



**Recent References (2020-Present) on the Administration of Angiotensin II  
Using ALZET® Osmotic Pumps**

**Q10278:** D. B. Mangarova, *et al.* Microscopic multifrequency magnetic resonance elastography of ex vivo abdominal aortic aneurysms for extracellular matrix imaging in a mouse model. *Acta Biomaterialia* 2022;140(389-397)

**Agents:** Angiotensin II **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** 2004; **Duration:** 4 weeks;

**ALZET Comments:** Dose (1000 ng/kg/min); animal info (8-weeks old B6.129P2- Apoetm1Unc/J (ApoE<sup>-/-</sup>) male mice); tissue perfusion (cardiac); cardiovascular;

**Q10238:** L. Lin, *et al.* Oxidized LDL but not angiotensin II induces cardiomyocyte hypertrophic responses through the interaction between LOX-1 and AT1 receptors. *Journal of Molecular and Cellular Cardiology* 2022;162(110-118)

**Agents:** Lipoprotein, oxydize low density; Angiotensin II; Losartan; LOX-1 neutralizing antibody; Enalapril **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** Not Stated;

**ALZET Comments:** Dose: Lipoprotein (250 ng/kg/min); Ang II (200 ng/kg/min); Losartan (3 mg/kg/day); LOX-1 neutralizing antibody (0.6 mg/kg/day); Enalapril (10 mg/kg/day); animal info: C57BL/6 mice; Lipoprotein, oxydize low density aka (ox-LDL); Angiotensin II aka (Ang II)cardiovascular;

**Q10273:** X. He, *et al.* CircRNA Chordc1 protects mice from abdominal aortic aneurysm by contributing to the phenotype and growth of vascular smooth muscle cells. *Molecular Therapy Nucleic Acids* 2022;27(81-98)

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** Not Stated; **Species:** Mice; **Pump:** 2004; **Duration:** 28 days;

**ALZET Comments:** Dose (1 ug/kg/min); animal info (10-12 week old C57BL/6, 12-16 week old ApoE<sup>-/-</sup> on C57BL/6 background); cardiovascular;

**Q10174:** J. Guan, *et al.* Plasma Kallikrein Contributes to Intracerebral Hemorrhage and Hypertension in Stroke-Prone Spontaneously Hypertensive Rats. *Translational Stroke Research* 2022;13(2):287-299

**Agents:** BPCCB; Angiotensin II **Vehicle:** PEG 400; Saline; PBS; **Route:** SC; **Species:** Rat; Mice; **Pump:** 2004; 1004; **Duration:** 4 weeks;

**ALZET Comments:** "Dose: BPCCB (0.25 µl/h); Ang II (0.11 µl/h)10% polyethylene glycol 400 vehicle used Controls received mp w/ vehicle; animal info: Male Wistar Kyoto (WKY); Littermate Klkb1; Wild type (WT)Blood pressure measured via tail cuff(STranee pg 9) for Blood pressure measurementsBPCCB aka 1-benzyl-1H-pyrazole-4-carboxylic acid 4-carbamimidoyl-benzylamidecardiovascular; HypertensionKalVista Pharmaceuticals, Inc., Cambridge, MA, USA  
3 Ionis Pharmaceuticals, Inc., Carlsbad, CA, USA"

**Q10382:** A. C. Filiberto, *et al.* Endothelial pannexin-1 channels modulate macrophage and smooth muscle cell activation in abdominal aortic aneurysm formation. *Nature Communications* 2022;13(1):1521

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 2004; **Duration:** 28 days;

**ALZET Comments:** Dose (1000 ng/kg/min); Controls received mp w/ vehicle; animal info (8-12 weeks old; Male); peptides; cardiovascular;

**Q10380:** X. Z. Fan, *et al.* Kv7.4 channel is a key regulator of vascular inflammation and remodeling in neointimal hyperplasia and abdominal aortic aneurysms. *Free Radical Biology & Medicine* 2022;178(111-124)

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 2004; **Duration:** 4 weeks;

**ALZET Comments:** Dose (1000 ng/kg/min); animal info (Male; 8-12 weeks of age); peptides; cardiovascular; Therapeutic indication (Vascular inflammatory diseases);

**Q10432:** F. Daoud, *et al.* YAP and TAZ in Vascular Smooth Muscle Confer Protection Against Hypertensive Vasculopathy. *Arteriosclerosis Thrombosis Vascular Biology* 2022;42(4):428-443

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 2004; **Duration:** 14 days;

**ALZET Comments:** Dose (1 mg/kg/day); animal info (4-6 weeks old); Blood pressure measured via tail cuff system; cardiovascular (hypertension);



**Q10431:** C. Dai, *et al.* Tabersonine attenuates Angiotensin II-induced cardiac remodeling and dysfunction through targeting TAK1 and inhibiting TAK1-mediated cardiac inflammation. *Phytomedicine* 2022;103(154238)

**Agents:** Angiotensin II **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** 1004; **Duration:** 30 days;

**ALZET Comments:** "Dose: (1000 ng/kg/min) animal info: Six-weeks old C57BL/6 mice (weight 16-17 g); post op. care: Mice received disinfection treatment on their wound and 1 g/l neomycin in the drinking water after implanting pumps; Blood pressure measured via: Tail cuff; Blood pressure measurements (see pg.2) Angiotensin II aka (Ang II) cardiovascular; Therefore, TAK1 may be a key regulator of the cardiomyocyte hypertrophy-inflammatory signaling network and represents a potential therapeutic target for protesting against HF."

**Q10422:** Y. Chen, *et al.* Dysregulation of interaction between LOX(high) fibroblast and smooth muscle cells contributes to the pathogenesis of aortic dissection. *Theranostics* 2022;12(2):910-928

**Agents:** Angiotensin II **Vehicle:** Water; DMSO; **Route:** Not Stated; **Species:** Mice; **Pump:** 1007D; **Duration:** 48 hours;

**ALZET Comments:** Dose: (1000 ng/kg/min) Controls received mp w/ vehicle; animal info: Three-week-old male wild-type C57BL/6 mice; post op. care: 5% lidocaine cream was given on the skin to relieve pain; Blood pressure measured via: noninvasive tail cuff; Angiotensin II aka (Ang II) cardiovascular;

**Q10270:** Y. Chen, *et al.* Dysregulation of interaction between LOX(high) fibroblast and smooth muscle cells contributes to the pathogenesis of aortic dissection. *Theranostics* 2022;12(2):910-928

**Agents:** Angiotensin II **Vehicle:** Not Stated; **Route:** Not Stated; **Species:** Mice; **Pump:** Not Stated; **Duration:** 48 hours;

