

June 04, 2021	Fast super-resolution ultrasound microvessel imaging using spatiotemporal data with deep fully convolutional neural network	Ultrasound localization microscopy (ULM) has been proposed to image microvasculature beyond the ultrasound diffraction limit.
January 04, 2021	A Protocol for Evaluating Vital Signs and Maternal-Fetal Parameters Using High-Resolution Ultrasound in Pregnant Mice	Pregnancy is a unique physiological state in which two individuals coexist: the mother and the fetus.
January 01, 2019	Pharmacological inhibition of Notch signaling regresses pre-established abdominal aortic aneurysm	Abdominal aortic aneurysm (AAA) is characterized by transmural infiltration of myeloid cells at the vascular injury site.
January 01, 2018	Development and growth trends in angiotensin II-induced murine dissecting abdominal aortic aneurysms	Abdominal aortic aneurysms are pathological dilations that can suddenly rupture, causing more than 15,000 deaths in the U.S. annually.
January 01, 2018	Impairment of an Endothelial NAD + -H 2 S Signaling Network Is a Reversible Cause of Vascular Aging	A decline in capillary density and blood flow with age is a major cause of mortality and morbidity.
November 29, 2021	Involvement of Endoplasmic Reticulum Stress-Mediated Activation of C/EBP Homologous Protein in Aortic Regurgitation-Induced Cardiac Remodeling in Mice	Aortic regurgitation (AR) is a volume overload disease causing eccentric left ventricular (LV) hypertrophy and eventually heart failure.
November 29, 2021	The mitochondria-targeted antioxidant MitoQ attenuated PM2.5-induced vascular fibrosis via regulating mitophagy	Short-term PM2.5 exposure is related to vascular remodeling and stiffness.
November 02, 2021	[18F]fluorothymidine uptake in the porcine pancreatic elastase-induced model of abdominal aortic aneurysm	The porcine pancreatic elastase (PPE) model is a common preclinical model of abdominal aortic aneurysms (AAA).
November 02, 2021	3D-Printed Scaffolds Promote Angiogenesis by Recruiting Antigen-Specific T Cells	The immune response after implantation is a primary determinant of the tissue-repair effects of three-dimensional (3D)-printed scaffolds.
November 02, 2021	Downregulated developmental processes in the postnatal right ventricle under the influence of a volume overload	The molecular atlas of postnatal mouse ventricular development has been made available and cardiac regeneration is documented to be a downregulated pr
October 19, 2021	Mutation of the 5'-untranslated region stem-loop mRNA structure reduces type I collagen deposition and arterial stiffness in male obese mice	Arterial stiffening, a characteristic feature of obesity and type 2 diabetes, contributes to the development and progression of cardiovascular disease
October 19, 2021	Deletion of BK channels decreased skeletal and cardiac muscle function but increased smooth muscle contraction in rats	Large conductance calcium-activated potassium channel (BK channel) is widely expressed in skeletal muscle, myocardium, smooth muscle and other muscle
October 19, 2021	Evaluation of fine particulate matter on vascular endothelial function in vivo and in vitro	Ambient fine particulate matter (PM2.5) and high-fat diet (HFD) are linked to the development of atherosclerosis.
October 19, 2021	Cyclic nucleotide phosphodiesterase 1C contributes to abdominal aortic aneurysm	Abdominal aortic aneurysm (AAA) is characterized by aorta dilation due to wall degeneration, which mostly occurs in elderly males.
October 19, 2021	Silencing IL12p35 Promotes Angiotensin II-Mediated Abdominal Aortic Aneurysm through Activating the STAT4 Pathway	Background and Purpose.
October 19, 2021	Biomechanical consequences of compromised elastic fiber integrity and matrix cross-linking on abdominal aortic aneurysmal enlargement	Abdominal aortic aneurysms (AAAs) are characterized histopathologically by compromised elastic fiber integrity, lost smooth muscle cells or their func

October 18, 2021	CCL7 contributes to angiotensin II-induced abdominal aortic aneurysm by promoting macrophage infiltration and pro-inflammatory phenotype	Chemokine C-C motif ligand 7 (CCL7), a member of CC chemokine subfamily, plays pivotal roles in numerous inflammatory diseases.
October 18, 2021	Artesunate Attenuated the Progression of Abdominal Aortic Aneurysm in a Mouse Model	Background: The inflammatory reaction is an important mechanism of pathogenesis of abdominal aortic aneurysm (AAA).
October 18, 2021	Red Blood Cell and Endothelial eNOS Independently Regulate Circulating Nitric Oxide Metabolites and Blood Pressure	Background: Current paradigms suggest that nitric oxide (NO) produced by endothelial cells (ECs) through endothelial nitric oxide synthase (eNOS) in t
October 18, 2021	Activation of Smad2/3 signaling by low fluid shear stress mediates artery inward remodeling	Endothelial cell (EC) sensing of wall fluid shear stress (FSS) from blood flow governs vessel remodeling to maintain FSS at a specific magnitude or se
August 24, 2021	Ultrasensitive Carbon Nanotubes for Photoacoustic Imaging of Inflamed Atherosclerotic Plaques	Disruption of vulnerable atherosclerotic plaques often leads to myocardial infarction and stroke, the leading causes of morbidity and mortality in the
August 24, 2021	Soluble epoxide hydrolase deletion attenuated nicotine-induced arterial stiffness via limiting the loss of SIRT1	We presently show that sEH knockout repressed nicotine-induced arterial stiffness and extracellular matrix remodeling via SIRT1-induced YAP deacetylat
August 24, 2021	Anti-atherogenic effect of 10% supplementation of anchovy (Engraulis encrasicolus) waste protein hydrolysates in apoE-deficient mice	Fish protein consumption exerts beneficial metabolic effects on human health, also correlat-ing with a decreased risk for cardiovascular disease.
August 09, 2021	A Thrombin-Responsive Nanoprobe for in Vivo Visualization of Thrombus Formation through Three-Dimensional Optical/Computed Tomography Hybrid Imaging	Early spontaneous detection of thrombin activation benefits precise theranostics for thrombotic vascular disease.
August 09, 2021	Bioinspired therapeutic platform based on extracellular vesicles for prevention of arterial wall remodeling in hypertension	Arterial stiffness due to the vessel remodeling is closely linked to raised blood pressure, and its physiopathologic mechanism is still not fully unde
July 07, 2021	Senolytic agents lessen the severity of abdominal aortic aneurysm in aged mice	Age is a major risk factor for abdominal aortic aneurysm (AAA), for which treatment options are limited to surgical intervention for large AAA and wat
July 07, 2021	In vivo photoacoustic imaging for monitoring treatment outcome of corneal neovascularization with metformin eye drops	Corneal neovascularization (CNV) compromises corneal avascularity and visual acuity.
June 28, 2021	Chronic stimulation of group II metabotropic glutamate receptors in the medulla oblongata attenuates hypertension development in spontaneously hypertensive rats	Baroreflex dysfunction is partly implicated in hypertension and one responsible region is the dorsal medulla oblongata including the nucleus tractus s
June 25, 2021	Aortic disease in Marfan syndrome is caused by overactivation of sGC-PRKG signaling by NO	Thoracic aortic aneurysm, as occurs in Marfan syndrome, is generally asymptomatic until dissection or rupture, requiring surgical intervention as the
June 25, 2021	Contrast enhanced ultrasound molecular imaging of activated platelets in the progression of atherosclerosis using microbubbles bearing the von Willebrand factor A1 domain	Platelet endothelial interactions have been linked to increased inflammatory activation and a prothrombotic state in atherosclerosis.
June 10, 2021	Doxorubicin induces arterial stiffness: A comprehensive in vivo and ex vivo evaluation of vascular toxicity in mice	Arterial stiffness is an important predictor of cardiovascular risk.

June 10, 2021	Mst1/2 Kinases Inhibitor, XMU-MP-1, Attenuates Angiotensin II-Induced Ascending Aortic Expansion in Hypercholesterolemic Mice	Background: Ascending and abdominal aortic aneurysms (AAs) are asymptomatic, permanent dilations of the aorta with surgical intervention as the current
June 10, 2021	Systemic delivery of targeted nanotherapeutic reverses angiotensin II-induced abdominal aortic aneurysms in mice	Abdominal aortic aneurysm (AAA) disease causes dilation of the aorta, leading to aortic rupture and death if not treated early.
June 09, 2021	Chemerin-9 Attenuates Experimental Abdominal Aortic Aneurysm Formation in ApoE^{-/-} Mice	Chronic inflammation plays an essential role in the pathogenesis of abdominal aortic aneurysm (AAA), a progressive segmental abdominal aortic dilation
June 09, 2021	Gelatin coating promotes in situ endothelialization of electrospun polycaprolactone vascular grafts	Rapid endothelialization is crucial for in situ tissue engineering vascular grafts to prevent graft failure in the long-term.
June 09, 2021	Stiffness of aortic arch and carotid arteries increases in ApoE-knockout mice with high-fat diet: Evidence from echocardiography	Arterial stiffness is an effective predictor of atherosclerosis.
June 07, 2021	Three-dimensional visualization and improved quantification with super-resolution ultrasound imaging - Validation framework for analysis of microvascular morphology using a chicken embryo model	The purpose of this study was to improve the morphological analysis of microvascular networks depicted in three-dimensional (3D) super-resolution ultr
June 07, 2021	SNF5 promotes IL-1β expression via H3K4me1 in atherosclerosis induced by homocysteine	Homocysteine (Hcy) is a strong and independent risk factor of atherosclerosis.
June 07, 2021	Loxl4 abrogation does not exaggerate angiotensin ii-induced thoracic or abdominal aortic aneurysm in mice	It has been shown that thoracic aortic aneurysm and dissection (TAAD) could be a Mendelian trait caused by a single gene mutation.
June 04, 2021	Measurement of total liver blood flow in intact anesthetized rats using ultrasound imaging	This short report describes the measurement of total liver blood flow in commonly used laboratory rats using the relatively non-invasive approach of u
June 04, 2021	The effect of hypoxia-mimicking responses on improving the regeneration of artificial vascular grafts	Cellular transition to hypoxia following tissue injury, has been shown to improve angiogenesis and regeneration in multiple tissues.
June 04, 2021	Rolipram prevents the formation of abdominal aortic aneurysm (Aaa) in mice: pde4b as a target in AAA	Abdominal aortic aneurysm (AAA) is a common life-threatening condition characterized by exacerbated inflammation and the generation of reactive oxygen
June 04, 2021	Activation of angiotensin type 2 receptor attenuates testosterone-induced hypertension and uterine vascular resistance in pregnant rats†	Preeclampsia is a pregnancy-related hypertensive disorder with unclear mechanisms.
June 04, 2021	Inhibition of NOX1 Mitigates Blood Pressure Increases in Elastin Insufficiency	Elastin (ELN) insufficiency leads to the cardiovascular hallmarks of the contiguous gene deletion disorder, Williams–Beuren syndrome, including hypert
May 28, 2021	Accelerated atherosclerosis caused by serum amyloid A response in lungs of ApoE^{-/-} mice	Airway exposure to eg particulate matter is associated with cardiovascular disease including atherosclerosis.
May 28, 2021	Chemotherapy-induced acute vascular injury involves intracellular generation of ROS via activation of the acid sphingomyelinase pathway	Several categories of chemotherapy confer substantial risk for late-term vascular morbidity and mortality.

March 25, 2021	Acute glucose influx-induced mitochondrial hyperpolarization inactivates myosin phosphatase as a novel mechanism of vascular smooth muscle contraction	It is well-established that long-term exposure of the vasculature to metabolic disturbances leads to abnormal vascular tone, while the physiological r
March 12, 2021	Histone citrullination as a novel biomarker and target to inhibit progression of abdominal aortic aneurysms	Neutrophil extracellular traps (NETs) have been implicated in the pathogenesis of abdominal aortic aneurysms (AAAs).
March 08, 2021	Sonopermeation Enhances Uptake and Therapeutic Effect of Free and Encapsulated Cabazitaxel	Delivery of drugs and nanomedicines to tumors is often heterogeneous and insufficient and, thus, of limited efficacy.
March 01, 2021	A Dual Role of Heme Oxygenase-1 in Angiotensin II-Induced Abdominal Aortic Aneurysm in the Normolipidemic Mice	Abdominal aortic aneurysm (AAA) bears a high risk of rupture and sudden death of the patient.
March 01, 2021	Analysis of Syk/PECAM-1 signaling pathway in low shear stress induced atherosclerosis based on ultrasound imaging	Background and Objective: Low shear stress (LSS) has been demonstrated to be involved in function of vascular endothelial cells.
March 01, 2021	Animal Model Dependent Response to Pentagalloyl Glucose in Murine Abdominal Aortic Injury	Abdominal aortic aneurysms (AAAs) are a local dilation of the aorta and are associated with significant mortality due to rupture and treatment complic
March 01, 2021	P-Selectin Glycoprotein Ligand-1 Deficiency Protects Against Aortic Aneurysm Formation Induced by DOCA Plus Salt	Purpose: P-selectin glycoprotein ligand-1 (PSGL-1) acts as a crucial regulator for the inflammatory cells infiltration by mediating the adhesion of le
March 01, 2021	Digestive n-6 Lipid Oxidation, a Key Trigger of Vascular Dysfunction and Atherosclerosis in the Western Diet: Protective Effects of Apple Polyphenols	Scope: A main risk factor of atherosclerosis is a Western diet (WD) rich in n-6 polyunsaturated fatty acids (PUFAs) sensitive to oxidation.
February 23, 2021	Developmental origins of mechanical homeostasis in the aorta	Background: Mechanical homeostasis promotes proper aortic structure and function.
February 22, 2021	Aortic Strain Correlates With Elastin Fragmentation in Fibrillin-1 Hypomorphic Mice	Background: Diagnosis requires that clinicians communicate and share patient information in an efficient manner.
February 19, 2021	Ultrasound molecular imaging of atherosclerosis for early diagnosis and therapeutic evaluation through leucocyte-like multiple targeted microbubbles	Cardiovascular diseases resulting from atherosclerosis have become a serious threat to human health.
January 18, 2021	TRPV5 attenuates abdominal aortic aneurysm in mice by regulating KLF4-dependent phenotype switch of aortic vascular smooth muscle cells	Abdominal aortic aneurysm (AAA) is a fatal vascular disease with insidious symptoms. However, the mechanism behind its development remains unclear.
January 18, 2021	Bone marrow-derived mesenchymal stem cells microvesicles stabilize atherosclerotic plaques by inhibiting NLRP3-mediated macrophage pyroptosis	Rupture of atherosclerotic plaques constitutes the major cause of thrombosis and acute ischemic coronary syndrome.
January 14, 2021	Assessing model mismatch and model selection in a Bayesian uncertainty quantification analysis of a fluid-dynamics model of pulmonary blood circulation	This study uses Bayesian inference to quantify the uncertainty of model parameters and haemodynamic predictions in a one-dimensional pulmonary circula
January 14, 2021	CFTR plays an important role in the regulation of vascular resistance and high-fructose/salt-diet induced hypertension in mice	Background: The pathophysiological roles of cystic fibrosis transmembrane-conductance regulator (CFTR) Cl-channels in the regulation of blood pressur

