March 25, 2021	Optogenetic stimulation of cholinergic fibers for the modulation of insulin and glycemia	Previous studies have demonstrated stimulation of endocrine pancreas function by vagal nerve electrical stimulation.
March 01, 2021	Subcutaneous Injection Performance in Yucatan Miniature Pigs with and without Human Hyaluronidase and Auto-injector Tolerability in Humans	Recombinant human hyaluronidase PH20 (rHuPH20) facilitates subcutaneous (SC) delivery of co-administered therapeutic agents by locally and transiently
March 01, 2021	Metabolomic differences in blastocoel and uterine fluids collected in vivo by ultrasound biomicroscopy on rabbit embryos†	The success of embryo development and implantation depends in part on the environment in which the embryo evolves.
January 18, 2021	Generation of neighbor-labeling cells to study intercellular interactions in vivo	Understanding cell–cell interactions is critical in most, if not all, research fields in biology.
January 14, 2021	In vivo selection of the MDA-MB-231br/eGFP cancer cell line to obtain a clinically relevant rat model for triple negative breast cancer brain metastasis	Young triple negative breast cancer (TNBC) patients are at high risk for developing very aggressive brain metastases associated with a poor prognosis
January 04, 2021	Bruceantin targets HSP90 to overcome resistance to hormone therapy in castration-resistant prostate cancer	Rationale: Aberrant androgen receptor (AR) signaling via full-length AR (AR-FL) and constitutively active AR variant 7 (AR-V7) plays a key role in the
January 04, 2021	Maternal regulation of inflammatory cues is required for induction of preterm birth	Infection-driven inflammation in pregnancy is a major cause of spontaneous preterm birth (PTB).
January 04, 2021	Klk4 induces anti-tumor effects in human xenograft mouse models of orthotopic and metastatic prostate cancer	Recent reports have suggested the role of kallikrein-related peptidase 4 (KLK4) to be that of remodeling the tumor microenvironment in many cancers, i
November 03, 2020	Modulation of SERCA2a expression and function by ultrasound guided myocardial gene transfection	Sarco/endoplasmic reticulum Ca^{2+} ATPase (SERCA2a) is important for cardiac physiological function and pathological progression.
September 09, 2020	In vivo photoacoustic guidance of stem cell injection and delivery for regenerative spinal cord therapies	Significance: Stem cell therapies are of interest for treating a variety of neurodegenerative diseases and injuries of the spinal cord.
July 01, 2020	Deterministic paracrine repair of injured myocardium using microfluidic-based cocooning of heart explant-derived cells	While encapsulation of cells within protective nanoporous gel cocoons increases cell retention and pro-survival integrin signaling, the influence of c
June 01, 2020	Radio-metal cross-linking of alginate hydrogels for non-invasive in vivo imaging	Alginate hydrogels are cross-linked polymers with high water content, tuneable chemical and material properties, and a range of biomedical application
June 01, 2020	Selective Translation of Cell Fate Regulators Mediates Tolerance to Broad Oncogenic Stress	Human skin tolerates a surprisingly high burden of oncogenic lesions.
May 01, 2020	Opposing Functions of BRD4 Isoforms in Breast Cancer	Bromodomain-containing protein 4 (BRD4) is a cancer therapeutic target in ongoing clinical trials disrupting primarily BRD4-regulated transcription pr
May 01, 2020	The role of a lncRNA (TCONS_00044595) in regulating pineal CLOCK expression after neonatal hypoxia–ischemia brain injury	A common, yet often neglectable, feature of neonatal hypoxic-ischemic brain damage (HIBD) is circadian rhythm disorders resulted from pineal gland dys
March 01, 2020	Embryonic Barcoding of Equipotent Mammary Progenitors Functionally Identifies Breast Cancer Drivers	Identification of clinically relevant drivers of breast cancers in intact mammary epithelium is critical for understanding tumorigenesis yet has prove
January 01, 2020	The alarmin interleukin-1α causes preterm birth through the NLRP3 inflammasome	Sterile intra-amniotic inflammation is a clinical condition frequently observed in women with preterm labor and birth, the leading cause of neonatal m

January 01, 2020	Alteration of the brain methylation landscape following postnatal inflammatory injury in rat pups	Preterm infants are vulnerable to inflammation-induced white matter injury (WMI), which is associated with neurocognitive impairment and increased ris
January 01, 2020	Therapy with Cardiomyocytes Derived from Pluripotent Cells in Chronic Chagasic Cardiomyopathy	Chagas disease discovered more than a century ago remains an incurable disease.
