

October 20, 2020	Modulation of vascular response after injury in the rat Achilles tendon alters healing capacity	Tendons are relatively hypovascular but become hypervascular during both injury and degeneration.
October 16, 2020	Clinically-applicable perfluorocarbon-loaded nanoparticles for in vivo photoacoustic, 19f magnetic resonance and fluorescent imaging	Photoacoustic imaging (PAI) is an emerging biomedical imaging technique that is now coming to the clinic.
September 09, 2020	Tetrazine-Derived Near-Infrared Dye as a Facile Reagent for Developing Targeted Photoacoustic Imaging Agents	A new photoacoustic (PA) dye was developed as a simple-to-use reagent for creating targeted PA imaging agents.
January 01, 2018	Ultrasound as a New Imaging Tool to Assess Pathological Change of Joints in Preclinical Mouse Models of Osteoarthritis	Murine osteoarthritis (OA) models are important for exploring OA pathology and treatment in the pre-clinical study.
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 25, 2021	Real-time visualisation of peripheral nerve trauma during subepineural injection in pig brachial plexus using micro-ultrasound	Background: Nerve damage is consistently demonstrated after subepineural injection in animal studies, but not after purposeful injection in patients p
June 21, 2021	Hypoxia-induced miR-210 modulates the inflammatory response and fibrosis upon acute ischemia	Hypoxia-induced miR-210 is a crucial component of the tissue response to ischemia, stimulating angiogenesis and improving tissue regeneration.
June 07, 2021	Polydatin prevents calcium pyrophosphate crystal-induced arthritis in mice	Background: Polydatin is a stilbenoid with important antioxidant, anti-inflammatory, and immunomodulating properties.
June 07, 2021	Ultrasonography study of the skin wound healing process in gilthead seabream (Sparus aurata)	This work aimed to carry out an in vivo study of the skin healing process in gilthead seabream (Sparus aurata) after being experimentally wounded.
March 25, 2021	Crumbs proteins stabilize the cone mosaics of photoreceptors and improve vision in zebrafish	Although the unique organization of vertebrate cone mosaics was first described long ago, both their underlying molecular basis and physiological sign
March 12, 2021	Suppression of hypoxia inducible factor 1α by low molecular weight heparin mitigates ventilation induced diaphragm dysfunction in a murine endotoxemia model	Mechanical ventilation (MV) is required to maintain life for patients with sepsis related acute lung injury but can cause diaphragmatic myotrauma with
March 08, 2021	Hydration State and Hyaluronidase Treatment Significantly Affect Porcine Vocal Fold Biomechanics	Objectives: The understanding of vocal fold hydration state, including dehydrated, euhydrated, rehydrated tissue, and how hydration affects vocal fold
March 01, 2021	Ultrasonography validation for early alteration of diaphragm echodensity and function in the mdx mouse model of Duchenne muscular dystrophy	The mdx mouse model of Duchenne muscular dystrophy is characterized by functional and structural alterations of the diaphragm since early stages of pa
March 01, 2021	Photoacoustic Imaging and Sensing: A New Way to See the Eye	Purpose: Photoacoustics (optoacoustics) is a hybrid technology utilizing light excitation of acoustic responses in targets of interest.
March 01, 2021	Hemodynamic Assay of Hind Limb in Multiple Animal Models	Introduction: Measuring hemodynamic characteristics of injured limbs is paramount to early identification of potentially damaging ischemic conditions,
February 23, 2021	Multispecies Evaluation of a Long-Acting Tenofovir Alafenamide Subdermal Implant for HIV Prophylaxis	New HIV-1 infection rates far outpace the targets set by global health organizations, despite important progress in curbing the progression of the epi

February 23, 2021	Ultrasound Monitoring of Thymus Involution in Septic Mice	Thymus involution is characterized by a progressive regression of thymus size and contributes to immunosuppression in sepsis.
January 18, 2021	A novel mouse model of obstructive sleep apnea by bulking agent-induced tongue enlargement results in left ventricular contractile dysfunction	Aims Obstructive sleep apnea (OSA) is a widespread disease with high global socio-economic impact.
January 04, 2021	Ultrasound-guided platelet-rich plasma injection and multimodality ultrasound examination of peripheral nerve crush injury	Ultrasound-guided platelet-rich plasma (PRP) injection is able to make up for the limitations of applying a single growth factor.
November 03, 2020	Comparison of photoacoustic and fluorescence tomography for the in vivo imaging of ICG-labelled liposomes in the medullary cavity in mice	Few reports quantitatively compare the performance of photoacoustic tomography (PAT) versus fluorescence molecular tomography (FMT) in vivo.
