZET Comments:** Controls received mp w/ vehicle; animal info (Wistar, male, 230-270 g, 3-4 mo old); long-term study; pumps replaced monthly

Q1861: F. Xie, et al. Neuropeptide Y Reverses Chronic Stress-induced Baroreflex Hypersensitivity in Rats. Cellular Physiology and Biochemistry 2012;29(3-4):463-474

**Agents:** Neuropeptide Y  
**Vehicle:** SC;  
**Species:** Rat;  
**Pump:** 2004;  
**Duration:** 3 months;  
**ALZET Comments:** Controls received mp w/ vehicle; animal info (Wistar, male, adult, 230-250 g); long-term study; pumps replaced monthly

Q2311: J. C. Morales-Medina, et al. The selective neuropeptide Y Y(5) agonist [cPP(1-7),NPY(19-23),Ala(31),Aib(32),Gln(34)]hPP differently modulates emotional processes and body weight in the rat. Behavioural Brain Research 2012;233(2):298-304

**Agents:** Neuropeptide Y Y5 agonist  
**Vehicle:** Saline;  
**Route:** CSF/CNS;  
**Species:** Rat;  
**Pump:** 2002;  
**Duration:** 12, 14 days;  
**ALZET Comments:** Control animals received mp w/ saline; animal info (Sprague Dawley, Wistar, male, 150-170 g, olfactory bulbectomized); neuropeptide Y Y5 agonist also known as [cPP1-7,NPY19-23,Ala31,Aib32,Gln34]hPP

Q3005: R. Matyal, et al. Neuropeptide Y improves myocardial perfusion and function in a swine model of hypercholesterolemia and chronic myocardial ischemia. Journal of Molecular and Cellular Cardiology 2012;53(6):891-898

**Agents:** Neuropeptide Y; HS014  
**Vehicle:** NaCl;  
**Route:** CSF/CNS;  
**Species:** Rat;  
**Pump:** 2001;  
**Duration:** 6 days;  
**ALZET Comments:** Controls received mp w/ vehicle; animal info (male, Wistar, 25-280 g); peptides; HS014 is a melanocortin 4 receptor antagonist

Q1285: E. Preston, et al. Central neuropeptide Y infusion and melanocortin 4 receptor antagonism inhibit thyrotropic function by divergent pathways. Neuropeptides 2011;45(6):407-415

**Agents:** Neuropeptide Y, HS014  
**Vehicle:** NaCl;  
**Route:** CSF/CNS;  
**Species:** Rat;  
**Pump:** 2001;  
**Duration:** 6 days;  
**ALZET Comments:** Controls received mp w/ vehicle; animal info (male, Wistar, 25-280 g); peptides; HS014 is a melanocortin 4 receptor antagonist

Q1605: M. P. Robich, et al. Effects of neuropeptide Y on collateral development in a swine model of chronic myocardial ischemia. Journal of Molecular and Cellular Cardiology 2010;49(6):1022-1030

**Agents:** Neuropeptide Y (3-36)  
**Vehicle:** Heparin; BSA;  
**Route:** Intramyocardial;  
**Species:** Pig (miniswine);  
**Pump:** Not Stated;  
**Duration:** 4 weeks;  
**ALZET Comments:** Controls received mp w/ placebo; animal info (Intact, adult, male, Yorkshire, miniswine); 2ML sized pump used; tissue perfusion (myocardium)

Q0659: Y. J. Tsai, et al. Neuropeptide Y Modulates c-Fos Protein Expression in the Cuneate Nucleus and Contributes to Mechanical Hypersensitivity following Rat Median Nerve Injury. Journal of Neurotrauma 2009;26(9):1609-1621

**Agents:** Neuropeptide Y, neuropeptide y antagonist  
**Vehicle:** Not Stated;  
**Route:** CSF/CNS;  
**Species:** Rat;  
**Pump:** 2004;  
**Duration:** 28 days;  
**ALZET Comments:** Controls received mp w/ vehicle; animal info (male, Sprague-Dawley, 180-250 g); functionality of mp verified by residual volume; peptides
P9660: J. B. Rose, et al. Neuropeptide Y Fragments Derived from Neprilysin Processing Are Neuroprotective in a Transgenic Model of Alzheimer’s Disease. Journal of Neuroscience 2009;29(4):1115-1125
Agents: Neuropeptide Y, c-terminal fragments amidated; Neuropeptide Y, c-terminal fragments non-amidated Vehicle: DMSO; NaCl; Route: CSF/CNS; Species: Mice (transgenic); Pump: 2004; Duration: 28 days;
ALZET Comments: Controls received mp w/vehicle; animal info (NEP, APP, doubt tg. 6mo); 10% DMSO used; peptides

