References on the Administration of Nitric Oxide Synthase Inhibitors Using ALZET® Osmotic Pumps

1. 1400W

Q4294: E. I. Ager*, et al.* Blockade of MMP14 Activity in Murine Breast Carcinomas: Implications for Macrophages, Vessels, and Radiotherapy. JOURNAL OF THE NATIONAL CANCER INSTITUTE 2015;107(U137-U148
ALZET Comments: 1400W dihydrochloride; SC; Mice (nude); 1002; Animal info (female, nu/nu, 6-8 weeks old); cancer (breast); enzyme inhibitor (nitric oxide synthase); immunology;.

Q3098: F. Klug*, et al.* Low-Dose Irradiation Programs Macrophage Differentiation to an iNOS(+)/M1 Phenotype that Orchestrates Effective T Cell Immunotherapy. CANCER CELL 2013;24(5):589-602
ALZET Comments: 1400W; PBS; SC; Mice; 2 weeks; Controls received mp w/ vehicle; animal info (RT5); cancer (cancer immunotherapy); immunology; iNOS inhibitor.

Q1253: M. Nishida*, et al.* Heterologous down-regulation of angiotensin type 1 receptors by purinergic P2Y(2) receptor stimulation through S-nitrosylation of NF-kappaB. PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA 2011;108(16):6662-6667
ALZET Comments: 1400W; suramin; Saline; Mice; Controls received mp w/ vehicle; animal info (C57BL/6J, 6 wks old, male); enzyme inhibitor (NO synthase, iNOS).

P8887: A. H. Hu*, et al.* Tonic beta-adrenergic drive provokes proinflammatory and proapoptotic changes in aging mouse heart. REJUVENATION RESEARCH 2008;11(1):215-226
ALZET Comments: 1400W; Isoproterenol bitartrate; SC; Mice; 2002; 14 days; Controls received mp w/ vehicle; enzyme inhibitor (iNOS); animal info (C57BL/6, 3, 20 months old); ischemia (myocardial).

P8870: Y. I. Chirino*, et al.* Selective iNOS inhibition reduces renal damage induced by cisplatin. TOXICOLOGY LETTERS 2008;176(1):48-57
ALZET Comments: 1400W; cisplatin; Saline; SC; Rat; 2001; 3 days; Controls received mp w/ vehicle; enzyme inhibitor (iNOS); animal info (male, Wistar, 230-275g.).

P8466: P. Zhang*, et al.* Inducible nitric oxide synthase deficiency protects the heart from systolic overload-induced ventricular hypertrophy and congestive heart failure. Circulation Research 2007;100(7):1089-1098
ALZET Comments: 1400W; Saline; SC; Mice; 2002; 2 weeks; Controls received mp w/ vehicle; cardiovascular; animal info (2-3 months old, CS7BL16).

P7221: F. J. Perez-Asenio*, et al.* Inhibition of iNOS activity by 1400W decreases glutamate release and ameliorates stroke outcome after experimental ischemia. NEUROBIOLOGY OF DISEASE 2005;18(2):375-384
ALZET Comments: 1400W; IP; Rat; 2-72 hours; Controls received mp w/ saline or no treatment; MCAO.

P6534: D. E. Hu*, et al.* Tumor cell-derived nitric oxide is involved in the immune-rejection of an immunogenic murine lymphoma. Cancer Research 2004;64(1):152-161
ALZET Comments: 1400W; PBS; SC; Mice; 2001; Controls received mp w/ vehicle; enzyme inhibitor (iNOS); cancer (lymphoma).

P5175: B. R. Sharp*, et al.* Differential response to myocardial reperfusion injury in eNOS-deficient mice. American Journal of Physiology-Heart and Circulatory Physiology 2002;282(H2422-H2426
ALZET Comments: 1400W; IP; Mice (knockout); Cardiovascular; enzyme inhibitor; 1400W is an inducible nitric oxide synthase (iNOS) inhibitor.