**ALZET Comments:** Dose (1000 ng/kg/min); animal info (3-week old male wild-type); Blood pressure measured via tail cuff method; cardiovascular;

**Q10424:** X. Chen, *et al.* Galactose-modified nanoparticles for delivery of microRNA to mitigate the progress of abdominal aortic aneurysms via regulating macrophage polarization. *Nanomedicine* 2022;44(102564)

**Agents:** Angiotensin II **Vehicle:** PBS; Saline; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 4 weeks;

**ALZET Comments:** Dose: (1000 ng/kg/min) Controls received mp w/ vehicle; animal info: Male apolipoprotein E-deficient (ApoE<sup>-/-</sup>) mice and male C57BL/6 mice; Angiotensin II aka (Ang II) cardiovascular (Abdominal aortic aneurysm)

**Q10423:** H. Chen, *et al.* Bmi-1-RING1B prevents GATA4-dependent senescence-associated pathological cardiac hypertrophy by promoting autophagic degradation of GATA4. *Clinical and Translational Medicine* 2022;12(4):e574

**Agents:** Angiotensin II **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** 1004; **Duration:** 4 weeks;

**ALZET Comments:** "Dose: (1.3 mg/kg/day) animal info: transgenic Bmi-1 overexpressing (Bmi-1Tg) and wild-type (WT) mice; Angiotensin II aka (Ang II); cardiovascular (cardiac hypertrophy)

**Q10426:** H. Chen, *et al.* microRNA-135a-5p regulates NOD-like receptor family pyrin domain containing 3 inflammasome-mediated hypertensive cardiac inflammation and fibrosis via thioredoxin-interacting protein. *Bioengineered* 2022;13(3):4658-4673

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** Not Stated; **Species:** Mice; **Pump:** 1007D; **Duration:** Not Stated;

**ALZET Comments:** Dose (1.5 mg/kg/day); Controls received mp w/ vehicle; animal info (Male; 24 total; 8 weeks old); Blood pressure measured via tail-cuff blood pressure system; peptides; cardiovascular; Therapeutic indication (Cardiac fibrosis);

**Q10406:** T. E. Banks, *et al.* Suppression of angiotensin II-activated NOX4/NADPH oxidase and mitochondrial dysfunction by preserving glucagon-like peptide-1 attenuates myocardial fibrosis and hypertension. *European Journal of Pharmacology* 2022;927(175048)

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Rat; **Pump:** Not Stated; **Duration:** 4 weeks;

**ALZET Comments:** Dose: (500 ng/kg/min) Controls received mp w/ vehicle; animal info: Male Sprague-Dawley rats weighing 200 ± 10 g from 8 to 10 weeks old; Blood pressure measured via: Tail cuff; Blood pressure measurement (see pg.9) Angiotensin II aka (Ang II) peptides; cardiovascular;



**Q10397:** K. Aonuma, *et al.* Impact of isorhamnetin for suppression of electrical and structural remodeling via CaMKII-RyR2 and TRPC-mediated MAPK pathways in atrial fibrillation. *Authorea* 2022;

**Agents:** Angiotensin II; Isorhamnetin **Vehicle:** Saline; **Route:** Not Stated; **Species:** Mice; **Pump:** 2002; **Duration:** 2 weeks;  
**ALZET Comments:** Dose (1000 ng/kg/min); Controls received mp w/ vehicle; animal info (Male; Wild-type; 8 weeks old); peptides; cardiovascular; Therapeutic indication (Arrhythmia);

**Q9824:** P. Zhong, *et al.* Ciliary neurotrophic factor overexpression protects the heart against pathological remodeling in angiotensin II-infused mice. *Biochemical and Biophysical Research Communications* 2021;547(15-22

**Agents:** Angiotensin II **Vehicle:** Saline, Sterile; **Route:** SC; **Species:** Mice; **Pump:** 1002; **Duration:** 14 days;  
**ALZET Comments:** Dose (2 mg/kg/day); animal info (8-week-old male mice); Angiotensin II aka Ang II; cardiovascular;

**Q9834:** Y. Zhao, *et al.* Suppression of Vascular Macrophage Activation by Nitro-Oleic Acid and its Implication for Abdominal Aortic Aneurysm Therapy. *Cardiovascular Drugs and Therapy* 2021;35(5):939-951

**Agents:** Angiotensin II **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** 2004; **Duration:** 4 weeks;  
**ALZET Comments:** Dose (1500 ng/kg/min); animal info (10 weeks old, Male, C57BL/6J); Blood pressure measured via Tail Cuff Method ;cardiovascular;

**Q9844:** H. Zhang, *et al.* MicroRNA-194 acts as a suppressor during abdominal aortic aneurysm via inhibition of KDM3A-mediated BNIP3. *Life Sciences* 2021;277(119309

**Agents:** Angiotensin II **Vehicle:** Not stated; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 28 days;  
**ALZET Comments:** Dose (1.44 mg/kg/day); animal info (C57BL/6 mice 23–25 g, 8–12 weeks old); Angiotensin II aka AngII; cardiovascular;

**Q9871:** N. Zeng, *et al.* Dickkopf 3: a Novel Target Gene of miR-25-3p in Promoting Fibrosis-Related Gene Expression in Myocardial Fibrosis. *Journal of Cardiovascular Translational Research* 2021;

**Agents:** Angiotensin II **Vehicle:** Not Stated; **Route:** Not Stated; **Species:** Mice; **Pump:** 2004; **Duration:** 28 days;  
**ALZET Comments:** Dose (1.46 mg/kg/day); animal info (One- to three-day-old newborn C57BL/6 mice); Angiotensin II aka AngII; cardiovascular;

**Q9882:** Y. H. Yu, *et al.* MicroRNA-99b-3p promotes angiotensin II-induced cardiac fibrosis in mice by targeting GSK-3beta. *Acta Pharmacologica Sinica* 2021;42(5):715-725

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 2 weeks;  
**ALZET Comments:** Dose (2 mg/kg/day); Controls received mp w/ vehicle; animal info (C57BL/6, Male, 18-22 g); cardiovascular;

**Q9558:** X. Wu, *et al.* P-Selectin Glycoprotein Ligand-1 Deficiency Protects Against Aortic Aneurysm Formation Induced by DOCA Plus Salt. *Cardiovascular Drugs and Therapy* 2021;

**Agents:** Angiotensin II **Vehicle:** Not Stated; **Route:** Not Stated; **Species:** Mice; **Pump:** 2004; **Duration:** 28 days;  
**ALZET Comments:** Dose (1.44 mg/kg/day); animal info (C57BL/6 mice, 20 months old); Blood pressure measured via tail cuff method; Angiotensin II aka AngII; cardiovascular;