P9847: R. Moriya, et al. Comparison of independent and combined chronic anti-obese effects of NPY Y2 receptor agonist, PYY(3-36), and NPY Y5 receptor antagonist in diet-induced obese mice. Peptides 2009;30(7):1318-1322
Agents: Neuropeptide Y, D-Trp34; peptide YY (3-36) Vehicle: Saline; BSA; Route: CSF/CNS; Species: Mice; Pump: 2001; 2002; Duration: 7, 14 days;
ALZET Comments: Controls received mp w/ vehicle; pumps replaced after 2 weeks; peptides; animal info (C57BL/6, 12-18 wks old); PBS/BSA in 2002 pump was replaced with NPP in 2001 after 2 week recovery period; obesity

P8515: T. Ishii, et al. Chronic intracerebroventricular administration of anti-neuropeptide Y antibody stimulates starvation-induced feeding via compensatory responses in the hypothalamus. Brain Research 2007;1144(91-100)
Agents: Antibody, rabbit, anti-neuropeptide Y Vehicle: Saline; Route: CSF/CNS; Species: Mice; Pump: 2002; Duration: 13 days;
ALZET Comments: Controls received mp w/ vehicle; comparison of ICV injections vs. mp; ALZET brain infusion kit 3 used; animal info (male, ddy, 7 weeks old, 35-40 g); peptides

P8684: T. Fuezesi, et al. Contribution of noradrenergic and adrenergic cell groups of the Brainstem and agouti-related protein-synthesizing neurons of the arcuate nucleus to neuropeptide-y innervation of corticotropin-releasing hormone neurons in hypothalamic Paraventricular nucleus of the rat. Endocrinology 2007;148(11):5442-5450
Agents: Neuropeptide Y Vehicle: CSF, artificial; Route: CSF/CNS; Species: Rat; Pump: 1003D; Duration: 3 days;
ALZET Comments: Controls received mp w/ vehicle; peptides; post op. care (bacitracin ointment over skull); animal info (Sprague-Dawley, male, 280-320g); 22-gauge stainless steel guide cannula, Plastics One

P8089: C. Gebhard, et al. Role of renal nerves and salt intake on erythropoietin secretion in rats following carbon monoxide exposure. Journal of Pharmacology and Experimental Therapeutics 2006;319(1):111-116
Agents: Isoproterenol; Neuropeptide Y, [Leu31, Pro34]--; Neuropeptide Y1 receptor antagonist Vehicle: Not Stated; Route: IV (jugular); Species: Rat; Pump: 1003D; Duration: 16 hours;
ALZET Comments: Controls received mp w/ vehicle; half-life (p.115) "short” for isoproterenol; peptides; animal info (male, Sprague-Dawley, 250-320g.)

P7215: M. Michalkiewicz, et al. Central neuropeptide Y signaling ameliorates N omega-nitro-L-arginine methyl ester hypertension in the rat through a Y1 receptor mechanism. Hypertension 2005;45(4):780-785
Agents: Neuropeptide Y, synthetic rat; BIBP3226 Vehicle: Saline; Route: CSF/CNS; Species: Rat; Pump: 2002; Duration: 14 days;
ALZET Comments: Controls received mp w/ vehicle; cardiovascular; antihypertensive; peptides; cannula placement confirmed by methylene blue staining; "This approach (mp) allowed us to assess the role of endogenous NPY in long-term control of BP under experimental conditions that excluded complications associated with anesthesia, restraint, and short-term drug administration.” (p. 782); neuropeptide Y, Y1 receptor antagonist