January 14, 2021	A validated mouse model capable of recapitulating the protective effects of female sex hormones on ascending aortic aneurysms and dissections (AADs)	Fewer females develop AADs (ascending aortic aneurysms and dissections) and the reasons for this protection remain poorly understood.
January 14, 2021	Thick PCL Fibers Improving Host Remodeling of PGS-PCL Composite Grafts Implanted in Rat Common Carotid Arteries	Vasculopathy and the consequential ischemia are major medical challenges. Grafting is an effective treatment to vascular occlusion.
January 04, 2021	Bimodal Imaging-Visible Nanomedicine Integrating CXCR4 and VEGFa Genes Directs Synergistic Reendothelialization of Endothelial Progenitor Cells	A major challenge to treat vascular endothelial injury is the restoration of endothelium integrity in which endothelial progenitor cells (EPCs) plays
January 04, 2021	Specific inhibition of SHP2 suppressed abdominal aortic aneurysm formation in mice by augmenting the immunosuppressive function of MDSCs	Aims: To address the roles of SHP2 in regulating angiotensin II (Ang II) induced abdominal aortic aneurysm (AAA) and the potential molecular mechanism
January 04, 2021	Vascular protective effect of aspirin and rivaroxaban upon endothelial denudation of the mouse carotid artery	While in recent trials the dual pathway inhibition with aspirin plus rivaroxaban has shown to be efficacious in patients with atherosclerotic cardiova
January 04, 2021	Inhibition of transforming growth factor-β signaling in myeloid cells ameliorates aortic aneurysmal formation in Marfan syndrome	Increased transforming growth factor- β (TGF- β) signaling contributes to the pathophysiology of aortic aneurysm in Marfan syndrome (MFS).
January 04, 2021	Effects of different positions of intravascular stent implantation in stenosed vessels on in-stent restenosis: An experimental and numerical simulation study	Percutaneous coronary intervention (PCI) has been widely used in the treatment of atherosclerosis, while in-stent restenosis (ISR) has not been comple
January 04, 2021	Daphnetin suppresses experimental abdominal aortic aneurysms in mice via inhibition of aortic mural inflammation	Rupture of abdominal aortic aneurysm (AAA) is a devastating event that can be prevented by inhibiting the growth of small aneurysms.
January 04, 2021	Early Gestational Exposure to Inhaled Ozone Impairs Maternal Uterine Artery and Cardiac Function	Exposure to air pollutants such as ozone (O ₃) is associated with adverse pregnancy outcomes, including higher incidence of gestational hypertension, p
January 04, 2021	Effects of Braiding Parameters on Tissue Engineered Vascular Graft Development	Tissue engineered vascular grafts (TEVGs) using scaffolds fabricated from braided poly(glycolic acid) (PGA) fibers coated with poly(glycerol sebacate)
January 04, 2021	Sex differences in the time course and mechanisms of vascular and cardiac aging in mice: role of the smooth muscle cell mineralocorticoid receptor	Aging is associated with heart and vascular dysfunction that contributes to cardiovascular disease (CVD) risk.
January 04, 2021	Factor Xa inhibitor rivaroxaban suppresses experimental abdominal aortic aneurysm progression via attenuating aortic inflammation	Objective: Rivaroxaban is a specific factor Xa (FXa) inhibitor for venous thromboembolism treatment.
November 03, 2020	Potential role of intermittent functioning of baroreflexes in the etiology of hypertension in spontaneously hypertensive rats	The spontaneously hypertensive rat (SHR) is a genetic model of primary hypertension with an etiology that includes sympathetic overdrive.
November 03, 2020	Macrophage pyroptosis is mediated by immunoproteasome subunit β5i (LMP7) in abdominal aortic aneurysm	Macrophages contribute to abdominal aortic aneurysm (AAA), but the effect of macrophage on AAA formation is not totally understood.
November 03, 2020	Aortic Stiffness and Diastolic Dysfunction in Sprague Dawley Rats Consuming Short-Term Fructose Plus High Salt Diet	Introduction: High fructose and salt consumption continues to be prevalent in western society.

November 03, 2020	In vivo measurement of flow-mediated vasodilation in living rats using high-resolution ultrasound	In humans, endothelial vasodilator function serves as a surrogate marker for cardiovascular health and is measured as changes in conduit artery diameter
October 16, 2020	Platelet membrane-functionalized nanoparticles with improved targeting ability and lower hemorrhagic risk for thrombolysis therapy	Intravenous injection of thrombolytic drugs is the most effective strategy for the treatment of thrombotic diseases.
October 16, 2020	Age-dependent characterization of carotid and cerebral artery geometries in a transgenic mouse model of sickle cell anemia using ultrasound and microcomputed tomography	To define morphological changes in carotid and cerebral arteries in sickle cell transgenic mice (SS) as they age, a combination of ultrasound and micr
October 16, 2020	Ultrasound Assessment of the Relation between Local Hemodynamic Parameters and Plaque Morphology	Mechanical factors, especially wall shear stress (WSS) and circumferential strain (CS), play an important role in the progression and rupture of ather
October 16, 2020	A novel biodegradable external stent regulates vein graft remodeling via the Hippo-YAP and mTOR signaling pathways	Coronary artery bypass graft (CABG) has been confirmed to effectively improve the prognosis of coronary artery disease, which is a major public health
October 16, 2020	Fluid shear stress modulates endothelial inflammation by targeting LIMS2	Mechanosensitive genes regulate multiple cardiovascular pathophysiological processes and disorders; however, the role of flow-sensitive genes in ather
October 16, 2020	A single exposure to eucalyptus smoke sensitizes rats to the postprandial cardiovascular effects of a high carbohydrate oral load	Objective: Previous studies have shown that air pollution exposure primes the body to heightened responses to everyday stressors of the cardiovascular
October 16, 2020	Functional Role of Second Heart Field-derived Smooth Muscle Cells in Thoracic Aortopathies in Mice	Changes in soil physical properties due to traditional methods of puddling for lowland rice (<i>Oryza sativa</i> L.) production and post-rice legumes was inv
October 16, 2020	Artery to vein configuration of arteriovenous fistula improves hemodynamics to increase maturation and patency	Arteriovenous fistulae (AVF) are the preferred mode of hemodialysis access, but 60% of conventional [vein-to-artery (V-A)] AVF fail to mature, and onl
September 09, 2020	A mouse model of stenosis distal to an arteriovenous fistula recapitulates human central venous stenosis	Objective: Central venous stenosis (CVS) is a major cause of arteriovenous fistula (AVF) failure.
September 09, 2020	GSK2593074A blocks progression of existing abdominal aortic dilation	Objective: Receptor interacting proteins kinase 1 and 3 (RIPK1 and RIPK3) have been shown to play essential roles in the pathogenesis of abdominal aor
September 09, 2020	Lin28a up-regulation is associated with the formation of restenosis via promoting proliferation and migration of vascular smooth muscle cells	To explore the potential role of Lin28a in the development of restenosis after percutaneous transluminal angioplasty, double-balloon injury surgery an
September 09, 2020	A bi-layered tubular scaffold for effective anti-coagulant in vascular tissue engineering	Acute coagulation is one of the vexed problems in transplantation of small-diameter artificial blood vessel.
September 09, 2020	Hyaluronan promotes the regeneration of vascular smooth muscle with potent contractile function in rapidly biodegradable vascular grafts	The regeneration of smooth muscle with physiological functions has been a key challenge in vascular tissue engineering.
September 09, 2020	Slow degrading poly(glycerol sebacate) derivatives improve vascular graft remodeling in a rat carotid artery interposition model	Porous synthetic grafts made of poly (glycerol sebacate) (PGS) can transform into autologous vascular conduits in vivo upon degradation of PGS.

September 01, 2020	Photochemical Tissue Passivation of Arteriovenous Grafts Prevents Long-term Development of Intimal Hyperplasia in a Swine Model	Background: The autologous vein remains the standard conduit for lower extremity and coronary artery bypass grafting despite a 30%-50% 5-y failure rate
July 01, 2020	miR-374b-5p is increased in deep vein thrombosis and negatively targets IL-10	Background: Deep venous thrombosis (DVT) is one of the most common venous thromboembolic (VTE) disorders and the third leading cardiovascular complica
June 01, 2020	Construction of vascular graft with circumferentially oriented microchannels for improving artery regeneration	Design and fabrication of scaffolds with three-dimensional (3D) topological cues inducing regeneration of the neo-tissue comparable to native one rema
May 01, 2020	Motor transmission defects with sex differences in a new mouse model of mild spinal muscular atrophy	Background: Mouse models of mild spinal muscular atrophy (SMA) have been extremely challenging to generate.
April 01, 2020	TRAIL-expressing cell membrane nanovesicles as an anti-inflammatory platform for rheumatoid arthritis therapy	Rheumatoid arthritis (RA) is one of the most common chronic autoimmune diseases.
March 30, 2020	Management of metabolic syndrome and reduction in body weight in type II diabetic mice by inhibiting glycosphingolipid synthesis	Metabolic syndrome is defined by hyperlipidemia and cardiovascular complications.
March 01, 2020	PM2.5-induced inflammation and lipidome alteration associated with the development of atherosclerosis based on a targeted lipidomic analysis	Epidemiological studies have confirmed that PM2.5 could contribute to the development of atherosclerosis accompanied with lipids dysregulation.
March 01, 2020	Therapeutic Antibody Against Phosphorylcholine Preserves Coronary Function and Attenuates Vascular 18F-FDG Uptake in Atherosclerotic Mice	This study showed that treatment with a therapeutic monoclonal immunoglobulin-G1 antibody against phosphorylcholine on oxidized phospholipids preserve
February 01, 2020	Effects of the different-sized external stents on vein graft intimal hyperplasia and inflammation	Background: The poor long-term patency ratio of vein grafts prevents patients from benefiting from coronary artery bypass graft (CABG).
February 01, 2020	Design and characterization of a porous pouch to prevent peritoneal adhesions during in vivo vascular graft maturation	Vein grafts for coronary artery bypass are not available in more than 30% of patients due to prior use or systemic vascular diseases.
February 01, 2020	Evolution of metallic cardiovascular stent materials: A comparative study among stainless steel, magnesium and zinc	A cardiovascular stent is a small mesh tube that expands a narrowed or blocked coronary artery.
February 01, 2020	Tissue-Engineered Vascular Grafts with Advanced Mechanical Strength from Human iPSCs	Vascular smooth muscle cells (VSMCs) can be derived in large numbers from human induced pluripotent stem cells (hiPSCs) for producing tissue-engineere
January 01, 2020	Targeted Repair of Vascular Injury by Adipose Derived Stem Cells Modified with P Selectin Binding Peptide	Percutaneous coronary intervention for coronary artery disease treatment often results in pathological vascular injury, characterized by P-selectin ov
January 01, 2020	Trophoblast-induced spiral artery remodelling and uteroplacental haemodynamics in pregnant rats with increased blood pressure induced by heme oxygenase inhibition	Introduction: The aim of the present study was to determine the contribution of the heme oxygenase (HO) system to the adaptation of the uteroplacental
January 01, 2020	Improvement of Endothelial Dysfunction of Berberine in Atherosclerotic Mice and Mechanism Exploring through TMT-Based Proteomics	Atherosclerosis is a multifactorial vascular disease triggered by disordered lipid metabolism, characterized by chronic inflammatory injury, and initi

