



Recent References (2021-Present) on Cancer Research  
Using ALZET® Osmotic Pumps

**Q11352:** Z. Li, *et al.* Intranasal 15d-PGJ2 inhibits the growth of rat lactotroph pituitary neuroendocrine tumors by inducing PPARgamma-dependent apoptotic and autophagic cell death. *Frontiers in Neuroscience* 2023;17(1109675

**Agents:** Estradiol **Vehicle:** Saline; DMSO; **Route:** SC; **Species:** Rat; **Strain:** Fischer; **Pump:** 2006; **Duration:** 6 weeks;  
**ALZET Comments:** Dose (1, 2, 4, 8, 16 mg); dose-dependent; 1% DMSO, 99% saline used; controls received mp w/ vehicle; animal info (Ten-week-old female); MRI; "E2 treatment significantly increased the volumes and weights of lactotroph PitNETs and serum PRL in OVX rats in a dose-dependent manner." p. 8

**Q11339:** Z. Liu, *et al.* Ameliorating cancer cachexia by inhibiting cancer cell release of Hsp70 and Hsp90 with omeprazole. *Journal of Cachexia, Sarcopenia and Muscle* 2022;13(1):636-647

**Agents:** Omeprazole **Vehicle:** DMSO; PBS; **Route:** SC; **Species:** Mice; **Strain:** Not Stated; **Pump:** Not Stated; **Duration:** 2 w  
**ALZET Comments:** Dose: (5 mg/kg/day); 0.1% DMSO vehicle used Controls received mp w/ vehicle; animal info: 8-week-old male mice of C57BL/6; therapeutic indication: cancer cachexia;

**Q11321:** J. H. Jun, *et al.* Effects of dexmedetomidine on A549 non-small cell lung cancer growth in a clinically relevant surgical xenograft model. *Scientific Reports* 2023;13(1):12471

**Agents:** Dexmedetomidine **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Strain:** BALB/c nude; **Pump:** 1002; **Duration:** 14 days;  
**ALZET Comments:** Dose (20 ug/kg/day); animal info (male; 6 weeks old, 17-18 g); receptor agonist (Alpha-2 adrenoceptor); immunology; xenograft

**Q11313:** P. L. Hsu, *et al.* Targeting BRD3 eradicates nuclear TYRO3-induced colorectal cancer metastasis. *Science Advances* 2023;

**Agents:** ARP100 **Vehicle:** DMSO; **Route:** IP; **Species:** Mice; **Strain:** NOD/SCID; **Pump:** 2004; **Duration:** 1 month;  
**ALZET Comments:** Dose (5 mg/kg/day); Controls received mp w/ vehicle; animal info (Male; 8 weeks old); enzyme inhibitor (MMP2); cancer (Colorectal);

**Q11309:** L. Guo, *et al.* PER2 integrates circadian disruption and pituitary tumorigenesis. *Theranostics* 2023;13(8):2657-2672

**Agents:** 17 Beta-estradiol **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Strain:** Per2-/- (C57BL6 background); **Pump:** 2004;  
**Duration:** Not Stated;  
**ALZET Comments:** Dose (20 mg); animal info (8-12 weeks old);

**Q11288:** E. Itzhaki, *et al.* Tumor-Targeted Poly(ArgGlyAsp) Nanocapsules for Personalized Cancer Therapy – In Vivo Study. *Advanced Therapeutics* 2023;6(6):

**Agents:** Estradiol, 17b- **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Strain:** NRG; NSG; **Pump:** Not Stated; **Duration:** 28 d  
**ALZET Comments:** Dose (1.08 mg/pellet); controls received mp w/ vehicle; animal info (5–8 week old); cancer (colon, breast, and gastric cancer);

**Q11287:** A. Ito, *et al.* Usefulness of direct intratumoral administration of doxorubicin hydrochloride with an electro-osmosis-assisted pump. *Frontiers in Drug Delivery* 2023;3(**Agents:** Not Stated **Vehicle:** Not Stated; **Route:** CSF/CNS (intratumoral); **Species:** Not Stated; **Strain:** Not Stated; **Pump:** Not Stated; **Duration:** Not Stated;

**ALZET Comments:** ALZET mention for anti-cancer drug delivery

**Q11283:** M. A. Hossain, *et al.* Development of Novel High-Affinity Antagonists for the Relaxin Family Peptide Receptor 1. *ACS Pharmacology & Translational Science* 2023;6(5):842-853

**Agents:** H2 relaxin; H2 R13/17 HR; H2 B-R13HR **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Strain:** C57BL/6J;  
**Pump:** 1007D; **Duration:** 8 days;  
**ALZET Comments:** Dose (H2 0.15 mg/kg/day, H2 B-R13/17HR and H2 B-R13HR 1.5 mg/kg/day); animal info (Male; 5 weeks old); peptides; cancer (Prostate);



**Q11277:** C. Guetta-Terrier, *et al.* Chi311 Is a Modulator of Glioma Stem Cell States and a Therapeutic Target in Glioblastoma. *Cancer Research* 2023;83(12):1984-1999

**Agents:** Antibody, anti-Chitinase 3-like 1 **Vehicle:** Not Stated; **Route:** CSF/CNS; **Species:** Mice; **Strain:** NU/J;  
**Pump:** Not Stated; **Duration:** 28 days;

**ALZET Comments:** animal info (Female and male; 9 weeks old); cancer (Glioblastoma); "We show that continuous localized treatment with anti-Chi311 antibody results in more than 60% reduction of tumor volume compared with IgG treated control mice." p. 12

**Q11270:** W. Dong, *et al.* A designer peptide against the EAG2-Kvbeta2 potassium channel targets the interaction of cancer cells and neurons to treat glioblastoma. *Nature Cancer* 2023;4(10):1418-1436

**Agents:** K90-114 **Vehicle:** DPBS; **Route:** CSF/CNS (intratumoral); **Species:** Mice **Strain:** NS **Pump:** 1002; 1007D **Duration:** 14d

**ALZET Comments:** Dose (300 µg); animal info: 6–12-week-old female; peptides; brain coordinates (1.5 mm lateral to midline, 2 mm posterior to bregma and –3 mm deep to the cranial surface); cancer (Glioblastoma); brain tissue distribution; "We utilized an osmotic pump with a cannula to infuse peptide intratumorally (Fig. 5c), a delivery route that bypasses the blood–brain barrier and increases peptide local concentration." p. 8

**R0452:** A. C. Chavez Alvarez, *et al.* Homologation of the Alkyl Side Chain of Antimitotic Phenyl 4-(2-Oxo-3-alkylimidazolidin-1-yl)benzenesulfonate Prodrugs Selectively Targeting CYP1A1-Expressing Breast Cancers Improves Their Stability in Rodent Liver Microsomes. *Journal of Medicinal Chemistry* 2023;66(4):2477-2497