P6952: M. Henry, et al. Energy metabolic profile of mice after chronic activation of central NPY Y1, Y2, or Y5 receptors. Obesity Research 2005;13(1):36-47
Agents: Neuropeptide Y; Y1 agonist; Y5 agonist Vehicle: Saline; water; Ascorbic acid; Route: CSF/CNS; Species: Mice; Pump: 2001; Duration: 6 days;
ALZET Comments: Controls received mp w/ vehicle; peptides; mice received a two week recovery period; guide cannula used and secured with tissue adhesive; animal info (6 week old, C57BL/6, 25-30 grams)
P6495: P. D. Raposinho, et al. Chronic neuropeptide Y infusion into the lateral ventricle induces sustained feeding and obesity in mice lacking either Npy1r or Npy5r expression. Endocrinology 2004;145(1):304-310

Agents: Neuropeptide Y, porcine Vehicle: Phosphate buffer; sodium chloride; Ascorbic acid; BSA; Route: CSF/CNS; Species: Mice; Pump: 2001; Duration: 7 days;

ALZET Comments: Controls received mp w/ vehicle; stress/adverse reaction: (see pg.305) initial weight loss from surgery/anesthesia; ALZET brain infusion kit 2 used; peptides: cyanoacrylate adhesive (Loctite 454)

P6110: K. Takahashi, et al. Adiposity elevates plasma MCP-1 levels leading to the increased CD11b-positive monocytes in mice. Journal of Biological Chemistry 2003;278(47):46654-46660

Agents: Neuropeptide Y; monocyte chemoattractant protein-1; PBS Vehicle: BSA; Route: CSF/CNS; Species: Mice; Pump: 2002; Duration: 2 weeks;

ALZET Comments: Controls received mp w/ vehicle; mcp-1 plasma levels taken; ALZET brain infusion kit used; peptides; obesity; 7-14 day recovery period after surgery; pumps filled with PBS during recovery; monocyte chemoattractant protein-1 is also known as MCP-1

P6233: L. P. Shearman, et al. Chronic MCH-1 receptor modulation alters appetite, body weight and adiposity in rats. European Journal of Pharmacology 2003;475(1-3):37-47

Agents: Neuropeptide Y, rat; melanin-concentrating hormone-1, receptor agonist; melanin-concentrating hormone-1, receptor antagonist Vehicle: Saline; Route: CSF/CNS; Species: Rat; Pump: 2002; Duration: 14 days;

ALZET Comments: Controls received mp w/ vehicle; dose-response (fig. 5); peptides; post op. care (antisedan); pump model incorrectly given as 2001 (p. 39); based on flow rate (.5 ul/hr) and duration (14 days) is actually model 2002 (p. 39)

P5852: P. D. Raposinho, et al. The melanocortin agonist Melanotan-II reduces the orexigenic and adipogenic effects of neuropeptide Y (NPY) but does not affect the NPY-driven suppressive effects on the gonadotropic and somatotropic axes in the male rat. Journal of Neuroendocrinology 2003;15(2):173-181

Agents: Melanotan-II; Neuropeptide Y Vehicle: PBS; Ascorbic acid; BSA; Route: CSF/CNS; Species: Rat; Pump: Not Stated; Duration: 7 days;

ALZET Comments: Peptides; Melanotan II or MTII (a melanocortin receptor agonist) & neuropeptide were dissolved in PBS, 0.01% ascorbic acid, 0.1% bovine serum albumin adjusted to ph 7.4; pump model not listed

P7706: S. Mashiko, et al. Characterization of neuropeptide Y (NPY) Y5 receptor-mediated obesity in mice: chronic intracerebroventricular infusion of D-Trp34NPY. Endocrinology 2003;144(5):1793-1801

Agents: Neuropeptide Y, D-Trp34 Vehicle: PBS; Ascorbic acid; BSA; Route: CSF/CNS; Species: Mice; Pump: 2001; 2002; Duration: 13,21 days;

ALZET Comments: Controls received mp w/ vehicle; dose-response (fig. 1); pumps replaced after 7-14 days; ALZET Brain Infusion kit used; peptides; post op. care (cefamedin); animal info (C57BL/6J, 9-12 weeks old, male); cannula placement confirmed by Evans blue dye injection

P5254: D. J. Toufexis, et al. Y1 receptor activation is involved in the effect of exogenous neuropeptide Y on pup growth and the early termination of lactational diestrus in the postpartum rat. J Neuroendocrinol 2002;14(5):354-360