January 01, 2020	Cell Fate Potential of NG2 Progenitors	Determining the origin of different glial subtypes is crucial to understand glial heterogeneity, and to enhance our knowledge of glial and progenitor
January 01, 2020	Proteomic Profiling of the ECM of Xenograft Breast Cancer Metastases in Different Organs Reveals Distinct Metastatic Niches	Metastasis causes most cancer-related deaths, and one poorly understood aspect of metastatic cancer is the adaptability of cells from a primary tumor
January 01, 2020	Multipotency of mouse trophoblast stem cells	Background: In a number of disease processes, the body is unable to repair injured tissue, promoting the need to develop strategies for tissue repair
January 01, 2020	Differential regulation of breast cancer bone metastasis by PARP1 and PARP2	PARP1 and PARP2 dual inhibitors, such as olaparib, have been recently FDA approved for the treatment of advanced breast and ovarian cancers.
January 01, 2020	Stem cell delivery to kidney via minimally invasive ultrasound-guided renal artery injection in mice	cell-based therapies are promising treatments for various kidney diseases.
January 01, 2020	Heterogeneity and chimerism of endothelial cells revealed by single-cell transcriptome in orthotopic liver tumors	The liver is a common host organ for cancer, either through lesions that arise in liver epithelial cells [e.g., hepatocellular carcinoma (HCC)] or as
January 01, 2020	Fluorescent Silica Nanoparticles to Label Metastatic Tumor Cells in Mineralized Bone Microenvironments	During breast cancer bone metastasis, tumor cells interact with bone microenvironment components including inorganic minerals.
January 01, 2020	MR imaging as a precise technique to evaluate skull-base tumor volume: Comparison of CT, MR imaging and FDG PET from murine and clinical data	In spite of the many imaging modalities used in clinics, the one that best reflects the true delineation of skull-base (infratemporal fossa, ITF) mali
October 01, 2019	Assessing therapeutic response non-invasively in a neonatal rat model of acute inflammatory white matter injury using high-field MRI	Perinatal infection and inflammatory episodes in preterm infants are associated with diffuse white matter injury (WMI) and adverse neurological outcom
August 01, 2019	Small-Molecule and CRISPR Screening Converge to Reveal Receptor Tyrosine Kinase Dependencies in Pediatric Rhabdoid Tumors	Cancer is often seen as a disease of mutations and chromosomal abnormalities.
August 01, 2019	Inflammatory Activation of Astrocytes Facilitates Melanoma Brain Tropism via the CXCL10-CXCR3 Signaling Axis	Melanoma is the deadliest skin cancer due to its high rate of metastasis, frequently to the brain.
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
June 01, 2019	A near-infrared turn-on probe for in vivo chemoselective photoacoustic detection of fluoride ion	The detection of fluoride ion (F –) in living subjects is of value for healthcare and environmental fields.
January 21, 2019	Targeting the perivascular niche sensitizes disseminated tumour cells to chemotherapy	The presence of disseminated tumour cells (DTCs) in bone marrow is predictive of poor metastasis-free survival of patients with breast cancer with loc
January 01, 2019	A polymeric paste-drug formulation for intratumoral treatment of prostate cancer	Objective: Focal therapy has emerged as a treatment option for low- to intermediate-risk localized prostate cancer (PCa) patients, to balance the risk

January 01, 2019	Fetal T Cell Activation in the Amniotic Cavity during Preterm Labor: A Potential Mechanism for a Subset of Idiopathic Preterm Birth	Prematurity is the leading cause of perinatal morbidity and mortality worldwide.