**Agents:** Not Stated **Vehicle:** Not Stated; **Route:** Not Stated; **Species:** Mice; **Strain:** Not Stated; **Pump:** Not Stated;  
**Duration:** Not Stated;

**ALZET Comments:** ALZET mentioned as alternate strategy to modify pharmacokinetic properties in animal models

**Q11249:** C. Brat, *et al.* Endogenous anti-tumorigenic nitro-fatty acids inhibit the ubiquitin-proteasome system by directly targeting the 26S proteasome. *Cell Chemical Biology* 2023;30(10):1277-1294 e12

**Agents:** 9-Nitro-oleic acid **Vehicle:** DMSO; **Route:** SC; **Species:** Mice; **Strain:** SCID; **Pump:** 2001; **Duration:** 7; 8 ;15 days;

**ALZET Comments:** controls received mp w/ vehicle; animal info: 5–6 week-old; pumps replaced after 8 days;

**Q11245:** I. Bhutada, *et al.* CDK7 and CDK9 inhibition interferes with transcription, translation, and stemness, and induces cytotoxicity in GBM irrespective of temozolomide sensitivity. *Neuro-Oncology* 2024;26(1):70-84

**Agents:** SNS032 **Vehicle:** Not Stated; **Route:** CSF/CNS (intratumoral); **Species:** Mice; **Strain:** SCID; **Pump:** Not Stated;  
**Duration:** 4 weeks;

**ALZET Comments:** animal info: 8 weeks-old; ALZET BIK 3 used; good methods see Supp. data; cancer (Glioblastoma);

**Q10956:** X. Li, *et al.* YM155 inhibits neuroblastoma growth through degradation of MYCN: A new role as a USP7 inhibitor. *European Journal of Pharmaceutical Sciences* 2023;181(106343

**Agents:** YM155 **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Strain:** BALB/c-nu; **Pump:** 1004; **Duration:** 21 days;

**ALZET Comments:** Dose (2 mg/kg/day); Controls received mp w/ vehicle; animal info (Female mice; 6 weeks old); cancer (Neuroblastoma); therapeutic indication (tumor growth size); xenograft

**Q11110:** N. Gupta, *et al.* Inhibition of CXCR4 Enhances the Efficacy of Radiotherapy in Metastatic Prostate Cancer Models. *Cancers (Basel)* 2023;15(4):

**Agents:** AMD3100 **Vehicle:** Water; **Route:** SC; **Species:** Mice; **Strain:** C57Bl/6; **Pump:** Not Stated; **Duration:** 14 days;

**ALZET Comments:** Dose (10 mg/kg); Controls received mp w/ PBS; animal info (Male; 6-10 weeks old); AMD3100 is a SDF1a receptor CXCR4 inhibitor; cancer (Prostate);

**Q11211:** L. E. Stevens, *et al.* JAK-STAT Signaling in Inflammatory Breast Cancer Enables Chemotherapy-Resistant Cell States. *Cancer Res* 2023;83(2):264-284

**Agents:** Ruxolitinib **Vehicle:** N,N-dymethylacetamide; propylene glycol; **Route:** SC; **Species:** Mice;

**Strain:** NOD.Cg-Prkdcscidll2rgtm1Sug/JicTac **Pump:** 1004; **Duration:** Not Stated;

**ALZET Comments:** Dose (60 mg/kg/day); 60% propylene glycol used; 40% N,N-dymethylacetamide used; animal info: 6-week-old female; Multiple pumps per animal (2); cancer (Breast);



**R0437:** S. A. Shetu, *et al.* Molecular Research in Pancreatic Cancer: Small Molecule Inhibitors, Their Mechanistic Pathways and Beyond. *Current Issues in Molecular Biology* 2023;45(3):1914-1949

**Agents:** IPI-269609 **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Strain:** E3LZ10.7; **Pump:** Not Stated; **Duration:** 5 days;  
**ALZET Comments:** Dose (20 mg/kg/d); animal info: xenograft male mice; cancer (Pancreatic); "...it was shown through immunohistochemistry that IPI-269609 reduced the overexpression of ALDH (aldehyde dehydrogenase-bright cells, a clonogenic tumor-initiating population in pancreatic cancer) in vivo." p. 20

**Q10983:** W. Qiu, *et al.* USP10 deubiquitinates RUNX1 and promotes proneural-to-mesenchymal transition in glioblastoma. *Cell Death and Disease* 2023;14(3):207

**Agents:** Spautin-1 **Vehicle:** Not Stated; **Route:** Not Stated; **Species:** Mice; **Strain:** Nude; **Pump:** Not Stated;  
**Duration:** Not Stated;

**ALZET Comments:** Dose (20 mg/kg); animal info: male nude mice (5-6 weeks of age); Spautin-1 is a selective inhibitor of deubiquitinating enzymes USP10 and USP13; enzyme inhibitor; cancer (Glioblastoma);

**Q10982:** E. A. Power, *et al.* Overcoming translational barriers in H3K27-altered diffuse midline glioma: Increasing the drug-tumor residence time. *Neuro-oncology Advances* 2023;5(1):vdad033

**Agents:** Alisertib **Vehicle:** DMSO; **Route:** CSF/CNS (pons); **Species:** Rat; **Strain:** DIPGXIIIp; **Pump:** 2001; **Duration:** 7 days;  
**ALZET Comments:** animal info: orthotopic patient derived xenograft model; short half-life (p.13); Alisertib is an Aurora kinase (AK) inhibitor; CT was used to confirm cannula placement in the pons (Fig. 5A). cancer (Diffuse midline glioma (DMG); brain tissue distribution; "continuous CED of alisertib via an implantable pump is an efficacious treatment strategy against H3K27M DMG" p. 8

**Q10977:** S. Parker, *et al.* Immunotoxin- $\alpha$ CD40 therapy activates innate and adaptive immunity and generates a durable antitumor response in glioblastoma models. *Science Translational Medicine* 2023;15(eabn5649

**Agents:** D2C7;  $\alpha$ CD40 **Vehicle:** Mouse serum albumin; PBS; **Route:** CSF/CNS (intratumoral); **Species:** Mice; **Strain:** C57BL/6;  
**Pump:** 1007D; **Duration:** 72 hours;

