Recent References (2015-Present) on the Cell Proliferation Studies Using ALZET® Osmotic Pumps

BrdU

R0404: H. Williams, *et al.* Use of Mouse Carotid Artery Ligation Model of Intimal Thickening to Probe Vascular Smooth Muscle Cell Remodeling and Function in Atherosclerosis. Methods in Molecular Biology 2022;2419(537-560
Agents: Uridine, bromodeoxy- **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 1 day; 6 weeks;
ALZET Comments: Dose: (0.11)animal info: male and female adult mice, 2 mos old; post op. care: 1.5 µg of buprenorphine hydrochloride (Vetergesic); Bromodeoxyuridine aka (BrdU)

Q10774: R. M. Wang, *et al.* Myocardial Matrix Hydrogel Acts as a Reactive Oxygen Species Scavenger and Supports a Proliferative Microenvironment for Cardiomyocytes. Acta Biomaterialia 2022;152(47-59
Agents: Uridine, 5-Ethynyl-2'deoxy-; Uridine, Bromodeoxy- **Vehicle:** Saline; **Route:** SC; **Species:** Rat **Duration:** 3 weeks;
ALZET Comments: Dose: (20 mg/kg/day); Controls received mp w/ vehicle; animal info: Female sprague Dawley rats; pumps replaced after 1.5 weeks; 5-Ethynyl-2 deoxyuridine aka (EdU); Bromodeoxy,uridine aka (BrdU); cardiovascular;

Q10668: P. J. Ruchaya, *et al.* Transplantation of Skeletal Muscle-Derived Sca-1(+)/PW1(+)/Pax7(-) Interstitial Cells (PICs) Improves Cardiac Function and Attenuates Remodeling in Mice Subjected to Myocardial Infarction. Cells 2022;11(24):
Agents: Uridine, bromodeoxy- **Vehicle:** PBS; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 14 days;
ALZET Comments: Dose (0.2 M); Controls received mp w/ vehicle; animal info (8-week old male C57BL/6 mice); cardiovascular;

Q10542: F. Heinemann, *et al.* Quantification of Hepatocellular Mitoses in a Toxicological Study in Rats Using a Convolutional Neural Network. Toxicologic Pathology 2022;50(3):344-352
Agents: Uridine, bromodeoxy- **Vehicle:** Saline; **Route:** SC; **Species:** Rats; **Pump:** Not Stated; **Duration:** Not Stated;
ALZET Comments: Dose (20 mg/ml saline; animal info (CrL:WI; Male; Split into groups of 7; 7-8 weeks old; Weighed 150-200 g); toxicology

Q10333: S. K. Sinha, *et al.* Local M-CSF (Macrophage Colony-Stimulating Factor) Expression Regulates Macrophage Proliferation and Apoptosis in Atherosclerosis. Arteriosclerosis Thrombosis and Vascular Biology 2021;41(1):220-233
Agents: Uridine, bromodeoxy- **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** 1002; **Duration:** 2 weeks;
ALZET Comments: Dose: (50 µg per day); animal info: 8- to 10-week-old female and
male mice WT background; bromodeoxyuridine aka (BrdU); cardiovascular

Q10065: C. Schnoz, *et al.* Deletion of the transcription factor Prox-1 specifically in the renal distal convoluted tubule causes hypomagnesemia via reduced expression of TRPM6 and NCC. Pflügers Archiv 2021;473(1):79-93
Agents: Bumetanide; Uridine, bromodeoxy- **Vehicle:** Water; PEG 300; **Route:** SC; **Species:** Mice; **Pump:** 2001; **Duration:** 3 days;
ALZET Comments: Dose (40 mg/kg/day Bumetanide; 40 mg/kg/day bromodeoxyuridine); dependence;