**Q9544:** S. Wang, *et al.* EZH2 Dynamically Associates With Non-coding RNAs in Mouse Hearts After Acute Angiotensin II Treatment. *Frontiers in Cardiovascular Medicine* 2021;8(585691

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 24 hours;  
**ALZET Comments:** Dose (1 mg/kg/min); Controls received mp w/ vehicle; animal info (male mice, 10 weeks old); Angiotensin II aka AngII; cardiovascular

**Q9547:** M. Wang, *et al.* Endothelial NADPH oxidase 4 protects against angiotensin II-induced cardiac fibrosis and inflammation. *ESC Heart Failure* 2021;8(2):1427-1437

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 1002; **Duration:** 14 days;  
**ALZET Comments:** Dose (1.1 mg/kg/day); Controls received mp w/ vehicle; animal info (male Mice, 8-16 weeks old); cardiovascular;



**Q9542:** J. Wang, *et al.* Inhibition of plasma kallikrein mitigates experimental hypertension-enhanced cerebral hematoma expansion. *Brain Research Bulletin* 2021;170(49-57)

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** Not Stated; **Species:** Mice; **Pump:** Not Stated; **Duration:** 28 days;  
**ALZET Comments:** Dose (1000 ng/kg/min); Controls received mp w/ vehicle; animal info (Adult male C57BL/6 mice); Blood pressure measured via tail-cuff method; 101 mmHg - 156 mmHg; Angiotensin II aka AngII; cardiovascular;

**Q9502:** A. Tirronen, *et al.* The Ablation of VEGFR-1 Signaling Promotes Pressure Overload-Induced Cardiac Dysfunction and Sudden Death. *Biomolecules* 2021;11(3):

**Agents:** Angiotensin II **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 2 weeks;  
**ALZET Comments:** Dose (0.1 mg/kg/h); animal info (Five-to-seven-month-old male VEGFR-1 TK-/- mice); Angiotensin II aka AngII; cardiovascular;

**Q9493:** M. R. Tamplin, *et al.* Longitudinal Testing of Retinal Blood Flow in a Mouse Model of Hypertension by Laser Speckle Flowgraphy. *Translational Vision Science & Technology* 2021;10(2):16

**Agents:** Angiotensin II **Vehicle:** PBS; **Route:** SC; **Species:** Mice; **Pump:** 1002; 2004; **Duration:** 2; 4 weeks;  
**ALZET Comments:** Dose (0.625 µg/kg/min); XXX% XXX used; Controls received mp w/ vehicle; animal info (male black C57BL/6J mice, 10-12 weeks old); Blood pressure measured via tail cuff method; Angiotensin II aka Ang-II; cardiovascular;

**Q10283:** S. Tai, *et al.* Metformin suppresses vascular smooth muscle cell senescence by promoting autophagic flux. *Journal of Advanced Research* 2021;

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 2004; **Duration:** 28 days;  
**ALZET Comments:** Dose (400 ng/kg/min); dose-response (see graph pg 5); animal info (male, 10 weeks old, 25-30g, C57BL/6); Blood pressure measured via tail cuff method; cardiovascular; Therapeutic indication (senescence-associated secretory phenotype);

**Q9490:** B. Sun, *et al.* Inhibition of CXCR2 alleviates the development of abdominal aortic aneurysm in Apo E-/- mice. *Acta Cirurgica Brasileira* 2021;36(1):e360105

**Agents:** Angiotensin II; SB225002 **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 1007D; **Duration:** 28 days;  
**ALZET Comments:** Dose (1000 ng/kg/min); Controls received mp w/ vehicle; animal info (ApoE-/- male mice, 10 weeks old); Blood pressure measured via tail-cuff method; Angiotensin II aka Ang II; cardiovascular;

**Q10338:** J. Song, *et al.* Inactivation of Interleukin-4 Receptor alpha Signaling in Myeloid Cells Protects Mice From Angiotensin II/High Salt-Induced Cardiovascular Dysfunction Through Suppression of Fibrotic Remodeling. *Journal of the American Heart Association* 2021;10(13):e017329

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** Not Stated **Species:** Mice; **Pump:** 1002; **Duration:** 4 weeks;  
**ALZET Comments:** Dose: (1.5 mg/kg per day); 4% NaCl vehicle used; Controls received mp w/ vehicle; animal info: C57BL/6 male 10-to 12-week-old mice; Blood pressure measured via: Noninvasive blood pressure measurements tail cuff; Angiotensin II aka (Ang II); cardiovascular;

**Q10281:** C. Y. Song, *et al.* 2-Methoxyestradiol Ameliorates Angiotensin II-Induced Hypertension by Inhibiting Cytosolic Phospholipase A2alpha Activity in Female Mice. *Hypertension* 2021;78(5):1368-1381

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 1002; **Duration:** 14 days;  
**ALZET Comments:** Dose (700 ng/kg/min); animal info (female mice, C57BL/6J); Blood pressure measured via tail cuff method; cardiovascular;

**Q9479:** X. Si, *et al.* MicroRNA-23b prevents aortic aneurysm formation by inhibiting smooth muscle cell phenotypic switching via FoxO4 suppression. *Life Sciences* 2021;119092

**Agents:** Angiotensin II **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** 2004; **Duration:** 28 days;  
**ALZET Comments:** Dose (1 µg/kg/min); Controls received mp w/ vehicle; animal info (male C57BL/6J mice, 10-12 weeks old); Blood pressure measured via tail-cuff method; Angiotensin II aka Ang II; cardiovascular;



