



References on the Cell Proliferation Studies Using ALZET® Osmotic Pumps

1. BrdU

Q6967: M. Kondo, *et al.* Involvement of peroxisome proliferator-activated receptor-alpha in liver tumor production by permethrin in the female mouse. *Toxicol Sci* 2019;

ALZET Comments: Uridine, Bromodeoxy; DMSO; SC; Mice; Rat; 2001; 2ML2; 7 days; 14 days; Dose (8.4 mgBrdU/mouse.; 33.6 mg BrdU/rat); 10% DMSO used; cancer (liver); stress/adverse reaction: One animal was dead due to anesthesia at implantation of osmotic pump;.

Q7027: S. Govindan, *et al.* In vivo pulse labeling of isochronic cohorts of cells in the central nervous system using FlashTag. *Nat Protoc* 2018;13(10):2297-2311

ALZET Comments: Uridine, bromodeoxy-, Deoxyuridine, 5-ethynyl-2'; SC; Mice; 1003D; 3 days; Dose (16 mg/ml BrdU or 10 mg/ml EdU);.

Q6551: E. Yulyaningsih, *et al.* Acute Lesioning and Rapid Repair of Hypothalamic Neurons outside the Blood-Brain Barrier. *Cell Rep* 2017;19(11):2257-2271

ALZET Comments: Uridine, bromodeoxy-; Fibroblast growth factor, basic; CSF, artificial; CSF/CNS (right lateral ventricle); Mice; 1007D; 7 days; Dose (3.2 mg/ml BrdU; 100 µg/ml bFGF); animal info (12- to 18-week-old Npy-GFP mice and Ai14(tdTomato) mice); Brain coordinates (anteroposterior -0.3 mm, lateral +1.0 mm to bregma and dorsoventral -2.5 mm below skull);.

Q6357: I. R. Miousse, *et al.* Dose-response analysis of epigenetic, metabolic, and apical endpoints after short-term exposure to experimental hepatotoxicants. *Food Chem Toxicol* 2017;109(Pt 1):690-702

ALZET Comments: Uridine, bromodeoxy-; PBS; Rat; 2ML1; 7 days; Dose (20 mg/ml); animal info (Ten-week old male F344/DuCrI rats); Bromodeoxyuridine is a structural analog of thymidine that incorporates into nuclear DNA and is used as a surrogate marker of cell proliferation);.

Q6358: R. I. Menzies, *et al.* Transcription controls growth, cell kinetics and cholesterol supply to sustain ACTH responses. *Endocr Connect* 2017;6(7):446-457

ALZET Comments: ACTH; Uridine, bromodeoxy-; Saline; SC; Mice; 2002; 2 weeks; Dose (ACTH: 3 µg/day; BrDU: 1mg/mL); 0.154 M NaCl used; animal info (25g male C57BL6 mice);.

Q5831: M. A. Mandell, *et al.* Continual renewal and replication of persistent *Leishmania major* parasites in concomitantly immune hosts. *Proc Natl Acad Sci U S A* 2017;114(5):E801-E810

ALZET Comments: Uridine, Bromodeoxy; Water; Mice; 2001D; Controls received mp w/ vehicle; animal info (6-10 weeks old); comparison of drinking water administration, multiple IP injections every 3 hours for 18 hours, single IP injection and minipump infusion; Dose (7.2 mg);.

Q6012: C. J. Choi, *et al.* Mode of action and human relevance of THF-induced mouse liver tumors. *Toxicol Lett* 2017;276(138-143)

ALZET Comments: Uridine, bromodeoxy; PBS; SC; Mice (knockout); 2001; 7 days; Controls received mp w/ vehicle; animal info (6-7 weeks; 17-20g); Therapeutic indication (THF, Liver tumor); Dose (15 mg/mL);.

Q6410: C. N. Brocker, *et al.* Hepatocyte-specific PPARA expression exclusively promotes agonist-induced cell proliferation without influence from nonparenchymal cells. *Am J Physiol Gastrointest Liver Physiol* 2017;312(3):G283-G299

ALZET Comments: Uridine, bromodeoxy-; SC; Mice (knockout); 1007D; 7 days; animal info (8-10 week old Ppara wild-type (Ppara_{+/+}) and conventional Ppara-null (Ppara_{-/-}) mice);.

Q5096: H. Williams, *et al.* Wnt2 and WISP-1/CCN4 Induce Intimal Thickening via Promotion of Smooth Muscle Cell Migration. *Arterioscler Thromb Vasc Biol* 2016;36(7):1417-24

ALZET Comments: Uridine, bromodeoxy-; SC; Mice (transgenic); 2004; 3 days; 28 days; animal info (Wnt2 +/-); cardiovascular;.



Q6513: M. L. Thompson, *et al.* Preventing painful age-related bone fractures: Anti-sclerostin therapy builds cortical bone and increases the proliferation of osteogenic cells in the periosteum of the geriatric mouse femur. *Mol Pain* 2016;12(ALZET
Comments: Uridine, bromodeoxy; PBS, Dulbecco's; SC; Mice; 1007D; 7 days; animal info (adult male C57BL/6 J mice.); Controls received mp w/ vehicle;.

Q6652: S. Ribback, *et al.* The Epidermal Growth Factor Receptor (EGFR) Inhibitor Gefitinib Reduces but Does Not Prevent Tumorigenesis in Chemical and Hormonal Induced Hepatocarcinogenesis Rat Models. *Int J Mol Sci* 2016;17(10):
ALZET Comments: Uridine, bromodeoxy; Rat; 2ML1; 7 days; animal info (inbred male and female Lewis rats); 5-Bromo-20-deoxyuridine AKA (BrdU); cancer (Hepatocellular carcinoma);.

Q5340: P. Douvaras, *et al.* Abnormal corneal epithelial maintenance in mice heterozygous for the micropinna microphthalmia mutation *Mp*. *Exp Eye Res* 2016;149(26-39)
ALZET Comments: Uridine, Bromodeoxy-; Saline; SC; Mice; 1007D; 7 days; Controls received mp w/ vehicle; animal info (15-week old *Mp/+* mice); functionality of mp verified by corneal imaging; Dose (50 mg/ml);.

Q5303: S. Di Siena, *et al.* Activated c-Kit receptor in the heart promotes cardiac repair and regeneration after injury. *Cell Death Dis* 2016;7(7):e2317
ALZET Comments: Uridine, Bromodeoxy; SC; mice; 30 days; post op. care (500 µl glucose solution (5% glucose/physiologic solution), analgesic Atradol (3 mg/kg); Dose (0.6 M);.

Q5773: R. E. Cohen, *et al.* Adult Neurogenesis Leads to the Functional Reconstruction of a Telencephalic Neural Circuit. *J Neurosci* 2016;36(34):8947-56
ALZET Comments: Uridine, Bromodeoxy; Saline, DMSO; SC; bird (sparrow); 1007D; 5 days; Controls received mp w/ vehicle; animal info; 7.5% NaCl and 15% DMSO used; Therapeutic indication (Neurogenesis, plasticity); Dose (50 mg/kg);.

Q4053: D. Pruthi, *et al.* Exposure to Experimental Preeclampsia in Mice Enhances the Vascular Response to Future Injury. *Hypertension* 2015;65(863-+)
ALZET Comments: Uridine, bromodeoxy-; SC; Mice; 14 days; Animal info (female, CD1, 2 months postpartum); cardiovascular; bp measured using tail cuff;.

Q4455: R. W. Hunter, *et al.* Hypertrophy in the Distal Convoluted Tubule of an 11-Hydroxysteroid Dehydrogenase Type 2 Knockout Model. *JOURNAL OF THE AMERICAN SOCIETY OF NEPHROLOGY* 2015;26(1537-1548)
ALZET Comments: Uridine, bromodeoxy-; furosemide; DMSO; SC; Mice; 1007D; 2001; 7 days; Animal info (WT or *Hsd1 1b2 -/-*); 50% DMSO used; pumps primed overnight in 37C saline;.