Q8822: A. Recabal, *et al.* The FGF2-induced tanycyte proliferation involves a connexin 43 hemichannel/purinergic-dependent pathway. Journal of Neurochemistry 2021;156(2):182-199
Agents: Uridine, bromodeoxy-; Fibroblast Growth Factor 2; Gap27 **Vehicle:** CSF; **Route:** CSF/CNS; **Species:** Rat; **Pump:** 1007D; **Duration:** 7 days;
ALZET Comments: Dose (0.75 ug/h BrdU, 0.0125 ug/hr FGF2, 0.13 ug/h Gap27); Controls received mp w/ vehicle; animal info (Male, Sprague Dawley, 120-280 g); Bromodeoxyuridine aka BrdU, Fibroblast Growth Factor 2 aka FGF2, Gap27 aka selective Cx43HC inhibitor ; enzyme inhibitor (Cx43HC Inhibitor); dental cement used; dependence;

Q10292: K. Ogata, *et al.* Club Cells Are the Primary Target for Permethrin-Induced Mouse Lung Tumor Formation. Toxicological Sciences 2021;184(1):15-32
Agents: Uridine, bromodeoxy- **Vehicle:** DMSO; **Route:** SC; **Species:** Mice; **Pump:** 2001; **Duration:** 7 days;
ALZET Comments: Dose:(200 uL); 10% DMSO vehicle used; Controls received mp w/ vehicle; animal info: Female mice, 10 weeks old; Bromodeoxyuridine aka (Brdu); dependence;

Q10001: M. Lafranconi, *et al.* A 90-day drinking water study in mice to characterize early events in the cancer mode of action of 1,4-dioxane. Regulatory Toxicology and Pharmacology 2021;119(104819
Agents: Uridine, bromodeoxy **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** 2ML1; **Duration:** 8 days;
ALZET Comments: Animal info (Female B6D2F1/Crl mice, 5 to 8 weeks old); bromodeoxyuridine aka BrdU; cancer (tumor development);

Q9306: S. Kikusaki, *et al.* Prevention of postoperative intrapericardial adhesion by dextrin hydrogel. General Thoracic and Cardiovascular Surgery 2021;69(9):1326-1334
Agents: Uridine, bromodeoxy- **Vehicle:** Not Stated; **Route:** Abdomen; **Species:** Rabbit; **Pump:** 2ML2; **Duration:** 14 days;
ALZET Comments: Animal info (male Japanese white rabbits, 2.5-3.0 kg); bromodeoxyuridine aka BrdU; cardiovascular;

Q9039: C. Wiemann, *et al.* Metazachlor: Mode of action analysis for rat liver tumour formation and human relevance. Toxicology 2019;426(152282
Agents: Uridine, bromodeoxy- **Vehicle:** Saline; **Route:** Not Stated; **Species:** Rat; **Pump:** 2ML1; **Duration:** 7 days;
ALZET Comments: Dose (20 mg/ml); animal info (male and female Wistar rats); Bromodeoxyuridine aka BrdU; dependence;

R0384: A. A. Pieper, *et al.* Benefits of Enhancing Nicotinamide Adenine Dinucleotide Levels in Damaged or Diseased Nerve Cells. Cold Spring Harbor Symposia on Quantitative Biology 2019;
Agents: Uridine, bromodeoxy-; aminopropylcarbazole **Vehicle:** Not stated; **Route:** CSF/CNS; **Species:** Mice; **Pump:** Not stated; **Duration:** 1 week;
ALZET Comments: neurodegenerative (missing NPAS3 impaired hippocampal neurogenesis); Therapeutic indication (Missing NPAS1 enhanced hippocampal neurogenesis);

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;
Agents: Uridine, Bromodeoxy **Vehicle:** DMSO; **Route:** SC; **Species:** Mice; Rat; **Pump:** 2001; 2ML2; **Duration:** 7 days; 14 days;
ALZET Comments: 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;

Q8139: H. Mziaut, *et al.* miR-132 controls pancreatic beta cell proliferation and survival in mouse model through the Pten/Akt/Foxo3 signaling. bioRxiv 2018;
Agents: Uridine, Bromodeoxy- **Vehicle:** DMSO; **Route:** IP; **Species:** Mice; **Pump:** 1007D; **Duration:** 7 days;
ALZET Comments: Dose (0.5 ul/hr/day); 50% DMSO used; animal info (C57Bl/6N mice with an age of 13-19 weeks and a body weight of 28-34 g); Bromodeoxyuridine aka BrdU ; cardiovascular;