**ALZET Comments:** Dose: 0.2  $\mu$ g D2C7, 10 to 300  $\mu$ g  $\alpha$ CD40; Controls received mp w/ vehicle; animal info: Female 7 to 8 weeks old and weighed 16 to 20 g; D2C7 is a recomb antibody immunotoxin; CD40 is immunoregulatory, belongs to tumor necrosis factor family; tumor brain coordinates (0.5 mm anterior and 2.0 mm lateral to bregma); cancer (Glioblastoma); convection enhanced delivery

**Q11057:** M. McNicholas, *et al.* A Compendium of Syngeneic, Transplantable Pediatric High-Grade Glioma Models Reveals Subtype-Specific Therapeutic Vulnerabilities. *Cancer Discovery* 2023;13(7):1592-1615

**Agents:** Trametinib; alpelisib **Vehicle:** Elacridar; saline, SBE-B-CD; **Route:** CSF/CNS (fourth ventricle); **Species:** Mice; **Strain:** C57BL/6J; **Pump:** 2002; **Duration:** 15 days;

**ALZET Comments:** Dose: (30mg/kg); controls received mp w/ vehicle; animal info: 8-week-old; comparison of oral gavage vs mp; ALZET brain infusion kit 2 used; brain coordinates (0.5 mm anterior and 1.8 mm lateral from bregma for striatal targeting, and 0.8 mm posterior 761 and 1.1 mm lateral from lambda for pontine targeting); cyanoacrylate adhesive; (loctite); cancer (Pediatric High-Grade Glioma);

**Q11142:** S. I. Masunaga, *et al.* The impact of TP53 status of tumor cells including the type and the concentration of administered 10B delivery agents on compound biological effectiveness in boron neutron capture therapy. *Journal of Radiation Research* 2023;64(2):399-411

**Agents:** 5-bromo-2-deoxyuridine **Vehicle:** Saline; **Route:** SC; **Species:** Mice (nude); **Strain:** Balb/cA nude; **Pump:** 2001;  
**Duration:** 7 days;

**ALZET Comments:** Dose (250 mg/mL); animal info (6-7 weeks old);

**Q10956:** X. Li, *et al.* YM155 inhibits neuroblastoma growth through degradation of MYCN: A new role as a USP7 inhibitor. *European Journal of Pharmaceutical Sciences* 2023;181(106343

**Agents:** YM155 **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Strain:** BALB/c-nu; **Pump:** 1004; **Duration:** 21 days;

**ALZET Comments:** Dose (2 mg/kg/day); Controls received mp w/ vehicle; animal info (Female mice; 6 weeks old); cancer (Neuroblastoma); therapeutic indication (tumor growth size); xenograft



**Q11110:** N. Gupta, *et al.* Inhibition of CXCR4 Enhances the Efficacy of Radiotherapy in Metastatic Prostate Cancer Models. *Cancers (Basel)* 2023;15(4):

**Agents:** AMD3100 **Vehicle:** Water; **Route:** SC; **Species:** Mice; **Strain:** C57Bl/6; **Pump:** Not Stated; **Duration:** 14 days; **ALZET Comments:** Dose (10 mg/kg); Controls received mp w/ PBS; animal info (Male; 6-10 weeks old); AMD3100 is a SDF1a receptor CXCR4 inhibitor; cancer (Prostate);

**Q10918:** R. Ge, *et al.* A Novel Tumor-Promoting Role for Nuclear Factor IX in Glioblastoma Is Mediated through Transcriptional Activation of GINS1. *Molecular Cancer Research* 2023;21(3):189-198

**Agents:** Doxorubicin **Vehicle:** Not Stated; **Route:** CSF/CNS (intratumoral); **Species:** Mice; **Strain:** BALB/cJ; **Pump:** 1003D; **Duration:** Not Stated; **ALZET Comments:** animal info (Male; Mice; genetic background); enzyme inhibitor (Topo isomerase 2); cyanoacrylate adhesive; cancer (Glioblastoma); Therapeutic indication (Glioblastoma);

**Q11106:** C. Garlapati, *et al.* PLK1 and AURKB phosphorylate survivin differentially to affect proliferation in racially distinct triple-negative breast cancer. *Cell Death & Disease* 2023;14(1):12

**Agents:** YM155 **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Strain:** Nude; **Pump:** 1004; **Duration:** 2 weeks; **ALZET Comments:** Dose (10 mg/kg); Controls received mp w/ vehicle; cancer (Breast); xenograft

**Q11103:** R. L. Fine, *et al.* C-Terminal p53 Palindromic Tetrapeptide Restores Full Apoptotic Function to Mutant p53 Cancer Cells In Vitro and In Vivo. *Biomedicines* 2023;11(1):

**Agents:** Adenovirus, 4R-Pal-p53p plasmid **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Strain:** Nude; **Duration:** 14 days; **ALZET Comments:** Controls received mp w/ vehicle; animal info (Female; 8-10 weeks old); peptides; gene therapy; xenograft

**Q11101:** M. Falcinelli, *et al.* Propranolol reduces IFN-gamma driven PD-L1 immunosuppression and improves anti-tumour immunity in ovarian cancer. *Brain Behavior and Immunity* 2023;110(1-12)

**Agents:** Propranolol **Vehicle:** PBS; **Route:** SC; **Species:** Mice; **Strain:** C57BL/6; **Pump:** Not Stated; **Duration:** Not Stated; **ALZET Comments:** Dose (2 mg/kg/d); Controls received mp w/ vehicle; animal info (Female; 6-8 weeks old); cancer (Epithelial ovarian); immunology;

**Q10499:** M. C. Bosland, *et al.* Effects of perinatal exposure to bisphenol A on induction of prostate cancer in Sprague Dawley rats by MNU and testosterone. *Toxicology* 2023;484(153394)

**Agents:** Bisphenol A **Vehicle:** Not Stated; **Route:** SC; **Species:** Rat; **Strain:** Not Stated; **Pump:** Not Stated; **Duration:** 21 days; **ALZET Comments:** Dose (2.5 or 25 µg/kg body weight/day); animal info (Female; Pregnant; 8-10 weeks old); cancer (Prostate);

**Q11155:** Q. Zhang, *et al.* USP21 promotes self-renewal and tumorigenicity of mesenchymal glioblastoma stem cells by deubiquitinating and stabilizing FOXD1. *Cell Death and Disease* 2022;13(8):712

**Agents:** Disulfiram **Vehicle:** Not Stated; **Route:** CSF/CNS; **Species:** Mice; **Strain:** BALB/c nude; **Duration:** 10 weeks; **ALZET Comments:** Dose: (50 mg/kg); animal info: 8-weeks-old male; Brain coordinates (2mm anterior, 2mm lateral, 3mm depth from the dura); cancer (Glioblastoma);