Agents: Neuropeptide Y; 1229U91; Neuropeptide Y, receptor agonist Vehicle: Ascorbic acid; Phosphate buffer; NaCl; BSA; Route: CSF/CNS; Species: Rat; Pump: 2001; Duration: 7 days;

ALZET Comments: Controls received mp w/ vehicle; peptides; cannula placement verified manually by locating the tip postmortem; 1229U91 is a mixed Y1 antagonist/Y4 agonist

P5583: C. Fekete, et al. Agouti-related protein (AGRP) has a central inhibitory action on the hypothalamic-pituitary-thyroid (HPT) axis; Comparisons between the effect of AGRP and neuropeptide Y on energy homeostasis and the HPT axis. Endocrinology 2002;143(10):3846-3853

Agents: Neuropeptide Y; Agouti-related protein Vehicle: CSF, artificial; Route: CSF/CNS; Species: Rat; Pump: 1003D; Duration: 3 days;

ALZET Comments: peptides; cannula was implanted then occluded with a dummy cannula for one week prior to infusion to allow for recovery; AGRP is an appetite stimulant
P6193: C. Fekete, et al. Neuropeptide Y1 and Y5 receptors mediate the effects of neuropeptide Y on the hypothalamic-pituitary-thyroid axis. Endocrinology 2002;143(12):4513-4519

Agents: Neuropeptide Y; neuropeptide Y, receptor agonist  
Vehicle: CSF, artificial;  
Route: CSF/CNS;  
Species: Rat;  
Pump: 1003D;  
Duration: 3 days;  
ALZET Comments: Controls received mp w/ vehicle; peptides; endocrinology

P5234: M. L. Correia, et al. Hemodynamic consequences of neuropeptide Y-induced obesity. American Journal of Hypertension 2002;15(2 Pt 1):137-142

Agents: Neuropeptide Y  
Vehicle: Saline;  
Route: CSF/CNS (third ventricle);  
Species: Rat;  
Pump: 2004;  
Duration: 2 weeks;  
ALZET Comments: Controls received mp w/ vehicle; Peptides: cannula placement verified by methylene blue staining; one-week recovery period

Q7724: P. D. Raposoinho, et al. Chronic administration of neuropeptide Y into the lateral ventricle of C57BL/6J male mice produces an obesity syndrome including hyperphagia, hyperleptinemia, insulin resistance, and hypogonadism. Mol Cell Endocrinol 2001;185(1-2):195-204

Agents: Neuropeptide Y; Peptide YY 3-36  
Vehicle: Saline;  
Route: CSF/CNS (right lateral ventricle);  
Species: Mice;  
Pump: Not Stated;  
Duration: 7 days;  
ALZET Comments: animal info (Male, Sprague Dawley, C57BL/6J); Neuropeptide Y aka pNPY, Peptide YY 3-26 aka PPY 3-36 ; ALZET brain infusion kit 2 used; Brain coordinates (0.5 mm posterior and 1.0 lateral to bregma and 2.2 mm below brain surface); cyanoacrylate adhesive;

P5015: A. Kramer, et al. Regulation of daily locomotor activity and sleep by hypothalamic EGF receptor signaling. Science 2001;294(5551):2511-2515

Agents: Transforming growth factor-a; Brain-derived neurotrophic factor; Vasoactive intestinal polypeptide; Peptide, histidine-isoleucine; Gastrin releasing peptide; Substance P; Neuromedin-C; Neurokinin A; Neuropeptide Y; Somatostatin; Antrin; Cholecystokinin; Thyrotropin-releasing hormone; Neutotensin; Neuromedin N;  
Vehicle: CSF, artificial;  
Route: CSF/CNS (third ventricle);  
Species: Hamster;  
Pump: 2002;  
Duration: 18,22 days;  
ALZET Comments: Peptides

Q6828: C. FEKETE, et al. Neuropeptide Y Has a Central Inhibitory Action on the Hypothalamic-Pituitary-Thyroid Axis. Endocrinology 2001;142(6):

Agents: Neuropeptide Y  
Vehicle: CSF, artificial;  
Route: CSF/CNS (left lateral ventricle);  
Species: Rat;  
Pump: 2001;  
Duration: 3 days;  
ALZET Comments: Dose (10 g/24 hours); Controls received mp w/ vehicle; animal info (adult male Sprague Dawley rats, weighing 230–260 g); Brain coordinates (AP 20.8; Lat 1.2; d-Vent3.2); cyanoacrylate adhesive;