January 01, 2020	Intrauterine exposure to chronic hypoxia in the rat leads to progressive diastolic function and increased aortic stiffness from early postnatal developmental stages	Aim: We sought to explore whether fetal hypoxia exposure, an insult of placental insufficiency, is associated with left ventricular dysfunction and in
January 01, 2020	mTORC1 Deficiency Modifies Volume Homeostatic Responses to Dietary Sodium in a Sex-Specific Manner	Mechanistic target of rapamycin (mTOR) pathway plays a role in features common to both excess salt/aldosterone and cardiovascular/renal diseases.
January 01, 2020	Intermedin 1-53 Ameliorates Homocysteine-Promoted Atherosclerotic Calcification by Inhibiting Endoplasmic Reticulum Stress	Aim: Vascular calcification (VC) is thought to be an independent predictor of cardiovascular morbidity and mortality.
January 01, 2020	BOLD-MRI demonstrates acute placental and fetal organ hypoperfusion with fetal brain sparing in response to phenylephrine but not ephedrine	Introduction: We previously reported blood oxygen level dependent MRI (BOLD-MRI) for monitoring placental and fetal hemodynamic changes in mice follow
January 01, 2020	Nck1, But Not Nck2, Mediates Disturbed Flow Induced p21 Activated Kinase Activation and Endothelial Permeability	BACKGROUND: Alteration in hemodynamic shear stress at atheroprone sites promotes endothelial paracellular pore formation and permeability.
January 01, 2020	IKK Epsilon Deficiency Attenuates Angiotensin II-Induced Abdominal Aortic Aneurysm Formation in Mice by Inhibiting Inflammation, Oxidative Stress, and Apoptosis	Abdominal aortic aneurysm (AAA) is a vascular disorder that is considered a chronic inflammatory disease.
January 01, 2020	Human Umbilical Cord Mesenchymal Stem Cells Attenuate Abdominal Aortic Aneurysm Progression in Sprague Dawley Rats: Implication of Vascular Smooth Muscle Cell Phenotypic Modulation	Abdominal aortic aneurysm (AAA) is life-threatening for which efficient non-surgical treatment strategy has not been available so far.
January 01, 2020	Effects of Klotho supplementation on hyperoxia-induced renal injury in a rodent model of postnatal nephrogenesis	Background: Hyperoxia (HO) causes kidney injury in preterm infants; however, whether these effects are modifiable is unknown.
January 01, 2020	Increased uterine artery blood flow in hypoxic murine pregnancy is not sufficient to prevent fetal growth restriction†	Incomplete maternal vascular responses to pregnancy contribute to pregnancy complications including intrauterine growth restriction (IUGR) and preecl
January 01, 2020	Multimodality Imaging-Based Characterization of Regional Material Properties in a Murine Model of Aortic Dissection	Chronic infusion of angiotensin-II in atheroprone (ApoE ^{-/-}) mice provides a reproducible model of dissection in the suprarenal abdominal aorta, often
January 01, 2020	Hydrogen sulfide stimulates xanthine oxidoreductase conversion to nitrite reductase and formation of NO	Cardiovascular disease is the leading cause of death and disability worldwide with increased oxidative stress and reduced NO bioavailability serving a
January 01, 2020	Intravenous Administration of Allogenic Cell-Derived Microvesicles of Healthy Origins Defends Against Atherosclerotic Cardiovascular Disease Development by a Direct Action on Endothelial Progenitor Cells	Atherosclerosis and cardiovascular disease development is the outcome of intermediate processes where endothelial dysfunction and vascular inflammatio
January 01, 2020	Medial calcification in the arterial wall of smooth muscle cell specific Smpd1 transgenic mice: A ceramide mediated vasculopathy	Arterial medial calcification (AMC) is associated with crystallization of hydroxyapatite in the extracellular matrix and arterial smooth muscle cells
January 01, 2020	Increased AT2R expression is induced by AT1R autoantibody via two axes, Klf-5/IRF-1 and circErbB4/miR-29a-5p, to promote VSMC migration	Vascular remodeling can be caused by angiotensin II type 1 receptor (AT1R) autoantibody (AT1-AA), although the related mechanism remains unknown.

January 01, 2020	A 6-month systems toxicology inhalation study in ApoE $-/-$ mice demonstrates reduced cardiovascular effects of E-vapor aerosols compared with cigarette smoke	Smoking cigarettes is harmful to the cardiovascular system.
January 01, 2020	Acute and chronic vascular effects of inhaled crotonaldehyde in mice: Role of TRPA1	Although crotonaldehyde (CR) is an abundant α,β -unsaturated aldehyde in mainstream cigarette smoke (MCS), the cardiovascular toxicity of inhaled CR is
January 01, 2020	Mild carotid stenosis creates gradual, progressive, lifelong brain, and eye damage: An experimental laboratory rat model	In humans, carotid stenosis of 70% and above might be the cause of clinical symptoms such as transient ischemic attack and stroke.
January 01, 2020	Label-free photoacoustic and ultrasound imaging for murine atherosclerosis characterization	Dual-modality photoacoustic tomography (PAT) and 4D ultrasound (4DUS) imaging have shown promise for cardiovascular applications, but their use in mur
January 01, 2020	Mechanism of angiogenesis promotion with Shexiang Baoxin Pills by regulating function and signaling pathway of endothelial cells through macrophages	Background and aims: "Shexiang Baoxin Pill" (SBP), a commonly used traditional Chinese medicine, has been used to treat angina, myocardial infarction
January 01, 2020	Ultrasound monitoring of magnet-guided delivery of mesenchymal stem cells labeled with magnetic lipid-polymer hybrid nanobubbles	Mesenchymal stem cells labeled with positively charged magnetic lipid-polymer hybrid nanobubbles could be tracked for magnet-guided delivery onto the
January 01, 2020	Ultrasound/Optical Dual Modality Imaging for Evaluation of Vulnerable Atherosclerotic Plaques with Osteopontin Targeted Nanoparticles	Because of the high mortality of coronary atherosclerotic heart diseases, it is necessary to develop novel early detection methods for vulnerable athe
January 01, 2020	Assessment of ICAM-1 N-glycoforms in mouse and human models of endothelial dysfunction	Endothelial dysfunction is a critical event in vascular inflammation characterized, in part, by elevated surface expression of adhesion molecules such
January 01, 2020	Neonatal hyperoxia exposure induces aortic biomechanical alterations and cardiac dysfunction in juvenile rats	Supplemental oxygen (O ₂) therapy in preterm infants impairs lung development, but the impact of O ₂ on long-term systemic vascular structure and functi
January 01, 2020	Runx2 (Runt-Related Transcription Factor 2)-Mediated Microcalcification Is a Novel Pathological Characteristic and Potential Mediator of Abdominal Aortic Aneurysm	OBJECTIVE: Abdominal aortic aneurysms (AAAs) are highly lethal diseases without effective clinical predictors and therapeutic targets.
January 01, 2020	Loss of ADAMTS19 causes progressive non-syndromic heart valve disease	Valvular heart disease is observed in approximately 2% of the general population ¹ .
January 01, 2020	Dysbiotic 1 carbon metabolism in cardiac muscle remodeling	Unless there is a genetic defect/mutation/deletion in a gene, the causation of a given disease is chronic dysregulation of gut metabolism.
January 01, 2020	Hyperdynamic circulatory syndrome in a mouse model transgenic for SerpinB3	Introduction and objectives: SerpinB3 is a cysteine protease inhibitor involved in several biological activities.
January 01, 2020	Loss of PARP-1 attenuates diabetic arteriosclerotic calcification via Stat1/Runx2 axis	Accelerated atherosclerotic calcification is responsible for plaque burden, especially in diabetes.
January 01, 2020	Persistence of Intraluminal Thrombus Makes Saccular Aneurysm More Biologically Active than Fusiform in an Experimental Rat Model	Introduction: Saccular aneurysms are thought to have a worse prognosis than fusiform aneurysms in humans, due to hemodynamic reasons.

January 01, 2020	Mitochondria-targeted antioxidant mitoquinone attenuates liver inflammation and fibrosis in cirrhotic rats	In liver cirrhosis, oxidative stress plays a major role in promoting liver inflammation and fibrosis.
January 01, 2020	Natriuretic Peptide Receptor 2 Locus Contributes to Carotid Remodeling	BACKGROUND: Carotid artery intima/media thickness (IMT) is a hallmark trait associated with future cardiovascular events.
January 01, 2020	Targeting endothelial thioredoxin-interacting protein (TXNIP) protects from metabolic disorder-related impairment of vascular function and post-ischemic revascularisation	Introduction: Although thioredoxin-interacting protein (TXNIP) is involved in a variety of biological functions, the contribution of endothelial TXNIP
January 01, 2020	Exercise preconditioning protects against acute cardiac injury induced by lipopolysaccharide through general control nonderepressible 2 kinase	Exercise preconditioning may protect against cardiac injury induced by lipopolysaccharide (LPS), but the mechanism is unresolved.
January 01, 2020	Measurement of Pulse Propagation Velocity, Distensibility and Strain in an Abdominal Aortic Aneurysm Mouse Model	An abdominal aortic aneurysm (AAA) is defined as a localized dilation of the abdominal aorta that exceeds the maximal intraluminal diameter (MILD) by
January 01, 2020	Different degradation rates of nanofiber vascular grafts in small and large animal models	Nanofiber vascular grafts have been shown to create neovessels made of autologous tissue, by in vivo scaffold biodegradation over time.
January 01, 2020	Cancer During Pregnancy: The Role of Vascular Toxicity in Chemotherapy-Induced Placental Toxicity	Breast cancer is diagnosed in ~0.3% of pregnant women.
January 01, 2020	Melatonin protects against thoracic aortic aneurysm and dissection through SIRT1 dependent regulation of oxidative stress and vascular smooth muscle cell loss	Melatonin functions as an endogenous protective molecule in multiple vascular diseases, whereas its effects on thoracic aortic aneurysm and dissection
January 01, 2020	AT2R agonist NP 6A4 mitigates aortic stiffness and proteolytic activity in mouse model of aneurysm	Clinical and experimental studies show that angiotensin II (AngII) promotes vascular pathology via activation of AngII type 1 receptors (AT1Rs).
January 01, 2020	Non-invasive ultrasound detection of cerebrovascular changes in a mouse model of TBI	carotid arteries of mice exposed to a controlled cortical impact.
January 01, 2020	Activated Endothelial TGFβ1 Signaling Promotes Venous Thrombus Nonresolution in Mice Via Endothelin-1	RATIONALE: Chronic thromboembolic pulmonary hypertension (CTEPH) is characterized by defective thrombus resolution, pulmonary artery obstruction, and
January 01, 2020	Abnormal Lysosomal Positioning and Small Extracellular Vesicle Secretion in Arterial Stiffening and Calcification of Mice Lacking Mucolipin 1 Gene	Recent studies have shown that arterial medial calcification is mediated by abnormal release of exosomes/small extracellular vesicles from vascular sm
January 01, 2020	PKM2 Activator TEPP-46 Attenuates Thoracic Aortic Aneurysm and Dissection by Inhibiting NLRP3 Inflammasome-Mediated IL-1β Secretion	Background: The development of thoracic aortic aneurysm and dissection (TAAD) is mediated by inflammasome activation, which exacerbates the secretion
January 01, 2020	17-Hydroxyprogesterone caproate improves T cells and NK cells in response to placental ischemia; new mechanisms of action for an old drug	Preeclampsia (PE) is new onset hypertension during pregnancy associated with increased uterine artery resistance (UARI) and an imbalance among CD4 + T
January 01, 2020	Dermal exposure to the UV filter benzophenone-3 during early pregnancy affects fetal growth and sex ratio of the progeny in mice	The aim of this study was to analyze whether dermal exposure to benzophenone 3 (BP-3) during pregnancy affects critical parameters of pregnancy, and w

January 01, 2020	Local Delivery of Dual MicroRNAs in Trilayered Electrospun Grafts for Vascular Regeneration	Globally growing problems related to cardiovascular diseases lead to a considerable need for synthetic vascular grafts.
January 01, 2020	A durable murine model of spleen transplantation with arterial and venous anastomoses	The spleen is a large lymphoid organ located in the abdomen that filters blood and regulates the immune system.
December 30, 2020	Inhibition of the Akt1-mTORC1 Axis Alters Venous Remodeling to Improve Arteriovenous Fistula Patency	Arteriovenous fistulae (AVF) are the most common access created for hemodialysis, but up to 60% do not sustain dialysis within a year, suggesting a ne
December 27, 2019	The pro-atherogenic response to disturbed blood flow is increased by a western diet, but not by old age	Atherogenic remodeling often occurs at arterial locations with disturbed blood flow (i.e., low or oscillatory) and both aging and western diet (WD) in
December 14, 2019	In vivo characterization of doxycycline-mediated protection of aortic function and structure in a mouse model of Marfan syndrome-associated aortic aneurysm	Aortic aneurysm is the most life-threatening complication in Marfan syndrome (MFS) patients.
November 01, 2019	Negative regulation of eNOS-NO signaling by over-SUMOylation of PPARγ contributes to insulin resistance and dysfunction of vascular endothelium in rats	SUMOylation of peroxisome proliferator-activated receptor gamma (PPAR γ) plays important regulatory role in its transcriptional activity.
November 01, 2019	Behavior, body composition, and vascular phenotype of homocystinuric mice on methionine restricted diet or enzyme replacement therapy	Classic homocystinuria (HCU) is an inherited disorder characterized by elevated homocysteine (Hcy) in plasma and tissues resulting from cystathionine
November 01, 2019	Loss of flow responsive Tie1 results in Impaired Aortic valve remodeling	The mechanisms regulating endothelial cell response to hemodynamic forces required for heart valve development, especially valve remodeling, remain
November 01, 2019	"Females Are Not Just 'Protected' Males": Sex-Specific Vulnerabilities in Placenta and Brain after Prenatal Immune Disruption	Current perceptions of genetic and environmental vulnerabilities in the developing fetus are biased toward male outcomes.
October 01, 2019	Pioglitazone downregulates Twist-1 expression in the kidney and protects renal function of Zucker diabetic fatty rats	Aims: Renal interstitial fibrosis and glomerulosclerosis are the characteristic presentation of diabetic nephropathy progression.
October 01, 2019	Elevated luteinizing hormone contributes to atherosclerosis formation by inhibiting nitric oxide synthesis via PI3K/Akt pathway	Background: The contentious effects of estrogen therapy on the risk of postmenopausal cardiovascular disease (CVD) indicate that this type of atherosc
October 01, 2019	Regulation of the inflammatory response by vascular grafts modified with Aspirin-Triggered Resolvin D1 promotes blood vessel regeneration	The unabated inflammatory response is often the cause for inhibited vascular regeneration of transplanted small-diameter vascular grafts (diameter
October 01, 2019	Scavenger receptor A1 attenuates aortic dissection via promoting efferocytosis in macrophages	Macrophage class A1 scavenger receptor (SR-A1) is a pattern recognition receptor with an anti-inflammatory feature in cardiovascular diseases.
September 01, 2019	Increased mitochondrial NADPH oxidase 4 (NOX4) expression in aging is a causative factor in aortic stiffening	Aging is characterized by increased aortic stiffness, an early, independent predictor and cause of cardiovascular disease.
August 06, 2019	Mitochondrial transplantation ameliorates acute limb ischemia	Objective: Acute limb ischemia (ALI), the most challenging form of ischemia-reperfusion injury (IRI) in skeletal muscle tissue, leads to decreased ske