- Q10323:** O. Schweigert, *et al.* CRIP1 expression in monocytes related to hypertension. *Clinical Science* 2021;135(7):911-924  
**Agents:** Angiotensin II **Vehicle:** Saline; Acetic Acid; **Route:** SC; **Species:** Mice; **Pump:** 1007D; **Duration:** 1 week;  
**ALZET Comments:** Dose: (2 mg/kg/d); 0.9% Saline vehicle used; Controls received mp w/ vehicle; animal info: adult male mice on a 129/Sv background 10 to 15 weeks; Blood pressure measured via: Telemetric blood pressure 144.4-mmHg - 153.7 mmHg; Angiotensin II aka (Ang II); Cardiovascular
- Q10322:** S. L. Schlichte, *et al.* Sympathoinhibition and vasodilation contribute to the acute hypotensive response of the superoxide dismutase mimic, MnTnBuOE-2-PyP5+, in hypertensive animals. *Advances in Redox Research* 2021;3(**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 1002; **Duration:** 3 weeks;  
**ALZET Comments:** Dose: (400 ng/kg/min); Controls received mp w/ vehicle; animal info: Eighteen-week-old male Wistar Kyoto (WKY) rats and aged-matched; Spontaneously Hypertensive Rats (SHRs) (315 360 g); post op. care: The incision was closed with 6.0 Prolene suture, treated with (bupivacaine (1 mg/kg); Blood pressure measured via: radiotelemeters 111-mmHg, 81-mmHg & 97-mmHg; Angiotensin II aka (Ang II); Cardiovascular
- Q10316:** A. Saito, *et al.* Activation of Invariant Natural Killer T Cells by alpha-Galactosylceramide Attenuates the Development of Angiotensin II-Mediated Abdominal Aortic Aneurysm in Obese ob/ob Mice. *Frontiers in Cardiovascular Medicines* 2021;8(659418  
**Agents:** Angiotensin II **Vehicle:** PBS; **Route:** SC; **Species:** Mice; **Pump:** 2004; **Duration:** 4 weeks;  
**ALZET Comments:** Dose: (1,000 ng/kg/min); Controls received mp w/ vehicle; animal info: Male 8-week-old leptin deficient ob/ob mice on C57BL/6; Blood pressure measured via: tail cuff; 112 mmHg -107 mmHg/154 mmHg-161 mmHg; Angiotensin II aka (Ang II); Cardiovascular: Abdominal aortic aneurysm
- Q8846:** B. M. Rush, *et al.* Genetic or pharmacologic Nrf2 activation increases proteinuria in chronic kidney disease in mice. *Kidney International* 2021;99(1):102-116  
**Agents:** Angiotensin II **Vehicle:** Acetic Acid; **Route:** SC; **Species:** Mice; **Pump:** 2004; **Duration:** 4 weeks;  
**ALZET Comments:** Dose (1.5 mg/kg/day); Controls received mp w/ vehicle; animal info (C57BL/6J, 13 weeks old); Blood pressure measured via Telemetry ;dependence;
- Q10059:** Y. Que, *et al.* Inactivation of SERCA2 Cys(674) accelerates aortic aneurysms by suppressing PPARgamma. *British Journal of Pharmacology* 2021;178(11):2305-2323  
**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 2004; **Duration:** 7 days;  
**ALZET Comments:** Dose (1.44 mg/kg/day); Controls received mp w/ vehicle; animal info (Male WT and Ski mice, 7 weeks old, 18-22 g); post op. care (buprenorphine); cardiovascular;
- Q10306:** L. Qiu, *et al.* Sirt3 Protects Against Thoracic Aortic Dissection Formation by Reducing Reactive Oxygen Species, Vascular Inflammation, and Apoptosis of Smooth Muscle Cells. *Frontiers in Cardiovascular Medicine* 2021;8(675647  
**Agents:** Aminopropionitrile; Angiotensin II **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** 1004; **Duration:** 4 weeks;  
**ALZET Comments:** Dose: BAPN (1 g/kg per day); Ang II (1,000 ng/kg/min); animal info: Four-week-old male C57BL/6J mice; β-aminopropionitrile aka (BAPN); Angiotensin II aka (Ang II); Cardiovascular
- Q10305:** J. Qian, *et al.* Myeloid differentiation protein 2 mediates angiotensin II-induced inflammation and mesenchymal transition in vascular endothelium. *BBA Molecular Basis of Disease* 2021;1867(3):166043  
**Agents:** Angiotensin II **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice **Pump:** Not Stated; **Duration:** 14 days;  
**ALZET Comments:** Dose: (1.44 mg/kg/day); animal info: eight-week-old C57BL/6 (WT) mice and MD2 knockout (KO) mice; Blood pressure measured via: non-invasive tail-cuff blood pressure (SBP) was noted (Fig. 1B).; Angiotensin II aka ( Ang II); Cardiovascular



**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; **Route:** Not Stated; **Species:** Mice; **Pump:** Not Stated; **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;

**Q10051:** N. Otaka, *et al.* Vasohibin-2 Aggravates Development of Ascending Aortic Aneurysms but not Abdominal Aortic Aneurysms nor Atherosclerosis in ApoE-Deficient Mice. *American Journal of Hypertension* 2021;34(5):467-475

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 2004; **Duration:** 3 weeks;  
**ALZET Comments:** Dose (1000 ng/kg/min); Controls received mp w/ vehicle; animal info (male ApoE-/- mice, 9 to 14 weeks old); Blood pressure measured via tail cuff system; 98 mmHg - 139 mmHg; Angiotensin II aka AngII; cardiovascular;

**Q10294:** F. Olivares-Silva, *et al.* Resolvin-D1 attenuation of angiotensin II-induced cardiac inflammation in mice is associated with prevention of cardiac remodeling and hypertension. *BBA Molecular Basis of Disease* 2021;1867(12):166241

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 1007D; 1002; **Duration:** 7 days; 14 days;  
**ALZET Comments:** Dose: (1.5 mg/kg/day); Controls received mp w/ vehicle; animal info: Male C57BL/6 mice between 6 and 8 weeks old and 20–24 g; post op. care: After the surgery, mice received s.c fluid therapy, antiseptic wound ointment; Blood pressure measured via: tail-cuff method; Blood pressure measurement (see page 10); Angiotensin II aka (Ang II); Cardiovascular

**Q9395:** H. Oda, *et al.* Recombinant Thrombomodulin Attenuates Preeclamptic Symptoms by Inhibiting High-Mobility Group Box 1 in Mice. *Endocrinology* 2021;162(4):

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 2001; **Duration:** 3 days;  
**ALZET Comments:** Dose (1.5 ug/g/day); Controls received mp w/ vehicle; animal info (C57/BL6J female wild-type mice, 8 to 12 weeks); Angiotensin II aka AngII; cardiovascular;

**Q10288:** A. Nolze, *et al.* Calcineurin (PPP3CB) regulates angiotensin II-dependent vascular remodelling by potentiating EGFR signalling in mice. *Acta Physiologica* 2021;233(3):e13715

**Agents:** Angiotensin II **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 28 days;  
**ALZET Comments:** Dose: (500 ng/kg/min); Controls received mp w/ vehicle; animal info: Wildtype (WT) and PPP3CB KO mice, 5-month-old male mice; Blood pressure measured via: tail-cuff; Angiotensin II aka (Ang II); Cardiovascular

**Q9392:** R. Nistala, *et al.* DPP4 inhibition mitigates ANG II-mediated kidney immune activation and injury in male mice. *American Journal of Physiology Renal Physiology* 2021;320(3):F505-F517