January 01, 2019	Radioembolization of Hepatocellular Carcinoma with Built-In Dosimetry: First in vivo Results with Uniformly-Sized, Biodegradable Microspheres Labeled with 188 Re	A common form of treatment for patients with hepatocellular carcinoma (HCC) is transarterial radioembolization (TARE) with non-degradable glass or res
January 01, 2019	Development of orthotopic tumour models using ultrasound-guided intrahepatic injection	Mouse models of human diseases are an essential part of the translational pipeline.
January 01, 2019	Transient callosal projections of L4 neurons are eliminated for the acquisition of local connectivity	Interhemispheric axons of the corpus callosum (CC) facilitate the higher order functions of the cerebral cortex.
January 01, 2019	Interaction of tumor cells and astrocytes promotes breast cancer brain metastases through TGF-β2/ANGPTL4 axes	Metastatic outcomes depend on the interactions of metastatic cells with a specific organ microenvironment.
January 01, 2019	Identification of novel cerebellar developmental transcriptional regulators with motif activity analysis	Background: The work of the FANTOM5 Consortium has brought forth a new level of understanding of the regulation of gene transcription and the cellular
January 01, 2019	Humanized bone facilitates prostate cancer metastasis and recapitulates therapeutic effects of zoledronic acid in vivo	Advanced prostate cancer (PCa) is known for its high prevalence to metastasize to bone, at which point it is considered incurable.
January 01, 2019	Imaging of the Mouse Lymphatic Sinus during Early Stage Lymph Node Metastasis Using Intranodal Lymphangiography with X-ray Micro-computed Tomography	Purpose: Lymph node (LN) metastasis is detected prior to distant metastasis in many types of cancer.
January 01, 2019	Physiologic expansion of human heart-derived cells enhances therapeutic repair of injured myocardium	Background: Serum-free xenogen-free defined media and continuous controlled physiological cell culture conditions have been developed for stem cell th
January 01, 2019	Imaging of X-Ray-Excited Emissions from Quantum Dots and Biological Tissue in Whole Mouse	Optical imaging in clinical and preclinical settings can provide a wealth of biological information, particularly when coupled with targetted nanopart
December 24, 2018	Inflammation-Induced Intra-Amniotic inflammation induces preterm birth by Activating the NLRP3 inflammasome†	m labor and birth, the leading cause of perinatal mortality and morbidity worldwide.
December 12, 2018	Multimodality cellular and molecular imaging of concomitant tumour enhancement in a syngeneic mouse model of breast cancer metastasis	
December 10, 2018	Species-dependent extracranial manifestations of a brain seeking breast cancer cell line	Purpose Metastatic brain tumors pose a severe problem in the treatment of patients with breast carci- noma.
December 05, 2018	Persistent reduction in sialylation of cerebral glycoproteins following postnatal inflammatory exposure	Background: The extension of sepsis encompassing the preterm newborn's brain is often overlooked due to technical challenges in this highly vulnerable
December 04, 2018	Caspase Cleavage of Gelsolin Is an Inductive Cue for Pathologic Cardiac Hypertrophy	Background-—Cardiac hypertrophy is an adaptive remodeling event that may improve or diminish contractile performance of the heart.
November 19, 2018	Noninvasive quantification of oxygen saturation in the portal and hepatic veins in healthy mice and those with colorectal liver metastases using QSM MRI	Purpose: This preclinical study investigated the use of QSM MRI to noninvasively measure venous oxygen saturation (SvO2) in the hepatic and portal vei
October 12, 2018	Repurposing simvastatin as a therapy for preterm labor: evidence from preclinical models	Preterm birth (PTB), the leading cause of neonatal morbidity and mortality, urgently requires novel therapeutic agents.

June 19, 2018	The oncolytic Adenovirus XVir-N-31 as a novel therapy in muscle-invasive bladder cancer	Muscle invasive bladder cancer represents approximately 25% of patients diagnosed with bladder cancer and carries a significant risk of death.