May 01, 2019	Z-Ligustilide protects vascular endothelial cells from oxidative stress and rescues high fat diet-induced atherosclerosis by activating multiple NRF2 downstream genes	Background and aims: Oxidative stress-induced endothelial dysfunction is considered to exert a vital role in the development of atherosclerotic corona
April 22, 2019	Strain Mapping From Four-Dimensional Ultrasound Reveals Complex Remodeling in Dissecting Murine Abdominal Aortic Aneurysms	Current in vivo abdominal aortic aneurysm (AAA) imaging approaches tend to focus on maximum diameter but do not measure three-dimensional (3D) vascula
March 01, 2019	Mas receptor deficiency augments angiotensin II-induced atherosclerosis and aortic aneurysm ruptures in hypercholesterolemic male mice	Clinical Relevance: Results from this study suggest a novel mode of intervening in the renin-angiotensin system to treat vascular diseases, namely, by
February 27, 2019	Fluid dynamics and forces in the HH25 avian embryonic outflow tract	The embryonic outflow tract (OFT) eventually undergoes aorticopulmonary septation to form the aorta and pulmonary artery, and it is hypothesized that
February 01, 2019	Functionalized polymer microbubbles as new molecular ultrasound contrast agent to target P-selectin in thrombus	Thrombotic diseases rarely cause symptoms until advanced stage and sudden death.
February 01, 2019	Recent strategies on targeted delivery of thrombolytics	Thrombus formed in blood vessel is a progressive process, which would lead to life-threatening thrombotic diseases such as ischemic stroke.
February 01, 2019	Magnesium but not nicotinamide prevents vascular calcification in experimental uraemia	Background. Optimal phosphate control is an unmet need in chronic kidney disease (CKD).
February 01, 2019	Deficiency of IL12p40 (Interleukin 12 p40) Promotes Ang II (Angiotensin II)-Induced Abdominal Aortic Aneurysm	Objective—Abdominal aortic aneurysm is caused by the accumulation of inflammatory cells in the aortic wall.
February 01, 2019	Effects of low-dose oxygen ions and protons on cardiac function and structure in male C57BL/6J mice	Purpose: Astronauts traveling beyond low-Earth orbit will be exposed to high linear-energy transfer charged particles.
January 22, 2019	Endothelial signaling by neutrophil-released oncostatin M enhances P-selectin-dependent inflammation and thrombosis	In the earliest phase of inflammation, histamine and other agonists rapidly mobilize P-selectin to the apical membranes of endothelial cells, where it
January 19, 2019	ROBO4 variants predispose individuals to bicuspid aortic valve and thoracic aortic aneurysm	Bicuspid aortic valve (BAV) is a common congenital heart defect (population incidence, 1–2%) ^{1–3} that frequently presents with ascending aortic aneurys
January 10, 2019	Implantation of VEGF-functionalized cell-free vascular grafts: regenerative and immunological response	Recently, our group demonstrated that immobilized VEGF can capture flowing endothelial cells (ECs) from the blood in vitro and promote endothelialization and
January 01, 2019	The flagellin-TLR5-Nox4 axis promotes the migration of smooth muscle cells in atherosclerosis	We hypothesized that NADPH oxidase 4 (Nox4) is involved in the formation of neointimal atherosclerotic plaques through the migration of smooth muscle
January 01, 2019	Assessment of Age-related Oxygenation Changes in Calf Skeletal Muscle by Photoacoustic Imaging: A Potential Tool for Peripheral Arterial Disease	Peripheral artery disease is often asymptomatic, and various imaging and nonimaging techniques have been used for assessment and monitoring treatments

January 01, 2019	Pigment Epithelial Derived Factor Deficiency Accelerates Atherosclerosis Development via Promoting Endothelial Fatty Acid Uptake in Mice With Hyperlipidemia	Background: Endothelial cell injury, induced by dyslipidemia, is the initiation of atherosclerosis, resulting in an imbalance in endothelial fatty aci
January 01, 2019	Hypoxia inducible factor 1α in vascular smooth muscle cells promotes angiotensin II-induced vascular remodeling via activation of CCL7-mediated macrophage recruitment	The process of vascular remodeling is associated with increased hypoxia.
January 01, 2019	Bilayered Polymeric Micro- and Nanofiber Vascular Grafts as Abdominal Aorta Replacements: Long-Term in Vivo Studies in a Rat Model	In vivo long-term evaluation of degradable implants offers valuable information for the further design and optimization of biomaterials.
January 01, 2019	Effects of Iliac Stenosis on Abdominal Aortic Aneurysm Formation in Mice and Humans	Reduced lower-limb blood flow has been shown to lead to asymmetrical abdominal aortic aneurysms (AAAs) but the mechanism of action is not fully unders
January 01, 2019	Cell proliferation detected using [18F]FLT PET/CT as an early marker of abdominal aortic aneurysm	Background: Abdominal aortic aneurysm (AAA) is a focal aortic dilatation progressing towards rupture.
January 01, 2019	Vimentin regulates Notch signaling strength and arterial remodeling in response to hemodynamic stress	The intermediate filament (IF) cytoskeleton has been proposed to regulate morphogenic processes by integrating the cell fate signaling machinery with
January 01, 2019	Sex-specific differences in endoplasmic reticulum aminopeptidase 1 modulation influence blood pressure and renin-angiotensin system responses	Salt sensitivity of blood pressure (SSBP) and hypertension are common, but the underlying mechanisms remain unclear.
January 01, 2019	In vivo engineered extracellular matrix scaffolds with instructive niches for oriented tissue regeneration	Implanted scaffolds with inductive niches can facilitate the recruitment and differentiation of host cells, thereby enhancing endogenous tissue regene
January 01, 2019	Site-specific chelation therapy with EDTA-loaded albumin nanoparticles reverses arterial calcification in a rat model of chronic kidney disease	Medial arterial calcification (MAC) is a common outcome in diabetes and chronic kidney disease (CKD).
January 01, 2019	Hypoxia-Induced miR-210 Is Necessary for Vascular Regeneration upon Acute Limb Ischemia	Critical limb ischemia is the most serious form of peripheral artery disease, characterized by severe functional consequences, difficult clinical mana
January 01, 2019	Aortic pathology from protein kinase G activation is prevented by an antioxidant vitamin B12 analog	People heterozygous for an activating mutation in protein kinase G1 (PRKG1, p.Arg177Gln) develop thoracic aortic aneurysms and dissections (TAAD) as y
January 01, 2019	Resolvin D4 attenuates the severity of pathological thrombosis in mice	Deep vein thrombosis (DVT) is a common cardiovascular disease with a major effect on quality of life, and safe and effective therapeutic measures to e
January 01, 2019	Stimulation of Caveolin-1 Signaling Improves Arteriovenous Fistula Patency	Objective—Arteriovenous fistulae (AVF) are the most common access created for hemodialysis; however, many AVF fail to mature and require repeated inte
January 01, 2019	Scutellarin Prevents Angiogenesis in Diabetic Retinopathy by Downregulating VEGF/ERK/FAK/Src Pathway Signaling	Background . Diabetic retinopathy (DR) is a serious microvascular complication of diabetes.
January 01, 2019	Fetal growth outcomes following peri-implantation exposure of Long-Evans rats to noise and ozone differ by sex	Background: Exposure to air pollution and high levels of noise have both been independently associated with the development of adverse pregnancy outco

January 01, 2019	Age-dependent characterization of the carotid and cerebral artery morphologies in a transgenic mouse model of sickle cell anemia using ultrasound and microcomputed tomography	Children with sickle cell anemia have elevated stroke risks as well as other arterial complications, but morphological changes to large arteries are n
January 01, 2019	Aspirin pre-treatment modulates ozone-induced fetal growth restriction and alterations in uterine blood flow in rats	Prenatal exposure to ozone has been linked to low birth weight in people and fetal growth restriction in rats.
January 01, 2019	Vascular impact of quercetin administration in association with moderate exercise training in experimental type 1 diabetes	Hyperglycemia and oxidative stress have a major role in the pathogenesis of diabetic vascular complications.
January 01, 2019	Renal cystic disease in the Fbn1C1039G/+ Marfan mouse is associated with enhanced aortic aneurysm formation	Marfan syndrome (MFS) is a connective tissue disorder caused by mutations in the fibrillin-1 gene (FBN1), resulting in aortic aneurysm formation and d
January 01, 2019	Fibroblast Growth Factor 21 Attenuates Vascular Calcification by Alleviating Endoplasmic Reticulum Stress Mediated Apoptosis in Rats	Fibroblast growth factor 21 (FGF21), a hormone with multiple metabolic properties, has proven to be pleiotropic biological effects and may play pivota
December 24, 2018	MicroRNA-217 attenuates intima-media complex thickness of ascending aorta measured by ultrasound bio-microscopy and inhibits inflammation and lipid metabolism in atherosclerotic models of ApoE-/- mice	Background: Little investigation was done to test the efficiency of microRNA-217 (miR-217) on atherosclerosis in vivo.
December 18, 2018	The effect of the heart rate lowering drug Ivabradine on hemodynamics in atherosclerotic mice	The heart rate lowering drug Ivabradine was shown to improve cardiac outcome in patients with previous heart failure.
December 16, 2018	Alcohol Consumption in Combination with an Atherogenic Diet Increased Indices of Atherosclerosis in Apolipoprotein E/Low Density Lipoprotein Receptor Double Knockout Mice	BACKGROUND Alcohol abuse and adherence to atherogenic diet (AD; a low-carbohydrate-high-protein diet) have been positively associated with cardiovascu
December 16, 2018	Natural killer cells induce neutrophil extracellular trap formation in venous thrombosis	Summary.
December 01, 2018	The GLP-1 Analogs Liraglutide and Semaglutide Reduce Atherosclerosis in ApoE-/- and LDLr-/- Mice by a Mechanism That Includes Inflammatory Pathways	The glucagon-like peptide-1 receptor agonists (GLP-1RAs) liraglutide and semaglutide reduce cardiovascular risk in type 2 diabetes patients.
December 01, 2018	Clarifying the relative impacts of vascular and nerve injury that culminate in erectile dysfunction in a pilot study using a rat model of prostate irradiation and a thrombopoietin mimetic	PURPOSE: Radiation therapy (RT) offers an important and curative approach to treating prostate cancer but is associated with a high incidence of erect
December 01, 2018	Rosuvastatin stabilizes atherosclerotic plaques by reducing CD40L overexpression-induced downregulation of P4Hα1 in ApoE-/- mice	Background Cluster of differentiation 40 ligand (CD40L) and rosuvastatin (RSV) affect atherosclerotic plaque stability, but little is known about thei
December 01, 2018	Brg1 trans-activates endothelium-derived colony stimulating factor to promote calcium chloride induced abdominal aortic aneurysm in mice	Endothelial cell derived secretive factors play pivotal roles maintaining the homeostasis by influencing the behaviors of other cells.
November 13, 2018	Noninvasive in vivo Assessment of the Re-endothelialization Process Using Ultrasound Biomicroscopy in the Rat Carotid Artery Balloon Injury Model	Objectives—Ultrasound biomicroscopy (UBM), or ultra high-frequency ultrasound, is a technique used to assess the anatomy of small research animals.
November 06, 2018	Statins Reduce Thoracic Aortic Aneurysm Growth in Marfan Syndrome Mice via Inhibition of the Ras Induced ERK (Extracellular Signal Regulated Kinase) Signaling Pathway	Background Statins reduce aneurysm growth in mouse models of Marfan syndrome, although the mechanism is unknown.

November 01, 2018	Biodegradable and elastomeric vascular grafts enable vascular remodeling	Implanted grafts, including vascular substitutes, inevitably experience remodeling by host cells.
September 07, 2018	Combining in vivo and in vitro biomechanical data reveals key roles of perivascular tethering in central artery function	Considerable insight into effectors of cardiovascular function can be gleaned from controlled studies on mice, especially given the diverse models tha
September 05, 2018	A preclinical ultrasound method for the assessment of vascular disease progression in murine models	Introduction: The efficacy of preclinical ultrasound at providing a quantitative assessment of mouse models of vascular disease is relatively unknown.
September 01, 2018	Bone marrow-derived mononuclear cell seeded bioresorbable vascular graft improves acute graft patency by inhibiting thrombus formation via platelet adhesion	Background: Acute thrombosis is a crucial cause of bioresorbable vascular graft (BVG) failure.
July 31, 2018	Fast Vessel Segmentation and Tracking in Ultra High-Frequency Ultrasound Images.	Ultra High Frequency Ultrasound (UHFUS) enables the visualization of highly deformable small and medium vessels in the hand.
July 18, 2018	The Murine Dialysis Fistula Model Exhibits a Senescence Phenotype: Pathobiologic Mechanisms and Therapeutic Potential	There is no therapy that promotes maturation and functionality of a dialysis arteriovenous fistula (AVF).
July 01, 2018	Inhibition of prolyl hydroxylase domain proteins selectively enhances venous thrombus neovascularisation	BACKGROUND: Hypoxia within acute venous thrombi is thought to drive resolution through stabilisation of hypoxia inducible factor 1 alpha (HIF1 α).
June 15, 2018	Angiotensin II receptor I blockade prevents stenosis of tissue engineered vascular grafts	We previously developed a tissue-engineered vascular graft (TEVG)made by seeding autologous cells onto a biodegradable tubular scaffold, in anattempt
June 12, 2018	The endothelial tumor suppressor p53 is essential for venous thrombus formation in aged mice	Venous thromboembolism (VTE) is a leading cause of morbidity and mortality in elderly people.
June 10, 2018	Pulmonary Arterial Hypertension and Endothelial Dysfunction Is Linked to NADPH Oxidase-Derived Superoxide Formation in Venous Thrombosis and Pulmonary Embolism in Mice	Pulmonary embolism (PE) results from deep vein thrombosis (DVT) and can lead to chronic thromboembolic pulmonary hypertension (CTEPH) involving vascul
May 24, 2018	Perivascular Adipose Tissue-Derived PDGF-D Contributes to Aortic Aneurysm Formation during Obesity	Obesity increases the risk of vascular diseases, including aortic aneurysm (AA).
May 18, 2018	Ginkgo biloba extracts prevent aortic rupture in angiotensin II-infused hypercholesterolemic mice	Abdominal aortic aneurysms (AAAs) are a chronic vascular disease characterized by pathological luminal dilation.
April 01, 2018	Red blood cell antibody-induced anemia causes differential degrees of tissue hypoxia in kidney and brain	Moderate anemia is associated with increased mortality and morbidity, including acute kidney injury (AKI), in surgical patients.
April 01, 2018	Diabetes Reduces Severity of Aortic Aneurysms Depending on the Presence of Cell Division Autoantigen 1 (CDA1)	Diabetes is a negative risk factor for aortic aneurysm, but the underlying explanation for this phenomenon is unknown.
March 15, 2018	The large-conductance voltage- and Ca²⁺-activated K⁺ channel and its γ1-subunit modulate mouse uterine artery function during pregnancy	The uterine artery (UA) markedly vasodilates during pregnancy to direct blood flow to the developing fetus.
March 08, 2018	MicroRNA-21 Knockout Exacerbates Angiotensin II-Induced Thoracic Aortic Aneurysm and Dissection in Mice With Abnormal Transforming Growth Factor-β-SMAD3 Signaling	Objective—Thoracic aortic aneurysm and dissection (TAAD) are severe vascular conditions.