**Agents:** Angiotensin II **Vehicle:** Saline, sterile; **Route:** Not Stated; **Species:** Mice; **Pump:** 1004; **Duration:** 3 weeks;  
**ALZET Comments:** Dose (1000 ng/kg/min); Controls received mp w/ vehicle; animal info (Male C57BL/6J mice, 11 weeks old); Angiotensin II aka AngII; cardiovascular;

**Q9381:** S. I. Murtada, *et al.* Differential biomechanical responses of elastic and muscular arteries to angiotensin II-induced hypertension. *Journal of Biomechanics* 2021;119(11):297

**Agents:** Angiotensin II **Vehicle:** Not Stated; **Route:** Not Stated; **Species:** Mice; **Pump:** 2004; **Duration:** 14 days;  
**ALZET Comments:** Dose (1000 ng/kg/min); animal info (male C57BL/6J mice, 20 weeks old); Angiotensin II aka AngII; cardiovascular;

**Q8291:** S. Munshaw, *et al.* Thymosin  $\beta$ 4 mediates vascular protection via regulation of Low Density Lipoprotein Related Protein 1 (LRP1). *Journal of Clinical Investigation* 2021;

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 10 days;  
**ALZET Comments:** Dose (1 mg/kg/day); animal info (9=12 weeks old, Male, ApoE -/-); Blood pressure measured via MLT44 pressure transducer; control w/vehicle cardiovascular;



**Q10260:** A. Mochida, *et al.* Defective autophagy in vascular smooth muscle cells enhances the healing of abdominal aortic aneurysm. *Physiological Reports* 2021;9(17):e15000

**Agents:** Angiotensin II **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** 1004; **Duration:** 4 weeks;

**ALZET Comments:** "Dose: (1,000 ng/kg/min); Controls received mp w/ vehicle; animal info: Atg7cKO:apoeKO mice and Atg7f/f:apoeKO mice, 10 weeks old; Blood pressure measured via: non-invasive tail-cuff; Blood pressure measurement (see graph pg.4); Angiotensin II aka (Ang II); Cardiovascular"

**Q10259:** K. N. Miyata, *et al.* Angiotensin II up-regulates sodium-glucose co-transporter 2 expression and SGLT2 inhibitor attenuates Ang II-induced hypertensive renal injury in mice. *Clinical Science* 2021;135(7):943-961

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 4 weeks;

**ALZET Comments:** Dose: (1000 ng/kg/min); 0.9% Saline vehicle used; Controls received mp w/ vehicle; animal info: Male WT mice at the age of 16 weeks (C57BL/6); Blood pressure measured via: BP-2000 tail-cuff; 124 mmHg - 77 mmHg; Angiotensin II aka (Ang II); Cardiovascular

**Q10258:** T. A. Milner, *et al.* Estrogen Receptor beta Contributes to Both Hypertension and Hypothalamic Plasticity in a Mouse Model of Peri-Menopause. *Journal of Neuroscience* 2021;41(24):5190-5205

**Agents:** Angiotensin II **Vehicle:** Saline; BSA; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 58 days;

**ALZET Comments:** Dose: (600 ng ·kg/min); 0.1% BSA vehicle used; Controls received mp w/ vehicle; animal info: females; males (3.5months old); Blood pressure measured via: Tail-cuff plethysmography; Recorded blood pressure: (see pg. 11); Angiotensin II aka (Ang II); Brain coordinates ((0.8 mm posterior, 0.2 mm lateral, and 4.8 mm ventral to bregma)); Cardiovascular: (Hypertension)

**Q10026:** D. L. Michell, *et al.* High intraluminal pressure promotes vascular inflammation via caveolin-1. *Scientific Reports* 2021;11(1):5894

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** Not Stated; **Species:** Mice; **Pump:** 2002,2004; **Duration:** 2, 4 weeks;

**ALZET Comments:** Dose (490 ng/kg/min); Controls received mp w/ vehicle; animal info (8–10 week-old C57Bl/6 mice); Blood pressure measured via tail-cuff method; Angiotensin II aka AngII; cardiovascular;

**Q9365:** T. Matsuura, *et al.* Activated Factor X Signaling Pathway via Protease-Activated Receptor 2 Is a Novel Therapeutic Target for Preventing Atrial Fibrillation. *Circulation Journal* 2021;85(8):1383-1391

**Agents:** Angiotensin II **Vehicle:** Not Stated; **Route:** Not Stated; **Species:** Mice; **Pump:** 2004; **Duration:** 2 weeks;

**ALZET Comments:** Dose (2 mg/kg/day); Controls received mp w/ vehicle; animal info (Eight-week-old male PAR2-/- mice); Blood pressure measured via tail-cuff method; 112 mmHg - 121 mmHg; Angiotensin II aka AngII; cardiovascular;

**Q10252:** D. S. A. Majid, *et al.* Angiotensin II-induced renal angiotensinogen formation is enhanced in mice lacking tumor necrosis factor- $\alpha$  type 1 receptor. *Physiological Reports* 2021;9(16):e14990

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 1002; **Duration:** 4 weeks;

**ALZET Comments:** 0.9% Saline vehicle used; animal info: WT; C57BL/6, mice (8–9) weeks of age; 25g weight; Blood pressure measured via: tail cuff; Recorded blood pressure: see pg. 4 & 8; Angiotensin II aka (Ang II) Cardiovascular; incorrectly labelled pump as 1002D

**Q10251:** S. L. Lv, *et al.* Lp-PLA2 inhibition prevents Ang II-induced cardiac inflammation and fibrosis by blocking macrophage NLRP3 inflammasome activation. *Acta Pharmacologica Sinica* 2021;42(12):2016-2032

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 1007D; **Duration:** 7 days;

**ALZET Comments:** "Dose: (1500 ng·kg/min); Controls received mp w/ vehicle; animal info: twelve-week-old male C57BL/6J mice (weight, 24–26 g); Blood pressure measured via: tail cuff; Angioensin II aka (Ang II); cardiovascular; "



**Q10249:** W. Lu, *et al.* Loss of FoxO3a prevents aortic aneurysm formation through maintenance of VSMC homeostasis. *Cell Death & Disease* 2021;12(4):378

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 2004; **Duration:** 28 days;

**ALZET Comments:** Dose: (1 µg/kg per minute); Controls received mp w/ vehicle; animal info: 8- to 15-week-old male C57BL/6J mice; Angiotensin II aka (Ang II); cardiovascular;

**Q10246:** P. Lu, *et al.* De-ubiquitination of p300 by USP12 Critically Enhances METTL3 Expression and Ang II-induced cardiac hypertrophy. *Experimental Cell Research* 2021;406(1):112761

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 1002; **Duration:** 4 weeks;