Q5143: A. C. Dusabineza, *et al.* Hepatic Stellate Cells Improve Engraftment of Human Primary Hepatocytes: A Preclinical Transplantation Study in an Animal Model. *Cell Transplant* 2015;24(12):2557-71
ALZET Comments: Uridine, bromodeoxy-; IP; mice; 1004; 6 hours; 4 weeks; animal info: SCID mice, females, 20–24 g; GFP+ transgenic mice, males, 35–44 g; gene therapy;.

Q4385: G. Cruzan, *et al.* Evaluation of the mode of action of mouse lung tumors induced by 4-methylimidazole. *REGULATORY TOXICOLOGY AND PHARMACOLOGY* 2015;73(501-508)
ALZET Comments: Uridine, bromodeoxy; SC; Mice; 5 days; Animal info (C57BL6 or CYP2F2, 8-11 weeks old);.

Q4367: H. J. Chen, *et al.* Human Placenta-Derived Adherent Cells Improve Cardiac Performance in Mice With Chronic Heart Failure. *STEM CELLS TRANSLATIONAL MEDICINE* 2015;4(269-275)
ALZET Comments: Uridine, bromodeoxy; SC; Mice; 1007D; 1 week; Animal info (female, C57BL6, 25g); cardiovascular;.

Q4203: N. Yaqoob, *et al.* Trichloroethylene and trichloroethanol-induced formic aciduria and renal injury in male F-344 rats following 12 weeks exposure. *Toxicology* 2014;323(70-77)
ALZET Comments: Uridine, bromodeoxy-; PBS; SC; Rat; 2ML1; 5 days; Animal info (male, F-344, 13-14 weeks old, 236-312g); functionality of mp verified by BrdU imaging; toxicology;.



Q4193: T. Yamada, *et al.* Human Hepatocytes Support the Hypertrophic but not the Hyperplastic Response to the Murine Nongenotoxic Hepatocarcinogen Sodium Phenobarbital in an In Vivo Study Using a Chimeric Mouse with Humanized Liver. TOXICOLOGICAL SCIENCES 2014;142(137-157

ALZET Comments: Growth hormone, recombinant human; uridine, bromodeoxy; SC; Mice(transgenic; SCID); Rat; 1002; 2ML1; 7 days; 14 days; Animal info (mice male, CD-1 or ICR or SCID, 10 weeks old; rat male, Wistar, 10 weeks old); toxicology;.

Q4090: K. M. Schweikart, *et al.* Comparative Uterotrophic Effects of Endoxifen and Tamoxifen in Ovariectomized Sprague-Dawley Rats. Toxicologic Pathology 2014;42(1188-1196

ALZET Comments: Uridine, bromodeoxy-; Sodium chloride; Rat; 2ML1; 3 days; Animal info (female, Sprague Dawley, ovariectomized, 11-12 weeks old);

Q3569: M. L. Rock, *et al.* The Time-to-Integrate-to-Nest Test as an Indicator of Wellbeing in Laboratory Mice. Journal of the American Association for Laboratory Animal Science 2014;53(1):24-28

ALZET Comments: Aldosterone; uridine, bromodeoxy-; Ethanol; saline; SC; Mice; 5 days; Controls received mp w/ vehicle; animal info (10 mouse strains; BALB/cAnNCrI, 129S2/ SvPasCrI, FVB/NCrI, C57BL/6NCrI, C3H/HeNCrI, CB17/ Icr-Prkdcscid/IcrIcoCrI, NOD.CB17-Prkdcscid/NCrCrI, CB17.Cg/ Prkdcscid Lystbg/CrI, C57BL/6NTac, and C57BL/6NJ, carotid artery injury); 11% ethanol used; Multiple pumps per animal (2); post op. care (buprenorphine 0.05 mg/kg SC); behavioral testing (nesting behaviour); cardiovascular;.

Q4286: S. Reuter, *et al.* Recombinant Neuregulin 1 Does Not Activate Cardiomyocyte DNA Synthesis in Normal or Infarcted Adult Mice. PLoS One 2014;9(U1401-U1415

ALZET Comments: Uridine, bromodeoxy-; Saline; Mice (transgenic); 1002; 9 days; Animal info (MHC-nLAC tf, 12 weeks old); cardiovascular;.

Q3721: M. Payton, *et al.* Antagonism of Ang-Tie2 and DII4-Notch signaling has opposing effects on tumor endothelial cell proliferation, evidenced by a new flow cytometry method. LABORATORY INVESTIGATION 2014;94(1296-1308

ALZET Comments: Uridine, bromodeoxy; SC; Mice; 2001D; 18 hours; "BrdUrd was delivered for 18 h by implanted osmotic minipump, as a single-bolus injection of BrdUrd showed minimal BrdUrd uptake in TAECs compared with other more highly proliferative tissues..." pg 1299; labeling of tumor-associated endothelial cells (TAEC).

Q4035: S. E. Owumi, *et al.* Depletion of Kupffer Cells Modulates Ethanol-Induced Hepatocyte DNA Synthesis in C57BL/6 Mice. ENVIRONMENTAL TOXICOLOGY 2014;29(867-875

ALZET Comments: Uridine, bromodeoxy-; SC; Mice; 1 week; Animal info (C57BL6, 27 weeks old); pumps primed;.

Q4005: Y. Miyazaki, *et al.* Mice are unable to endogenously regenerate podocytes during the repair of immunotoxin-induced glomerular injury. NEPHROLOGY DIALYSIS TRANSPLANTATION 2014;29(1005-1012

ALZET Comments: Uridine, bromodeoxy-; SC; Mice; 2002; 2004; 2 weeks; 4 weeks; Animal info (NEP25);.

Q4550: Y. Miyazaki, *et al.* Mice are unable to endogenously regenerate podocytes during the repair of immunotoxin-induced glomerular injury. Nephrol Dial Transplant 2014;29(5):1005-12

ALZET Comments: Uridine, bromodeoxy; saline; SC; mice; 2002, 2004; 2, 4 weeks; Controls received injection of saline; animal info: NEP25 mice; Dose: 1.25 ng/h/g body weight of BrdU; Industry authored (Nephrol Dial Transplant);.

Q3994: S. I. Masunaga, *et al.* Effect of bevacizumab combined with boron neutron capture therapy on local tumor response and lung metastasis. EXPERIMENTAL AND THERAPEUTIC MEDICINE 2014;8(291-301

ALZET Comments: Uridine, bromodeoxy-; Saline; SC; Mice; 6 days; Animal info (female, C57BL6, 8 weeks old); cancer (melanoma);.

Q4555: S. I. Masunaga, *et al.* Effect of bevacizumab combined with boron neutron capture therapy on local tumor response and lung metastasis. Exp Ther Med 2014;8(1):291-301

ALZET Comments: uridine, bromodeoxy-; saline; SC; mice; 6 days; Controls received mp w/ vehicle; animal info (B16-BL6 melanoma tumor-bearing C57BL/6 mice); functionality of mp verified by collecting tissue samples to check for BrdU presence;



cancer (local tumor response and lung metastasis); BrdU aka Bromodeoxyuridine; Nucleoside (synthetic analog of thymidine); Dose: 250 mg/mL BrdU in saline; Industry authored (Department of Radiation Life and Medical Science, Japan);.

Q4556: S. Masunaga, *et al.* The dependency of compound biological effectiveness factors on the type and the concentration of administered neutron capture agents in boron neutron capture therapy. Springerplus 2014;3(128)

ALZET Comments: Uridine, bromodeoxy-; Saline; SC; Mice; 5 days; animal info (female, C3H/He, 8-11 weeks old); cancer (SCC VII squamous cell carcinoma);.

Q3987: R. N. V. S. Mamidi, *et al.* Carbohydrate malabsorption mechanism for tumor formation in rats treated with the SGLT2 inhibitor canagliflozin. Chemico-Biological Interactions 2014;221(109-118)

ALZET Comments: Uridine, bromodeoxy-; Sodium bicarbonate; SC; Rat; 2ML1; 7 days; Animal info (male, SPF Sprague Dawley, 8-9 weeks old); cancer (renal tubular tumors); diabetes; "The loaded minipumps were stored under aseptic conditions at approximately 30–37C (in an oven) to avoid crystallization.".