March 02, 2018	Minoxidil improves vascular compliance, restores cerebral blood flow and alters extracellular matrix gene expression in a model of chronic vascular stiffness	Increased vascular stiffness correlates with higher risk of cardiovascular complications in aging adults.
February 16, 2018	Effects of teriparatide on morphology of aortic calcification in aged hyperlipidemic mice	Calcific aortic vasculopathy correlates with bone loss in osteoporosis in an age-independent manner.
February 12, 2018	In vitro photoacoustic spectroscopy of pulsatile blood flow: probing the interrelationship between red blood cell aggregation and oxygen saturation	Assessments of the appropriateness and inappropriateness of behaviors may influence conflict, cohesion, and goal attainment in multinational organization
January 18, 2018	Pulmonary vascular dysfunction secondary to pulmonary arterial hypertension: Insights gained through retrograde perfusion	Here, we tested the hypothesis that severe pulmonary arterial hypertension impairs retrograde perfusion.
January 02, 2018	Alternative RNA splicing in the endothelium mediated in part by Rbfox2 regulates the arterial response to low flow	Low and disturbed blood flow drives the progression of arterial diseases including atherosclerosis and aneurysms.
January 01, 2018	Elevated 20-HETE in metabolic syndrome regulates arterial stiffness and systolic hypertension via MMP12 activation	Arterial stiffness plays a causal role in development of systolic hypertension.
January 01, 2018	A biodegradable synthetic graft for small arteries matches the performance of autologous vein in rat carotid arteries	Autologous veins are the most widely used grafts for bypassing small arteries in coronary and peripheral arterial occlusive diseases.
January 01, 2018	Cohort-based multiscale analysis of hemodynamic-driven growth and remodeling of the embryonic pharyngeal arch arteries	Growth and remodeling of the primitive pharyngeal arch artery (PAA) network into the extracardiac great vessels is poorly understood but a major source
January 01, 2018	Ganoderma Triterpenoids Exert Antiatherogenic Effects in Mice by Alleviating Disturbed Flow-Induced Oxidative Stress and Inflammation	Ganoderma mushrooms, used in traditional Chinese medicine to promote health and longevity, have become widely accepted as herbal supplements.
January 01, 2018	A context-specific cardiac β-catenin and GATA4 interaction influences TCF7L2 occupancy and remodels chromatin driving disease progression in the adult heart	Chromatin remodeling precedes transcriptional and structural changes in heart failure.
January 01, 2018	Rho Kinase Inhibitor, Fasudil, Attenuates Contrast-induced Acute Kidney Injury	Abstract: In this study, we tested the hypothesis that fasudil, a Rho kinase inhibitor, would protect against contrast-induced acute kidney injury (CI
January 01, 2018	Gut-dependent microbial translocation induces inflammation and cardiovascular events after ST-elevation myocardial infarction	Background: Post-infarction cardiovascular remodeling and heart failure are the leading cause of myocardial infarction (MI)-driven death during the post
January 01, 2018	Upregulation of Vascular Endothelial Growth Factor in Amniotic Fluid Stem Cells Enhances Their Potential to Attenuate Lung Injury in a Preterm Rabbit Model of Bronchopulmonary Dysplasia	BACKGROUND: Bronchopulmonary dysplasia (BPD) is a chronic lung disease that affects extremely preterm infants and remains - despite improvements in ne
January 01, 2018	The chronic complex stress combined atherogenic diet accelerates the process of atherosclerosis in mice	The effects of stress on the atherosclerosis are complex.
January 01, 2018	CXCL8 hyper-signaling in the aortic abdominal aneurysm	There are indications for elevated CXCL8 levels in abdominal aortic aneurysm disease (AAA).
January 01, 2018	Cell Type-Specific Contributions of the Angiotensin II Type 1a Receptor to Aorta Homeostasis and Aneurysmal Disease	OBJECTIVE Two were the aims of this study: first, to translate whole-genome expression profiles into computational predictions of functional associati

January 01, 2018	Chemokine CC-motif ligand 2 participates in platelet function and arterial thrombosis by regulating PKCα-P38MAPK-HSP27 pathway	Background: Studies indicate that chemokine CC-motif ligand 2 (CCL2) is involved in inflammation and atherosclerosis.
January 01, 2018	Simultaneous ablation of uterine natural killer cells and uterine mast cells in mice leads to poor vascularization and abnormal doppler measurements that compromise fetal well-being	Intrauterine growth restriction (IUGR) is a serious pregnancy complication with short- and long-term health consequences.
January 01, 2018	Role of Acid Sphingomyelinase and Ceramide in Mechano-Acoustic Enhancement of Tumor Radiation Responses	Background: High-dose radiotherapy (>8-10 Gy) causes rapid endothelial cell death via acid sphingomyelinase (ASMase)-induced ceramide production, resu
January 01, 2018	The complement C3a-C3aR axis promotes development of thoracic aortic dissection via regulation of MMP2 expression	© 2018 by The American Association of Immunologists, Inc. All rights reserved.
January 01, 2018	Improved photoacoustic-based oxygen saturation estimation with SNR-regularized local fluence correction	As photoacoustic (PA) imaging makes its way into the clinic, accuracy of PA-based metrics becomes increasingly important.
January 01, 2018	In vivo inhibition of nuclear factor of activated T-cells leads to atherosclerotic plaque regression in IGF-II/LDLR $-/-$ ApoB 100/100 mice	Aims:Despite vast clinical experience linking diabetes and atherosclerosis, the molecular mechanisms leading to accelerated vascular damage are still
January 01, 2018	Four Surgical Modifications to the Classic Elastase Perfusion Aneurysm Model Enable Haemodynamic Alterations and Extended Elastase Perfusion	OBJECTIVE/BACKGROUND: Abdominal aortic aneurysm (AAA) is an individual and socioeconomic burden in today's ageing society.
January 01, 2018	Vascular endothelial function is impaired by aerosol from a single IQOS HeatStick to the same extent as by cigarette smoke	Background Heated tobacco products (also called 'heat-not-burn' products) heat tobacco at temperatures below that of combustion, causing nicotine and
January 01, 2018	Deep Vein Thrombosis Induced by Stasis in Mice Monitored by High Frequency Ultrasonography.	Venous thrombosis is a common condition affecting 1 - 2% of the population, with an annual incidence of 1 in 500.
January 01, 2018	Temporal and spatial changes in wall shear stress during atherosclerotic plaque progression in mice	Wall shear stress (WSS) is involved in atherosclerotic plaque initiation, yet its role in plaque progression remains unclear.
January 01, 2018	Copper sulfide nanoparticles as a photothermal switch for TRPV1 signaling to attenuate atherosclerosis	Atherosclerosis is characterized by the accumulation of lipids within the arterial wall.
January 01, 2018	Restoring mitochondrial DNA copy number preserves mitochondrial function and delays vascular aging in mice	Aging is the largest risk factor for cardiovascular disease, yet the molecular mechanisms underlying vascular aging remain unclear.
January 01, 2018	Rapamycin prevents thoracic aortic aneurysm and dissection in mice	Objective: The purpose of this study was to investigate whether rapamycin inhibits the development of thoracic aortic aneurysm and dissection (TAAD) i
January 01, 2018	Vascular Remodeling Process of Heparin-Conjugated Poly(ϵ-Caprolactone) Scaffold in a Rat Abdominal Aorta Replacement Model	In the field of vascular graft research, poly- ϵ -caprolactone (PCL) is used owing to its good mechanical strength and biocompatibility.
January 01, 2018	Transcriptional regulation mediated by H2A.Z via ANP32e-dependent inhibition of protein phosphatase 2A	The mechanisms that regulate H2A.Z and its requirement for transcription in differentiated mammalian cells remains ambiguous.

January 01, 2018	Diet-induced obesity alters the maternal metabolome and early placenta transcriptome and decreases placenta vascularity in the mouse	Obesity in a mouse model leads to alterations in the maternal metabolome and early placenta transcriptome as well as changes in vascularity later in g
January 01, 2018	Systemic Upregulation of IL-10 (Interleukin-10) Using a Nonimmunogenic Vector Reduces Growth and Rate of Dissecting Abdominal Aortic Aneurysm	Original Research Systemic Upregulation of IL-10 (Interleukin-10) Using a Nonimmunogenic Vector Reduces Growth and Rate of Dissecting Abdominal Aortic
January 01, 2018	Increased placental T cell trafficking results in adverse neurobehavioral outcomes in offspring exposed to sub-chronic maternal inflammation	Interleukin-1 beta (IL-1 β) is a cytokine mediator of perinatal brain injury.
January 01, 2018	Chronic exposure to electronic cigarette (E-cig) results in impaired cardiovascular function in mice	Proponents for electronic cigarettes(E-cigs) claim they are a safe alternative to smoking tobacco-based cigarettes,however little is known about the l
January 01, 2018	Notoginsenoside R1, a unique constituent of Panax notoginseng, blinds proinflammatory monocytes to protect against cardiac hypertrophy in ApoE-/- mice	Notoginsenoside R1, a unique constituent from the root of Panax notoginseng, exerts anti-inflammatory, anti-oxidative and anti-apoptotic properties.
January 01, 2018	Lipid-Lowering Therapy With Ezetimibe Decreases Spontaneous Atherothrombotic Occlusions in a Rabbit Model of Plaque Erosion	OBJECTIVE: Plaque erosion is increasing its importance as one of the mechanisms of acute coronary syndromes in this statin era.
January 01, 2018	Angiotensin-(1-7)-induced Mas receptor activation attenuates atherosclerosis through a nitric oxide-dependent mechanism in apolipoproteinE-KO mice	© 2018 Springer-Verlag GmbH Germany, part of Springer Nature Angiotensin (Ang)-(1-7) ameliorates vascular injury by increasing nitric oxide (NO) bioav
January 01, 2018	Increased Calcific Aortic Valve Disease in response to a diabetogenic, procalcific diet in the LDLr-/-ApoB100/100mouse model	Objective: Calcific aortic valve disease (CAVD) is a major cause of aortic stenosis (AS) and cardiac insufficiency.
January 01, 2018	Angiotensin II Infusion Does Not Cause Abdominal Aortic Aneurysms in Apolipoprotein E-Deficient Rats	The apolipoprotein E-deficient (apoE -/-) mouse model has advanced our understanding of cardiovascular disease mechanisms and experimental therapeut
January 01, 2018	Glucagon-like peptide-1 receptor antagonism impairs basal exercise capacity and vascular adaptation to aerobic exercise training in rats	Cardiorespiratory fitness (CRF) inversely predicts cardiovascular (CV) mortal- ity and CRF is impaired in people with type 2 diabetes (T2D).
January 01, 2018	Identification of type IV collagen exposure as a molecular imaging target for early detection of thoracic aortic dissection	Thoracic aortic dissection (TAD) is an aggressive and life-threatening vascular disease and there is no effective means of early diagnosis of dissecti
January 01, 2018	Lack of T-bet reduces monocytic interleukin-12 formation and accelerates thrombus resolution in deep vein thrombosis	© 2018 The Author(s). The role of leukocytes in deep vein thrombosis (DVT) resolution is incompletely understood.
January 01, 2018	Motion model ultrasound localization microscopy for preclinical and clinical multiparametric tumor characterization	Super-resolution imaging methods promote tissue characterization beyond the spatial resolution limits of the devices and bridge the gap between histop
January 01, 2018	Sympathetic Neuronal Activation Triggers Myeloid Progenitor Proliferation and Differentiation	There is a growing body of research on the neural control of immunity and inflammation.
January 01, 2018	Alterations of Ocular Hemodynamics Impair Ophthalmic Vascular and Neuroretinal Function	Hypertension is associated with numerous diseases, but its direct impact on the ocular circulation and neuroretinal function remains unclear.