P5028: A. Koarai*, et al.* Allergic airway hyperresponsiveness and eosinophil infiltration is reduced by a selective iNOS inhibitor, 1400W, in mice. Pulmonary Pharmacology & Therapeutics 2000;13(267-275

ALZET Comments: 1400W; Saline; SC; mice; 1003D; 26 hours; Controls received mp w/ vehicle; immunology; 1400 W is a selective inducible Nitric Oxide Synthase (iNOS) inhibitor; asthma.

P4279: M. A. Rudd*, et al.* Salt-induced hypertension in Dahl salt-resistant and salt-sensitive rats with NOS II inhibition. Am. J. Physiol. (Heart Circ. Physiol. 46) 1999;277(H732-H739
ALZET Comments: AMT; 1400W; Ethylisourea, S-; Rat; 12 days; Cardiovascular; agents are NOS II inhibitors; AMT is 2-amino-5,6-dihydro-6-methyl-4H-1,3-thiazine; S-ethylisourea is also known as EIT; enzyme inhibitors; nitric oxide synthase inhibitor;.

P3742: L. L. Thomsen*, et al.* Selective inhibition of inducible nitric oxide synthase inhibits tumor growth in vivo: studies with 1400W, a novel inhibitor. Cancer Res 1997;57(3300-3304
ALZET Comments: 1400W; Water, sterile; SC; mice; 2002; 6, 12, 13 days; controls received mp w/ vehicle; functionality of mp verified by measurement of 1400W in plasma and tumor samples; stress/adverse reaction: unexpected symptoms in 2 mice in high dose group (12 mg/kg/h), not clear if compound toxicity or bacterial infection (see pg. 3303); cancer; 1400W is N-(3-(aminomethyl)benzyl)acetamidine, a NO synthase inhibitor.

2. L-NAME

Q6918: M. Lemery Magnin*, et al.* Assessment of Placental Perfusion in the Preeclampsia L-NAME Rat Model with High-Field Dynamic Contrast-Enhanced MRI. Fetal Diagn Ther 2018;44(4):277-284
ALZET Comments: L-NAME; Saline; SC; Rat (pregnant); 2ML1; 3 days; Dose (50 mg/day); Controls received mp w/ vehicle; animal info (Pregnant female Sprague-Dawley rats on embryonic day 16); L-NAME aka Nω-nitro-L-arginine methyl ester;.

Q7151: D. S. Lee*, et al.* PDI-mediated S-nitrosylation of DRP1 facilitates DRP1-S616 phosphorylation and mitochondrial fission in CA1 neurons. Cell Death Dis 2018;9(9):869
ALZET Comments: RNA, small interfering (protein disulfide isomerase), L-NAME; Saline; CSF/CNS (right lateral ventricle); Rats; 1007D; Dose (15 µg/µl L-NAME); animal info (7-week-old male Sprague-Dawley rats); Nω-nitro-L-arginine methyl ester hydrochloride aka L-name; enzyme inhibitor (protein disulfide isomerase); ALZET brain infusion kit 1 used; Brain coordinates (right lateral ventricle, 1mm posterior; 1.5 mm lateral; 3.5 mm depth from bregma);.

Q6927: A. R. Jeon*, et al.* PDI Knockdown Inhibits Seizure Activity in Acute Seizure and Chronic Epilepsy Rat Models via S-Nitrosylation-Independent Thiolation on NMDA Receptor. Front Cell Neurosci 2018;12(438
ALZET Comments: RNA, small interfering; L-NAME; PACMA31; Saline; CSF/CNS (Right lateral ventricle); Rat; 1007D; 1 week; Controls received mp w/ vehicle; animal info (7 week old male Sprague-Dawley rats); enzyme inhibitor (PACMA31 is a selective PDI inhibitor); ALZET brain infusion kit 1 used; Brain coordinates (1 mm posterior; 1.5 mm lateral; 3.5 mm depth from bregma); Therapeutic indication (seizure);.