**ALZET Comments:** Dose:(1.3 mg/kg/day); Controls received mp w/ vehicle; animal info: Male 6-8-weeks-old C57BL/6J mice and global gene-line USP12 knockout (USP12-KO) mice (C57BL/6J background); cardiovascular;

**Q10043:** Y. S. Liu, *et al.* Luteolin attenuates angiotensin II-induced renal damage in apolipoprotein E-deficient mice. *Molecular Medical Reports* 2021;23(2):

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 2004; **Duration:** 4 weeks;

**ALZET Comments:** Dose (1000 ng/kg/min); Controls received mp w/ vehicle; animal info (male ApoE<sup>-/-</sup> mice, 8 weeks old); Angiotensin II aka AngII; cardiovascular;

**Q10240:** Q. Liu, *et al.* Exercise attenuates angiotensin-induced muscle atrophy by targeting PPARγ/miR-29b. *Journal of Sport and Health Science* 2021;

**Agents:** Angiotensin II **Vehicle:** PBS; Acetic acid; **Route:** SC; **Species:** Mice; **Pump:** 2001; **Duration:** 7 days;

**ALZET Comments:** "Dose: (1.5 ug/kg/min.)vehicle used; Controls received mp w/ vehicle; animal info: Male C57BL/6J mice. weight of the

mice was about 25 g, on average (10 weeks old); behavioral testing: Test of grip strength; Angiotensin II aka (Ang II); cardiovascular; "

**Q10241:** F. Liu, *et al.* p47(phox)-Dependent Oxidant Signalling through ASK1, MKK3/6 and MAPKs in Angiotensin II-Induced Cardiac Hypertrophy and Apoptosis. *Antioxidants (Basel)* 2021;10(9):

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** Not Stated; **Species:** Mice; **Pump:** Not Stated; **Duration:** 14 days;

**ALZET Comments:** Dose: (0.8 mg/kg/day); Controls received mp w/ vehicle; animal info: Littermates of wild-type and p47phox KO mice (7-months); Blood pressure measured via: tail-cuff; Recorded blood pressure: Systolic BP (180.3 ± 7.5 mmHg) Diastolic BP - (142.6±10.8 mmHg); Angiotensin II aka (Ang II); cardiovascular;

**Q10229:** J. Li, *et al.* Angiotensin II-induced muscle atrophy via PPARγ suppression is mediated by miR-29b. *Molecular Therapy Nucleic Acid* 2021;23(743-756

**Agents:** Angiotensin II **Vehicle:** NaCl; Acetic Acid; **Route:** Not Stated; **Species:** Mice; **Pump:** 2001; **Duration:** 7 days;

**ALZET Comments:** Dose: (1.5 ug/kg/min); 0.9% NaCl vehicle used; Controls received mp w/ vehicle; animal info: Ten-week-old male C57BL/6 mice; behavioral testing: Grip-strength test; Angiotensin II aka (Ang II)cardiovascular;

**Q9319:** A. Kunath, *et al.* Inhibition of angiotensin-induced aortic aneurysm by metformin in apolipoprotein E-deficient mice. *JVS: Vascular Science* 2021;2(33-42

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** Not Stated; **Species:** Mice; **Pump:** 1004; **Duration:** 28 days;

**ALZET Comments:** Dose (1000 ng/kg/min); 0.9% NaCl used; Controls received mp w/ vehicle; animal info (8 to 12 week old ApoE<sup>-/-</sup> mice); post op. care (buprenorphine); Angiotensin II aka AngII; cardiovascular;

**Q10221:** M. Kukida, *et al.* Effects of Endogenous Angiotensin II on Abdominal Aortic Aneurysms and Atherosclerosis in Angiotensin II-Infused Mice. *Journal of American Heart Association* 2021;10(9):e020467

**Agents:** Angiotensin II **Vehicle:** Not Stated; **Route:** Not Stated; **Species:** Mice; **Pump:** 2001; **Duration:** 7 days;

**ALZET Comments:** Dose: (1000 ng/kg per minute); Animal info: male C57BL/6J mice (8-to10-weeks-old); Angiotensin II aka (Ang II); cardiovascular;





**Q10219:** S. M. Krishna, *et al.* Kallistatin limits abdominal aortic aneurysm by attenuating generation of reactive oxygen species and apoptosis. *Scientific Reports* 2021;11(1):17451

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 1004; **Duration:** 28 days;

**ALZET Comments:** Dose: (1.0 µg/kg/min); Controls received mp w/ vehicle; animal info: apolipoprotein E deficient (ApoE<sup>-/-</sup>) mice; Blood pressure measured via: Tail cuffs; cardiovascular;

**Q10218:** I. Kopaliani, *et al.* Overexpression of dimethylarginine dimethylaminohydrolase 1 protects from angiotensin II-induced cardiac hypertrophy and vascular remodeling. *American Journal of Physiology and Heart Circulatory Physiology* 2021;321(5):H825-H838

**Agents:** Angiotensin II **Vehicle:** NaCl; **Route:** SC; **Species:** Mice; **Pump:** 1002; 1004; **Duration:** 2 weeks; 4 weeks;

**ALZET Comments:** Dose: (0.75 mg/kg/day); (1.5 mg/kg/day); 0.9% NaCl vehicle used; Controls received mp w/ vehicle; animal info: 12-wk-old male DDAH1 transgenic (DDAH1 TG) and wild-type male (WT) littermates (8, 20–22); All mice had C57BL/6J genetic background; Multiple pumps per animal (2 different pump model used); Blood pressure measured via: tail cuff; Angiotensin II aka (Ang II)cardiovascular;

**Q9310:** G. R. Kim, *et al.* MicroRNA-212-5p and its target PAFAH1B2 suppress vascular proliferation and contraction via the downregulation of RhoA. *PLoS One* 2021;16(3):e0249146

**Agents:** Angiotensin II **Vehicle:** Not stated; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 2 Weeks;

**ALZET Comments:** Controls received mp w/ vehicle; animal info (CD-1 male mice); Blood pressure measured via tail-cuff method;110 mmHg - 180 mmHg;cardiovascular;

**Q10206:** P. P. N. Kemper, *et al.* Feasibility of Bilinear Mechanical Characterization of the Abdominal Aorta in a Hypertensive Mouse Model. *World Federation for Ultrasound in Medicine & Biology* 2021;47(12):3480-3490

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 4 weeks;

**ALZET Comments:** Dose: (490 ng/kg/min); Controls received mp w/ vehicle; animal info: C57BL/6 male mice approximately 2-3 month; Angiotensin II aka (Ang II); cardiovascular; (Hypertension)

