



Recent References (2011-2019) on the Administration of Bromodeoxyuridine Using ALZET® Osmotic Pumps

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;.

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);.

Q7185: S. E. Iismaa, *et al.* Cardiac hypertrophy limits infarct expansion after myocardial infarction in mice. *Sci Rep* 2018;8(1):6114

ALZET Comments: Uridine, 5-bromo-2'-deoxy; DMSO, Water; SC; Mice; 2002, 2006; 9 days and 12 weeks; Dose (10 mg/kg/day); 50% DMSO/water used; animal info (16 weeks old male mice); post op. care (bupivacaine, 8 mg/kg, buprenorphine, 0.075 mg/kg); Model 2006 pumps replaced after 6 weeks; long-term study; 5-bromo-2'-deoxyuridine aka BrdU; cardiovascular; .

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);.

Q6274: L. C. Wehmas, *et al.* Metabolic Disruption Early in Life is Associated With Latent Carcinogenic Activity of Dichloroacetic Acid in Mice. *Toxicol Sci* 2017;159(2):354-365

ALZET Comments: Uridine, 5-bromodeoxy-; PBS; SC; Mice; 2001; 5 days; Dose (2.4 mg/ml); animal info (B6C3F1 mice); 5-bromo-20-deoxyuridine aka BrdU;.

Q6190: Y. Okuda, *et al.* Editor's Highlight: Mode of Action Analysis for Rat Hepatocellular Tumors Produced by the Synthetic Pyrethroid Momfluorothrin: Evidence for Activation of the Constitutive Androstane Receptor and Mitogenicity in Rat Hepatocytes. *Toxicol Sci* 2017;158(2):412-430

ALZET Comments: Uridine, 5-bromo-2-deoxy; SC; Rat; 2ML1; 7 day; 14 days; animal info (Wistar strain rats aged 9 weeks; CAR Knockout rats with a Crl:CD genetic background aged 10 weeks and wild-type Crl:CD rats aged 11 weeks);.

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);.

Q6565: A. Jourdon, *et al.* Prss56, a novel marker of adult neurogenesis in the mouse brain. *Brain Struct Funct* 2016;221(9):4411-4427

ALZET Comments: Uridine, 5-bromodeoxy; Growth factor, basic fibroblast; CSF, artificial; Albumin, mouse serum; CSF/CNS (right lateral ventricle); Mice; 7 days; animal info (3 month old Prss56Cr mice); Brain coordinates (-0.5 mm; L: +1.2 mm; DV:-2.5 mm);.

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);.

Q4584: V. V. Sherstnev, *et al.* Long-lived newly formed neurons in the mature brain are involved in the support of learning and memory processes. *Neurochemical Journal* 2015;9(13-19

ALZET Comments: Uridine, 5-bromo-2-deoxy-; Saline, sterile; CSF/CNS; Rat; 2002; 14 days; Animal info (male, Wistar, 12 weeks old, 220-250g); behavioral testing (morris water maze); pumps removed after 14 days;.

Q4281: R. J. Rasoulopour, *et al.* Pronamide: Human relevance of liver-mediated rat leydig cell tumors. *REGULATORY TOXICOLOGY AND PHARMACOLOGY* 2015;72(394-404

ALZET Comments: Uridine, 5-bromo-2-deoxy-; PBS; SC; Rat; 2ML2; 14 days; Animal info (male, Crl:CD(SC), 14-16 months old); "This implantation method insured a constant, uniform, systemic delivery of BrdU during the two week exposure period." pg 396;.

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;.

Q4491: Y. H. Lee, *et al.* Cellular origins of cold-induced brown adipocytes in adult mice. *FASEB JOURNAL* 2015;29(286-299

ALZET Comments: Norepinephrine; uridine, 5-bromo-2'-deoxyuridine; Ascorbic acid; Mice; 7 days; Controls received mp w/ vehicle; animal info (C57BL6J or tdTomato);.

Q4481: J. E. Klaunig, *et al.* Mechanism of 1,3-Dichloropropene-Induced Rat Liver Carcinogenesis. *TOXICOLOGICAL SCIENCES* 2015;143(6-15

ALZET Comments: Uridine, 5-bromo-2-deoxy-; Rat; 7 days; Animal info (male, F344 rat, 6-4 weeks old);.

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 behavior); cardiovascular;.

Q5599: M. L. Rock. The time-to-integrate-to-nest test as an indicator of wellbeing in laboratory mice. Journal of American Association of Laboratory Animal Science 2014;53(1):24-28

ALZET Comments: Aldosterone; bromodeoxyuridine; Ethanol; SC; Mice; 3 days; 11% ethanol used; Multiple pumps per animal (2): one for aldosterone and one for BrdU; no stress: Minipump implantation surgery did not appear to affect TINT results, yet mice were more likely to fail the TINT the morning after CAI surgery. Mice required 2 full days to return to baseline TINT levels. This lag may be due to the fact that minipump implantation surgery is adequately treated with a single dose of buprenorphine whereas CAI surgery is not (see pg. 27); post op. care: Buprenorphine (0.05 mg/kg SC); Dose: Aldosterone (6 g/kg/d;), BrdU (25 mg/kg/d);.

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.".

Q3305: N. T. Lindau, *et al.* Rewiring of the corticospinal tract in the adult rat after unilateral stroke and anti-Nogo-A therapy. *Brain* 2014;137(;):739-756

ALZET Comments: Antibody, mouse monoclonal anti-Nogo-A 11C7; uridine, anti-bromodeoxy; CSF/CNS (intrathecal); Rat; 2ML2; 2 weeks; Controls received mp w/control antibody; animal info (female, Long Evans, 3-7 months, 230-400g); ischemia (photothrombic); post op. care (Rimadyl 2.5mg/kg, Baytril 5mg/kg for 3 days; mannitol 20% injection 17 mg/kg; heating pad for 24h); behavioral testing (pellet grasping); pump and catheter removed after 2 weeks; used 32 gauge intrathecal catheter;.

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 conditions); 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; sulfoxaflor; 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.

Q1839: G. Cruzan, *et al.* CYP2F2-generated metabolites, not styrene oxide, are a key event mediating the mode of action of styrene-induced mouse lung tumors. *Regulatory Toxicology and Pharmacology* 2012;62(1):214-220

ALZET Comments: Uridine, 5-bromo 2'-deoxy; Saline; SC; Mice; 2001; Animal info (CYP2F2 -/-, male); labeling of S-phase 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).

Q1742: G. Speit, *et al.* Analysis of micronuclei, histopathological changes and cell proliferation in nasal epithelium cells of rats after exposure to formaldehyde by inhalation. MUTATION RESEARCH-GENETIC TOXICOLOGY AND ENVIRONMENTAL MUTAGENESIS 2011;721(2):127-135

ALZET Comments: Uridine, 5-bromo 2'-deoxy; SC; Rat; 2ML1; 3 days; Animal info (male, Fischer 344).

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, Crl: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.