Q6279: L. M. Yamaleyeva*, et al.* Photoacoustic imaging for in vivo quantification of placental oxygenation in mice. FASEB J 2017;31(12):5520-5529
ALZET Comments: L-NAME; Mice; 2001; 7 days; Dose (50 mg/kg/d); animal info (Female C57Bl/6 mice); L-NG-Nitroarginine methyl ester aka L-NAME;.

Q6182: B. Sitohy*, et al.* Early Actions of Anti-Vascular Endothelial Growth Factor/Vascular Endothelial Growth Factor Receptor Drugs on Angiogenic Blood Vessels. Am J Pathol 2017;187(10):2337-2347
ALZET Comments: L-NAME, D-NAME; PBS; SC; Mice (nude); 1003D; 1 day; Dose: L-NAME (134 mg/kg/day); Controls received mp w/ vehicle; animal info (4 to 6-week-old female athymic nude mice, wild-type C57BL/6 and eNOS null mice); N(G)-nitro-L-arginine methyl ester aka L-NAME; N(G)-nitro-L-arginine methyl ester (inactive isomer) aka D-NAME; “Because oral administration could not be counted on to deliver a consistent amount of drug reliably over a short (1 day) period of time, L- and D-NAME were administered by way of s.c. implanted minipumps.”.

Q5684: Y. L. Tain*, et al.* Maternal melatonin or N-acetylcysteine therapy regulates hydrogen sulfide-generating pathway and renal transcriptome to prevent prenatal N(G)-Nitro-L-arginine-methyl ester (L-NAME)-induced fetal programming of hypertension in adult male offspring. Am J Obstet Gynecol 2016;215(5):636 e1-636 e72
ALZET Comments: L-NAME; SC; Rat (pregnant); Controls received mp w/ saline; animal info (female, Sprague Dawley); teratology; cardiovascular; Bp measured using tail cuff; Bp measured using tail cuff; Dose (60 mg/kg/day);.

Q5166: V. A. Netti*, et al.* Effects of nitric oxide system and osmotic stress on Aquaporin-1 in the postnatal heart. Biomed Pharmacother 2016;81(225-34
ALZET Comments: L-NAME; Saline; SC; Rat; 1003D; 3 day; Controls received mp w/ vehicle; animal info (male, Sprague Dawley, 25-50 days old); cardiovascular; L-NAME solution prepared in laminar flow cabinet and used filter; Dose (4 mg/kg/day);.

Q4123: Y. L. Tain*, et al.* Maternal Citrulline Supplementation Prevents Prenatal N(G)-Nitro-L-Arginine-Methyl Ester (L-NAME)-Induced Programmed Hypertension in Rats. Biology of Reproduction 2015;92(U27-U33
ALZET Comments: L-NAME; SC; Rat (pregnant); Animal info (female, Sprague Dawley, 10 weeks old); teratology; cardiovascular;.

Q4602: Y. L. Tain*, et al.* Transcriptome Analysis in Rat Kidneys: Importance of Genes Involved in Programmed Hypertension. INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES 2015;16(4744-4758
ALZET Comments: L-NAME; SC; Rat (pregnant); Controls received mp w/ saline, iso-osmotic; animal info (female, Sprague Dawley); teratology; cardiovascular; bp measured using tail cuff;.

Q4983: L. H. Pojoga*, et al.* Cooperative Role of Mineralocorticoid Receptor and Caveolin-1 in Regulating the Vascular Response to Low Nitric Oxide-High Angiotensin II-Induced Cardiovascular Injury. J Pharmacol Exp Ther 2015;355(1):32-47
ALZET Comments: Angiotensin II; L-NAME; SC; 4 days; animal info (male, cav-1 KO, 12 weeks old); AngII infused to induce cardiovascular injury; Dose (L-NAME 0.1 - 0.2 mg/mL; AngII 0.7-2.8 mg/kg/day);.