Q3958: M. J. LeBaron, *et al.* Characterization of Nuclear Receptor-Mediated Murine Hepatocarcinogenesis of the Herbicide Pronamide and Its Human Relevance. TOXICOLOGICAL SCIENCES 2014;142(74-92)

ALZET Comments: Uridine, bromodeoxy-; PBS; Mice; 2001; 7 days; Animal info (male, CD-1, 8 weeks old); functionality of mp verified by staining; cancer (liver);.

Q3542: R. Landsiedel, *et al.* Application of short-term inhalation studies to assess the inhalation toxicity of nanomaterials. Particle and Fibre Toxicology 2014;11(U1-U26)

ALZET Comments: Uridine, bromodeoxy-; SC; Rat; 2ML1; 3 days; Animal info (male, Wistar, Crl:WI, 7 weeks old); toxicology;.

Q4965: B. E. Grayson, *et al.* Improvements in hippocampal-dependent memory and microglial infiltration with calorie restriction and gastric bypass surgery, but not with vertical sleeve gastrectomy. Int J Obes (Lond) 2014;38(3):349-56

ALZET Comments: Uridine, Bromodeoxy; Ghrelin; IP; Rat; 2ML2; 2 weeks; Controls received mp w/ vehicle surgery (see Figure 1 on pg 350 for condntions); animal info (5 cohorts of adult male long-Evan rats, 250-300 g, 8 weeks old); behavioral testing (Morris Water Maze, latency to escape the water measured; 8-arm radial maze for finding food; four-arm spontaneous alternations to measure spatial working memory); BrdU aka Bromodeoxyuridine; GHR aka gastric hormone ghrelin; Dose: BrdU infused at 10mg/kg/day; GHR infused at 250 nM/kg/day.

Q5044: D. R. Geter, *et al.* Dose-response modeling of early molecular and cellular key events in the CAR-mediated hepatocarcinogenesis pathway. Toxicol Sci 2014;138(2):425-45

ALZET Comments: uridine, bromodeoxy; saline; mice; 2001; 1 week; animal info (6 week old male and female CD-1 mice; nulliparous and nonpregnant); cancer (rodent liver tumors); dose-response (dietary test prep section pg 426); PB aka Phenobarbital; BrdU aka Bromodeoxyuridine; Dose: 20 mg/ml BrdU.

Q4776: David R. Geter, *et al.* Dose-Response Modeling of Early Molecular and Cellular Key Events in the CAR-Mediated Hepatocarcinogenesis Pathway. TOXICOLOGICAL SCIENCES 2014;138(2):425-445

ALZET Comments: Uridine, Bromodeoxy; PBS; mice; 2001; 1 week; animal info (6 week old male and female CD-1 mice; nulliparous and nonpregnant); cancer (rodent liver tumors); dose-response (dietary test prep section pg 426); PB aka Phenobarbital; BrdU aka Bromodeoxyuridine; Dose: 20 mg/ml BrdU.

Q4714: J. Cordoba-Chacon, *et al.* Long-But Not Short-Term Adult-Onset, Isolated GH Deficiency in Male Mice Leads to Deterioration of beta-Cell Function, Which Cannot Be Accounted for by Changes in beta-Cell Mass. ENDOCRINOLOGY 2014;155(3):726-735

ALZET Comments: Uridine, bromodeoxy; Mice; 72 hours; Animal info (male, AOiGHD, 12 weeks old);.

Q3819: B. M. Braunger, *et al.* Identification of Adult Stem Cells in Schwalbe's Line Region of the Primate Eye. INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE 2014;55(7499-7507)

ALZET Comments: Uridine, bromodeoxy-; SC; Monkey (macaque); 2ML4; 4 weeks; Animal info (Macaca fascicularis); pumps removed after 4 weeks;.



Q3813: E. P. Bless, *et al.* Oestradiol and Diet Modulate Energy Homeostasis and Hypothalamic Neurogenesis in the Adult Female Mouse. *Journal of Neuroendocrinology* 2014;26(805-816)

ALZET Comments: Uridine, bromodeoxy-; CSF, artificial; mouse serum albumin; CSF/CNS; Mice; 1007D; 9 days; Animal info (female, C57BL6J, 10-12 weeks old, bilateral ovariectomy); pumps removed after 9 days;.

Q2700: Z. Yu, *et al.* Myeloid Cell 5-Lipoxygenase Activating Protein Modulates the Response to Vascular Injury. *Circulation Research* 2013;112(3):432-U71

ALZET Comments: Uridine, bromodeoxy; SC; Mice; 28 days; Animal info (C57BL/6, FLAP KO, male, 12 wks old).

Q4764: Su-Ping Chang, *et al.* Cell Proliferation, Movement and Differentiation during Maintenance of the Adult Mouse Adrenal Cortex. *PLoS One* 2013;8(12):1-15

ALZET Comments: Uridine, Bromodeoxy; saline; SC; mice; 1007D, 2002; 1, 2 weeks; C57BL/6, 12 weeks old, mice; dose: 50 mg/ml; mp wer used to investigate cell proliferation, movement, and differentiation in mice adrenal cortex via BrdU infusion.

Q3359: S. C. Robins, *et al.* Extensive regenerative plasticity among adult NG2-glia populations is exclusively based on self-renewal. *Glia* 2013;61(10):1735-1747

ALZET Comments: Uridine, bromodioxo; Ara-C; CSF, artificial; CSF/CNS; Mice (transgenic); 7 days; 12 days; Animal info (male, NG2-CreER:tomato, 8-12 weeks old); pulsatile delivery (delayed delivery 2 days with vehicle in catheter); brain tissue distribution; cyanoacrylate adhesive used to close catheter tubing; Plastics 1 cannula and catheter.

Q2778: S. C. Robins, *et al.* Evidence for NG2-glia Derived, Adult-Born Functional Neurons in the Hypothalamus. *PLoS One* 2013;8(10):U880-U890

ALZET Comments: Uridine, bromodeoxy; uridine, ethynyldeoxy; CSF, artificial; CSF/CNS; Mice; 7 days; Animal info (NG2-CreER:tdTomato); Plastics One cannula used; labeling of NG2 derived neurons.

Q5258: S. C. Robins, *et al.* Evidence for NG2-glia derived, adult-born functional neurons in the hypothalamus. *PLoS One* 2013;8(10):e78236

ALZET Comments: Uridine, bromodeoxy; uridine, ethynyldeoxy; CSF, artificial; CSF/CNS (right lateral ventricle); mice; 1007D; 7 days; animal info: NG2-CreER:tdTomato mice; functionality of mp verified post brain removal; Plastics One infusion kit used; brain tissue distribution; delayed delivery (2 days); delayed delivery (2 days); Dose: 30 ug/day (BrdU and EdU); Brain coordinates; 0.3 mm (anteroposterior), 1.0 mm (lateral), and 2.5 mm (dorsoventral, below skull).

Q3246: Y. Morimoto, *et al.* Pulmonary toxicity of printer toner following inhalation and intratracheal instillation. *INHALATION TOXICOLOGY* 2013;25(12):679-690 Uridine, bromodeoxy;

ALZET Comments: Uridine, bromodeoxy;; Rat; 2ML1; 5 days; Animal info (Female, Wistar, 8 weeks old); functionality of mp verified by BrdU imaging; toxicology; immunology; pumps used to deliver BrdU for imaging purposes only.

Q2517: K. Mishima, *et al.* Involvement of N-type Ca(2+) channels in the fibrotic process of the kidney in rats. *American Journal of Physiology-Renal Physiology* 2013;304(6):F665-F673

ALZET Comments: Uridine, bromodeoxy; IP; Rat; 1 week; Animal info (Wistar, male, 200 g); labeling of label-retaining cells (LRCs).