Q8107: E. Magrinelli, *et al.* Simultaneous production of diverse neuronal subtypes during early corticogenesis. bioRxiv 2018;
Agents: Uridine, Bromodeoxy **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 1003D; **Duration:** 3 days or 7 days;
ALZET Comments: Dose (16 mg/ml both 0.1 ul/hr); animal info (CD1); Bromodeoxyuridine aka BrdU ; neurodegenerative (Corticogenesis);

Q8074: F. C. Lewis-McDougall, *et al.* Senescent, dysfunctional human cardiac progenitor cells (CPCs) accumulate in the aged heart and elimination of senescent cells enhances CPC activation and cardiomyocyte proliferation in aged mice. bioRxiv 2018;
Agents: Uridine, bromodeoxy- **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** Not stated; **Duration:** 14 days;
ALZET Comments: Dose (0.2 M); animal info (22-32 months); Bromodeoxyuridine aka BrdU, thymidine analogue ; dependence;

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
Agents: Uridine, bromodeoxy-, Deoxyuridine, 5-ethynyl-2' **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** 1003D;
Duration: 3 days;
ALZET Comments: Dose (16 mg/ml BrdU or 10 mg/ml EdU);

Q7820: J. M. Gonzalez-Rosa*, et al.* Myocardial Polyploidization Creates a Barrier to Heart Regeneration in Zebrafish. Developmental Cell 2018;44(4):433-446 e7
Agents: uridine, bromodeoxy- **Vehicle:** PBS; **Route:** SC; **Species:** Mice; **Pump:** 1002; **Duration:** Not Stated;
ALZET Comments: Dose (16 mg/ml); animal info (12 weeks, MHC-ECT2; MHC-nLAC double transgenic or MHC-nLAC single transgenic); cardiovascular; mp used for BrdU labeling;

Q10131: C. Carresi*, et al.* Anti-oxidant effect of bergamot polyphenolic fraction counteracts doxorubicin-induced cardiomyopathy: Role of autophagy and c-kit(pos)CD45(neg)CD31(neg) cardiac stem cell activation. Journal of Molecular Cellular Cardiology 2018;119(10-18
Agents: Uridine, bromodeoxy- **Vehicle:** Saline; **Route:** SC; **Species:** Rat; **Pump:** Not Stated; **Duration:** 21 days;
ALZET Comments: Dose (0.6M); Controls received mp w/ vehicle; animal info (Wistar male 6–8 weeks,(300 ± 10 g); Bromodeoxyuridine aka (BrdU); cardiovascular; (cardiomyopathy)

Q8178: C. Carresi*, et al.* Anti-oxidant effect of bergamot polyphenolic fraction counteracts doxorubicin-induced cardiomyopathy: Role of autophagy and c-kit(pos)CD45(neg)CD31(neg) cardiac stem cell activation. J Mol Cell Cardiol 2018;119(10-18
Agents: Uridine, bromodeoxy- **Vehicle:** Saline; **Route:** SC; **Species:** Rat; **Pump:** Not stated; **Duration:** 21 days;
ALZET Comments: Dose(0.6 M);Controls received mp w/ vehicle; animal info (Wistar male rats (n = 40) at 6–8 weeks of age (body weight 300 ± 10 g)); Bromodeoxyuridine aka BrdU; cardiovascular;

Q10118: R. W. Boyce*, et al.* Decreased osteoprogenitor proliferation precedes attenuation of cancellous bone formation in ovariectomized rats treated with sclerostin antibody. Bone Reports 2018;8(90-94
Agents: Uridine, bromodeoxy- **Vehicle:** PBS, Dulbecco's; DMSO; **Route:** SC; **Species:** Rat; **Pump:** 2ML1; **Duration:** 5 days;
ALZET Comments: Dose (10 µL/h,50 mg/mL); 15% DMSO used; Controls received mp w/ vehicle; (6 mo.old female Sprague-Dawley, 500 g); Uridine, 5-bromo-2'-deoxy aka (BrdU)