November 03, 2020	Evaluation of Hemodynamics in a Murine Hindlimb Ischemia Model Using Spatial Frequency Domain Imaging	Background and Objectives: Spatial frequency domain imaging (SFDI), an optical imaging technique capable of quantitatively measuring tissue hemodynamics
October 19, 2020	Deficiency of β-arrestin2 exacerbates inflammatory arthritis by facilitating plasma cell formation	β -arrestin2 (β -arr2) is, a key protein that mediates desensitization and internalization of G protein-coupled receptors and participates in inflammation
October 19, 2020	IOP-induced regional displacements in the optic nerve head and correlation with peripapillary sclera thickness	Mechanical insult induced by intraocular pressure (IOP) is likely a driving force in the disease process of glaucoma.
October 16, 2020	Dual-modal magnetic resonance and photoacoustic tracking and outcome of transplanted tendon stem cells in the rat rotator cuff injury model	Stem cells have been used to promote the repair of rotator cuff injury, but their fate after transplantation is not clear.
October 16, 2020	Long-Term Monitoring of Donor Xenogeneic Testis Tissue Grafts and Cell Implants in Recipient Mice Using Ultrasound Biomicroscopy	Testis tissue xenografting and testis cell aggregate implantation from various donor species into recipient mice are novel models for the study and ma
October 16, 2020	Ergogenic Effect of BCAAs and L-Alanine Supplementation: Proof-of-Concept Study in a Murine Model of Physiological Exercise	Background: Branched-chain amino acids (BCAAs: leucine, isoleucine, valine) account for 35% of skeletal muscle essential amino acids (AAs).
September 09, 2020	EphA7+ perivascular cells as myogenic and angiogenic precursors improving skeletal muscle regeneration in a muscular dystrophic mouse model	Skeletal muscle has a capacity for muscular regeneration mediated by satellite cells (SCs) and non-SCs.
March 30, 2020	Cutaneous optical coherence tomography for longitudinal volumetric assessment of intradermal volumes in a mouse model	Clinical evaluation of skin lesions requires precise and reproducible technologies for their qualitative and quantitative assessment.
January 01, 2020	3D High-Frequency Ultrasound Imaging of Cartilage-Bone Interface Compared with Micro-CT	Cartilage-bone interface (CBI) is a complex structure which bears important information in pathophysiology of osteoarthritis (OA).
July 01, 2019	Accuracy of Ultrasound-Guided versus Landmark-Guided Intra-articular Injection for Rat Knee Joints	Abstract—Our aim was to test the effectiveness of ultrasound-guided intra-articular (IA) injection into the knee joint of rodents by an inexperienced
January 01, 2019	Fibro-Adipogenic Remodeling of the Diaphragm in Obesity-Associated Respiratory Dysfunction	Respiratory dysfunction is a common complication of obesity, conferring cardiovascular morbidity, increased mortality and often necessitating mechanic

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	Non Invasive Ultrasound Quantification of Scar Tissue Volume Identifies Early Functional Changes During Tendon Healing	Tendon injuries are very common and disrupt the transmission of forces from muscle to bone, leading to impaired function and quality of life.
December 16, 2018	Improving Stem Cell Delivery to the Trabecular Meshwork Using Magnetic Nanoparticles	Glaucoma is a major cause of blindness and is frequently associated with elevated intraocular pressure.
December 12, 2018	Biceps Detachment Preserves Joint Function in a Chronic Massive Rotator Cuff Tear Rat Model	Background: Lesions of the long head of the biceps tendon are often associated with massive rotator cuff tears (MRCTs), and biceps tenotomy is frequen
December 01, 2018	Photoacoustic imaging for monitoring periodontal health: A first human study	The gold-standard periodontal probe is an aging tool that can detect periodontitis and monitor gingival health but is highly error-prone, does not ful
November 24, 2018	Indocyanine Green labeling for optical and photoacoustic imaging of Mesenchymal Stem Cells after in vivo transplantation	The transplantation of Mesenchymal Stem Cells (MSCs) holds great promise for the treatment of a plethora of human diseases, but new non-invasive proce
November 15, 2018	Lycium Barbarum Polysaccharides Improve Retinopathy in Diabetic Sprague-Dawley Rats	Diabetic retinopathy (DR) has become the most frequent cause of impaired visual acuity and blindness in working-age population in developed countries.
August 22, 2018	Hydrogen peroxide induced tendinopathic changes in a rat model of patellar tendon injury	Tendinopathy includes cases with chronic tendon pain and spontaneous tendon ruptures, which is putatively resulted from failed tendon healing.