Q2543: S. Masunaga, *et al.* Wortmannin efficiently suppresses the recovery from radiation-induced damage in pimonidazole-unlabeled quiescent tumor cell population. *Journal of Radiation Research* 2013;54(2):221-229

ALZET Comments: Uridine, bromodeoxy; Saline, physiological; SC; Mice; 5 days; Animal info (C57BL/6J, female, 9 wks old, syngenic).

Q2556: S. Masunaga, *et al.* Radiosensitivity of pimonidazole-unlabelled intratumour quiescent cell population to gamma-rays, accelerated carbon ion beams and boron neutron capture reaction. *British Journal of Radiology* 2013;86(1021):U173-U182

ALZET Comments: Uridine, bromodeoxy; Saline, physiological; SC; Mice; Animal info (C57BL/6, female, syngenic, 9 wks old).

Q5010: M. J. LeBaron, *et al.* An integrated approach for prospectively investigating a mode-of-action for rodent liver effects. *Toxicol Appl Pharmacol* 2013;270(2):164-73



ALZET Comments: uridine, bromodeoxy-; PBS; SC; mice; 2001; 7 days; toxicology; animal info: (C57BL/6J; wildtype, knock-out, and humanized); functionality of mp verified by BrdU immunohistochemistry; cancer (hepatic); MoA; liver tumors; toxicity of agricultural molecule; sulfoxaflo; short-term rodent carcinogenicity study; 15 mg/mL; Industry authored (The Dow Chemical Company, Midland, MI, 48674, USA);.

Q5065: C. Krautz, *et al.* Effects of immunosuppression on alpha and beta cell renewal in transplanted mouse islets. *Diabetologia* 2013;56(7):1596-604

ALZET Comments: uridine, bromodeoxy-; tacrolimus; sirolimus; everolimus; mycophenolate mofetil; DMSO; IP; mice; 1004; 28 days; controls received mp w/ BrdU; animal info: C57BL/6, diabetic mice, transplanted with syngeneic islets in the liver, 10-12 wk old; functionality of mp verified by monitoring drug plasma levels; HPLC-MS/MS; mp were used to infuse immunosuppressant MMF (Mycophenolate Mofetil). Study concluded that MMF neither impaired pancreatic beta cell proliferation, nor adversely affected the fractional beta cell area. Pump mentions 2 mice that had very high Everolimus levels due to malfunction of the pump, and died 7, and 9 days respectively after transplantation; dose: Everolimus (1 mg/kg/d), Tacrolimus (1mg/kg/d); Mycophenolate Mofetil (20mg/kg/d), Sirolimus 90.2 mg/kg/d); BrdU (100 ug/ul);.

Q3233: D. N. Khuu, *et al.* Adult Human Liver Mesenchymal Stem/Progenitor Cells Participate in Mouse Liver Regeneration After Hepatectomy. *CELL TRANSPLANTATION* 2013;22(8):1369-1380

ALZET Comments: Uridine, bromodeoxy;; IP; Mice (SCID); 3 days; 14 days; 28 days;

Q6668: M. M. Gziri, *et al.* Fetal rat hearts do not display acute cardiotoxicity in response to maternal Doxorubicin treatment. *J Pharmacol Exp Ther* 2013;346(3):362-9

ALZET Comments: Uridine, bromodeoxy; DMSO; Water; SC; Rat; 2ML1; Dose (14.4 mg/kg/day); 50% DMSO used; animal info (Wistar rats);.

Q2931: A. Gouaze, *et al.* Cerebral Cell Renewal in Adult Mice Controls the Onset of Obesity. *PLoS One* 2013;8(8):U971-U981

ALZET Comments: Uridine, bromodeoxy-;; NaCl; SC; Mice; 1007D; 1 month; 1 week; Brain infusion kit (3) used; antisense (Arac); 65 mm tubing connected to mp allowed for delayed delivery of vehicle for 2 days after surgery; animal info. (seven week-old male, C57BL/6);.

Q2872: P. Douvaras, *et al.* Increased Corneal Epithelial Turnover Contributes to Abnormal Homeostasis in the Pax6(+/-) Mouse Model of Aniridia. *PLoS One* 2013;8(8):U372-U389

ALZET Comments: Uridine, bromodeoxy; SC; Mice; 1007D; 7 days; Animal info (15 or 30 wks old); label of the adult cornea.

Q3066: G. Cruzan, *et al.* Studies of styrene, styrene oxide and 4-hydroxystyrene toxicity in CYP2F2 knockout and CYP2F1 humanized mice support lack of human relevance for mouse lung tumors. *Regulatory Toxicology and Pharmacology* 2013;66(1):24-29

ALZET Comments: Uridine, Bromodeoxy; Saline; SC; Mice; 2001; 5 days; Animal info (8 weeks old, CD-1 & C57BL6); toxicology; Used to label cells & in determination of toxicity and proliferation.

Q2445: X. Y. Wang, *et al.* Novel Method for Isolation of Murine Clara Cell Secretory Protein-Expressing Cells with Traces of Stemness. *PLoS One* 2012;7(8):U218-U227

ALZET Comments: Uridine, bromodeoxy; SC; Mice; 2001; 7 days; Animal info (FVB, 2 mo old).

Q1629: D. E. G. McNay, *et al.* Remodeling of the arcuate nucleus energy-balance circuit is inhibited in obese mice. *Journal of Clinical Investigation* 2012;122(1):142-152

ALZET Comments: Leptin; uridine, bromodeoxy; CSF, artificial; albumin, mouse serum; CSF/CNS; Mice; 1007D; 7 days; animal info (C57BL/6, DIO, male, 8 wks old); Plastics One guide cannula used.

Q5386: K. Lee, *et al.* Effects of aging on thyroarytenoid muscle regeneration. *Laryngoscope* 2012;122(12):2800-7

ALZET Comments: Uridine, Bromodeoxy; SC; Rat; 2ML1; 7 days; animal info (male Fischer 344/Brown Norway rats; 6, 24, 32 months old); functionality of mp verified by analyzing muscle cell samples; Aging study; muscle regeneration (healing, recovery); Dose (125 ug/g);.



Q2612: K. Isobe, *et al.* Stimulation of Adrenal Chromaffin Cell Proliferation by Hypercalcemia Induced by Intravenous Infusion of Calcium Gluconate in Rats. *Journal of Toxicologic Pathology* 2012;25(4):281-285

ALZET Comments: Uridine, bromodeoxy; IP; Rat; 7 days; Animal info (Sprague Dawley, male, 8 wks old); labeling of chromaffin cells in the adrenal glands.

Q2168: M. Germann, *et al.* Stem-Like Cells with Luminal Progenitor Phenotype Survive Castration in Human Prostate Cancer. *Stem Cells* 2012;30(6):1076-1086

ALZET Comments: Uridine, bromodeoxy; NaCl; SC; Mice (SCID); 2 weeks; Animal info (male, SCID); 14-day pump used; labeling of CR BM18 cancer cells; cancer (prostate).

Q1873: M. Futamura, *et al.* Chronic treatment with a glucokinase activator delays the onset of hyperglycaemia and preserves beta cell mass in the Zucker diabetic fatty rat. *Diabetologia* 2012;55(4):1071-1080

ALZET Comments: Uridine, bromodeoxy; SC; Rat; 2ML1; 3 days; animal info (5 wks old, Zucker); labeling of beta cells.

Q2172: K. A. Criswell, *et al.* Pregabalin Induces Hepatic Hypoxia and Increases Endothelial Cell Proliferation in Mice, a Process Inhibited by Dietary Vitamin E Supplementation. *TOXICOLOGICAL SCIENCES* 2012;128(1):42-56

ALZET Comments: Uridine, bromodeoxy; uridine, 5-ethynyl-2'-deoxy; Sodium carbonate; saline; SC; Mice; Rat; 2001; 2ML1; 4 days; Animal info (B6C3F1, 9-11 wks old, 18.5-22 g, Wistar, 6-8 wks old, 151-250 g); labeling of endothelial cells.