**Q9301:** S. Katsuki, *et al.* Nanoparticle-Mediated Delivery of Pitavastatin to Monocytes/Macrophages Inhibits Angiotensin II-Induced Abdominal Aortic Aneurysm Formation in Apoe(*f*) Mice. *Journal of Atherosclerosis Thrombosis* 2021;

**Agents:** Angiotensin II **Vehicle:** PBS; **Route:** IP; **Species:** Mice; **Pump:** 2004; **Duration:** 28 days;

**ALZET Comments:** Dose (1320 ng/kg/min); Controls received mp w/ vehicle; animal info (male C57BL/6J mice, 16-18 weeks old); Blood pressure measured via tail-cuff method;cardiovascular;

**Q10202:** S. Jana, *et al.* Gelsolin is an important mediator of Angiotensin II-induced activation of cardiac fibroblasts and fibrosis. *FASEB J* 2021;35(10):e21932

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 1004; **Duration:** 2 weeks; 4 weeks;

**ALZET Comments:** Dose: (1.5 mg/kg/day); Controls received mp w/ vehicle; animal info: Wildtype (Gsn<sup>+/+</sup>) and GSN knock out (Gsn<sup>-/-</sup>), 10 weeks of age; Blood pressure measured via: Telemetric blood pressure; Angiotensin II aka (Ang II); cardiovascular;

**Q10196:** K. Inoue, *et al.* Maxacalcitol (22-Oxacalcitriol (OCT)) Retards Progression of Left Ventricular Hypertrophy with Renal Dysfunction Through Inhibition of Calcineurin-NFAT Activity. *Cardiovascular Drugs and Therapy* 2021;35(2):381-397

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Rat; **Pump:** Not Stated; **Duration:** 14 days;

**ALZET Comments:** Dose: (0.15 µg/kg)Controls received mp w/ vehicle; animal info: Six-week-old male Wistar ratsBlood pressure measured via: Not specified150.6 (16.0) mmHg - 77.3 (8.21)mmHg;Angiotensin II aka (Ang II)cardiovascular; (Kidney disease)

**Q10194:** J. Hupfeld, *et al.* miR-208b Reduces the Expression of Kcnj5 in a Cardiomyocyte Cell Line. *Biomedicines* 2021;9(7):

**Agents:** Angiotensin II; Isoprenaline **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** 1004; **Duration:** 3 weeks; 2 weeks;

**ALZET Comments:** Dose:Angiotensin II (1000 ng/kg); Isoprenaline (30 mg/kg/day)Controls received mp w/no vehicleanimal info: C57BL6, six months of agepost op. care: Carprofen (5–10 mg/kg BW, Rimadyl)Angiotensin II aka (Ang II); Isoprenaline aka (ISO)cardiovascular;



**Q10189:** L. Huo, *et al.* Piezo2 channel in nodose ganglia neurons is essential in controlling hypertension in a pathway regulated directly by Nedd4-2. *Pharmacological Research* 2021;164(105391)

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Rat; **Pump:** 2002; **Duration:** 14 days;

**ALZET Comments:** Dose: Angiotensin II (400 ng/Kg/min.) 0.9% Saline vehicle used animal info: L-NNA-induced hypertensive animal model; WKY rats, weight of 190- 210 g post op. care: Benzylpenicillin (19 mg/0.1 mL) Blood pressure measured via: Tail cuff blood pressure results (see pg 8, 10) Angiotensin II aka (Ang II) cardiovascular; Hypertension stress/adverse reaction: (see pg 2) 9 rats were excluded because 5 rats with damaged osmotic minipumps and 4 rats died during the experimental procedure. In control group, 2 rats were excluded because their osmotic minipumps were damaged

**Q10190:** S. Hu, *et al.* Upregulated LRRc55 promotes BK channel activation and aggravates cell injury in podocytes. *Journal of Experimental Medicine* 2021;218(3):

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 2004; **Duration:** 4 weeks;

**ALZET Comments:** Dose: Angiotensin II (1,000 ng/kg/min) Controls received mp w/ vehicle; animal info: C57BL/6 mice aged 10–12 wk; Angiotensin II aka (Ang II) diabetes;

**Q10188:** J. Hu, *et al.* PU.1 inhibition attenuates atrial fibrosis and atrial fibrillation vulnerability induced by angiotensin-II by reducing TGF- $\beta$ 1/Smads pathway activation. *Journal of Cellular and Molecular Medicine* 2021;25(14):6746-6759

**Agents:** Angiotensin II **Vehicle:** PBS; **Route:** SC; **Species:** Mice; **Pump:** 1002; **Duration:** 28 days;

**ALZET Comments:** Dose: Angiotensin II (750 ng/kg/min) Controls received mp w/ vehicle; animal info: Male C57BL/6 mice Angiotensin aka (Ang II) cardiovascular; PU.1 inhibition can attenuate Ang-II- induced (atrial fibrosis) and consequently decrease vulnerability to AF by suppressing activation of the TGF- $\beta$ 1/ Smads pathway. These findings suggest that PU.1 may be a promising therapeutic target for the treatment of (atrial fibrosis) and the reduction of AF vulnerability

**Q9276:** M. Htet, *et al.* Editing of the myosin phosphatase regulatory subunit suppresses angiotensin II induced hypertension via sensitization to nitric oxide mediated vasodilation. *European Journal of Physiology* 2021;473(4):611-622

**Agents:** Angiotensin II **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 2 weeks;

**ALZET Comments:** Dose (400 ng/kg/min); animal info (wild-type C57B6/J male mice); Blood pressure measured via telemetry; 102.7 mmHg - 103.9 mmHg; Angiotensin II aka AngII; cardiovascular;

**Q10181:** S. He, *et al.* Kruppel-Like Factor 15 Modulates CXCL1/CXCR2 Signaling-Mediated Inflammatory Response Contributing to Angiotensin II-Induced Cardiac Remodeling. *Frontiers in Cell and Developmental Biology* 2021;9(644954)

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** 1002; **Duration:** 14 days;

**ALZET Comments:** Dose: Ang II (1,000 ng/kg/min) animal info: Male, 8-week-old KLF15 KO mice and WT littermates; Rat KLF15 Blood pressure measured via tail cuff cardiovascular;

**Q10180:** C. B. Harrison, *et al.* Fibroblast Nox2 (NADPH Oxidase-2) Regulates ANG II (Angiotensin II)-Induced Vascular Remodeling and Hypertension via Paracrine Signaling to Vascular Smooth Muscle Cells. *Arteriosclerosis, Thrombosis, and Vascular Biology* 2021;41(2):698-710