January 01, 2018	Protein-1) in Smooth Muscle Cells Protects Mice From Abdominal Aortic Aneurysms	Abdominal aortic aneurysm (AAA) has high mortality rate when ruptured, but currently, there is no proven pharmacological therapy for AAA because of ou
January 01, 2018	Inhibition of endoplasmic reticulum stress by intermedin1-53 attenuates angiotensin II-induced abdominal aortic aneurysm in ApoE KO Mice	Endoplasmic reticulum stress (ERS) is involved in the development of abdominal aortic aneurysm (AAA).
December 17, 2017	Large is required for normal astrocyte migration and retinal vasculature development	Background: Persistent fetal vasculature (PFV) is a congenital developmental anomaly of the eye that accounts for about 5% of childhood blindness.
December 04, 2017	The Hippo signaling pathway: a potential therapeutic target is reversed by a Chinese patent drug in rats with diabetic retinopathy	Background: The Hippo signaling pathway is reported to be involved in angiogenesis, but the roles of the Hippo pathway in diabetic retinopathy have no
December 01, 2017	Novel application and serial evaluation of tissue-engineered portal vein grafts in a murine model	Aim: Surgical management of pediatric extrahepatic portal vein obstruction requires meso-Rex bypass using autologous or synthetic grafts.
August 10, 2017	Sustained Placental Growth Factor-2 Treatment Does Not Aggravate Advanced Atherosclerosis in Ischemic Cardiomyopathy	Angiogenic growth factor therapy for ischemic cardiovascular disease carries a risk of stimulating atherosclerotic plaque growth.
August 01, 2017	A Novel Murine Model of Marfan Syndrome Accelerates Aortopathy and Cardiomyopathy	Background. Marfan syndrome (MFS) represents a genetic disorder with variable phenotypic expression.
June 27, 2017	Fibrin-Targeted and H₂O₂-Responsive Nanoparticles as a Theranostics for Thrombosed Vessels	A thrombus (blood clot) is formed in injured vessels to maintain the integrity of vasculature.
June 13, 2017	Role of Bone Marrow Mononuclear Cell Seeding for Nanofiber Vascular Grafts	OBJECTIVE: Electrospinning is a promising technology that provides biodegradable nanofiber scaffolds for cardiovascular tissue engineering.
June 09, 2017	Loss of Smooth Muscle α-Actin Leads to NF-κB-Dependent Increased Sensitivity to Angiotensin II in Smooth Muscle Cells and Aortic Enlargement Novelty and Significance	RATIONALE Mutations in ACTA2, encoding the smooth muscle isoform of α -actin, cause thoracic aortic aneurysms, acute aortic dissections, and occlusive
June 01, 2017	Establishment and evaluation of a reversible two-kidney, one-clip renovascular hypertensive rat model	The aim of the present study was to establish and evaluate a novel and reversible two-kidney, one-clip renovascular hypertensive rat model with a ti
June 01, 2017	Loss of MURC/Cavin-4 induces JNK and MMP-9 activity enhancement in vascular smooth muscle cells and exacerbates abdominal aortic aneurysm	Abdominal aortic aneurysm (AAA) is relatively common in elderly patients with atherosclerosis.
June 01, 2017	Reduced arterial elasticity due to surgical skeletonization is ameliorated by abluminal PEG hydrogel	Arteries for bypass grafting are harvested either with neighboring tissue attached or as skeletonized vessels that are free of surrounding tissue.
May 09, 2017	Effect of chronic estradiol plus progesterone treatment on experimental arterial and venous thrombosis in mouse	Postmenopausal hormone replacement therapy (HRT) with estrogen plus progestogens is the first line therapy to treat menopausal symptoms.
May 02, 2017	Deficient Circumferential Growth Is the Primary Determinant of Aortic Obstruction Attributable to Partial Elastin Deficiency Highlights	Objective—Williams syndrome is characterized by obstructive aortopathy attributable to heterozygous loss of ELN, the gene encoding elastin.

April 10, 2017	Cytoglobin regulates blood pressure and vascular tone through nitric oxide metabolism in the vascular wall	The identity of the specific nitric oxide dioxygenase (NOD) that serves as the main in vivo regulator of O ₂ -dependent NO degradation in smooth muscle
April 01, 2017	Inhibition or deletion of angiotensin II type 1 receptor suppresses elastase-induced experimental abdominal aortic aneurysms	Objective: Angiotensin (Ang) II type 1 receptor (AT1) activation is essential for the development of exogenous Ang II-induced abdominal aortic aneurys
April 01, 2017	Long term miR 29b suppression reduces aneurysm formation in a Marfan mouse model	Aortic root aneurysm formation and subsequent dissection and/or rupture remain the leading cause of death in patients with Marfan syndrome.
April 01, 2017	Epoetin beta pegol ameliorates flow-mediated dilation with improving endothelial nitric oxide synthase coupling state in nonobese diabetic rats	BACKGROUND/AIMS: Patients with diabetic nephropathy have a high cardiovascular mortality.
March 29, 2017	Development of a Glycosaminoglycan Derived, Selectin Targeting Anti-Adhesive Coating to Treat Endothelial Cell Dysfunction	Endothelial cell (EC) dysfunction is associated with many disease states including deep vein thrombosis (DVT), chronic kidney disease, sepsis and diab
March 24, 2017	Chronic PARP-1 inhibition reduces carotid vessel remodeling and oxidative damage of the dorsal hippocampus in spontaneously hypertensive rats	Vascular remodeling during chronic hypertension may impair the supply of tissues with oxygen, glucose and other compounds, potentially unleashing dele
March 09, 2017	A comparative study of the characterization of miR-155 in knockout mice	miR-155 is one of the most important miRNAs and plays a very important role in numerous biological processes.
March 01, 2017	Endothelial Nox4-based NADPH oxidase regulates atherosclerosis via soluble epoxide hydrolase	Nox4-based NADPH oxidase is a major reactive oxygen species-generating enzyme in the vasculature, but its role in atherosclerosis remains controversia
March 01, 2017	Murine ultrasound-guided transabdominal para-aortic injections of self-assembling type I collagen oligomers	Abdominal aortic aneurysms (AAAs) represent a potentially life-threatening condition that predominantly affects the infrarenal aorta.
February 20, 2017	Dual-acting biofunctionalised scaffolds for applications in regenerative medicine	Off the shelf scaffolds for replacing ultra-small diameter vascular grafts are valuable for reconstruction of diseased or damaged vessels.
February 14, 2017	Ultrasound-based Pulse Wave Velocity Evaluation in Mice	Arterial stiffness can be evaluated by calculating pulse wave velocity (PWV), i.e., the speed with which the pulse wave travels in a conduit vessel.
February 14, 2017	Deletion of Hypoxia-Inducible Factor-1α in Myeloid Lineage Exaggerates Angiotensin II-Induced Formation of Abdominal Aortic Aneurysm	Hypoxia-inducible factor (HIF)-1 α is a transcription factor that regulates various genes responding to hypoxic conditions.
February 01, 2017	Increased Oxidative Stress and Hypoxia Inducible Factor-1 Expression during Arteriovenous Fistula Maturation	BACKGROUND: The poor clinical results that are frequently reported for arteriovenous fistulae (AVF) for hemodialysis are typically due to failure of A
February 01, 2017	In vivo photoacoustic lipid imaging in mice using the second near-infrared window	Photoacoustic imaging has emerged as a promising technique to improve preclinical and clinical imaging by providing users with label-free optical cont

February 01, 2017	Dual effects of fructose on ChREBP and FoxO1/3α are responsible for AldoB up-regulation and vascular remodelling	Increased production of methylglyoxal (MG) in vascular tissues is one of the causative factors for vascular remodeling in different subtypes of metabo
January 24, 2017	Female Mice With an XY Sex Chromosome Complement Develop Severe Angiotensin II-Induced Abdominal Aortic AneurysmsClinical Perspective	Background—Abdominal aortic aneurysms (AAAs) are a deadly pathology with strong sexual dimorphism.
January 12, 2017	Mutations in HYAL2, Encoding Hyaluronidase 2, Cause a Syndrome of Orofacial Clefting and Cor Triatriatum Sinister in Humans and Mice	Orofacial clefting is amongst the most common of birth defects, with both genetic and environmental components.
January 09, 2017	Nitric oxide mediates aortic disease in mice deficient in the metalloprotease Adamts1 and in a mouse model of Marfan syndrome	Heritable thoracic aortic aneurysms and dissections (TAAD), including Marfan syndrome (MFS), currently lack a cure, and causative mutations have been
January 01, 2016	Expanding Acquisition and Clutter Filter Dimensions for Improved Perfusion Sensitivity	A method is explored for increasing the sensitivity of power-Doppler imaging without contrast enhancement.
January 01, 2016	Suppression of aortic expansion and contractile recovery in a rat abdominal aortic aneurysm model by biodegradable gelatin hydrogel sheet incorporating basic fibroblast growth factor	Biodegradable gelatin hydrogel sheet (BGHS) incorporating basic fibroblast growth factor (bFGF) may inhibit the progression of abdominal aortic aneu
January 01, 2016	Original Research: Feasibility and safety of two surgical techniques for the development of an animal model of jugular vein occlusion	To date, no studies have explored the effect of abnormal cerebral venous circulation on brain disorders, whereas many studies have investigated neurod
January 01, 2016	Unspliced XBP1 Confers VSMC Homeostasis and Prevents Aortic Aneurysm Formation via FoxO4 Interaction	Rationale: Although not fully understood, the phenotypic transition of vascular smooth muscle cells exhibits at the early onset of the pathology of ao
January 01, 2016	Eph-B4 regulates adaptive venous remodeling to improve arteriovenous fistula patency	Low rates of arteriovenous fistula (AVF) maturation prevent optimal fistula use for hemodialysis; however, the mechanism of venous remodeling in the f
January 01, 2016	Monitoring inflammation injuries in the progression of atherosclerosis with contrast enhanced ultrasound molecular imaging	PURPOSE: The upregulation of vascular cell adhesion molecule-1 (VCAM-1) on vascular endothelium plays a great role in the progression of atherosclerosi
January 01, 2016	High-Fat, High-Sugar Diet-Induced Subendothelial Matrix Stiffening is Mitigated by Exercise	Consumption of a high-fat, high-sugar diet and sedentary lifestyle are correlated with bulk arterial stiffening.
January 01, 2016	Recombinant Decorin Fusion Protein Attenuates Murine Abdominal Aortic Aneurysm Formation and Rupture	Decorin (DCN) is a small-leucine rich proteoglycan that mediates collagen fibrillogenesis, organization, and tensile strength.
January 01, 2016	Targeting Interleukin-1β Protects from Aortic Aneurysms Induced by Disrupted Transforming Growth Factor β Signaling	Aortic aneurysms are life-threatening conditions with effective treatments mainly limited to emergency surgery or trans-arterial endovascular stent gr
January 01, 2016	Toll-like receptor-4 signaling pathway in aorta aging and diseases: "its double nature"	Recent advances in the field of innate immunity have revealed a complex role of innate immune signaling pathways in both tissue homeostasis and diseas
January 01, 2016	Improving in vivo outcomes of decellularized vascular grafts via incorporation of a novel extracellular matrix	Each year, hundreds of thousands coronary bypass procedures are performed in the US, yet there currently exists no off-the-shelf alternative to autolo

January 01, 2016	Altered Penile Caveolin Expression in Diabetes: Potential Role in Erectile Dysfunction	Background The pathophysiology of increased severity of erectile dysfunction in men with diabetes and their poor response to oral pharmacotherapy are
January 01, 2016	Deficiency of CCAAT/enhancer-binding protein homologous protein (CHOP) prevents diet-induced aortic valve calcification in vivo	Aortic valve (AoV) calcification is common in aged populations.
January 01, 2016	Oral chromium picolinate impedes hyperglycemia-induced atherosclerosis and inhibits proatherogenic protein TSP-1 expression in STZ-induced type 1 diabetic ApoE -/- mice	Increasing evidence suggests thrombospondin-1 (TSP-1), a potent proatherogenic matricellular protein, as a putative link between hyperglycemia and ath
January 01, 2016	DBZ (Danshensu Bingpian Zhi), a novel natural compound derivative, attenuates atherosclerosis in apolipoprotein E-Deficient mice	Background-DBZ (Danshensu Bingpian Zhi), a synthetic derivative of a natural compound found in traditional Chinese medicine, has been reported to supp
January 01, 2016	5-HT causes splanchnic venodilation	Serotonin [5-hydroxytryptamine (5-HT)] causes relaxation of the isolated superior mesenteric vein, a splanchnic blood vessel, through activation of th
January 01, 2016	Comparison of very-high-frequency ultrasound assessment of radial arterial wall layers after first and repeated transradial coronary procedures	BACKGROUND Transradial coronary procedure (TRP) traumatizes the radial artery (RA), especially resulting in changes to arterial wall morphology.
January 01, 2016	Deletion of the NR4A nuclear receptor NOR1 in hematopoietic stem cells reduces inflammation but not abdominal aortic aneurysm formation	Background: The NR4A3 orphan nuclear hormone receptor, NOR1, functions as a constitutively active transcription factor to regulate inflammation, proli
January 01, 2016	Pentaerythritol tetranitrate (PETN) in-vivo treatment improves oxidative stress and vascular dysfunction by suppression of endothelin-1 signaling in monocrotaline-induced pulmonary hypertension	Objective: Oxidative stress and endothelial dysfunction contribute to pulmonary arterial hypertension (PAH).
January 01, 2016	Differential Effects of EGFL6 on Tumor versus Wound Angiogenesis	Angiogenesis inhibitors are important for cancer therapy, but clinically approved anti-angiogenic agents have shown only modest efficacy and can compr
January 01, 2016	In vivo MR-angiography for the assessment of aortic aneurysms in an experimental mouse model on a clinical MRI scanner: Comparison with high-frequency ultrasound and histology	Background MR-angiography currently represents one of the clinical reference-standards for the assessment of aortic-dimensions.
January 01, 2016	Effects of Rotigaptide and RIC on Ischemia Reperfusion Injury in the In Vitro Rabbit Heart	Background: Remote Ischemic Preconditioning (rIPC) and the antiarrhythmic peptide analogue, Rotigaptide (ZP123), protects against myocardial ischemia-
January 01, 2016	Cortistatin attenuates angiotensin II-induced abdominal aortic aneurysm through inactivation of the ERK1/2 signaling pathways	Abdominal aortic aneurysm (AAA) is a fatal disease that is associated with chronic inflammation in the vessel wall.
January 01, 2016	Obesity-induced vascular dysfunction and arterial stiffening requires endothelial cell arginase 1	Aims Elevation of arginase activity has been linked to vascular dysfunction in diabetes and hypertension by a mechanism involving decreased nitric oxi
January 01, 2016	Characterization of age-related penile microvascular hemodynamic impairment using laser speckle contrast imaging: Possible role of increased fibrogenesis	Current technology for penile hemodynamic evaluations in small animals is invasive and has limitations.