**Q10855:** S. Yuan, *et al.* Ras Drives Malignancy Through Stem Cell Crosstalk With the Microenvironment. *Nature* 2022;612(7940):555-563

**Agents:** Leptin; VEGFA; Rapamycin **Vehicle:** PBS; DMSO; **Route:** SC; **Species:** Mice (nude); **Strain:** Nude; **Duration:** 4 weeks; **ALZET Comments:** Dose: Leptin (2 mg/ml; 0.5 mg/ml); 0.5 mg/ml SMLA; VEGFA 50ug/ml; 10 mM rapamycin; 10% DMSO used; Controls received mp w/ vehicle; animal info (mice); cancer (Squamous cell carcinomas);

**Q10777:** W. Wang, *et al.* Diabetic hyperglycemia promotes primary tumor progression through glycation-induced tumor extracellular matrix stiffening. *Science Advances* 2022;

**Agents:** Insulin **Vehicle:** Citrate buffer; **Route:** SC; **Species:** Mice; **Strain:** MMTV-PyMT; **Pump:** 2006; **Duration:** 7 weeks; **ALZET Comments:** Dose: Insulin (0.5 U of insulin per mouse per day); Controls received mp w/ vehicle; animal info: Female mice of the FVB strain background (4 weeks of age.); diabetes;



**Q10285:** N. Very, *et al.* Thymidylate synthase O-GlcNAcylation: a molecular mechanism of 5-FU sensitization in colorectal cancer. *Oncogene* 2022;41(5):745-756

**Agents:** 5-fluorouracil; Thiamet-G **Vehicle:** NaCl; **Route:** SC; **Species:** Mice; **Strain:** C57BL/6J; **Duration:** 13 days;  
**ALZET Comments:** Dose (12.5 mg/kg/day); (90 mg/kg/day); 0.9% sodium chloride used; animal info ( 8 week male mice);

**Q11226:** E. Toda, *et al.* Inhibition of the chemokine signal regulator FROUNT by disulfiram ameliorates crescentic glomerulonephritis. *Kidney International* 2022;102(6):1276-1290

**Agents:** Disulfiram; DSF-41 **Vehicle:** 2-hydroxypropyl-beta-cyclodextrin; **Species:** Rat; **Strain:** Wistar-Kyoto; **Pump:** 2ML1;  
**ALZET Comments:** Dose: Disulfiram 100 mg/kg per day; DSF-41 20 mg/kg; 50% 2-hydroxypropyl-beta-cyclodextrin vehicle used; Controls received mp w/ vehicle; immunology

**Q11223:** Y. Tanaka, *et al.* Combined treatment with glucagon-like peptide-1 receptor agonist exendin-4 and metformin attenuates breast cancer growth. *Diabetology International* 2022;13(3):480-492

**Agents:** Exendin-4 **Vehicle:** Saline; **Route:** Not Stated; **Species:** Mice; **Strain:** athymic CAnN.Cg-Foxn1nu/CrlCrlj; **Pump:** 1004;  
**ALZET Comments:** Dose: 300 pmol/kg/day; Controls received mp w/ vehicle; animal info: Female mice 6 weeks; cancer (Breast cancer); diabetes;

**Q10692:** S. Talele, *et al.* Central Nervous System Distribution of the Ataxia-Telangiectasia Mutated Kinase Inhibitor AZD1390: Implications for the Treatment of Brain Tumors. *Journal of Pharmacology and Experimental Therapeutics* 2022;383(1):91-102

**Agents:** AZD1390 **Vehicle:** DMSO; **Route:** IP; **Species:** Mice; **Strain:** Wild-type, TKO; **Pump:** 1003D; **Duration:** 24 hours;  
**ALZET Comments:** Dose (10 mg/ml); Controls received mp w/ vehicle; animal info (Male; Female; 8-14 weeks old; ); enzyme inhibitor (AZD1390 is a ataxia telangiectasia mutant kinase inhibitor); cancer (Glioblastoma);

**Q10614:** F. Mota, *et al.* A Reactivity-Based (18)F-Labeled Probe for PET Imaging of Oxidative Stress in Chemotherapy-Induced Cardiotoxicity. *Molecular Pharmaceutics* 2022;19(1):18-25

**Agents:** Doxorubicin **Vehicle:** Saline; **Route:** SC; **Species:** Rat; **Strain:** Wistar; **Pump:** Not Stated; **Duration:** 7 days;  
**ALZET Comments:** Dose (30 mg/kg); 0.9% NaCl used; Controls received mp w/ vehicle; animal info (Male; ; Weighed 280-300 g); enzyme inhibitor (Doxorubicin); cardiovascular (cardiotoxicity)

**Q10613:** N. Moskovits, *et al.* Palbociclib in Combination With Sunitinib Exerts a Synergistic Anti-Cancer Effect in Patient-Derived Xenograft Models of Various Human Cancers Types. *Cancer Letters* 2022;536(2):15665

**Agents:** Estradiol **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Strain:** NSG, NOD.Cg-25 PrkdcscidIl2rgtm1Wjl/SzJl; NRG, NOD.Cg-Rag1tm1Mom Il2rgtm1Wjl/SzJl; **Pump:** Not Stated; **Duration:** 28 days;  
**ALZET Comments:** Dose (1.08 mg/pellet); animal info (5–8 weeks old mice () female or male according to the patient's sex.);

**Q11166:** D. Laha, *et al.* Preclinical assessment of synergistic efficacy of MELK and CDK inhibitors in adrenocortical cancer. *Journal of Experimental & Clinical Cancer Research* 2022;41(1):282

**Agents:** RGB-286638 **Vehicle:** DMSO; **Route:** Not Stated; **Species:** Mice; **Strain:** Not Stated; **Pump:** 1002;  
**ALZET Comments:** Dose: 0.06 mg/ul; 0.1% DMSO vehicle used Controls received mp w/ vehicle; RGB-286638 is a cyclin-dependent kinase inhibitor; cancer (Adrenocortical)

**Q10580:** H. Kosaka, *et al.* Role of Substance P-Dependent Chemotactic Signaling in Postoperative Adhesion Formation. *Journal of Surgical Research* 2022;270(49-57)

**Agents:** SB225002 **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Strain:** Wild-type BALB/c; **Pump:** 2001D; **Duration:** 24 h  
**ALZET Comments:** Dose (800 ug/mouse); animal info ( mice; 20 g); SB225002 is a CSCR2 antagonist; immunology;

**Q10579:** J. Kopecky, *et al.* Intratumoral Administration of the Antisecretory Peptide AF16 Cures Murine Gliomas and Modulates Macrophage Functions. *Scientific Reports* 2022;12(1):4609