July 25, 2018	Regional Deformation of the Optic Nerve Head and Peripapillary Sclera During IOP Elevation	PURPOSE: To measure the deformation of the porcine optic nerve head (ONH) and peripapillary sclera (PPS) in response to intraocular pressure (IOP) ele
July 05, 2018	Titin-based mechanosensing modulates muscle hypertrophy	Background Titin is an elastic sarcomeric filament that has been proposed to play a key role in mechanosensing and trophicity of muscle.
June 01, 2018	Non-uniformity in pre-insertional Achilles tendon is not influenced by changing knee angle during isometric contractions	Achilles tendinopathy remains a prevalent condition among recreational and high-level athletes.
March 26, 2018	Positive End-expiratory Pressure Ventilation Induces Longitudinal Atrophy in Diaphragm Fibers	RATIONALE: Diaphragm weakness in critically ill patients prolongs ventilator dependency and duration of hospital stay, and increases mortality and hea
March 01, 2018	Strain imaging of the lateral collateral ligament using high frequency and conventional ultrasound imaging: An ex-vivo comparison	Recent first attempts of in situ ultrasound strain imaging in collateral ligaments encountered a number of challenges and illustrated a clear need for
January 01, 2018	High-Frequency Ultrasound Imaging of Tidemark In Vitro in Advanced Knee Osteoarthritis	High-frequency ultrasound imaging has been widely adopted for assessment of the degenerative changes of articular cartilage in osteoarthritis (OA).
January 01, 2018	Photoacoustic imaging of synovial tissue hypoxia in experimental post-traumatic osteoarthritis.	OBJECTIVES: This pilot study aimed to investigate the feasibility of non-invasively assessing synovial tissue hypoxia in vivo using photoacoustic (PA)

January 01, 2018	Nicotine impairs intra-substance tendon healing after full thickness injury in a rat model	Nicotine is harmful to many bodily systems; however, the effects of nicotine on intra-substance tendon healing remain largely unexplored.
January 01, 2018	High-frequency spectral ultrasound imaging (SUSI) visualizes early post-traumatic heterotopic ossification (HO) in a mouse model.	PURPOSE Early treatment of heterotopic ossification (HO) is currently limited by delayed diagnosis due to limited visualization at early time points.
January 01, 2018	Optimal range of injection rates for a lymphatic drug delivery system	The lymphatic drug delivery system (LDDS) is a new technique that permits the injection of drugs into a sentinel lymph node (SLN) at an early stage of
January 01, 2018	Prevascularization of dermal substitutes with adipose tissue-derived microvascular fragments enhances early skin grafting	Split-thickness skin grafts (STSG) are still the gold standard for the treatment of most skin defects.
January 01, 2018	Development and evaluation of a CEACAM6-targeting theranostic nanomedicine for photoacoustic-based diagnosis and chemotherapy of metastatic cancer	Metastasis is the leading cause of cancer-related deaths.
January 01, 2018	Validation of ultrasound as a diagnostic tool to assess vocal cord motion in an animal feasibility study	Background: Post-thyroidectomy dysphonia can result from recurrent laryngeal nerve (RLN) injury.
September 01, 2017	Cystic fibrosis transmembrane conductance regulator mediates tenogenic differentiation of tendon-derived stem cells and tendon repair: accelerating tendon injury healing by intervening in its downstream signaling	Tendons are a mechanosensitive tissue, which enables them to transmit to bone forces that are derived from muscle.
June 01, 2017	Growth hormone secretagogues prevent dysregulation of skeletal muscle calcium homeostasis in a rat model of cisplatin-induced cachexia	BACKGROUND Cachexia is a wasting condition associated with cancer types and, at the same time, is a serious and dose-limiting side effect of cancer ch
January 10, 2017	Biodegradable Magnesium Screws Accelerate Fibrous Tissue Mineralization at the Tendon-Bone Insertion in Anterior Cruciate Ligament Reconstruction Model of Rabbit	The incorporation of tendon graft into bone tunnel is one of the most challenging clinical issues in anterior cruciate ligament (ACL) reconstruction.
January 01, 2016	Ultrahigh Frequency Ultrasound Imaging of the Hand : A New Diagnostic Tool for Hand Surgery	Background: Ultrasonography is a cost-effective, noninvasive, and expedient imaging modality with numerous clinical applications.
January 01, 2016	Stretching reduces skin thickness and improves subcutaneous tissue mobility in a murine model of systemic sclerosis	OBJECTIVE Although physical therapy can help preserve mobility in patients with systemic sclerosis (SSc), stretching has not been used systematically
January 01, 2016	Aging leads to inferior Achilles tendon mechanics and altered ankle function in rodents	Spontaneous rupture of the Achilles tendon is increasingly common in the middle aged population.