January 01, 2016	Loss of vascular smooth muscle cell autophagy exacerbates angiotensin II-associated aortic remodeling	Objective: The pathophysiologic processes of abdominal aortic aneurysms (AAAs) and atherosclerosis often intersect.
January 01, 2016	Dietary potassium regulates vascular calcification and arterial stiffness	Vascular calcification is a risk factor that predicts adverse cardiovascular complications of several diseases including atherosclerosis.
January 01, 2016	Aortic microcalcification is associated with elastin fragmentation in Marfan syndrome	Marfan syndrome (MFS) is a connective tissue disorder in which aortic rupture is the major cause of death.
January 01, 2016	Molecularly Engineered Theranostic Nanoparticles for Thrombosed Vessels: H2O2-Activatable Contrast-Enhanced Photoacoustic Imaging and Antithrombotic Therapy	A thrombus (blood clot), composed mainly of activated platelets and fibrin, obstructs arteries or veins, leading to various life-threatening diseases.
January 01, 2016	Moderately Elevated Homocysteine Does Not Contribute to Thoracic Aortic Aneurysm in Mice	Background: Moderate hyperhomocysteinemia is an attractive target for intervention because it is present in 5-7% of the population and can be reversed
January 01, 2016	Fetal Alcohol Exposure Alters Blood Flow and Neurological Responses to Transient Cerebral Ischemia in Adult Mice	Background: Prenatal alcohol exposure (PAE) can result in physical and neurocognitive deficits that are collectively termed "fetal alcohol spectrum di
January 01, 2016	Renal Resistive Index as a Novel Indicator for Renal Complications in High-Fat Diet-Fed Mice	Background/Aims: The renal resistive index (RI) is a novel candidate as a renal injury prognostic indicator, but it remains unclear how renal RI level
January 01, 2016	Computer-Aided Evaluation of Blood Vessel Geometry From Acoustic Images	A method for computer-aided assessment of blood vessel geometries based on shape-fitting algorithms from metric vision was evaluated.
January 01, 2016	Divergent coronary flow responses to uridine adenosine tetraphosphate in atherosclerotic ApoE knockout mice	Uridine adenosine tetraphosphate (Up 4 A) exerts potent relaxation in porcine coronary arteries that is reduced following myocardial infarction, suggest
January 01, 2016	Notch1 haploinsufficiency causes ascending aortic aneurysms in mice.	An ascending aortic aneurysm (AscAA) is a life-threatening disease whose molecular basis is poorly understood.
January 01, 2016	HPW-RX40 prevents human platelet activation by attenuating cell surface protein disulfide isomerases	Protein disulfide isomerase (PDI) present at platelet surfaces has been considered to play an important role in the conformational change and activati
January 01, 2016	Collagen External Scaffolds Mitigate Intimal Hyperplasia and Improve Remodeling of Vein Grafts in a Rabbit Arteriovenous Graft Model	Objectives .
January 01, 2016	Intravascular application of electrocautery in a rabbit model of abdominal aortic endarterectomy	Effective therapies for preventing perioperative complications such as thrombosis and inflammation after coronary endarterectomy (CE) are lacking.
January 01, 2016	Possible type 1 diabetes risk prediction: Using ultrasound imaging to assess pancreas inflammation in the inducible autoimmune diabetes BBDR model	Background/Aims Studies of human cadaveric pancreas specimens indicate that pancreas inflammation plays an important role in type 1 diabetes pathogene

January 01, 2016	Non-invasive longitudinal monitoring of angiogenesis in a murine full-thickness cutaneous wound healing model using high-resolution three-dimensional ultrasound imaging	Background/Purpose: The aim of this study was to evaluate the longitudinal monitoring of angiogenesis in a murine full- thickness cutaneous wound heal
January 01, 2016	Trimethylamine-N-oxide induces vascular inflammation by activating the NLRP3 inflammasome through the SIRT3-SOD2-mtROS signaling pathway	BACKGROUND Trimethylamine-N-oxide (TMAO) has recently been identified as a novel and independent risk factor for promoting atherosclerosis through ind
January 01, 2016	Customization of bilio-pancreatic limb length to modulate and sustain anti-diabetic effect of gastric bypass surgery	Although Roux-en-Y Gastric Bypass (RYGB) remains the most effective treatment for obesity and type 2 diabetes (T2D), many patients fail to achieve rem
January 01, 2016	Angiotensin II infusion into ApoE^{-/-} mice: a model for aortic dissection rather than abdominal aortic aneurysm?	Aims Angiotensin II-infused ApoE ^{-/-} mice are a popular mouse model for preclinical aneurysm research.
January 01, 2016	Photoacoustic Imaging: A Novel Tool for Detecting Carotid Artery Thrombosis in Mice	Thrombosis is a main cause of acute cardiovascular events, and detecting thrombi in small arteries via noninvasive im- aging remains challenging.
December 22, 2016	SRC-1 Regulates Blood Pressure and Aortic Stiffness in Female Mice	Framingham Heart Study suggests that dysfunction of steroid receptor coactivator-1 may be involved in the development of hypertension.
December 12, 2016	The role of GRIP1 and ephrin B3 in blood pressure control and vascular smooth muscle cell contractility	Several erythropoietin-producing hepatocellular receptor B family (EPHB) and their ligands, ephrinBs (EFNBs), are involved in blood pressure regulatio
December 12, 2016	Mouse models of deep vein thrombosis	
December 01, 2016	Serelaxin improves the pathophysiology of placental ischemia in the reduced uterine perfusion pressure rat model of preeclampsia	Preeclampsia is a hypertensive disorder of pregnancy with limited therapeutic options.
December 01, 2016	Smart Microbubble Eluting Theranostic Stent for Noninvasive Ultrasound Imaging and Prevention of Restenosis	A pH-responsive microbubble-eluting theranostic stent is developed for real-time ultrasound imaging of stent implanted blood vessels and dissolution o
December 01, 2016	Maternal vascular responses to hypoxia in a rat model of intrauterine growth restriction	Maternal vascular responses to hypoxia in a rat model of intrauterine growth restriction.
November 23, 2016	Intrauterine Growth Restriction Influences Vascular Remodeling and Stiffening in the Weanling Rat More than Sex or Diet	Intrauterine growth restriction (IUGR) increases the incidence of adult cardiovascular disease (CVD).
November 11, 2016	Photoacoustic Imaging for the Detection of Hypoxia in the Rat Femoral Artery and Skeletal Muscle Microcirculation	Photoacoustic (PA) imaging is an emerging technology that combines structural and functional imaging of tissues using laser and ultrasound energy.
November 08, 2016	Aortic and Cardiac Structure and Function Using High-Resolution Echocardiography and Optical Coherence Tomography in a Mouse Model of Marfan Syndrome	Marfan syndrome (MFS) is an autosomal-dominant disorder of connective tissue caused by mutations in the fibrillin-1 (FBN1) gene.
November 07, 2016	Functional screening of mammalian mechanosensitive genes using Drosophila RNAi library– Smarcd3/Bap60 is a mechanosensitive pro-inflammatory gene	Disturbed blood flow (d-flow) induces atherosclerosis by altering the expression of mechanosensitive genes in the arterial endothelium.
November 02, 2016	in a Rat Model	Hepatic infarcts or abscesses occur after hepatic artery interruption.

October 14, 2016	Angiotensin receptor blockade mediated amelioration of mucopolysaccharidosis type I cardiac and craniofacial pathology	Mucopolysaccharidosis type I (MPS IH) is a lysosomal storage disease (LSD) caused by inactivating mutations to the alpha-L-iduronidase (IDUA) gene.
October 14, 2016	Smooth muscle cell-specific Tgfr1 deficiency promotes aortic aneurysm formation by stimulating multiple signaling events	Transforming growth factor (TGF)- β signaling disorder has emerged as a common molecular signature for aortic aneurysm development.
October 05, 2016	Innate Effector-Memory T Cell Activation Regulates Post-Thrombotic Vein Wall Inflammation and Thrombus Resolution	Rationale: Immune cells play an important role during the generation and resolution of thrombosis.
October 05, 2016	Endothelial-like cells differentiated from mesenchymal stem cells attenuate neointimal hyperplasia after vascular injury	The present study investigated the contribution of bone marrow-derived mesenchymal stem cells (BM-MSCs) to neointimal formation, and whether endotheli
October 04, 2016	Asymmetric pulsation of rat carotid artery bifurcation in three-dimension observed by ultrasound imaging	Abstract The arterial structure cyclically fluctuates in three-dimensions (3-D) caused by pulsatile blood flow.
October 01, 2016	Toll-like receptor 4 mutation suppresses hyperhomocysteinemia-induced hypertension	Hyperhomocysteinemia (HHcy) has been observed to promote hypertension, but the mechanisms are unclear.
September 13, 2016	Hemodynamic Influence on Smooth Muscle Cell Kinetics and Phenotype During Early Vein Graft Adaptation	Pathologic vascular adaptation following local injury is the primary driver for accelerated intimal hyperplasia and an occlusive phenotype.
September 13, 2016	Matrix metalloproteinase inhibitor, doxycycline and progression of calcific aortic valve disease in hyperlipidemic mice	Calcific aortic valve disease (CAVD) is the most common cause of aortic stenosis. Currently, there is no non-invasive medical therapy for CAVD.
September 01, 2016	Cardiovascular health effects of oral and pulmonary exposure to multi-walled carbon nanotubes in ApoE-deficient mice	Exposure to high aspect ratio nanomaterials, such as multi-walled carbon nanotubes (MWCNTs) may be associated with increased risk of atherosclerosis,
September 01, 2016	Defective Connective Tissue Remodeling in Smad3 Mice Leads to Accelerated Aneurysmal Growth through Disturbed Downstream TGF-β Signaling	Aneurysm-osteoarthritis syndrome characterized by unpredictable aortic aneurysm formation, is caused by SMAD3 mutations.
September 01, 2016	Visualization of haemophilic arthropathy in F8 $-/-$ rats by ultrasonography and micro-computed tomography	A major complication of haemophilia is haemophilic arthropathy (HA), a debilitating disorder with an incompletely defined pathobiology.
June 01, 2016	Resveratrol Decreases TXNIP mRNA and Protein Nuclear Expressions With an Arterial Function Improvement in Old Mice	Aging leads to a high prevalence of glucose intolerance and cardiovascular diseases, with oxidative stress playing a potential role.
February 01, 2016	Assessment of Venous Thrombosis in Animal Models	Deep vein thrombosis and common complications, including pulmonary embolism and post-thrombotic syndrome, represent a major source of morbidity and mo
January 01, 2015	Influence of shear stress magnitude and direction on atherosclerotic plaque composition	The precise flow characteristics that promote different atherosclerotic plaque types remain unclear.

January 01, 2015	Comparison of Arterial Input Function Models for Small-Animal Ultrasound Perfusion Imaging	Background, Motivation and Objective Bolus & burst (B&B) is a method for quantitative ultrasound perfusion analysis combining bolus tracking and burst
January 01, 2015	Smooth muscle FGF/TGFbeta cross talk regulates atherosclerosis progression	The conversion of vascular smooth muscle cells (SMCs) from contractile to proliferative phenotype is thought to play an important role in atherosclerosis
January 01, 2015	Re-assessing the enhanced permeability and retention effect in peripheral arterial disease using radiolabeled long circulating nanoparticles	Abstract As peripheral arterial disease (PAD) results in muscle ischemia and neovascularization, it has been claimed that nanoparticles can passively
January 01, 2015	Partial Portal Vein Arterialization Attenuates Acute Bile Duct Injury Induced by Hepatic Dearterialization in a Rat Model	Hepatic infarcts or abscesses occur after hepatic artery interruption.
January 01, 2015	Ascending Aortic Aneurysm in Angiotensin II-Infused Mice: Formation, Progression, and the Role of Focal Dissections.	OBJECTIVE To understand the anatomy and physiology of ascending aortic aneurysms in angiotensin II-infused ApoE(-/-) mice.
January 01, 2015	Accelerated Blood Clearance Phenomenon Reduces the Passive Targeting of PEGylated Nanoparticles in Peripheral Arterial Disease	Peripheral arterial disease (PAD) is a leading global health concern.
January 01, 2015	Fetal and Neonatal Stem Cells Early Intravenous Delivery of Human Brain Stromal Cells Modulates Systemic Inflammation and Leads to Vasoprotection in Traumatic Spinal Cord Injury	Spinal cord injury (SCI) is a life-threatening condition with multifaceted complications and limited treatment options.
September 01, 2015	Influence of physical activity and gender on arterial function in type 2 diabetes, normal and impaired glucose tolerance	To determine whether Nordic walking improves cardiovascular function in middle-aged women and men, we included 121 with normal glucose tolerance, 33 w
June 01, 2015	The innate immune system contributes to tissue-engineered vascular graft performance	The first clinical trial of tissue-engineered vascular grafts (TEVGs) identified stenosis as the primary cause of graft failure.
April 02, 2015	Noninvasive Molecular Ultrasound Monitoring of Vessel Healing After Intravascular Surgical Procedures in a Preclinical Setup.	OBJECTIVE: Cardiovascular interventions induce damage to the vessel wall making antithrombotic therapy inevitable until complete endothelial recovery.
April 01, 2015	Photoacoustic Imaging of Vascular Hemodynamics: Validation with Blood Oxygenation Level-Dependent MR Imaging	Purpose To noninvasively assess vascular hemodynamics with photoacoustic imaging (PAI) and blood oxygenation level-dependent (BOLD) magnetic resonance
January 01, 2015	Rip2 modifies VEGF-induced signalling and vascular permeability in myocardial ischaemia	Aims In myocardial ischaemia, vascular endothelial growth factor (VEGF) induces permeability by activating a signalling pathway that includes VEGF r
January 01, 2015	Multimodality and Molecular Imaging of Matrix Metalloproteinase Activation in Calcific Aortic Valve Disease	Calcific aortic valve disease (CAVD) is the most common cause of aortic stenosis.
January 01, 2015	Prostaglandin E synthase is upregulated by Gas6 during cancer-induced venous thrombosis.	Venous thromboembolism (VTE) is a common complication of cancer.
January 01, 2015	Axl modulates immune activation of smooth muscle cells in vein graft remodeling.	The pathophysiological mechanisms of the immune activation of smooth muscle cells are not well understood.