**Agents:** Temozolomide; AF16 **Vehicle:** Not Stated; **Route:** CSF/CNS (intratumoral); **Species:** Mice; **Strain:** C57BL/6; **Pump:** 1003D; **Duration:** 3 days;  
**ALZET Comments:** Dose (180 mg/72 ul; 300 ug/72 ul); animal info (Female; 8-10 weeks old); peptides; immunology; cancer (Glioblastoma);





**Q11216:** A. Kopecky. Novel methods of malignant brain tumor utilizing the tumor microenvironment. Lund University, Faculty of Medicine 2022;

**Agents:** Trimetazidine **Vehicle:** Saline; **Route:** CSF/CNS (intratumoral); **Species:** Mice; **Strain:** Not Stated; **Pump:** Not Stated; **Duration:** Not Stated;

**ALZET Comments:** Dose (180µg); Controls received mp w/ vehicle; comparison of single injection w/ mp; cancer (Glioblastoma multiforme); immunology; "This route circumvents the blood-brain barrier that normally excludes a wide spectrum of chemotherapeutics from being used in malignant brain tumor patients due to their impassable electrochemical characteristics."

**R0443:** S. I. Khairnar, *et al.* Cardiotoxicity linked to anticancer agents and cardioprotective strategy. Archives of Pharmacol Research 2022;45(10):704-730

**Agents:** Melatonin; melatonin, 6-OH; alamandine **Vehicle:** Alcohol; DMSO; **Route:** Not Stated; **Species:** Mice; **Strain:** Not Stated; **Pump:** Not Stated; **Duration:** 42 days;

**ALZET Comments:** Dose MEL, 6-OH MEL (0.5 mg/0.1 ml); alamandine 50 mg/kg/day; 10% alcohol; 10% DMSO used; animal info: SCID mice; half-life (p.710);

**R0440:** M. Jurczyk, *et al.* Nanoparticles Loaded with Docetaxel and Resveratrol as an Advanced Tool for Cancer Therapy. Biomedicines 2022;10(5):

**Agents:** Docetaxel; resveratrol **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Strain:** Not Stated; **Duration:** 1 month; **ALZET Comments:** immunology; cancer therapy

**Q10543:** C. Hemmers, *et al.* Chemokine CCL9 Is Upregulated Early in Chronic Kidney Disease and Counteracts Kidney Inflammation and Fibrosis. Biomedicines 2022;10(2):

**Agents:** CCL6; CCL9 **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Strain:** C57BL/6J; **Pump:** 2002; **Duration:** Not Stated;

**ALZET Comments:** Dose (1µg/day); 0.9% NaCl used; Controls received mp w/ vehicle; animal info (Female; 8-12 weeks old; ); immunology (chronic kidney disease)

**Q10274:** S. Hegde, *et al.* Inhibition of the RacGEF VAV3 by the small molecule IODVA1 impedes RAC signaling and overcomes resistance to tyrosine kinase inhibition in acute lymphoblastic leukemia. Leukemia 2022;36(3):637-647

**Agents:** IODVA1; Imatinib **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Strain:** Vav3-deficient; Rac1Δ/Δ+Rac2-deficient; C57Bl/10; NOD/SCID/IL2RG-/-; **Pump:** Not Stated; **Duration:** 28 days;

**ALZET Comments:** Controls received mp w/ vehicle; animal info (Vav3-deficient mice and Rac1Δ/Δ+Rac2-deficient mice; C57Bl/10 (females, 8–16 weeks old) and NSG (NOD/SCID/IL2RG-/- males and females, 8–14 weeks old); IODVA1 aka 2-guanidinobenzimidazole derivative with anti-tumorigenic properties; cancer (leukemia)

**Q10530:** E. Gondoh, *et al.* Possible mechanism for improving the endogenous immune system through the blockade of peripheral mu-opioid receptors by treatment with naldemedine. British Journal of Cancer 2022;127(8):1565-1574

**Agents:** Naltrexone, methyl- **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Strain:** ICR; **Pump:** Not Stated; **Duration:** 21 days;

**ALZET Comments:** "Dose: (0.1 ml/10g) Controls received mp w/ vehicle; animal info: Male mice (20–25 g) behavioral testing: Hot-plate test; methylnaltrexone is a peripheral MOR antagonist; immunology

**Q10522:** L. Freire Boullosa, *et al.* Optimization of the Solvent and In Vivo Administration Route of Auranofin in a Syngeneic Non-Small Cell Lung Cancer and Glioblastoma Mouse Model. Pharmaceutics 2022;14(12):

**Agents:** Auranofin **Vehicle:** DMSO; PEG 300; Ethanol, absolute; **Route:** SC; **Species:** Mice; **Strain:** C57BL/6J; **Pump:** 1002; **Duration:** 14 days;

**ALZET Comments:** Dose (2, 5, 10 and 15 mg/kg/day); dose-response (see pg. 10); 50% DMSO, 40% PEG 300, 10% EtOH; Controls received mp w/ vehicle; animal info (Female mice who 6-10 weeks old; Male 129S2/SvPasCrl mice that 6-9 weeks old); comparison of pump with IP injection and oral gavage; cancer (Lung); behavioral testing (Mouse Grimace Scale); Therapeutic indication (Cancer); good methods (pg 8)



**Q10381:** L. M. Fernandez-Sevilla, *et al.* High BMP4 expression in low/intermediate risk BCP-ALL identifies children with poor outcomes. *Blood* 2022;139(22):3303-3313

**Agents:** DMH1 **Vehicle:** DMSO; **Route:** SC; **Species:** Mice; **Strain:** Not Stated; **Pump:** Not Stated; **Duration:** 5 weeks;

**ALZET Comments:** Dose (3 mg/kg/day); Controls received mp w/ vehicle; animal info (8-12 weeks old; IV-infused via tail vein with human primary cells); DMH1 is a BMP inhibitor; cancer (Blood); Therapeutic indication (Leukemic CNS disease);

**Q10467:** W. T. Doucette, *et al.* Chronic chemogenetic manipulation of ventral pallidum targeted neurons in male rats fed an obesogenic diet. *Brain Research* 2022;1784(147886)

**Agents:** Clozapine-N-oxide **Vehicle:** Acetic acid; saline **Route:** SC **Species:** Rat **Strain:** Not Stated; **Pump:** 2ML4; **Duration:** 1 m

**ALZET Comments:** Dose: 6 mg/kg/day; animal info (Male; Fed high-fat/high-sugar diet); post op. care (ketoprofen 3 mg/kg); gene therapy; checked that CNO did not precipitate during infusion

**Q10465:** O. Dmitrieva-Posocco, *et al.* beta-Hydroxybutyrate suppresses colorectal cancer. *Nature* 2022;605(7908):160-165