Q2360: E. Bermudez, *et al.* Toxicity of methyl tertiary-butyl ether (MTBE) following exposure of Wistar Rats for 13 weeks or one year via drinking water. *Journal of Applied Toxicology* 2012;32(9):687-706

ALZET Comments: Uridine, bromodeoxy; PBS; SC; Rat; 2ML1; 3.5 days; Animal info (Wistar, male, female, 4-6 wks old).

Q2020: A. C. Adams, *et al.* Fundamentals of FGF19 & FGF21 Action In Vitro and In Vivo. *PLoS One* 2012;7(5):U1479-U1489

ALZET Comments: Fibroblast growth factor 19; Fibroblast growth factor-21; uridine, bromodeoxy; PBS; SC; Mice; 7 days; Controls received mp w/ vehicle; animal info (male, C57BL/6J, ob/ob, 9 wks old); labeling of hepatocytes.

Q2382: O. Zachrisson, *et al.* Restorative Effects of Platelet Derived Growth Factor-BB in Rodent Models of Parkinson's Disease. *JOURNAL OF PARKINSONS DISEASE* 2011;1(1):49-63

ALZET Comments: Ara-C; platelet-derived growth factor; uridine, bromodeoxy; CSF/CNS; Mice; Rat; 2002; 14 days; Control animals received mp w/ vehicle; animal info (Sprague Dawley, male, 280-350 g, C57BL/6, 10 wks old); neurodegenerative (Parkinson's disease).

Q0897: Y. Yoshida, *et al.* Treatment with valsartan stimulates endothelial progenitor cells and renal label-retaining cells in hypertensive rats. *Journal of Hypertension* 2011;29(1):91-101

ALZET Comments: Angiotensin II; uridine, bromodeoxy; SC; IP; Rat; 1, 2 weeks; Animal info (Wistar Kyoto); peptides; systolic blood pressure was measured by tail-cuff (BO-98A; Softron Co).

Q0866: M. A. Wang, *et al.* Microsomal Prostaglandin E(2) Synthase-1 Modulates the Response to Vascular Injury. *Circulation* 2011;126(6):631-U181

ALZET Comments: Uridine, bromodeoxy; SC; Mice; 2002; Animal info (mPGES-1 KO, wt).

Q0658: N. Schupp, *et al.* Mineralocorticoid receptor-mediated DNA damage in kidneys of DOCA-salt hypertensive rats. *FASEB Journal* 2011;25(3):968-978

ALZET Comments: Uridine, bromodeoxy; Rat; 1 week; Animal info (male, CrI:CD, Sprague-Dawley); 2ml pump used.

Q1869: A. Oikonomopoulos, *et al.* Wnt Signaling Exerts an Antiproliferative Effect on Adult Cardiac Progenitor Cells Through IGFBP3. *Circulation Research* 2011;109(12):1363-1374

ALZET Comments: Uridine, bromodeoxy; Mice; 1 week; Animal info (male, female, C57BL/6J, 8-12 wks old); labeling of cardiac side population cells.

Q1726: F. S. Loffredo, *et al.* Bone Marrow-Derived Cell Therapy Stimulates Endogenous Cardiomyocyte Progenitors and Promotes Cardiac Repair. *Cell Stem Cell* 2011;8(4):389-398



ALZET Comments: Uridine, bromodeoxy; SC; Mice (transgenic); 1 week; Animal info (double Tg MerCreMer-Zeg); labeling of cardiomyocytes.

Q1646: Q. H. Li, *et al.* Intracoronary administration of cardiac stem cells in mice: a new, improved technique for cell therapy in murine models. *Basic Research In Cardiology* 2011;106(5):849-864

ALZET Comments: Uridine, bromodeoxy; Mice; 39 days; Animal info (female, C57BL/6); labeling of cardiac stem cells (CSC's).

Q0645: S. Y. Leong, *et al.* The Rho Kinase Pathway Regulates Mouse Adult Neural Precursor Cell Migration. *Stem Cells* 2011;29(2):332-343

ALZET Comments: Uridine, bromodeoxy; Y27632; CSF/CNS; Mice; 1007D; 7 days; Controls received mp w/ BrdU only; animal info (6-8 wks old, male, C57BL/6).

Q2240: T. Kadar, *et al.* Delayed Loss of Corneal Epithelial Stem Cells in a Chemical Injury Model Associated with Limbal Stem Cell Deficiency in Rabbits. *Current Eye Research* 2011;36(12):1098-1107

ALZET Comments: Uridine, bromodeoxy; DMSO; water; SC; Rabbit; Animal info (New Zealand, White, female, 2-3 kg); labeling of slow cycling cells.

Q1134: Y. Imanishi, *et al.* Cinacalcet HCl Suppresses Cyclin D1 Oncogene-Derived Parathyroid Cell Proliferation in a Murine Model for Primary Hyperparathyroidism. *Calcified Tissue International* 2011;89(1):29-35

ALZET Comments: Uridine, bromodeoxy-; SC; Mice; 2001; 5 days; Animal info (PC2, wt, 7-84 wks old).

Q1089: B. Glinghammar, *et al.* Proliferative and Molecular Effects of the Dual PPAR alpha/gamma Agonist Tesaglitazar in Rat Adipose Tissues: Relevance for Induction of Fibrosarcoma. *Toxicologic Pathology* 2011;39(2):325-336

ALZET Comments: Uridine, bromodeoxy; SC; Rat; 7 days; Animal info (male, Wistar, Hannover, Galas).

Q1432: J. Ford, *et al.* GPR30 Deficiency Causes Increased Bone Mass, Mineralization, and Growth Plate Proliferative Activity in Male Mice. *Journal of Bone and Mineral Research* 2011;26(2):298-307

ALZET Comments: Uridine, bromodeoxy; IP; Mice; 1003D; 3 days; Animal info (C57Bl6/J x 129SvEvTac, GPR30 null).

Q0986: D. R. Boverhof, *et al.* Transgenic Animal Models in Toxicology: Historical Perspectives and Future Outlook. *TOXICOLOGICAL SCIENCES* 2011;121(2):207-233

ALZET Comments: Uridine, bromodeoxy; SC; Mice; 2001; Animal info (male, sexually mature, huPXR/huCAR, PXRKO/CARKO, wt).

Q0962: D. Angert, *et al.* Repair of the Injured Adult Heart Involves New Myocytes Potentially Derived From Resident Cardiac Stem Cells. *Circulation Research* 2011;108(10):1226-U230

ALZET Comments: Isoproterenol; uridine, bromodeoxy; DMSO; water, deionized; SC; Cat; 2ML1; 7, 10 days; Animal info (adult, feline, 5-6 mo old); post op. care (Bupivacane); 50% DMSO used.

2. edU

Q7027: S. Govindan, *et al.* In vivo pulse labeling of isochronic cohorts of cells in the central nervous system using FlashTag. *Nat Protoc* 2018;13(10):2297-2311

ALZET Comments: Uridine, bromodeoxy-, Deoxyuridine, 5-ethynyl-2'; SC; Mice; 1003D; 3 days; Dose (16 mg/ml BrdU or 10 mg/ml EdU);

Q6236: M. Patterson, *et al.* Frequency of mononuclear diploid cardiomyocytes underlies natural variation in heart regeneration. *Nat Genet* 2017;49(9):1346-1353

ALZET Comments: Deoxyuridine, 5-ethynyl-2'; DMSO; Saline; SC; Mice; 1002; 13 days; Dose (5 mg); 50% DMSO, 50% saline used; cardiovascular;



Q6399: Y. T. Chen, *et al.* Low-Level MHC Class II Expression Leads to Suboptimal Th Cell Response, Increased Autoaggression, and Heightened Cytokine Inducibility. *J Immunol* 2017;198(5):1928-1943

ALZET Comments: Uridine, 5'-ethynyl-2'-deoxy; SC; Mice; 2001; 7 days; immunology;

Q5259: K. C. Roche, *et al.* SOX9 maintains reserve stem cells and preserves radioresistance in mouse small intestine. *Gastroenterology* 2015;149(6):1553-1563 e10

ALZET Comments: Uridine, 5-ethynyl-2'-deoxy; DMSO, PEG 300; SC; mice; 28 days; Controls received mp w/ vehicle; animal info (SOX9 knockout mice); functionality of mp verified by Click-it EdU flow cytometry kit; 50% DMSO used, 50% PEG 300; cell proliferation assays; Dose (1.15 mg/ul);

Q2778: S. C. Robins, *et al.* Evidence for NG2-glia Derived, Adult-Born Functional Neurons in the Hypothalamus. *PLoS One* 2013;8(10):U880-U890

ALZET Comments: Uridine, bromodeoxy; uridine, ethynyldeoxy; CSF, artificial; CSF/CNS; Mice; 7 days; Animal info (NG2-CreER:tdTomato); Plastics One cannula used; labeling of NG2 derived neurons.