**Agents:** Angiotensin II **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** 1002; **Duration:** 14 days;

**ALZET Comments:** Dose: (1.1 mg/[kg·day]) animal info: Nox2<sup>fl/fl</sup> mice C57BL/6J, 7 to 8 weeks post op. care: Flunixin-meglumine Blood pressure measured via Radiotelemetry Angiotensin II aka (Ang II) cardiovascular; Hypertension

**Q10176:** Y. T. Guo, *et al.* Kruppel-Like Factor 15/Interleukin 11 Axis-Mediated Adventitial Remodeling Depends on Extracellular Signal-Regulated Kinases 1 and 2 Activation in Angiotensin II-Induced Hypertension. *Journal of American Heart Association* 2021;10(16):e020554

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** Not Stated; **Species:** Mice; **Pump:** 1002; **Duration:** 14 days;

**ALZET Comments:** Dose: (1000 ng/kg/min) Controls received mp w/ vehicle; animal info: Male C57BL/6 mice, aged 8 to 10 weeks (weight, 20–23g); Blood pressure measured via: tail cuff 109.3±9.2 mmHg-159.8±16.36 mmHg; 135.6±15.4 mmHg-142.4±19.6 mmHg; cardiovascular;



**Q9252:** W. Gu, *et al.* PHD Finger Protein 19 Promotes Cardiac Hypertrophy via Epigenetically Regulating SIRT2. *Cardiovascular Toxicology* 2021;21(6):451-461

**Agents:** Angiotensin II **Vehicle:** Not Stated; **Route:** Not Stated; **Species:** Mice; **Pump:** 2004; **Duration:** 4 weeks;  
**ALZET Comments:** Dose (1.5 mg/kg/day); animal info (8-12 week old male C57BL/6 mice); Angiotensin II aka Ang II; cardiovascular;

**Q9248:** Z. Gong, *et al.* UCHL1 inhibition attenuates cardiac fibrosis via modulation of nuclear factor-kappaB signaling in fibroblasts. *European Journal of Pharmacology* 2021;900(174045)

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** SC; **Species:** Mice; **Pump:** Not Stated; **Duration:** 4 weeks;  
**ALZET Comments:** Dose (1000 ng/kg/min); Controls received mp w/ vehicle; animal info (8-week-old mice); Blood pressure measured via tail-cuff method; 120 mmHg - 180 mmHg; Angiotensin II aka Ang II; cardiovascular;

**Q10167:** W. Ge, *et al.* Mep1a contributes to Ang II-induced cardiac remodeling by promoting cardiac hypertrophy, fibrosis and inflammation. *Journal of Molecular and Cellular Cardiology* 2021;152(52-68)

**Agents:** Angiotensin II **Vehicle:** Saline, sterile; **Route:** Not Stated; **Species:** Mice; **Pump:** 2004; **Duration:** 28 days;  
**ALZET Comments:** Dose: (1000 ng/kg/min); 0.9% sterile saline used; Controls received mp w/ vehicle; animal info: Wild type mice (WT, C57BL/6, N5) 8-10 week-old males; cardiovascular;

**Q10163:** G. Gabel, *et al.* Parallel Murine and Human Aortic Wall Genomics Reveals Metabolic Reprogramming as Key Driver of Abdominal Aortic Aneurysm Progression. *Journal of American Heart Association* 2021;10(17):e020231

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** Not Stated; **Species:** Mice; **Pump:** 2004; **Duration:** 4 weeks;  
**ALZET Comments:** Dose: (1.44 µg/kg per minute); Controls received mp w/ vehicle; animal info: Male ApoE<sup>-/-</sup> mice aged 13 weeks; Angiotensin II aka (Ang II); cardiovascular;

**Q10156:** Y. Feng, *et al.* Site-1 Protease-Derived Soluble (Pro)Renin Receptor Contributes to Angiotensin II-Induced Hypertension in Mice. *Hypertension* 2021;77(2):405-416

**Agents:** Angiotensin II; PF-429252 **Vehicle:** Not Stated; **Route:** SC; **Species:** Mice; **Pump:** 1007D; **Duration:** 6 days;  
**ALZET Comments:** Dose: (Ang II 300 ng/kg/day; PF-429242 20 mg/kg/day); Controls received mp w/ vehicle; animal info: B6129SF1/J mice; Blood pressure measured via Radiotelemetry; (21.8±1.9 mmHg) - (48.8±9.4 mmHg); Angiotensin II aka (Ang II); PF-429252 aka S1P inhibitor; antihypertensive; cardiovascular; Hypertension

**Q9223:** L. H. Feng, *et al.* Irbesartan inhibits metastasis by interrupting the adherence of tumor cell to endothelial cell induced by angiotensin II in hepatocellular carcinoma. *Annals of Translational Medicine* 2021;9(3):207

**Agents:** Angiotensin II **Vehicle:** Not Stated; **Route:** Not Stated; **Species:** Mice; **Pump:** 1004; **Duration:** 4 weeks;  
**ALZET Comments:** Dose (100 ng/kg/min); animal info (5-week-old male BALB/c nude mice, 18–20 g); Angiotensin II aka Ang II; cancer (Carcinoma); "Ang II was administered by an ALZET osmotic pump (ALZA, Cupertino, California, USA; model: 1004; sustained release rate: 0.11 µL/hour; duration: 4 weeks), which could release Ang II continuously, homogeneously and stably; avoid stress due to repeated administration; and protect the short half-life of the drug" pg 3

**Q10154:** S. Fang, *et al.* RNF34 ablation promotes cerebrovascular remodeling and hypertension by increasing NADPH-derived ROS generation. *Neurobiology of Disease* 2021;156(105396)

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** Not Stated; **Species:** Mice; **Pump:** 2002; **Duration:** 28 days;  
**ALZET Comments:** Dose: (1.1 mg/kg per day); Controls received mp w/ vehicle; animal info: RNF34 global knockout mice (RNF34KO) and RNF34-floxed mice (RNF34f/f) 8 weeks old; behavioral testing (Water maze); Blood pressure measured via Radiotelemetry; Angiotensin II aka (Ang II); cardiovascular

**Q10153:** Y. Fan, *et al.* Sirt6-mediated Nrf2/HO-1 activation alleviates angiotensin II-induced DNA DSBs and apoptosis in podocytes. *Food & Function* 2021;12(17):7867-7882

**Agents:** Angiotensin II **Vehicle:** Saline; **Route:** Not Stated; **Species:** Rat; **Pump:** Not Stated; **Duration:** 14 days; 28 days;  
**ALZET Comments:** Dose: (400 ng kg<sup>-1</sup> min<sup>-1</sup>); Controls received mp w/ vehicle; "animal info: male specific-pathogen-free Wistar rats"; Angiotensin II aka (Ang II); Chronic kidney disease