**Agents:** Sodium beta-hydroxybutyrate **Vehicle:** PBS; **Route:** SC; **Species:** Mice; **Strain:** Cdx2ERTApcl/fl; **Duration:** 4 weeks;

**ALZET Comments:** Dose: (20 M)Controls received mp w/ vehicle; animal info: Ten-week-old mice; cancer (Colorectal cancer);

**Q10599:** L. Di Cesare Mannelli, *et al.* Neuronal Alarmin IL-1alpha Evokes Astrocyte-Mediated Protective Signals: Effectiveness in Chemotherapy-Induced Neuropathic Pain. *Neurobiology of Disease* 2022;168(105716)

**Agents:** Interleukin-1a **Vehicle:** Saline; **Route:** CSF/CNS (intrathecal); **Species:** Rat; **Pump:** 1002; **Duration:** 10 days;

**ALZET Comments:** Dose (0.25 mL/h); Controls received mp w/ vehicle; animal info (Male; Weighed about 200-250 g); behavioral testing (Paw pressure test; Cold plate test); immunology;

**Q10435:** E. E. Deiktakis, *et al.* Impact of add-back FSH on human and mouse prostate following gonadotropin ablation by GnRH antagonist treatment. *Endocrine Connections* 2022;11(6):

**Agents:** Follicle stimulating hormone, human; **Route:** SC; **Species:** Mice; **Strain:** C57BL/6; **Duration:** 4 weeks;

**ALZET Comments:** Dose (10 IU/kg/day); Controls received mp w/ vehicle; animal info (Male; 6-8 weeks old; mice, Chemically castrated); FSH aka follicle-stimulating hormone; cancer (Prostate);

**Q10434:** A. DeGuzman, *et al.* Bittersweet: relevant amounts of the common sweet food additive, glycerol, accelerate the growth of PC3 human prostate cancer xenografts. *BMC Research Notes* 2022;15(1):101

**Agents:** Glycerol **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Strain:** Not Stated; **Pump:** 2004; **Duration:** 32 days;

**ALZET Comments:** Dose (0.25 µL/h); Controls received mp w/ vehicle; animal info (Male; 6 weeks old); post op. care (Bupivacaine 7 mg/kg); wound clips used; cancer (Prostate);

**Q10513:** A. De Zutter, *et al.* A stabilized CXCL9(74-103)-derived peptide selectively inhibits proliferation, adhesion and metastasis of tumor cells that express high levels of heparan sulfate. *International Journal of Biological Macromolecules* 2022;222(Pt B):2808-2822

**Agents:** D-CXCL9(74-103); CXCL9(86-103) **Vehicle:** PBS; **Route:** SC; **Species:** Mice; **Pump:** 1007D; 1002; **Duration:** 1; 2 weeks;

**ALZET Comments:** Dose (2 µg/h); Controls received mp w/ vehicle; animal info (Female; Mice; 6-8 weeks old); fluorescence imaging; peptides; cancer

**Q10421:** A. Casazza, *et al.* PhAc-ALGP-Dox, a Novel Anticancer Prodrug with Targeted Activation and Improved Therapeutic Index. *Molecular Cancer Therapeutics* 2022;21(4):568-581

**Agents:** Doxorubicin; PhAc-ALGP-Dox **Vehicle:** Not Stated; **Route:** IP; **Species:** Mice; **Pump:** 1007D; **Duration:** 7 days;

**ALZET Comments:** Dose (58 mg/kg; 1026 mg/kg/wk); animal info (Female; 6-8 weeks old); doxorubicin and PhAc-ALGP-Dox are chemotherapeutics; cancer (General);

**Q10420:** S. Canovas Nunes, *et al.* Validation of a small molecule inhibitor of PDE6D-RAS interaction with favorable anti-leukemic effects. *Blood Cancer Journal* 2022;12(4):64

**Agents:** DW0254 **Vehicle:** DMSO; Ethanol; **Route:** SC; **Species:** Mice; **Strain:** NBSGW; DW0254; **Pump:** 2001; **Duration:** 7 days;

**ALZET Comments:** Dose: (500 mg/ml); 50% DMSO and 15% Ethanol vehicle used; Controls received mp w/ vehicle; animal info: mice; DW0254 is a small molecule RAC inhibitor; pumps replaced after one week; cancer (lymphoblastic leukemia)



**Q10495:** N. Ben-Jonathan, *et al.* Dopamine Receptors in Breast Cancer: Prevalence, Signaling, and Therapeutic Applications. *Critical Reviews TM in Oncogenesis* 2022;27(2):51-71

**Agents:** Fenoldopam **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Strain:** athymic nude; **Duration:** 3 weeks; 7 days;  
**ALZET Comments:** animal info: mice; D1R agonist; fluorescence imaging; cancer (Breast cancer); xenograft

**Q10398:** L. Awwad, *et al.* Cardiac Remodeling in the Absence of Cardiac Contractile Dysfunction Is Sufficient to Promote Cancer Progression. *Cells* 2022;11(7):

**Agents:** Phenylephrine **Vehicle:** Acetic acid; Saline; **Route:** SC; **Species:** Mice; **Strain:** Not Stated; **Pump:** 1002;  
**ALZET Comments:** Dose (10 mg/kg/day); 0.06% acetic acid in saline used; animal info (Female; 8 weeks old); cardiovascular;

**Q10676:** M. Abdullah Shamim, *et al.* Topical Carvedilol Delivery Prevents UV-Induced Skin Cancer with Negligible Systemic Absorption. *International Journal of Pharmaceutics* 2022;611(121302)

**Agents:** Isoproterenol **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Strain:** SKH-1; **Pump:** 1004; **Duration:** 28 days;  
**ALZET Comments:** Dose (20 ug/kg/day); animal info (; Female; Hairless; 7-8 weeks old); Blood pressure measured via tail-cuff method; cancer (Skin);

**Q9875:** A. H. Zahalka, *et al.* Using CT-guided stereotactic prostate radiation therapy (CT-SPRT) to assess sustained murine prostate ablation. *Scientific Reports* 2021;11(1):6571

**Agents:** Testosterone **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Strain:** Not Stated; **Duration:** 4 weeks;  
**ALZET Comments:** Dose (1.875 µg/h); animal info (male mice, 8-weeks-old); cancer (Prostate Cancer);

**Q9888:** S. Yoshimoto, *et al.* NFAT5 promotes oral squamous cell carcinoma progression in a hyperosmotic environment. *Laboratory Investigation* 2021;101(1):38-50