Q4122: Y. L. Tain*, et al.* Long-Term Effects of Maternal Citrulline Supplementation on Renal Transcriptome Prevention of Nitric Oxide Depletion-Related Programmed Hypertension: The Impact of Gene-Nutrient Interactions. International Journal of Molecular Sciences 2014;15(23255-23268
ALZET Comments: L-NAME; SC; Rat (pregnant); Controls received mp w/ saline; animal info (female, Sprague Dawley, 10 weeks old); teratology; cardiovascular;.

Q3270: E. Zana-Taieb*, et al.* Effect of Two Models of Intrauterine Growth Restriction on Alveolarization in Rat Lungs: Morphometric and Gene Expression Analysis. PLoS One 2013;8(11):U35-U45
ALZET Comments: L-NAME; Saline; SC; Rat (pregnant); Controls received high protein diet; animal info (Female, Sprague Dawley); teratology.

Q3102: A. Kurabayashi*, et al.* Conditional VHL Gene Deletion Causes Hypoglycemic Death Associated with Disproportionately Increased Glucose Uptake by Hepatocytes through an Upregulated IGF-I Receptor. PLoS One 2013;8(7):U1405-U1415
ALZET Comments: L-NAME; Insulin-like growth factor 1 receptor; Saline; acetic acid; SC; Mice; 14 days; Controls received mp w/ vehicle; animal info (VHL-KO); 25% acetic acid used; immunology.

Q2618: L. Butruille*, et al.* Maternal hypertension induced by NO blockade does not program adult metabolic diseases in growth-restricted rat fetuses. METABOLISM-CLINICAL AND EXPERIMENTAL 2013;62(3):442-445
ALZET Comments: L-NAME; SC; Rat (pregnant); 2ML1; Control animals received mp w/ saline; animal info (Wistar Han, female, E17).

Q3026: H. Abe*, et al.* Nitric Oxide Induces Vascular Endothelial Growth Factor Expression in the Rat Placenta in Vivo and in Vitro. BIOSCIENCE BIOTECHNOLOGY AND BIOCHEMISTRY 2013;77(5):971-976

ALZET Comments: L-NAME; SC; Rat (pregnant); 2001D; 24 hours; Animal info (Crj Wistar); enzyme inhibitor (NOS, nitric oxide).

Q2193: J. Ivars*, et al.* Maternal hypertension induces tissue-specific modulations of the apelinergic system in the fetoplacental unit in rat. Peptides 2012;35(1):136-138
ALZET Comments: L-NAME; SC; Rat (pregnant); 5 days; Animal info (Wistar, female, E17); enzyme inhibitor (nitric oxide synthase, NOS);.

Q2087: L. Butruille*, et al.* Prenatal fasudil exposure alleviates fetal growth but programs hyperphagia and overweight in the adult male rat. European Journal of Pharmacology 2012;689(1-3):278-284
ALZET Comments: L-NAME; fasudil; SC; Rat (pregnant); Controls received mp w/ normal saline; animal info (Wistar Han, 200-250 g, E14, female); enzyme inhibitor (nitric oxide synthase, NOS, Rho-kinase, ROCK); one group contained mixture of fasudil and L-NAME; teratology.

3. L-NMA

P5591: N. Presle*, et al.* Cartilage protection by nitric oxide synthase inhibitors after intraarticular injection of interleukin-1beta in rats. Arthritis Rheum 1999;42(10):2094-2102
ALZET Comments: L-NMA; Saline; IP; Rat; 1003D; 72 hours; Controls received mp w/ vehicle; enzyme inhibitor; nitric oxide synthase inhibitors; L-NMA also called N-monomethyl-L-arginine.