P4311: D. D. Pierroz, et al. Many LH peaks are needed to physiologically stimulate testosterone secretion: modulation by fasting and NPY. American Journal of Physiology Endocrinology and Metabolism 1999;276(E603-E610

Agents: Neuropeptide Y  
Vehicle: Saline; Ascorbic acid; BSA;  
Route: CSF/CNS;  
Species: Rat;  
Pump: 2001;  
Duration: 1 week;  
ALZET Comments: Controls received no treatment; peptides; vehicle was filter sterilized

P4132: J. E. McMinn, et al. NPY-induced overfeeding suppresses hypothalamic NPY mRNA expression: potential roles of plasma insulin and leptin. Regul. Pept 1998;75-76(425-431

Agents: Neuropeptide Y, human  
Vehicle: CSF, artificial;  
Route: CSF/CNS (third ventricle);  
Species: Rat;  
Pump: 2002;  
Duration: Not Stated;  
ALZET Comments: Controls received mp w/vehicle; cannula placement verified one week after placement by icv injection of angiotensin II; pumps implanted 3 weeks after cannula placement; peptides

P3830: D. White. Intrathecal neuropeptide Y exacerbates nerve injury-induced mechanical hyperalgesia. Brain Research 1997;750(141-146

Agents: Neuropeptide Y; Trinositol, a-  
Vehicle: Saline; Heparin;  
Route: CSF/CNS (intrathecal);  
Species: Rat;  
Pump: Not Stated;  
Duration: 14 days;  
ALZET Comments: peptides

Q6028: P. D. Raposoinho, et al. Chronic administration of neuropeptide Y into the lateral ventricle of C57BL/6J male mice produces an obesity syndrome including hyperphagia, hyperleptinemia, insulin resistance, and hypogonadism. Mol Cell Endocrinol 2001;185(1-2):195-204

Agents: Neuropeptide Y; Peptide YY 3-36  
Vehicle: Saline;  
Route: CSF/CNS (right lateral ventricle);  
Species: Mice;  
Pump: Not Stated;  
Duration: 7 days;  
ALZET Comments: animal info (Male, Sprague Dawley, C57BL/6J); Neuropeptide Y aka pNPY, Peptide YY 3-26 aka PPY 3-36 ; ALZET brain infusion kit 2 used; Brain coordinates (0.5 mm posterior and 1.0 lateral to bregma and 2.2 mm below brain surface); cyanoacrylate adhesive;
P4124: A. Al-Arabi, et al. Synergistic action by neuropeptide y (NPY) and norepinephrine (NE) on food intake, metabolic rate, and brown adipose tissue (bat) causes remarkable weight loss in the obese (fa/fa) Zucker rat. Biomedical Sciences Instrumentation 1997;33(216-225
Agents: Neuropeptide Y; Norepinephrine Vehicle: Not Stated; Route: SC; Species: Rat; Pump: 2002; Duration: 14 days;
ALZET Comments: controls received mp w/vehicle; agents infused alone or in combination; peptides

P3462: D. M. White, et al. Vasoactive intestinal polypeptide and neuropeptide Y act indirectly to increase neurite outgrowth of dissociated dorsal root ganglion cells. Neuroscience 1996;73(3):881-887
Agents: Vasoactive intestinal peptide; Neuropeptide Y; VIP antagonist; Trinositol, a- Vehicle: Heparin; Saline; Route: CSF/CNS (intrathecal); Species: Rat; Pump: 2002; Duration: 2 weeks;
ALZET Comments: Peptides; 10 U/ml of heparin

P4109: D. D. Pierroz, et al. Chronic administration of neuropeptide Y into the lateral ventricle inhibits both the pituitary-testicular axis and growth hormone and insulin-like growth factor I secretion in intact adult male rats. Endocrinology 1996;137(1):3-12
Agents: Neuropeptide Y, synthetic porcine; Neuropeptide Y-(13-36) Vehicle: Not Stated; Route: CSF/CNS; Species: Rat; Pump: 2001; Duration: 7 days;
ALZET Comments: controls received sham surgery; dose-response (6, 18, 36 ug/d); peptides