Q5258: S. C. Robins, *et al.* Evidence for NG2-glia derived, adult-born functional neurons in the hypothalamus. *PLoS One* 2013;8(10):e78236

ALZET Comments: Uridine, bromodeoxy; uridine, ethynyldeoxy; CSF, artificial; CSF/CNS (right lateral ventricle); mice; 1007D; 7 days; animal info: NG2-CreER:tdTomato mice; functionality of mp verified post brain removal; Plastics One infusion kit used; brain tissue distribution; delayed delivery (2 days); delayed delivery (2 days); Dose: 30 ug/day (BrdU and EdU); Brain coordinates; 0.3 mm (anteroposterior), 1.0 mm (lateral), and 2.5 mm (dorsoventral, below skull).

Q3442: K. J. Christie, *et al.* ADULT HIPPOCAMPAL NEUROGENESIS, RHO KINASE INHIBITION AND ENHANCEMENT OF NEURONAL SURVIVAL. *Neuroscience* 2013;247():75-83

ALZET Comments: Uridine, 5-ethynyl-2'-deoxy; Y27632; CSF/CNS; Mice; 1007D; 7 days; 37 days; Animal info (male, C57BL6, 8-9 weeks old); ALZET brain infusion kit used; behavioral testing (elevated plus maze; object recognition; y maze); ethynyldeoxyuridine aka EDU; Y27632 is a ROCK inhibitor;

Q2172: K. A. Criswell, *et al.* Pregabalin Induces Hepatic Hypoxia and Increases Endothelial Cell Proliferation in Mice, a Process Inhibited by Dietary Vitamin E Supplementation. *TOXICOLOGICAL SCIENCES* 2012;128(1):42-56

ALZET Comments: Uridine, bromodeoxy; uridine, 5-ethynyl-2'-deoxy; Sodium carbonate; saline; SC; Mice; Rat; 2001; 2ML1; 4 days; Animal info (B6C3F1, 9-11 wks old, 18.5-22 g, Wistar, 6-8 wks old, 151-250 g); labeling of endothelial cells.

Q0680: N. Guo, *et al.* Short Telomeres Compromise beta-Cell Signaling and Survival. *PLoS One* 2011;6(3):U429-U438

ALZET Comments: Uridine, 5-ethynyl-2-deoxy; SC; Mice; 14 days; Animal info (mTR +/-); 5-ethynyl-2-deoxyuridine also known as EdU.

P0718: R. F. Schinazi, *et al.* Antiviral activity of 5-ethyl-2-deoxyuridine against herpes simplex viruses in cell culture, mice, and guinea pigs. *Antimicrob. Agents Chemother* 1985;28(4):552-560

ALZET Comments: Uridine, 5-ethyl-2-deoxy-; SC; mice; 2001; no duration posted; comparison of topical Edu and acyclovir in guinea pigs vs. mp infusion of Edu w/ip adminis. and oral doses of Edu, acyclovir and DMSO in mice; immunology.

3. Thymidine

Q7269: A. Vujic, *et al.* Exercise induces new cardiomyocyte generation in the adult mammalian heart. *Nat Commun* 2018;9(1):1659

ALZET Comments: Thymidine, 15-; Radio-isotope; 15N tracer; SC; Mice; Pump model not stated; 8 weeks; Dose (20 ug/h); animal info (2 months old, C57Bl/6, male); pumps replaced weekly for 8 weeks; cardiovascular;

Q7233: O. A. Mineyeva, *et al.* Spatial geometry of stem cell proliferation in the adult hippocampus. *Sci Rep* 2018;8(1):3444

ALZET Comments: Thymidine, 5-bromo-2'-deoxyuridine; Saline; SC; Mice; 1007D; 5 days; Dose (3 mg); animal info (2.5 months old, Nestin-GFP mice);



Q4884: S. S. J. X. Z.-H. L. J. H. & *et al.* Lack of JWA Enhances Neurogenesis and Long-Term Potentiation in Hippocampal Dentate Gyrus Leading to Spatial Cognitive Potentiation. *MOLECULAR NEUROBIOLOGY* 2016;53(355-368)

ALZET Comments: Thymidine, 3'-azido-3'-deoxy-; cyclodextrin, methyl-b-; Saline; PEG 400; CSF/CNS (dentate gyrus); Mice; 14 days; Controls received mp w/ vehicle; animal info (JWA-nKO); behavioral testing (morris water maze, rotarod test); used Plastics One cannula; used dental cement and screws; enzyme inhibitor (telomerase);

Q3694: C. E. Wood, *et al.* Comparative Time Course Profiles of Phthalate Stereoisomers in Mice. *TOXICOLOGICAL SCIENCES* 2014;139(21-34)

ALZET Comments: Thymidine, 3H-; SC; Mice; 5 days; Animal info (male, B6C3F1, 21-28 days old); toxicology; Thymidine used for imaging cells undergoing DNA replication;

Q4114: M. L. Steinhauser, *et al.* Quantifying cell division with deuterated water and multi-isotope imaging mass spectrometry (MIMS). *SURFACE AND INTERFACE ANALYSIS* 2014;46(161-164)

ALZET Comments: Thymidine, 15N-; SC; Mice; 3 days; Animal info (male, C57BL6, 8-10 weeks old); imaging;

Q3943: S. M. Kim, *et al.* Loss of White Adipose Hyperplastic Potential Is Associated with Enhanced Susceptibility to Insulin Resistance. *Cell Metabolism* 2014;20(1049-1058)

ALZET Comments: Thymidine, 15N-; Water; SC; Mice; Animal info (male, C57BL6J, 4 weeks old); imaging;

Q2624: S. E. Senyo, *et al.* Mammalian heart renewal by pre-existing cardiomyocytes. *Nature* 2013;493(7432):433-U186

ALZET Comments: Thymidine, 15N-; SC; Mice (transgenic); Animal info (MerCreMer/Zeg tg, male, adult, 4 wks old).

Q1802: M. L. Steinhauser, *et al.* Multi-isotope imaging mass spectrometry quantifies stem cell division and metabolism. *Nature* 2012;481(7382):516-U131

ALZET Comments: Thymidine, N-; SC; Mice; 2 weeks; Animal info (adult, C57B6).

Q1953: Q. G. Zhou, *et al.* Hippocampal Telomerase Is Involved in the Modulation of Depressive Behaviors. *Journal of Neuroscience* 2011;31(34):12258-12269

ALZET Comments: Thymidine, 3'-azido-deoxy; CSF/CNS (hippocampus); Mice; 7, 28 days; Animal info (C57BL/6, 18-22 g, adult); 3-azido-deoxythymidine also known as AZT aka azidothymidine.

Q1618: R. T. Turner, *et al.* The Role of Mast Cells in Parathyroid Bone Disease. *Journal of Bone and Mineral Research* 2010;25(7):1637-1649

ALZET Comments: Parathyroid hormone, human, (1-34); thymidine, methyl-3H; Ethanol; SC; Rat; mice; 12 days; 1 week; Controls received mp w/ vehicle; animal info (Sprague Dawley, 6 wks to 6 mo; DBA, adult); 2% ethanol used.