P4241: J. Ou*, et al.* Differential effects of nonselective nitric oxide synthase (NOS) and selective inducible NOS inhibition on hepatic necrosis, apoptosis, ICAM-1 expression, and neutrophil accumulation during endotoxemia. Nitric Oxide: Biology & Chemistry 1997;1(5):404-416
ALZET Comments: Aminoguanidine; Lysine, L-N6-(1-imino-ethyl)-; V-PYRRO/NO; L-NAME; L-NMA; Saline; IV (jugular); IV (gastric); Rat; 2001D; 16 hours; controls received mp w/vehicle; good methods (p. 406); nitric oxide synthase inhibitors; PE10 catheter tubing inserted in gastric vein; some animals implanted with one pump for gastric vein and one for jugular vein; NMA is NG-monomethyl-L-arginine.

4. L-NMMA

P7793: S. Seto*, et al.* Contribution of central nitric oxide to the regulation of blood pressure and sodium balance in DOCA-salt hypertension. Journal of Cardiovascular Pharmacology 2006;47(5):680-685
ALZET Comments: L-NMMA; IP; CSF/CNS; Rat; 2ML4; 4 weeks; Controls received mp w/ saline; replacement therapy (nephrectomy); dose-response (fig. 1); enzyme inhibitor (no synthase); cardiovascular; animal info (male, Wistar, 7 wk. old, 240g.); cannula location confirmed by methylene blue staining.

P7271: S. Kashiwagi*, et al.* NO mediates mural cell recruitment and vessel morphogenesis in murine melanomas and tissue-engineered blood vessels. Journal of Clinical Investigation 2005;115(7):1816-1827
ALZET Comments: L-NMMA; D-NMMA; SC; Mice; mice (SCID); 1002; 8, 21 days; Controls received mp w/ D-NMMA; pumps replaced at day 14; enzyme inhibitor (NO synthase); cancer (melanoma); cardiovascular; eNOS -/- mice; iNOS -/- mice.

P6754: Y. Momohara*, et al.* Roles of endogenous nitric oxide synthase inhibitors and endothelin-1 for regulating myometrial contractions during gestation in the rat. MOLECULAR HUMAN REPRODUCTION 2004;10(7):505-512
ALZET Comments: L-NMMA; IP; Rat; 2 weeks; Controls received mp w/ saline; enzyme inhibitor (no synthase).

P6845: J. Hagendoorn*, et al.* Endothelial nitric oxide synthase regulates microlymphatic flow via collecting lymphatics. Circulation Research 2004;95(2):204-209
ALZET Comments: L-NMMA; D-NMMA; SC; Mice; 3 days; Controls received mp w/ D-NMMA; enzyme inhibitor (NO synthase); cardiovascular.

P4418: M. R. Schaffer*, et al.* Inhibition of nitric oxide synthesis in wounds: pharmacology and effect on accumulation of collagen in wounds in mice. Eur. J. Surg 1999;165(262-267
ALZET Comments: L-NMMA; Aminoguanidine hemisulphate; MITU;; PBS;; IP;; mice;; 10 days;; control received mp w/vehicle; comparison of IP injections vs. mp; wound healing study; MITU is S-methyl isothiouronium, a competitive NO synthase inhibitor.

R0140: J. Li*, et al.* Nitric oxide IV. determination of nitric oxide protection and toxicity in liver. Am. J. Physiol 1999;276(G1069-G1073
ALZET Comments: L-NMMA; L-NAME; Aminoguanidine; IV (hepatic portal);; Rat;; nitric oxide synthase inhibitors;.

P4228: Y. Wada*, et al.* Chronic inhibition of nitric oxide in central nervous system does not cause hypertension. Hypertension Res 1998;21(97-101
ALZET Comments: L-NMMA; D-NMMA; CSF/CNS (cisterna magna); Rat; 2001; 7 days; controls received mp w/D-NMMA; no stress (p. 98); nitric oxide synthase inhibitor; L-NMMA is N6-monomethyl-L-arginine; silastic PE10 tubing connected to PE50 tubing; pump implanted 7 days after cannula implantation; catheter patency verified; cardiovascular.