P2624: R. Zelis, et al. Neuropeptide Y infusion decreases plasma renin activity in postmyocardial infarction rats. J. Cardiovasc. Pharmacol 1994;24(6):896-899
Agents: Neuropeptide Y Vehicle: Sodium chloride; Route: IV (jugular); Species: Rat; Pump: Not Stated; Duration: 1 week;
ALZET Comments: controls received mp w/ vehicle; peptides

P2710: M. G. Dube, et al. Evidence that neuropeptide Y is a physiological signal for normal food intake. Brain Research 1994;646(341-344
Agents: Antibody, neuropeptide Y; Immunoglobulin, anti-neuropeptide Y Vehicle: Serum, normal rabbit; CSF, artificial; Saline; Immunoglobulin, normal rabbit serum; Route: CSF/CNS (third ventricle); Species: Rat; Pump: 2001D; Duration: 24 hours;
ALZET Comments: controls received mp w/ rabbit serum; peptides

P3078: N. Zarjevski, et al. Chronic intracerebroventricular neuropeptide-Y administration to normal rats mimics hormonal and metabolic changes of obesity. Endocrinology 1993;133(4):1753-1758
Agents: Neuropeptide Y, porcine Vehicle: PBS; Albumin, bovine serum; Ascorbic acid; Route: CSF/CNS; Species: Rat; Pump: 2001; Duration: 7 days;
ALZET Comments: controls received mp with vehicle; peptides; stylet maintained cannula patency for 1 week after placement

P3087: B. Xu, et al. Role of neuropeptide-Y in episodic luteinizing hormone release in ovariectomized rats: an excitatory component and opioid involvement. Endocrinology 1993;133(2):747-754
Agents: Antibody, neuropeptide Y Vehicle: Serum, normal rabbit; CSF, artificial; Route: CSF/CNS (third ventricle); Species: Rat; Pump: 2001D; Duration: Not Stated;
ALZET Comments: Controls received mp with vehicle; peptides

P2731: N. M. Gruaz, et al. Evidence that neuropeptide Y could represent a neuroendocrine inhibitor of sexual maturation in unfavorable metabolic conditions in the rat. Endocrinology 1993;133(2):747-754
Agents: Neuropeptide Y, synthetic porcine Vehicle: Sodium chloride; Ascorbic acid; Albumin, bovine serum; PBS; Route: CSF/CNS; Species: Rat; Pump: 2001; Duration: 7 days;
ALZET Comments: controls were food-restricted and received mp w/ vehicle or were fed ad libitum; peptides

P2158: C. Catzeflis, et al. Neuropeptide Y administered chronically into the lateral ventricle profoundly inhibits both the gonadotropin and the somatotropin axis in intact adult female rats. Endocrinology 1993;132(1):224-234
Agents: Neuropeptide Y, porcine Vehicle: Ascorbic acid; Albumin, bovine serum; PBS; Route: CSF/CNS; Species: Rat; Pump: 2001; Duration: 7 days;
ALZET Comments: controls received mp with vehicle; dose-response (graph p. 227); peptides
P1983: B. Beck, et al. Chronic and continuous intracerebroventricular infusion of neuropeptide Y in Long-Evans rats mimics the feeding behaviour of obese Zucker rats. Int. J. Obes 1992;16(295-302
Agents: Neuropeptide Y Vehicle: CSF, artificial; Route: CSF/CNS; Species: Rat; Pump: 2002; Duration: Not Stated;
ALZET Comments: Functionality of mp verified by measurement of residual volume; stress/adverse reaction: small weight loss in animals with vehicle-containing pumps p298; stability verified in vitro at 37 C for 14 days; peptides

P1716: B. Waeber, et al. Prevention of renal hypertension in the rat by neuropeptide Y. J. Hypertens 1990;8(21-25
Agents: Neuropeptide Y Vehicle: Saline; Route: IV (jugular); Species: Rat; Pump: 1702; Duration: 8, 9 days;
ALZET Comments: Peptides

P1961: B. Beck, et al. Chronic and continuous ICV infusion of neuropeptide Y disrupts the nycthemeral feeding patterns in rats. Annals of the New York Academy of Sciences 1990;611(491-494
Agents: Neuropeptide Y Vehicle: CSF, artificial; Route: Not Stated; Species: Rat; Pump: 2002; Duration: 2 weeks;
ALZET Comments: peptides