**Agents:** Mannitol **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Strain:** Not Stated; **Pump:** 1004; **Duration:** 4 weeks;  
**ALZET Comments:** Dose (289.5 ug/mouse/day); Controls received mp w/ vehicle; animal info (); cancer (Carcinoma);

**Q10835:** B. Xu, *et al.* An Oncolytic Virus Expressing a Full-Length Antibody Enhances Antitumor Innate Immune Response to Glioblastoma. *Nature Communications* 2021;12(1):5908

**Agents:** aCD47-G1 **Vehicle:** Saline; **Route:** CSF/CNS; **Species:** Mice; **Strain:** athymic nude; **Pump:** 1003D; **Duration:** 72 hours;  
**ALZET Comments:** Dose: 24 ug/day; Controls received mp w/ vehicle; animal info: Six- to eight-week-old female mice CT2A GBM model; ALZET brain infusion kit 3 used; Brain coordinates (2mm lateral and 1mm anterior to bregma at a depth of 3 mm); immunology;

**Q9545:** C. Wang, *et al.* Salidroside and isorhamnetin attenuate urotensin II-induced inflammatory response in vivo and in vitro: Involvement in regulating the RhoA/ROCK II pathway. *Oncology Letters* 2021;21(4):292

**Agents:** Urotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Rat; **Strain:** Wistar; **Pump:** 2006D; **Duration:** 7 days;  
**ALZET Comments:** Dose (10 ng/kg/min); Controls received mp w/ vehicle; animal info (healthy male rats, 180-200 g, 8 weeks old); Urotensin II aka UII; dependence;

**R0401:** G. I. Vazquez Cervantes, *et al.* New Immunotherapeutic Approaches for Glioblastoma. *Journal of Immunology Research* 2021;2021(3412906)

**Agents:** D2C7-exotoxin **Vehicle:** Not Stated; **Route:** Not Stated; **Species:** Mice; **Strain:** Not Stated; **Pump:** Not Stated;  
**Duration:** Not Stated;  
**ALZET Comments:** Epidermal growth factor receptor also (EGFRvIII)immunology; cancer (immunotherapy)

**Q10691:** T. Takiguchi, *et al.* Angiotensin II Promotes Primary Tumor Growth and Metastasis Formation of Murine TNBC 4T1 Cells Through the Fibroblasts Around Cancer Cells. *European Journal of Pharmacology* 2021;909(174415)

**Agents:** Angiotensin II **Vehicle:** PBS; **Route:** SC; **Species:** Mice; **Strain:** BALB/c; **Pump:** 1004; **Duration:** 3 days;  
**ALZET Comments:** Dose: (1.0 µg/kg/min)Controls received mp w/ vehicle; animal info: female mice (8–10 weeks old); Blood pressure measured via: tail cuff; Blood pressure measurement (see pg 4 fig 1A); Angiotensin II aka (Ang II); peptides; cancer (Lung metastasis)





**Q10682:** P. J. Siska, *et al.* Kynurenine Induces T Cell Fat Catabolism and Has Limited Suppressive Effects in Vivo. *EBioMedicine* 2021;74(103734)

**Agents:** Rapamycin **Vehicle:** DMSO; **Route:** Not Stated; **Species:** Mice; **Strain:** C57BL6J; **Duration:** 7 days; 10 days;

**ALZET Comments:** Dose (0.5 mg/kg/d); Controls received mp w/ vehicle; animal info (; Female; 8-12 weeks of age; D-kynurenine diet or control chow); cancer (head and neck);

**Q10064:** P. Schiapparelli, *et al.* Strategies to Modulate the Blood-Brain Barrier for Directed Brain Tumor Targeting.

Nanotherapy for Brain Tumor Drug Delivery. *Neuromethods* 2021;163(**Agents:** Not Stated **Vehicle:** Saline, sterile; **Route:** CSF/CNS; **Species:** Mice; **Strain:** Not Stated; **Pump:** 1007D; **Duration:** 7 days;

**ALZET Comments:** 0.9% NaCl used; animal info (6-8-week-old mice); ALZET brain infusion kit 3 used; cancer (Brain Tumor); good methods (pgs 85-86)

**Q10280:** S. Pietzsch, *et al.* Anthracycline-free tumor elimination in mice leads to functional and molecular cardiac recovery from cancer-induced alterations in contrast to long-lasting doxorubicin treatment effects. *Basic Research in Cardiology* 2021;116(1):61

**Agents:** Angiotensin II **Vehicle:** PBS; **Species:** Mice; **Duration:** 14 days;

**ALZET Comments:** Dose (1.44 ug/g BW); dose-response (examines tolerance to increased blood pressure by continuous AngII infusion shown in fig. 3C on pg 61); Controls received mp w/ GCV-m+AngII; animal info (male mice ~12 weeks, housed in groups of 5 and maintained on a 14 h/10 h light/dark cycle); Resultant plasma level (found carnitine reduction in plasma samples during advanced cancer stage but normalization after recovery); peptides; cancer (cardiac); cardiovascular;

**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; **Strain:** Not Stated; **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;

**Q10250:** N. Ludwig, *et al.* Novel TGFbeta Inhibitors Ameliorate Oral Squamous Cell Carcinoma Progression and Improve the Antitumor Immune Response of Anti-PD-L1 Immunotherapy. *Molecular Cancer Therapeutics* 2021;20(6):1102-1111

**Agents:** TGF beta-2 inhibitor **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Strain:** C57BL/6J; **Pump:** 2004; **Duration:** 4 weeks;

**ALZET Comments:** Dose: (10 ug per day); animal info: female, immunocompetent mice ages 8 weeks; Transforming growth factor-b inhibitor aka (TGFb); cancer (Oral squamous cell carcinoma);

**Q10236:** Y. Li, *et al.* Tacrolimus inhibits oral carcinogenesis through cell cycle control. *Biomedicine & Pharmacotherapy* 2021;139(111545)

**Agents:** Tacrolimus **Vehicle:** Not Stated; **Route:** Not Stated; **Species:** Rat; **Strain:** Sprague-Dawley; **Duration:** 4 weeks;

**ALZET Comments:** Dose: (5 mg/kg/d); Controls received mp w/ vehicle; animal info: Male (SD) rats (6–8 weeks old); Tacrolimus aka (TAC, FK506) is a major calcineurin inhibitor; cancer ();

**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 **Route:** SC; **Species:** Mice; **Strain:** B6D2F1/Crl; **Pump:** 2ML1; **Duration:** 8 days;

**ALZET Comments:** Animal info (Female mice, 5 to 8 weeks old); bromodeoxyuridine aka BrdU; cancer (tumor development);

**Q10952:** R. Koyama, *et al.* Pannexin 1-Mediated ATP Signaling in the Trigeminal Spinal Subnucleus Caudalis Is Involved in Tongue Cancer Pain. *International Journal of Molecular Sciences* 2021;22(21):