P3522: Y. Suzuki*, et al.* Central administration of a nitric oxide synthase inhibitor impairs spatial memory in spontaneous hypertensive rats. Neuroscience Letters 1996;207(105-108
ALZET Comments: L-NMMA; Saline; Trypan blue; CSF/CNS (dorsal third ventricle); Rat; 2001; no duration posted; agent is N-monomethyl-L-arginine; enzyme inhibitor: nitric oxide synthase.

P3473: T. I. Cohen*, et al.* Intrathecal infusion of the Nitric Oxide Synthase Inhibitor N-methyl L-arginine after experimental spinal cord injury in guinea pigs. J. Neurotrauma 1996;13(7):361-369
ALZET Comments: L-NMMA; D-NMMA; CSF/CNS (intrathecal); Guinea pig; 2001; no duration posted; spinal cord injury.

5. L-NNA

P4395: K. S. Cramer*, et al.* A role for nitric oxide in the development of the ferret retinogeniculate projection. Journal of Neuroscience 1996;16(24):7995-8004
ALZET Comments: L-NNA; Saline; CSF/CNS (lateral geniculate nucleus); Ferret; 2002; 12 days; Controls received mp with saline; animals received antibiotics prophylactically.

P2483: F.-Y. Lee*, et al.* N-Nitro-L-arginine administration corrects peripheral vasodilation and systemic capillary hypotension and ameliorates plasma volume expansion and sodium retention in portal hypertensive rats. Hepatology 1993;17(1):84-90
ALZET Comments: L-NNA; Heparin; Saline; IV (jugular); Rat; 2ML1; 6 days; heparin added for anticoagulation; NNA stable for at least 6 days (p. 85).

P2574: A. S. Kimes*, et al.* Attenuation of some signs of opioid withdrawal by inhibitors of nitric oxide synthase. Psychopharmacology 1993;112(521-524
ALZET Comments: L-NNA; Saline; SC; Rat; 2ML1; 8 days; controls received mp w/ saline; comparison of ip injections vs mp; Injected L-NNA "was more effective than continuous infusion"; L-NNA is L-N-nitroarginine and is a NOS inhibitor.

6. Methylisothiourea

P9880: K. L. H. Wu*, et al.* Nitric Oxide and Superoxide Anion Differentially Activate Poly(ADP-ribose) Polymerase-1 and Bax to Induce Nuclear Translocation of Apoptosis-Inducing Factor and Mitochondrial Release of Cytochrome c after Spinal Cord Injury. Journal of Neurotrauma 2009;26(7):965-977
ALZET Comments: Methylisothiourea, S-; PTIO, carboxy-; Coenzyme Q_{10}; tempol; FeTMPyP; furosemide; PJ-34; CSF, artificial; sesame oil; CSF/CNS (spinal cord); Rat; 1003D; 3 days; Controls received mp w/ vehicle; multiple pumps per animal

(2); post op. care (procraine penicillin); adult, male, specific pathogen free, 200-250 g.); spinal cord injury; PE-10 catheter used; PTIO is a NO trapping agent; enzyme inhibitor PJ-34 is poly(ADP-ribose) polymerase PARP inhibitor.

P4781: D. T. Efron*, et al.* A novel method of studying wound healing. Journal of Surgical Research 2001;98(16-20
ALZET Comments: Methylisothiourea, S-; adenovirus vector; gene, mouse iNOS cDNA sequence; Saline; Dye, methlene blue; Dye, India black ink; PBS; SC (wound healing site);; Rat;; 2001; 2ML1;; 7 days;; Controls received mp w/ saline; functionality of mp verified by dye infusion; gene therapy; enzyme inhibitor; methylisothiourea,S- is an inducible nitric oxide synthase inhibitor (iNOS inhibitor); wound healing; SC-implanted pumps infused 2 hydroxyproline sponges via catheter; initial studies used 2ML1 pumps to infuse dyes in order to assess the feasibility of direct infusion with pumps; iNOS inhibitor infusion was with 2001 pumps; pumps were designed to infuse directly into SC implanted polyvinyl sponges at the wound site; Adenovirus vector was dissolved in PBS; iNOS inhibitor was delivered in saline; diagram of pump-catheter assembly and location (p. 18); "Dye infusion demonstrated both grossly and microscopically excellent delivery of the infusate to wound sponges" (p. 18);.