Q1255: M. Perez-Martin, *et al.* IGF-I stimulates neurogenesis in the hypothalamus of adult rats. *European Journal of Neuroscience* 2010;31(9):1533-1548

ALZET Comments: Insulin-like growth factor-1; thymidine, H3; CSF/CNS; Rat; 2001; 7 days; Controls received mp w/ saline; animal info (adult, male, Wistar, albino, male, female, 2 mo old); ALZET brain infusion kit used.

Q0381: M. Zhao, *et al.* Bromodeoxyuridine infused into the cerebral ventricle of adult mice labels nigral neurons under physiological conditions-A method to detect newborn nerve cells in regions with a low rate of neurogenesis. *Journal of Neuroscience Methods* 2009;184(2):327-331

ALZET Comments: Uridine, bromodeoxy; thymidine, 3H; PBS; NaOH; CSF/CNS; IP; Mice; 2004; 1003D; Animal info (adult, male, C57BL/6, 10 wks old); labeling of neurons; ALZET brain infusion kit used.

P9129: R. Rodriguez, *et al.* Thymidine selectively enhances growth suppressive effects of camptothecin/irinotecan in MSI+ cells and tumors containing a mutation of MRE11. *Clinical Cancer Research* 2008;14(17):5476-5483

ALZET Comments: Thymidine; Saline; SC; Mice (nude); 2001; Controls received vehicle IP; animal info (male, 6 wks old, athymic, nu/nu).



P9319: A. B. DeAngelo, *et al.* The induction of hepatocellular neoplasia by trichloroacetic acid administered in the drinking water of the male B6C3F1 mouse. *JOURNAL OF TOXICOLOGY AND ENVIRONMENTAL HEALTH-PART A-CURRENT ISSUES* 2008;71(16):1056-1068

ALZET Comments: Uridine, bromodeoxy-; thymidine, 3H-; SC; Mice; 2001; 5 days; Cancer (hepatic); toxicology; animal info (B6C3F1, male, 7-107 wks old).

P7340: C. K. Thompson, *et al.* Seasonal change in neuron size and spacing but not neuronal recruitment in a basal ganglia nucleus in the avian song control system. *Journal of Comparative Neurology* 2005;481(276-283

ALZET Comments: Thymidine, [3H]; SC; Bird (song sparrow); 1007D; 7 days;

P7500: S. Lotinun, *et al.* Evidence that the cells responsible for marrow fibrosis in a rat model for hyperparathyroidism are preosteoblasts. *Endocrinology* 2005;146(9):4074-4081

ALZET Comments: Parathyroid hormone, human 1-34; thymidine, methyl -3H; Sodium chloride; HCl; serum, rat; ethanol; SC; Rat; 1, 2, 4 weeks; 1, 3, 5 days; Controls received mp w/ vehicle; functionality of mp verified by serum PTH; pumps replaced after 2 weeks; stability verified; peptides; multiple pumps per animal (2); animal info (female, Sprague-Dawley, 260 g); 2% ethanol.

P7532: H. F. Helander, *et al.* Cell proliferation in the gastric epithelium of the ulcer rat. *SCANDINAVIAN JOURNAL OF GASTROENTEROLOGY* 2005;40(12):1386-1393

ALZET Comments: Thymidine; gastrin-17, synthetic rat; Saline; BSA; SC; Rat; 2ML1; 2ML2; 1, 2, 6, 13 days; Controls received mp w/ agent and no induced ulcer; functionality of mp verified by plasma gastrin levels; multiple pumps per animal (2); animal info (female, Sprague-Dawley, 200-250 g); mp primed overnight in 37C s.

P6496: H. F. Helander, *et al.* Parietal cell density during gastric ulcer healing in the rat. *SCANDINAVIAN JOURNAL OF GASTROENTEROLOGY* 2004;39(1):20-26

ALZET Comments: Thymidine, (methyl-3H)-; gastrin-17, synthetic rat; Saline; BSA; SC; Rat; 2ML1; 2ML2; 1,2,6,13 days; Functionality of mp verified by gastrin plasma concentrations; multiple pumps per animal (2); mp primed overnight in saline @ 37 degrees Celsius.

P8464: M. Zhao, *et al.* Evidence for neurogenesis in the adult mammalian substantia nigra. *Proc. Natl. Acad. Sci. U. S. A* 2003;100(13):7925-7930

ALZET Comments: Uridine, bromodeoxy-; thymidine, 3H; Ara-C; Saline, radio-isotopes; CSF/CNS; IP; Mice; 1003D; 1002; 2004; 2,3,10,14,21 days; Comparison of oral administration vs. IP injections; animal info (male, C57BL/6, 2-20 months old); neurodegenerative (Parkinson's disease); "the blood brain barrier and or peripheral metabolism limit the availability of BrdUrd in the brain." (p. 7929).

P7703: J. P. Van Miller, *et al.* Skin irritation, basal epithelial cell proliferation, and carcinogenicity evaluations of a representative specialty acrylate and methacrylate. *Regul. Toxicol. Pharmacol* 2003;37(1):54-65

ALZET Comments: Uridine, bromodeoxy-; thymidine, 3H methyl-; PBS, dulbecco's; IP; Mice; 1003D; 2001D; 24 hours; Animal info (male wistar).

P5644: N. Poorkhalkali, *et al.* Cell kinetics of the oesophageal epithelium in the rat: Effects of hypergastrinaemia. *SCANDINAVIAN JOURNAL OF GASTROENTEROLOGY* 2003;38(1):14-19

ALZET Comments: Gastrin-17; thymidine; Saline; BSA; radio-isotopes; 3H tracer; SC; Rat; 2ML1; 2ML2; 24 hrs; 6,9,15,17 days; Comparison of acute injections vs. mp; pumps replaced after 13 days in some groups; multiple pumps per animal (2) in one group (one with each agent); gastrin dissolved in saline w/ BSA.

P5684: L. Chouaf-Lakhdar, *et al.* Proliferative activity and nestin expression in periventricular cells of the adult rat brain. *NeuroReport* 2003;14(4):633-636

ALZET Comments: Uridine, bromodeoxy-; thymidine; Saline; NaOH (sodium hydroxide); Radio-Isotopes; 3H tracer; CSF/CNS; Rat; 1003D; 3 days; Brain tissue distribution.



P5334: D. L. Park, *et al.* Avian brainstem neurogenesis is stimulated during cochlear hair cell regeneration. *Brain Research* 2002;949(1-2):1-10

ALZET Comments: Thymidine; ³H Tracer; Radio-isotopes; IP; Bird (chicken); 2001; 14 days; Pumps replaced after 7 days.

P4369: F. Doetsch, *et al.* Subventricular zone astrocytes are neural stem cells in the adult mammalian brain. *Cell* 1999;97(703-716

ALZET Comments: Thymidine, [³H]-; Ara-C; Radio-isotopes; Saline; 3H Tracer; CSF/CNS; CSF/CNS (surface of brain); mice; 2002; 1007D; 6, 12 days; Ara-C is cytosine-b-D-arabinofuranoside; controls received mp with vehicle.

P4127: A. L. Kuntz, *et al.* Transforming growth factor- α with insulin induces proliferation in rat utricular extrasensory epithelia. *Otolaryngol Head Neck Surg* 1998;118(816-824

ALZET Comments: Thymidine; Transforming growth factor- α ; Insulin; ³H tracer; Radio-isotopes; ear (cochlea); Rat; 1003D; 2001; 3,7 days; controls received mp w/vehicle; tissue perfusion (cochlea); agents infused singly or concomitantly in same pump; ALZET brain infusion kit 1 was modified for cochlear infusion; peptides.

P3552: B. Ohlsson, *et al.* Epidermal growth factor induces cell proliferation in mouse pancreas and salivary glands. *Pancreas* 1997;14(1):94-98

ALZET Comments: Epidermal growth factor; Thymidine; 3H tracer; Radio-isotopes; SC; IP; mice; 2001; 1003D; 1, 3, 7 days; Controls received no treatment; peptides; human recomb. EGF used; EGF & [3H]-thymidine given concomitantly.