Q6551: E. Yulyaningsih*, et al.* Acute Lesioning and Rapid Repair of Hypothalamic Neurons outside the Blood-Brain Barrier. Cell Reports 2017;19(11):2257-2271
Agents: Uridine, bromodeoxy-; Fibroblast growth factor, basic **Vehicle:** CSF, artificial; **Route:** CSF/CNS (right lateral ventricle); **Species:** Mice; **Pump:** 1007D; **Duration:** 7 days;
ALZET Comments: 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
Agents: Uridine, bromodeoxy-; **Vehicle:** PBS; **Route:** Not Stated; **Species:** Rat; **Pump:** 2ML1; **Duration:** 7 days;
ALZET Comments: Dose (20 mg/ml); animal info (Ten-week old male F344/DuCrl 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. Endocrine Connections 2017;6(7):446-457
Agents: ACTH; Uridine, bromodeoxy-; **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 2002; **Duration:** 2 weeks;
ALZET Comments: 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
Agents: Uridine, Bromodeoxy **Vehicle:** Water; **Route:** Not Stated; **Species:** Mice; **Pump:** 2001D; **Duration:** Not Stated;
ALZET Comments: 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
Agents: Uridine, bromodeoxy **Vehicle:** PBS; **Route:** SC; **Species:** Mice (knockout); **Pump:** 2001; **Duration:** 7 days;
ALZET Comments: 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. American Journal of Physiology Gastrointestinal and Liver Physiology 2017;312(3):G283-G299
Agents: Uridine, bromodeoxy- **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice (knockout); **Pump:** 1007D; **Duration:** 7 days;
ALZET Comments: 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. Arteriosclerosis, Thrombosis, and Vascular Biology 2016;36(7):1417-24
Agents: Uridine, bromodeoxy- **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice (transgenic); **Pump:** 2004; **Duration:** 3 days; 28 days;
ALZET Comments: 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(**Agents:** Uridine, bromodeoxy **Vehicle:** PBS, Dulbecco's; **Route:** SC; **Species:** Mice; **Pump:** 1007D; **Duration:** 7 days;
ALZET Comments: 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):
Agents: Uridine, bromodeoxy **Vehicle:** Not Stated; **Route:** Not Stated; **Species:** Rat; **Pump:** 2ML1; **Duration:** 7 days;
ALZET Comments: animal info (inbred male and female Lewis rats); cancer (Hepatocellular carcinoma);

Q5340: P. Douvaras, *et al.* Abnormal corneal epithelial maintenance in mice heterozygous for the micropinna microphthalmia mutation Mp. Experimental Eye Research 2016;149(26-39
Agents: Uridine, Bromodeoxy- **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 1007D; **Duration:** 7 days;
ALZET Comments: 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 & Disease 2016;7(7):e2317
Agents: Uridine, Bromodeoxy **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 30 days;
ALZET Comments: 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
Agents: Uridine, Bromodeoxy **Vehicle:** Saline, DMSO; **Route:** SC; **Species:** bird (sparrow); **Pump:** 1007D; **Duration:** 5 days;
ALZET Comments: 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-+
Agents: Uridine, bromodeoxy- **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 14 days;
ALZET Comments: 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
Agents: Uridine, bromodeoxy-; furosemide **Vehicle:** DMSO; **Route:** SC; **Species:** Mice; **Pump:** 1007D; 2001; **Duration:** 7 days;
ALZET Comments: 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 Transplantation 2015;24(12):2557-71
Agents: Uridine, bromodeoxy- **Vehicle:** Not Stated; **Route:** IP; **Species:** Mice; **Pump:** 1004; **Duration:** 6 hours; 4 weeks;
ALZET Comments: 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
Agents: Uridine, bromodeoxy **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 5 days;
ALZET Comments: 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
Agents: Uridine, bromodeoxy **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** 1007D; **Duration:** 1 week;
ALZET Comments: Animal info (female, C57BL6, 25g); cardiovascular;

