



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, 250-300g); 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:** Route: SC; **Species:** Rat; **Pump:** 2004; **Duration:** 3 months;

ALZET Comments: Controls received mp w/ PBS; 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 **Vehicle:** Heparin; BSA; **Route:** IA; **Species:** Swine; **Pump:** 2ML4; **Duration:** 5 weeks;

ALZET Comments: Animal info (swine model of metabolic syndrome with chronic myocardial ischemia, six-week-old, male; Yorkshire miniswine); ischemia (arterial)

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; PBS; **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 Nephilysin 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; 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. Raposinho, *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- α ; Brain-derived neurotrophic factor; Vasoactive intestinal polypeptide; Peptide, histidine-isoleucine; Gastrin releasing peptide; Substance P; Neuromedin-C; Neurokinin A; Neuropeptide K; Neuropeptide Y; Somatostatin; Antrin; Cholecystokinin; Thyrotropin-releasing hormone; Neurotensin; 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



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(4):1891-1894

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 libitium; peptides

P2158: C. Catzeflis, *et al.* Neuropeptide Y administered chronically into the lateral ventricle profoundly inhibits both the gonadotropic and the somatotrophic 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