P4099: C. Jansen, *et al.* Epidermal growth factor induces increased mucosal thickness of the small intestine in mouse. *Eur. Surg. Res* 1997;29(447-454

ALZET Comments: Epidermal growth factor; Thymidine; ³H tracer; Radio-isotopes; SC; IP; mice; 1003D; 2001; 1, 3, 7 days; peptides; recomb. human EGF used.

P3860: J. Zhu, *et al.* A continuous intracerebral gene delivery system for in vivo liposome-mediated gene therapy. *Gene Therapy* 1996;3(472-476

ALZET Comments: Liposomes; Gene, herpes simplex virus thymidine kinase; Gene, lacZ; CSF/CNS (caudate nucleus); Rat; 1003D; 3 days; controls received mp w/LacZ gene; tissue perfusion (tumor); functionality of mp verified by gene expression; comparison of intracerebral injections vs. mp; no stress (see pg.473); stability verified by gene expression; ALZET brain infusion kit used; cancer; gene therapy; "DNA-liposome complexes were stable within minipumps at body temperature (37C) for 1-3 days." (pg.474); "continuous administration of DNA-liposome complexes did not result in significant in vivo toxicity." (pg.474).

P3505: D. W. Roberson, *et al.* Light microscopic evidence that direct transdifferentiation gives rise to new hair cells in regenerating avian auditory epithelium. *Auditory Neuroscience* 1996;2(195-205

ALZET Comments: Thymidine; Radio-isotopes; ³H tracer; ear (cochlea); bird (chicken); 2002; 5,12 days; 26,30 hours; tissue perfusion (cochlea); ALZET brain infusion kit used.

P3329: T. M. Monticello, *et al.* Correlation of regional and nonlinear formaldehyde-induced nasal cancer with proliferating populations of cells. *Cancer Res* 1996;56(1012-1022

ALZET Comments: Thymidine, methyl; ³H tracer; Radio-isotopes; SC; Rat; 2ML1; 5 days; cancer.

P3380: T. J. Kinsella, *et al.* In vivo modulation of iododeoxyuridine metabolism and incorporation into cellular DNA by 5'-amino-5'-deoxythymidine in normal mouse tissues and two human colon cancer xenografts. *Clin. Cancer Res* 1996;2(981-989

ALZET Comments: Uridine, iododeoxy-; Thymidine, 5'-amino-5'-deoxy-; NaOH; SC; Mice (nude); 2001; 6 days; controls received mp w/NaOH; 6 day stability verified by uv spectrophotometry p.983; cancer; toxicology; 1-2 mps used per animal; agents given singly & together.

P2846: J. C. Siglin, *et al.* Gender-dependent differences in hepatic tumor promotion in diethylnitrosamine initiated infant B6C3F mice by alpha-hexachlorocyclohexane. *J. Toxicol. Environ. Health* 1995;44(235-245

ALZET Comments: Thymidine; Radio-isotopes; ³H tracer; SC; Rat; 2002; 7 days; cancer.



P7963: E. W. Rubel, *et al.* Mammalian Vestibular Hair Cell Regeneration. *Science* 1995;267(5198):701-707

ALZET Comments: Thymidine; 3H tracer; radio-isotopes; Ear (semicircular canal); Guinea pig; 2002; 2,4,6 weeks; Functionality of mp verified by scintillation counts of perilymph of the ear; long-term study; pumps replaced every two weeks; ALZET brain infusion kit used; animal info (albino, 300-400 g); Vetbond adhesive used to close skin; tissue perfusion (semicircular canal).

P3246: H. Li, *et al.* Parietal cell kinetics after administration of omeprazole and ranitidine in the rat. *Scand. J. Gastroenterol* 1995;30(205-209)

ALZET Comments: Ranitidine; Thymidine; ³H tracer; Radio-isotopes; SC; Rat; 2002; 2ML1; 5-56 days; controls received mp with saline; long-term study, pumps replaced weekly; 1 ranitidine and 1 thymidine pump used concomitantly in each animal.

P2818: H. Dobnig, *et al.* Evidence that intermittent treatment with parathyroid hormone increases bone formation in adult rats by activation of bone lining cells. *Endocrinology* 1995;136(8):3632-3638

ALZET Comments: Thymidine; Water; Ethanol; ³H tracer; Radio-isotopes; SC; Rat; no duration posted; no comment posted.

P3083: H. Zerban, *et al.* Cell proliferation and cell death (apoptosis) in hepatic preneoplasia and neoplasia are closely related to phenotypic cellular diversity and instability. *Carcinogenesis* 1994;15(11):2467-2473

ALZET Comments: Thymidine; ³H tracer; Radio-isotopes; SC; Rat; 2ML1; 48 hours; cancer; pumps implanted in abdominal wall.

P2211: A. F. Tarantal, *et al.* Pre and postnatal treatment of the rhesus macaque (*Macaca mulatta*) with azidothymidine: I. fetal studies. *Pediatr. Aids HIV Infection: Fetus to Adolescent* 1994;5(1):10-19

ALZET Comments: Azidothymidine; Sodium hydroxide; SC; monkey (pregnant); 2ML4; 28 days; controls received mp w/vehicle; functionality of mp verified by plasma levels of AZT; teratology; AZT is azidothymidine, also known as zidovudine; multiple pumps per animal (3-4); "Circulating levels of AZT remained constant during the course of treatment and were achieved by the first (24 hr.) sample (p. 11); antiretroviral drug.

P2487: Z.-Y. Chen, *et al.* Inhibition of cell proliferation by ciprofibrate in glutathione s-transferase p1-1-positive rat hepatic hyperplastic nodules. *Cancer Res* 1994;54(2622-2629)

ALZET Comments: Thymidine; Uridine, bromodeoxy-; Radio-isotopes; ³H tracer; IP; Rat; 2ML1; 3 days; pumps replaced five days after first pumps removed; cancer; toxicology; double cell labeling method; BRDU infused after thymidine;

P3257: B. G. Lake, *et al.* Comparison of the hepatic effects of nafenopin and WY-14, 643 on peroxisome proliferation and cell replication in the rat and syrian hamster. *Environ. Health Perspect* 1993;101(Sup 5):241-248

ALZET Comments: Thymidine; 3H tracer; Radio-isotopes; SC; Rat; hamster; 2001; 2ML1; no duration posted; cancer; toxicology.

P2578: J. E. Klaunig. Selective induction of DNA synthesis in mouse preneoplastic and neoplastic hepatic lesions after exposure to phenobarbital. *Environ. Health Perspect* 1993;101(5):235-240

ALZET Comments: Thymidine; 3H tracer; Radio-isotopes; mice; 7 days; toxicology.

P2572: J. Kanno, *et al.* Effect of methylene chloride inhalation on replicative DNA synthesis in the lungs of female B6C3F1 mice. *Environ. Health Perspect* 1993;101(5):271-276

ALZET Comments: Uridine, bromodeoxy-; Thymidine; PBS; Sodium hydroxide; 3H tracer; Radio-isotopes; SC; mice; 2001; 6 days; toxicology;

P2269: J. F. Foley, *et al.* Inhalation exposure to a hepatocarcinogenic concentration of methylene chloride does not induce sustained replicative DNA synthesis in hepatocytes of female B6C3F1 mice. *Carcinogenesis* 1993;14(5):811-817

ALZET Comments: Radio-isotopes; Thymidine; Uridine, bromodeoxy-; 3H tracer; SC; mice; 2001; 6 days; toxicology; cancer;

P2647: S. D. Brown, *et al.* Neurogenesis in adult canary telencephalon is independent of gonadal hormone levels. *J. Neurosci* 1993;13(5):2024-2032

ALZET Comments: Thymidine; 3H tracer; Radio-isotopes; bird (canary); 1003D; 3 days; "constant infusion of thymidine rather than. . .'pulse' injections was chosen for its greater sensitivity."