**Agents:** 10Panx; Brilliant blue G, dye; BzATP **Vehicle:** PBS; **Route:** CSF/CNS (cisterna magna); **Species:** Rat; **Strain:** Fisher; **Pump:** 1002; **Duration:** Not Stated;

**ALZET Comments:** Dose: (PBS/10Panx 20 nmol/0.5 ml/h; BBG 7pmol/0.5 ml/h; BzATP 20 pmol/0.5 ml/h); Controls received mp w/ vehicle; animal info: male (weighing 200–250 g); 10Panx is an inhibitory peptide for pannexin 1; BzATP is a specific agonist of P2X7Rs; cancer (Squamous cell carcinoma; Tongue cancer pain (PANX1))



**T0015:** R. Koyama. The role of pannexin 1-mediated ATP signaling in the trigeminal spinal subnucleus caudalis in tongue cancer pain. Proceedings of the National Academy of Sciences 2021;

**Agents:** 10Panx; Brilliant blue G; BzATP **Vehicle:** PBS; **Route:** CSF/CNS (cisterna magna); **Species:** Rat; **Strain:** Fischer; **Pump:** 2002; **Duration:** 14 days;

**ALZET Comments:** Dose: PBS and 10Panx (20 nmol/0.5 µL/h), Brilliant Blue G (7 pmol/0.5 µL/h), or BzATP (20 pmol/0.5 µL/h); Controls received mp w/ vehicle; animal info: male (weighing 200–250 g)post op. care: (e.g., buprenorphine, meloxicam, ketoprofen, carprofen, or tramadol); peptides; BBG is an antagonist of P2X7Rs; BzATP is a specific agonist of P2X7Rs; 10Panx is an inhibitory peptide for PANX1 channels; PANX1 is a therapeutic target for the development of appropriate drugs to prevent tongue cancer pain

**Q10214:** S. H. Kizilbash, *et al.* In Vivo Efficacy of Tesevatinib in EGFR-Amplified Patient-Derived Xenograft Glioblastoma Models May Be Limited by Tissue Binding and Compensatory Signaling. *Molecule Cancer Therapeutics* 2021;20(6):1009-1018

**Agents:** Tesevatinib **Vehicle:** DMSO; **Route:** IP; **Species:** Mice; **Strain:** FVB WT; TKO; **Pump:** 1003D; **Duration:** 48 hours;

**ALZET Comments:** "Dose: (1 µL/h); Controls received mp w/ vehicle; animal info: mice and 8 to 14 weeks; half-life (p.3); Tesevatinib is a potent oral brain penetrant EGFR inhibitor; cancer (Glioblastoma )"

**Q10561:** J. H. Jun, *et al.* Effects of Bisphenol A on the Proliferation, Migration, and Tumor Growth of Colon Cancer Cells: In vitro and in Vivo Evaluation with Mechanistic Insights Related to ERK and 5-HT3. *Food and Chemical Toxicology* 2021;158(11):2662

**Agents:** Bisphenol A **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Strain:** BALB/c nude; **Pump:** 1004; **Duration:** 28 days;

**ALZET Comments:** Dose (100 µg/kg/day); animal info (6 weeks old; Male mice ; Weigh 17-18 g);

**Q10386:** L. Huang, *et al.* YK-4-279 Attenuates Progression of Pre-Existing Pigmented Lesions to Nodular Melanoma in a Mouse Model. *Cancers (Basel)* 2021;14(1):

**Agents:** YK-4-279 **Vehicle:** DMSO; **Route:** IP; **Species:** Mice; **Strain:** Not Stated; **Pump:** 1004; **Duration:** Not Stated;

**ALZET Comments:** Dose (1.6 mg/kg; 8 mg/kg); dose-response (see p. 3); Controls received mp w/ vehicle; half-life (p.3); pumps replaced after 28/29 days; cancer (Melanoma); Therapeutic indication (Melanoma);

**Q10318:** H. S. Huang, *et al.* Insuline-Like Growth Factor-2 (IGF2) and Hepatocyte Growth Factor (HGF) Promote Lymphomagenesis in p53-null Mice in Tissue-specific and Estrogen-signaling Dependent Manners. *Journal of Cancer Research and Clinical Oncology* 2021;12(20):6021-6030

**Agents:** Estrogen **Vehicle:** PBS; **Route:** SC; **Species:** Mice; **Strain:** C57BL6/J; Trp53-/- **Pump:** 1004; **Duration:** 28 days;

**ALZET Comments:** Dose: (80 nM); Controls received mp w/ vehicle; animal info: male; cancer (Lymphoma); dependence;

**Q10539:** M. A. Harris, *et al.* ssDNA Nanotubes For Selective Targeting Of Glioblastoma And Delivery Of Doxorubicin For Enhanced Survival. *Science Advances* 2021;7(49):

**Agents:** Doxorubicin **Vehicle:** PBS; **Route:** CSF/CNS; **Species:** Mice; **Strain:** Not Stated; **Pump:** 1002; **Duration:** 14 days;

**ALZET Comments:** Dose: (70 µM or 0.2 mg/kg)Controls received mp w/ vehicle; animal info: Eight-week-old mice; Doxorubicin aka (DOX)ALZET brain infusion kit 3 used; Brain coordinates (right hemisphere from bregma: anterior, 1.0 mm; and lateral, 1.5 mm); cancer (Glioblastoma);

**Q10528:** R. D. B. E. C. Gillis, A.; Ziegler A.I.; Chung, N.C.; Pon, C.K.; Shackelford, D.M.; Andreassen, B.K.; Halls, M.L. Carvedilol blocks neural regulation of breast cancer progression in vivo. *Journal of the American College of Cardiology* 2021;

**Agents:** Carvedilol **Vehicle:** Glacial acetic acid; Hydroxypropyl-β-cyclodextrin; **Species:** Mice; **Strain:** BALB/c nu/nu; **Pump:** 1004; **Duration:** 28 days;

**ALZET Comments:** Dose: (2 mg/kg/day); 1% glacial acetic acid; 20% hydroxypropyl-β-cyclodextrin vehicle used; Controls received mp w/ vehicle; animal info: Six-week old female mice (Breast cancer); studies are currently evaluating prophylactic use of carvedilol in cancer patients to prevent cancer therapy-induced cardiotoxicity with mixed results (52,53). The findings presented here suggest that future evaluation of carvedilol for primary prevention for cardiotoxicity may be an ideal opportunity to also evaluate biomarkers of its effect on cancer progression. (pg.19);