November 01, 2014	Acute reductions in mechanical wall strain precede the formation of intimal hyperplasia in a murine model of arterial occlusive disease	OBJECTIVE: Intimal hyperplasia (IH) continues to plague the durability of vascular interventions.
May 01, 2014	Aortic valve sclerosis in mice deficient in endothelial nitric oxide synthase	Risk factors for fibrocalcific aortic valve disease (FCAVD) are associated with systemic decreases in bioavailability of endothelium-derived nitric
April 15, 2014	Exercise performance and peripheral vascular insufficiency improve with AMPK activation in high-fat diet-fed mice	Intermittent claudication is a form of exercise intolerance characterized by muscle pain during walking in patients with peripheral artery disease (PA
January 01, 2014	Age-related vascular gene expression profiling in mice	Increasing age involves a number of detrimental changes in the cardiovascular system and particularly on the large arteries.
January 01, 2014	Monitoring and staging abdominal aortic aneurysm disease with pulse wave imaging.	The abdominal aortic aneurysm (AAA) is a silent and often deadly vascular disease caused by the localized weakening of the arterial wall.
November 01, 2013	Rhodamine-Loaded Intercellular Adhesion Molecule-1-targeted Microbubbles for Dual-Modality Imaging Under Controlled Shear Stresses	BACKGROUND: The ability to image incipient atherosclerosis is based on the early events taking place at the endothelial level.
November 01, 2013	Development and optimization of near-IR contrast agents for immune cell tracking	Gold nanorods (NRs) are attractive for in vivo imaging due to their high optical cross-sections and tunable absorbance.
July 15, 2013	Glucose-stimulated insulin secretion causes an insulin-dependent nitric oxide-mediated vasodilation in the blood supply of the rat sciatic nerve	This study tested the hypothesis that acute hyperglycemia reduces sciatic nerve blood flow in Sprague-Dawley rats.
April 01, 2013	Enhanced Sonographic Imaging to Diagnose Lymph Node Metastasis: Importance of Blood Vessel Volume and Density	Lymph node size is an important variable in ultrasound diagnosis of lymph node metastasis.
March 28, 2013	Mitochondrial activation by inhibition of PDKII suppresses HIF1a signaling and angiogenesis in cancer	Most solid tumors are characterized by a metabolic shift from glucose oxidation to glycolysis, in part due to actively suppressed mitochondrial functi
January 01, 2013	Injection of Vessel-Derived Stem Cells Prevents Dilated Cardiomyopathy and Promotes Angiogenesis and Endogenous Cardiac Stem Cell Proliferation in mdx/utrn^{-/-} but Not Aged mdx Mouse Models for Duchenne Muscular Dystrophy	Duchenne muscular dystrophy (DMD) is the most common form of muscular dystrophy.
January 01, 2013	Molecular imaging of inflammation and platelet adhesion in advanced atherosclerosis effects of antioxidant therapy with NADPH oxidase inhibition.	BACKGROUND: In atherosclerosis, local generation of reactive oxygen species amplifies the inflammatory response and contributes to plaque vulnerabilit
January 01, 2013	High and low frequency subharmonic imaging of angiogenesis in a murine breast cancer model	This project compared quantifiable measures of tumor vascularity obtained from contrast-enhanced high frequency (HF) and low frequency (LF) subharmoni
December 01, 2012	Inhibition of Notch1 signaling reduces abdominal aortic aneurysm in mice by attenuating macrophage-mediated inflammation.	OBJECTIVE: Activation of inflammatory pathways plays a critical role in the development of abdominal aortic aneurysms (AAA).
November 01, 2012	The Vascular Disrupting Agent STA-9584 Exhibits Potent Antitumor Activity by Selectively Targeting Microvasculature at Both the Center and Periphery of Tumors	Vascular disrupting agents (VDAs) are an emerging class of therapeutics targeting the existing vascular network of solid tumors.

September 01, 2012	Y1R control of sciatic nerve blood flow in the Wistar Kyoto rat.	We hypothesized that neuropeptide Y (NPY) exerts vasoconstrictor properties in sciatic nerve blood supply by a Y1 receptor (Y1R) mechanism.
August 01, 2012	Murine ultrasound imaging for circumferential strain analyses in the angiotensin II abdominal aortic aneurysm model	OBJECTIVE: The underlying causes of abdominal aortic aneurysms (AAAs) remain obscure, although research tools such as the angiotensin II (Ang II) apol
July 06, 2012	Enhanced angiogenic and cardiomyocyte differentiation capacity of epigenetically reprogrammed mouse and human endothelial progenitor cells augments their efficacy for ischemic myocardial repair.	RATIONALE: Although bone marrow endothelial progenitor cell (EPC)-based therapies improve the symptoms in patients with ischemic heart disease, their
June 26, 2012	Novel Single-Chain Antibody-Targeted Microbubbles for Molecular Ultrasound Imaging of Thrombosis: Validation of a Unique Noninvasive Method for Rapid and Sensitive Detection of Thrombi and Monitoring of Success or Failure of Thrombolysis in Mice	BACKGROUND: Molecular imaging is a fast emerging technology allowing noninvasive detection of vascular pathologies.
April 03, 2012	Endothelial expression of hypoxia-inducible factor 1 protects the murine heart and aorta from pressure overload by suppression of TGF-β signaling.	Chronic systemic hypertension causes cardiac pressure overload leading to increased myocardial O ₂ consumption.
March 01, 2012	Low-dose metronomic oral dosing of a prodrug of gemcitabine (LY2334737) causes antitumor effects in the absence of inhibition of systemic vasculogenesis.	Metronomic chemotherapy refers to the close, regular administration of conventional chemotherapy drugs at relatively low, minimally toxic doses, with
February 21, 2012	Gene Inactivation of Proprotein Convertase Subtilisin/Kexin Type 9 Reduces Atherosclerosis in Mice	BACKGROUND: The proprotein convertase subtilisin/kexin type 9 (PCSK9) promotes independently of its enzymatic activity the degradation of the low-dens
February 01, 2012	Non-invasive in vivo analysis of a murine aortic graft using high resolution ultrasound microimaging.	INTRODUCTION: As yet, murine aortic grafts have merely been monitored histopathologically.
January 01, 2011	Intravascular photoacoustic imaging of lipid in atherosclerotic plaques in the presence of luminal blood	Intravascular photoacoustic (IVPA) imaging can characterize atherosclerotic plaque composition on the basis of the optical absorption contrast between
December 23, 2011	Molecular Imaging of Vasa Vasorum Neovascularization via DEspR-targeted Contrast-enhanced Ultrasound Micro-imaging in Transgenic Atherosclerosis Rat Model	PURPOSE: Given that carotid vasa vasorum neovascularization is associated with increased risk for stroke and cardiac events, the present in vivo study
December 15, 2011	Bioengineered human vascular networks transplanted into secondary mice reconnect with the host vasculature and re-establish perfusion	The ability to form anastomoses with the host circulation is essential for vascular networks incorporated within cell-seeded bioengineered tissues.
December 06, 2011	Imaging guided trials of the angiogenesis inhibitor sunitinib in mouse models predict efficacy in pancreatic neuroendocrine but not ductal carcinoma.	Preclinical trials in mice represent a critical step in the evaluation of experimental therapeutics.
December 01, 2011	A critical role for macrophages in neovessel formation and the development of stenosis in tissue-engineered vascular grafts	The primary graft-related complication during the first clinical trial evaluating the use of tissue-engineered vascular grafts (TEVGs) was stenosis.
November 15, 2011	Volumetric and Angiogenic Evaluation of Antitumor Effects with Acoustic Liposome and High-Frequency Ultrasound	Acoustic liposomes (AL) have their inherent echogenicity and can add functionality in serving as drug carriers with tissue specificity.

October 11, 2011	Tissue-intrinsic dysfunction of circadian clock confers transplant arteriosclerosis	The suprachiasmatic nucleus of the brain is the circadian center, relaying rhythmic environmental and behavioral information to peripheral tissues to
October 01, 2011	Regional and systemic hemodynamic responses following the creation of a murine arteriovenous fistula	The study of hemodynamic alterations following the creation of an arteriovenous fistula (AVF) is relevant to vascular adaptive responses and hemodialy
September 08, 2011	Transcriptional profiling and network analysis of the murine angiotensin II-induced abdominal aortic aneurysm.	We sought to characterize temporal gene expression changes in the murine angiotensin II (ANG II)-ApoE ^{-/-} model of abdominal aortic aneurysm (AAA).
July 01, 2011	Longitudinal common carotid artery wall motion is associated with plaque burden in man and mouse	OBJECTIVE: Velocity vector imaging can be used to assess longitudinal common carotid artery (CCA) wall movement (tLoD) in man.
May 27, 2011	Calcific aortic valve stenosis: methods, models, and mechanisms.	Calcific aortic valve stenosis (CAVS) is a major health problem facing aging societies.
March 01, 2011	HIF-1-dependent stromal adaptation to ischemia mediates in vivo tumor radiation resistance.	PURPOSE: Hypoxia-inducible factor 1 (HIF-1) promotes cancer cell survival and tumor progression.
February 01, 2011	Influences of aortic motion and curvature on vessel expansion in murine experimental aneurysms.	OBJECTIVE: To quantitatively compare aortic curvature and motion with resulting aneurysm location, direction of expansion, and pathophysiological feat
January 01, 2010	Micro-Ultrasonographic Imaging of Atherosclerotic Progression	We studied prospectively whether atherosclerotic progression in apolipoprotein-E knock- out mice could be noninvasively and accurately measured by use
January 01, 2010	Micro-ultrasound for preclinical imaging	Over the past decade, non-invasive preclinical imaging has emerged as an important tool to facilitate biomedical discovery.
January 01, 2010	In vivo bioimaging as a novel strategy to detect doxorubicin-induced damage to gonadal blood vessels.	INTRODUCTION: Chemotherapy may induce deleterious effects in normal tissues, leading to organ damage.
November 15, 2010	A Critical Function of Th17 Proinflammatory Cells in the Development of Atherosclerotic Plaque in Mice	Considerable evidence supports that the CD4(+) T cell-mediated immune response contributes to the development of atherosclerotic plaque.
June 01, 2010	Aortic regurgitation dramatically alters the distribution of atherosclerotic lesions and enhances atherogenesis in mice.	OBJECTIVE: Hemodynamics plays a critical role in atherogenesis, but the association between flow pattern and preferential localization of lesion is no
May 01, 2010	Torcetrapib produces endothelial dysfunction independent of cholesteryl ester transfer protein inhibition.	OBJECTIVE: Torcetrapib, a prototype cholesteryl ester transfer protein (CETP) inhibitor with potential for decreasing atherosclerotic disease, increas
January 01, 2009	Antiangiogenic Cancer Therapy : Monitoring with Molecular US and a Clinically Translatable Contrast Purpose : Methods : Results :	Purpose: Materials and Methods: To develop and test human kinase insert domain receptor (KDR)-targeted microbubbles (MBs) (MB KDR) for imaging KDR at

October 01, 2009	Partial carotid ligation is a model of acutely induced disturbed flow, leading to rapid endothelial dysfunction and atherosclerosis.	Atherosclerosis is closely associated with disturbed flow characterized by low and oscillatory shear stress, but studies directly linking disturbed fl
September 01, 2008	Dual-targeted Contrast Agent for US Assessment of Tumor Angiogenesis in Vivo	Purpose: To develop and validate a dual-targeted ultrasound imaging agent that attaches to both vascular endothelial growth factor receptor-2 (VEGFR2)
March 01, 2008	Micro-ultrasound imaging assessment of carotid plaque characteristics in apolipoprotein-E knockout mice.	This study was aimed to test the hypothesis that noninvasive assessment of carotid plaques can be achieved by high-resolution micro-ultrasound imaging
February 01, 2008	In vivo measurement of flow-mediated vasodilation in living rats using high-resolution ultrasound.	In humans, endothelial vasodilator function serves as a surrogate marker for cardiovascular health and is measured as changes in conduit artery diamet
January 01, 2008	High-Resolution Ultrasound Perfusion Imaging of Therapeutic Angiogenesis	OBJECTIVES: The purpose of this study was to test the feasibility of contrast pulse sequence (CPS) ultrasound imaging for high-resolution perfusion im
January 01, 2008	Targeted Microbubbles for Imaging Tumor Angiogenesis: assessment of whole body biodistribution with dynamic micro-PET in mice.	Purpose: Materials and Methods: Results: Conclusion: To evaluate in vivo whole-body biodistribution of micro- bubbles (MBs) targeted to tumor angiogen
December 15, 2007	Vitamin E analogues inhibit angiogenesis by selective induction of apoptosis in proliferating endothelial cells: the role of oxidative stress.	"Mitocans" from the vitamin E group of selective anticancer drugs, alpha-tocopheryl succinate (alpha-TOS) and its ether analogue alpha-TEA, triggered
August 01, 2007	Detecting vascular changes in tumour xenografts using micro-ultrasound and micro-ct following treatment with VEGFR-2 blocking antibodies.	Blockade of vascular endothelial growth factor (VEGF) binding to its receptors on endothelial cells has been shown preclinically to induce tumour grow
February 01, 2007	Non-invasive real-time imaging of atherosclerosis in mice using ultrasound biomicroscopy.	There are increasing needs to develop imaging techniques to study in vivo vascular morphology and function in various mouse models of atherosclerosis.
January 01, 2007	Ex vivo Characterization of Atherosclerosis using Intravascular Photoacoustic Imaging.	The imaging of plaque composition represents one of the important steps in the interventional management of atherosclerosis.
January 01, 2007	Molecular Imaging of Vascular Endothelial Growth Factor Receptor 2 Expression using targeted contrast enhanced High frequency ultrasonography	The aim of our study was to investigate the use of targeted con- trast-enhanced high-frequency ultrasonography for molecular imaging of vascular endot
May 26, 2006	Developmental changes in hemodynamics of uterine artery, utero- and umbilicoplacental, and vitelline circulations in mouse throughout gestation	In human pregnancy, abnormal placental hemodynamics likely contribute to the etiology of early-onset preeclampsia and fetal intrauterine growth restri
July 01, 2005	Quantitation of hemodynamic function during developmental vascular regression in the mouse eye.	PURPOSE: Ultrasound biomicroscopy (UBM) utilizes frequencies higher than conventional diagnostic ultrasound and can noninvasively provide anatomic and