January 01, 2016	Dynamic weight bearing analysis is effective for evaluation of tendinopathy using a customized corridor with multi-directional force sensors in a rat model	Few studies discuss kinetic changes in tendinopathy models.
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 01, 2016	Local administration of Trolox, a vitamin E analog, reduced tendon adhesion in a chicken model of flexor digitorum profundus tendon injury	Background Hand flexor tendon injuries are compromised with tendon adhesion.
November 01, 2016	Postinjury biomechanics of Achilles tendon vary by sex and hormone status	Achilles tendon ruptures are common injuries.

October 01, 2016	Small Fractions of Muscular Dystrophy Embryonic Stem Cells Yield Severe Cardiac and Skeletal Muscle Defects in Adult Mouse Chimeras	Duchenne muscular dystrophy (DMD) is characterized by the loss of the protein dystrophin, leading to muscle fragility, progressive weakening, and susc
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.
February 01, 2016	In vivo longitudinal study of rodent skeletal muscle atrophy using ultrasonography	Muscle atrophy is a widespread ill condition occurring in many diseases, which can reduce quality of life and increase morbidity and mortality.
January 01, 2015	Photoacoustic imaging of real-time oxygen changes in chronic leg ulcers after topical application of a haemoglobin spray: a pilot study	Objective: To use a non-invasive measurement of oxygen saturation in chronic leg ulcers after the application of a topical haemoglobin spray to invest
January 01, 2015	Intratendinous Injection of Hyaluronate Induces Acute Inflammation: A Possible Detrimental Effect	Abstract Hyaluronate (HA) is therapeutic for tendinopathy, but an intratendinous HA injection is usu- ally painful; thus, it is not suggested for clin
January 01, 2015	LOW-MAGNITUDE HIGH-FREQUENCY VIBRATION ENHANCED MESENCHYMAL STEM CELL RECRUITMENT IN OSTEOPOROTIC FRACTURE HEALING THROUGH THE SDF-1 / CXCR4 PATHWAY	Low-magnitude high-frequency vibration (LMHFV) has been proven to promote osteoporotic fracture healing.
January 01, 2015	Validation of ultrasonography for non-invasive assessment of diaphragm function in muscular dystrophy	Abstract Duchennemuscular dystrophy (DMD) is a severe, degenerativemuscle disease caused by dystrophin mutations.
January 01, 2015	Systemic Administration of Allogeneic Mesenchymal Stem Cells Does Not Halt Osteoporotic Bone Loss in Ovariectomized Rats.	Mesenchymal stem cells (MSCs) have innate ability to self-renew and immunosuppressive functions, and differentiate into various cell types.
January 01, 2015	High-resolution 3D volumetry versus conventional measuring techniques for the assessment of experimental lymphedema in the mouse hindlimb	Secondary lymphedema is a common complication of cancer treatment characterized by chronic limb swelling with interstitial inflammation.
January 14, 2015	Accuracy of ultrasound-guided intra-articular injections in guinea pig knees	OBJECTIVE: Dunkin Hartley guinea pigs, a commonly used animal model of osteoarthritis, were used to determine if high frequency ultrasound can ensure
October 23, 2014	Measurement of Endothelium-Dependent Vasodilation in Mice.	OBJECTIVE: Endothelium-dependent, flow-mediated vasodilation after an increase in shear stress at the endothelial lining of conduit arteries during re
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
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.
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.
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.

November 15, 2011	Ultrasound biomicroscopy for biomechanical characterization of healthy and injured triceps surae of rats.	This work describes the use of ultrasound biomicroscopy (UBM) to follow up the degeneration-regeneration process after a laceration injury induced in
January 15, 2011	Ultrasound-guided needle positioning near the sciatic nerve to elicit compound muscle action potentials from the gastrocnemius muscle of the rat.	The use of ultrasound-guided electrode positioning in near-nerve myography was investigated.
June 01, 2008	Muscle ultrasound in neuromuscular disorders.	Muscle ultrasound is a useful tool in the diagnosis of neuromuscular disorders, as these disorders result in muscle atrophy and intramuscular fibrosis
May 01, 2008	Limb Stress-Rest Perfusion Imaging With Contrast Ultrasound for the Assessment of Peripheral Arterial Disease Severity	OBJECTIVES: We hypothesized that stress-rest perfusion imaging of skeletal muscle in the lower extremity with contrast-enhanced ultrasound (CEU) could