



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

Q5682: A. M. Szema, *et al.* NFATc3 and VIP in Idiopathic Pulmonary Fibrosis and Chronic Obstructive Pulmonary Disease. *PLoS One* 2017;12(1):e0170606

ALZET Comments: Peptide, Vasoactive intestinal; Saline; SC; Mice (transgenic); 2 days; Controls received mp w/ vehicle; animal info (male, 9x-NFAT-luciferase, 2-3 months old, 20-25g); peptides; Dose (0.166 mg/kg/day);.

Q1110: W. Habre, *et al.* Prevention of bronchial hyperreactivity in a rat model of precapillary pulmonary hypertension. *RESPIRATORY RESEARCH* 2011;12(;):U1-U8

ALZET Comments: Vasoactive intestine peptide; iloprost; tezosentan; IP; Rat; 2ML4; 4 weeks; Controls received mp w/ saline; animal info (adult. male, Sprague Dawley, 213-382 g); peptides.

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

ALZET Comments: Vasoactive intestinal peptide; vasoactive intestinal peptide pituitary adenylate cyclase-activating peptide receptor agonist; PBS; SC; Mice; 4 weeks; Controls received mp w/ vehicle; animal info (female, apoE -/-, 12 wks old); peptides.

P9398: B. K. Choudhury, *et al.* Gene plasticity in colonic circular smooth muscle cells underlies motility dysfunction in a model of postinfective IBS. *American Journal of Physiology-Gastrointestinal and Liver Physiology* 2009;296(3):G632-G642

ALZET Comments: Vasoactive intestinal polypeptide, p-chloro-D-Phe5Leu17-; SC; Rat; 1007D; 7 days; 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 and Experimental Immunology* 2005;139(3):411-420

ALZET Comments: Vasoactive intestinal peptide; SC; Mice; 3, 7 days; 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

ALZET Comments: Vasoactive intestinal peptide; Saline; SC; Mice; 48 hours; 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

ALZET Comments: 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;; CSF, artificial; CSF/CNS (third ventricle); hamster; 2002; 18-22 days; peptides.

P4528: K. Maruno, *et al.* Vasoactive intestinal peptide inhibits human small-cell lung cancer proliferation *in vitro* and *in vivo*. *Proc. Natl. Acad. Sci* 1998;95(14373-14378)

ALZET Comments: Vasoactive intestinal peptide; forskolin; PBS; DMSO; SC; Mice (nude); 2002; 8 weeks; 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).

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

ALZET Comments: Vasoactive intestinal peptide; Neuropeptide Y; VIP antagonist; Trinositol, α -; Heparin; Saline; CSF/CNS (intrathecal); Rat; 2002; 2 weeks; 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. *Biol. Reprod* 1994;50(1350-1356

ALZET Comments: Vasoactive intestinal peptide, porcine; Prolactin, ovine; Saline; Sodium bicarbonate; SC; CSF/CNS; CSF/CNS (median eminence); bird (turkey); 2001; 2002; 7, 10, 12 days; 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.

P1943: A. M. Stanis, *et al.* The role of vasoactive intestinal peptide and other neuropeptides in the regulation of the immune response in vitro and in vivo. *Ann. N. Y. Acad. Sci* 1987;527(478-485

ALZET Comments: Somatostatin; Substance P; Vasoactive intestinal peptide; SC; mice; 7 days; immunology; peptides.

P0824: M. Niimi, *et al.* Plasma concentration of prolactin during four-day osmotic pump infusion of thyrotropin-releasing hormone and vasoactive intestinal polypeptide in rats. *Endocrinol. Japan* 1985;32(6):929-932

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