7. MITU

P4418: M. R. Schaffer*, et al.* Inhibition of nitric oxide synthesis in wounds: pharmacology and effect on accumulation of collagen in wounds in mice. Eur. J. Surg 1999;165(262-267
ALZET Comments: L-NMMA; Aminoguanidine hemisulphate; MITU;; PBS;; IP;; mice;; 10 days;; control received mp w/vehicle; comparison of IP injections vs. mp; wound healing study; MITU is S-methyl isothiouronium, a competitive NO synthase inhibitor.

P3442: M. R. Schaffer*, et al.* Nitric oxide regulates wound healing. J. Surg. Res 1996;63(237-240
ALZET Comments: MITU; IP; mice; 10 days; controls received mp w/ PBS; immunology; MITU is S-methyl isothiouronium, a competitive NO synthase inhibitor; wound healing.

8. MLA

P8382: A. Pocivavsek*, et al.* Ventral hippocampal alpha7 and alpha4beta2 nicotinic receptor blockade and clozapine effects on memory in female rats. Psychopharmacology 2006;188(4):597-604
ALZET Comments: Nicotine ditartrate; MLA; erythroidine, dihydro-beta; Saline, sterile; CSF, artifical; SC; CSF/CNS (ventral hippocampus); Rat; 2004; 2ML4; 4 weeks; Controls received mp w/ vehicle; multiple pumps per animal (2); animal info (female, Sprague-Dawley, 200-300g.); neurodegenerative (Alzheimer's disease); methyllycaconitine; cannula placement confirmed w/ Chicago sky-blue dye; schizophrenia.

P7098: K. Kawakami*, et al.* Nitric oxide accelerates interleukin-13 cytotoxin-mediated regression in head and neck cancer animal model. Clinical Cancer Research 2004;10(15):5264-5270
ALZET Comments: MLA; IP; Mice (nude); 1007D; 7 days; Cancer (head, neck); MLA is NW-monomethyl-L-arginine.

P4198: C.-Y. Yim*, et al.* Effects of nitric oxide (NO) synthesis inhibition on antitumor responses during interleukin-2 (IL-2) treatment of mice. Korean J. Internal Med 1996;11(2):93-100
ALZET Comments: MLA; SC; mice; 2001; no duration posted; controls received sham implantation; MLA is n-monomethyl-L-arginine, an NOS inhibitor; cancer; immunology.

P2804: C.-Y. Yim*, et al.* Nitric oxide synthesis contributes to IL-2-induced antitumor responses against intraperitoneal Meth A tumor. J. Immunol 1995;155(4382-4390
ALZET Comments: MLA; SC; mice; 2001; 8 days; controls received sham surgery; pumps replaced after 8 days; cancer; MLA is N-monomethyl-L-arginine, an NOS inhibitor.

P3553: W. E. Samlowski*, et al.* Effectiveness and toxicity of protracted nitric oxide synthesis inhibition during IL-2 treatment of mice. J. Immunother 1995;18(3):166-178
ALZET Comments: MLA; SC; mice; 2001; 1007D; no duration posted; controls received sham implantation or no treatments; immunology; toxicology.

