References on the Administration of Vasoactive Intestinal Polypeptide Using ALZET® Osmotic Pumps

**Q8453:** K. A. Duggan, *et al.* Vasoactive intestinal peptide infusion reverses existing renal interstitial fibrosis via a blood pressure independent mechanism in the rat. *Eur J Pharmacol* 2020;873(172979

**Agents:** Vasoactive intestinal peptide **Vehicle:** Hartmann’s Solution; **Route:** IV (iliac); **Species:** Rat; **Pump:** Not stated; **Duration:** 14 weeks;

**ALZET Comments:** Dose (5 pmol/kg/min); Controls received mp w/ vehicle; animal info (Fourteen week old spontaneous hypertensive rat); long-term study; Blood pressure measured via tail cuff plethysmography; 193 mmHg - 200 mmHg; Vasoactive intestinal peptide aka VIP; peptides; dependence;


**Agents:** Peptide, Vasoactive intestinal **Vehicle:** Saline; **Route:** SC; **Species:** Mice (transgenic); **Pump:** Not Stated; **Duration:** 2 days;

**ALZET Comments:** Controls received mp w/ vehicle; animal info (male, 9x-NFAT-luciferase, 2-3 months old, 20-25g); peptides; Dose (0.166 mg/kg/day);

**Q0805:** Y. Sheikine, *et al.* Activation of VPAC(1) receptors aggravates early atherosclerosis in hypercholesterolemic apolipoprotein E-deficient mice. *Biochemical and Biophysical Research Communications* 2010;402(3):471-476

**Agents:** Vasoactive intestinal peptide; vasoactive intestinal peptide pituitary adenylate cyclase-activating peptide receptor agonist **Vehicle:** PBS; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 4 weeks;

**ALZET Comments:** Controls received mp w/ vehicle; animal info (female, apoE −/−, 12 wks old); peptides


**Agents:** Vasoactive intestinal polypeptide, p-chloro-D-Phe5Leu17 **Vehicle:** Not Stated; **Route:** SC; **Species:** Rat; **Pump:** 1007D; **Duration:** 7 days;

**ALZET Comments:** Controls received mp w/ vehicle; peptides; animal info (male, Sprague Dawley, 6-8 wks old); VPAC 1/2 receptor antagonist

**P7186:** R. Newman, *et al.* Vasoactive intestinal peptide impairs leucocyte migration but fails to modify experimental murine colitis. *Clinical & Experimental Immunology* 2005;139(3):411-420

**Agents:** Vasoactive intestinal peptide **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 3, 7 days;

**ALZET Comments:** Controls received mp w/ saline; functionality of mp verified by VIP plasma levels; comparison of IP injections vs. mp; immunology; peptides; TNBS-induced colitis

**P5911:** M. C. Grimm, *et al.* Cutting edge: Vasoactive intestinal peptide acts as a potent suppressor of inflammation in vivo by trans-deactivating chemokine receptors. *Journal of Immunology* 2003;171(10):4990-4994

**Agents:** Vasoactive intestinal peptide **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 48 hours;

**ALZET Comments:** Controls received mp w/ saline; immunology; peptides

**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

Agents: Vasoactive intestinal peptide; forskolin  
**Vehicle:** PBS; DMSO;  
**Route:** SC;  
**Species:** Mice (nude);  
**Pump:** 2002;  
**Duration:** 8 weeks;  
**ALZET Comments:** Controls received mp w/PBS; dose-response (pg. 14376-14377); long-term study, pumps replaced after 2 weeks; cancer (lung); multiple pumps per animal (2) in some animals; “For systemic delivery of peptides in vivo, constant infusion by osmotic pumps increases efficacy and reduces side effects relative to bolus injection.” (p. 14377).

**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

**P2858:** G. R. Pitts, et al. Role of vasoactive intestinal peptide in the control of prolactin-induced turkey incubation behavior. II. Chronic infusion of vasoactive intestinal peptide. Biology of Reproduction 1994;50(1350-1356  
**Agents:** Vasoactive intestinal peptide, porcine; Prolactin, ovine  
**Vehicle:** Saline; Sodium bicarbonate;  
**Route:** SC; CSF/CNS; CSF/CNS (median eminence);  
**Species:** bird (turkey);  
**Pump:** 2001; 2002;  
**Duration:** 7, 10, 12 days;  
**ALZET Comments:** controls received mp with saline; functionality of mp verified by residual volume; stability of pVIP -- still potent after 17 days in sc pump; peptides; pumps implanted after recovery from CNS surgery

**Agents:** Somatostatin; Substance P; Vasoactive intestinal peptide  
**Vehicle:** Not Stated;  
**Route:** SC;  
**Species:** mice;  
**Pump:** Not Stated;  
**Duration:** 7 days;  
**ALZET Comments:** immunology; peptides

**Agents:** Thyrotropin-rel. factor; Vasoactive intestinal peptide  
**Vehicle:** Acetic acid;  
**Route:** SC;  
**Species:** Rat;  
**Pump:** 2001;  
**Duration:** 4 days;  
**ALZET Comments:** controls received mp w/ vehicle; functionality of mp verified by elevated plasma levels; peptides