edU

Q10774: R. M. Wang, *et al.* Myocardial Matrix Hydrogel Acts as a Reactive Oxygen Species Scavenger and Supports a Proliferative Microenvironment for Cardiomyocytes. Acta Biomaterialia 2022;152(47-59
Agents: Uridine, 5-Ethynyl-2'deoxy-; Uridine, Bromodeoxy- **Vehicle:** Saline; **Route:** SC; **Species:** Rat; **Pump:** Not Stated;
Duration: 3 weeks;
ALZET Comments: Dose: (20 mg/kg/day); Controls received mp w/ vehicle; animal info: Female sprague Dawley rats; pumps replaced after 1.5 weeks; 5-Ethynyl-2 deoxyuridine aka (EdU); Bromodeoxy,uridine aka (BrdU); cardiovascular;

Q10860: A. E. Yuko, *et al.* LIN28a Induced Metabolic and Redox Regulation Promotes Cardiac Cell Survival in the Heart After Ischemic Injury. Redox Biology 2021;47(102162
Agents: Deoxyuridine, 5-ethynyl-2' **Vehicle:** DMSO; Water, double distilled; **Route:** SC; **Species:** Mice; **Pump:** Not Stated;
Duration: 1 week;
ALZET Comments: Dose: (39.0625 mg/mL); 50/50% DMSO/ddH2O vehicle used; Controls received mp w/ vehicle; animal info: (C57BL/6; 8–12 weeks old male mice)ischemia (Myocardial);

Q7941: I. Aquila, *et al.* c-kit Haploinsufficiency impairs adult cardiac stem cell growth, myogenicity and myocardial regeneration. Cell Death Dis 2019;10(6):436
Agents: Uridine, 5-bromo-2'-deoxy-; Uridine, 5-Ethynyl-2'-deoxy-; Uracil, 5-fluoro- **Vehicle:** Water, Deionized, DMSO buffered;
Route: SC; **Species:** Mice; **Pump:** Not stated; **Duration:** 7, 25, 28 days;
ALZET Comments: Dose ((BrdU 50 mg/kg/day), (EdU 50 mg/kg/day), (5-FU 15 mg/kg/day)); 50% deionized water and 50% DMSO used; Controls received mp w/ vehicle; animal info (12 weeks, male, C57BL/6J, Tg-myh6(MCM), and Tg-myh6MCM: R26(mT-mG/+)); cardiovascular; mp used for BrdU and EdU labeling or for ISO + 5-FU induced cardiomyopathy;

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
Agents: Uridine, bromodeoxy-, Deoxyuridine, 5-ethynyl-2' **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** 1003D;
Duration: 3 days;
ALZET Comments: 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
Agents: Deoxyuridine, 5-ethynyl-2' **Vehicle:** DMSO; Saline; **Route:** SC; **Species:** Mice; **Pump:** 1002; **Duration:** 13 days;
ALZET Comments: 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
Agents: Uridine, 5'-ethynyl-2'-deoxy **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** 2001; **Duration:** 7 days;
ALZET Comments: 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
Agents: Uridine, 5-ethynyl-2'-deoxy **Vehicle:** DMSO, PEG 300; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 28 days;
ALZET Comments: 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);

Thymidine

Q7269: A. Vujic*, et al.* Exercise induces new cardiomyocyte generation in the adult mammalian heart. Nat Commun 2018;9(1):1659
Agents: Thymidine, 15-; Radio-isotope **Vehicle:** 15N tracer; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 8 weeks;
ALZET Comments: 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
Agents: Thymidine, 5-bromo-2'-deoxyuridine **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 1007D; **Duration:** 5 days;
ALZET Comments: 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
Agents: Thymidine, 3'-azido-3'-deoxy-; cyclodextrin, methyl-b- **Vehicle:** Saline; PEG 400; **Route:** CSF/CNS (dentate gyrus);
Species: Mice; **Pump:** Not Stated; **Duration:** 14 days;
ALZET Comments: 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);