9. Nitroindazole

P9327: Y. H. Tian*, et al.* 7-nitroindazole, nitric oxide synthase inhibitor, attenuates physical dependence on Butorphanol in rat. Synapse 2008;62(8):582-589
ALZET Comments: Butorphanol tartrate; nitroindazole, 7-; Saline; DMSO; CSF/CNS; Rat; 2001; 72 hours; Enzyme inhibitor (nitric oxide synthase, NOS); animal info (male, Sprague Dawley, 250-275 g.); pump connected to catheter after 1 week recovery period; 10% DMSO used; PE60 tubing used.

P8379: T. Thippeswamy*, et al.* NO-cGMP mediated galanin expression in NGF-deprived or axotomized sensory neurons. Journal of Neurochemistry 2007;100(3):790-801
ALZET Comments: Nitroindazole, 7-; DMSO; IP; Rat; 2ML1; 7 days; Controls received mp w/ vehicle; animal info (male, Wistar, Albino, 250-280g.); 20% DMSO.

P7078: E. Y. Kim*, et al.* Changes of [^{3}H]muscimol, [^{3}H]flunitrazepam and [^{3}H]MK-801 binding in rat brain by prolonged ventricular infusion of 7-nitroindazole. Neurochemical Research 2004;29(12):2221-2229
ALZET Comments: Nitroindazole, 7-; CSF/CNS; Rat; 2ML1; 7 days; Controls received mp w/ saline; enzyme inhibitor (nitric oxide synthase); cyanoacrylate adhesive.

P3492: T. Bazzett*, et al.* The neuronal NOS inhibitor L-MIN, but not 7-NINA, reduces neurotoxic effects of chronic intrastriatal administration of quinolinic acid. Brain Research 1997;775(229-232
ALZET Comments: Quinolinic acid; Nitroindazole, 7-, sodium salt; thiocitrulline dihydrochloride, methyl-; PBS; CSF/CNS (striatum); Rat; 2002; no duration posted; dose-response; microdialysis; quinolinic acid administered alone or w/1 other agent in same pump; enzyme inhibitor; nitric oxide synthase inhibitor;.

P3444: M. J. O'Neill*, et al.* Neuroprotective effects of 7-nitroindazole in the gerbil model of global cerebral ischaemia. Eur. J. Pharmacol 1996;310(115-122
ALZET Comments: Nitroindazole, 7-, sodium salt; IP; gerbil; 1003D; 72 hours; comparison of ip injections vs. mp; 2 pumps implanted in each animal; 7-nitroindazole is a neuronal nitric oxide sythase inhibitor; neuroprotection seen when 7-nitroindazole was infused via mp, but not when injected 12X after occlusion.

10. Thiocitrulline

Q6948: Y. Zhang*, et al.* Hyperbaric oxygen produces a nitric oxide synthase-regulated anti-allodynic effect in rats with paclitaxel-induced neuropathic pain. Brain Res 2019;
ALZET Comments: S-Methyl-L-thiocitrulline; Saline; SC; Rat; 1007D; 7 days; Dose (0.5 ± 0.1 µL/hr/day); 0.9% saline used; animal info (male Sprague Dawley); post op. care (Ampicillin, meloxicam); enzyme inhibitor (S-Methyl-L-thiocitrulline is a neuronal nitric oxide synthase (nNOS) inhibitor); Brain coordinates (AP–1.0 mm, ML –2.0 mm, DV –3.5mm from bregma); bilateral cannula used; dependence;.

P3492: T. Bazzett*, et al.* The neuronal NOS inhibitor L-MIN, but not 7-NINA, reduces neurotoxic effects of chronic intrastriatal administration of quinolinic acid. Brain Research 1997;775(229-232
ALZET Comments: Quinolinic acid; Nitroindazole, 7-, sodium salt; thiocitrulline dihydrochloride, methyl-; PBS; CSF/CNS (striatum); Rat; 2002; no duration posted; dose-response; microdialysis; quinolinic acid administered alone or w/1 other agent in same pump; enzyme inhibitor; nitric oxide synthase inhibitor;.