January 01, 2018	Repeated administrations of cardiac progenitor cells are superior to a single administration of an equivalent cumulative dose	BACKGROUND We have recently found that 3 repeated doses (12×106each) of c-kitPOScardiac progenitor cells (CPCs) were markedly more effective than a si
January 01, 2018	Caveolin1 Identifies a Specific Subpopulation of Cerebral Cortex Callosal Projection Neurons (CPN) Including Dual Projecting Cortical Callosal/Frontal Projection Neurons (CPN/FPN)	The neocortex is composed of many distinct subtypes of neurons that must form precise subtype-specific connections to enable the cortex to perform com
January 01, 2018	Touch and tactile neuropathic pain sensitivity are set by corticospinal projections	Current models of somatosensory perception emphasize transmission from primary sensory neurons to the spinal cord and on to the brain1–4.
January 01, 2018	Selective inhibition of the lactate transporter MCT4 reduces growth of invasive bladder cancer	Introduction & Objectives: The significance of lactate transporters has been recognized in various cancer types, but their role in urothelial carcinom
January 01, 2018	Modulation of neuroinflammation and memory dysfunction using percutaneous vagus nerve stimulation in mice	Background: The vagus nerve is involved in regulating immunity and resolving inflammation.
January 01, 2018	Phosphatidylserine targeted single-walled carbon nanotubes for photothermal ablation of bladder cancer	© 2017 IOP Publishing Ltd.
January 01, 2018	Mesopore-Induced Aggregation of Cobalt Protoporphyrin for Photoacoustic Imaging and Antioxidant Protection of Stem Cells	With the ever accelerating development of functional materials design and fabrication, various nanomaterial based molecular imaging platforms with imp
January 01, 2018	Cranial irradiation increases tumor growth in experimental breast cancer brain metastasis	© 2018 John Wiley & Sons, Ltd.
July 01, 2017	Metabotropic glutamate receptor 5 mediates the suppressive effect of 6-OHDA-induced model of Parkinson's disease on liver cancer	Numerous epidemiological studies suggested that there is a variable cancer risk in patients with Parkinson's disease (PD).
May 01, 2017	Activation of EphA1-Epha receptor axis attenuates diabetic nephropathy in mice	The Eph family of receptor tyrosine kinases serves as key modulators of various cellular functions, including inflammation, hypertrophy and fibrosis.
April 03, 2017	A novel treatment for metastatic lymph nodes using lymphatic delivery and photothermal therapy	Systemic delivery of an anti-cancer agent often leads to only a small fraction of the administered dose accumulating in target sites.
March 16, 2017	Repeated doses of cardiac mesenchymal cells are therapeutically superior to a single dose in mice with old myocardial infarction	We have recently demonstrated that repeated administrations of c-kitPOS cardiac progenitor cells (CPCs) have cumulative beneficial effects in rats wit
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 02, 2017	Stellate cells drive maturation of the entorhinal-hippocampal circuit	The neural representation of space relies on a network of entorhinal-hippocampal cell types with firing patterns tuned to different abstract features
February 01, 2017	Single-Cell Analysis of SMN Reveals Its Broader Role in Neuromuscular Disease	The mechanism underlying selective motor neuron (MN) death remains an essential question in the MN disease field.
January 01, 2016	Acquisition of Cholangiocarcinoma Traits during Advanced Hepatocellular Carcinoma Development in Mice	Past studies have identified hepatic tumors with mixed hepatocellular carcinoma (HCC) and cholangiocarcinoma (CC) characteristics that have a more agg

January 01, 2016	Intrathymic injection of hematopoietic progenitor cells establishes functional T cell development in a mouse model of severe combined immunodeficiency	BACKGROUND Even though hematopoietic stem cell transplantation can be curative in patients with severe combined immunodeficiency, there is a need for
January 01, 2016	Ultrasound-mediated delivery and distribution of polymeric nanoparticles in the normal brain parenchyma and melanoma metastases	The blood-brain barrier (BBB) prevents the passage of nearly all drugs into the brain, hindering brain cancer treatment.
January 01, 2016	Mechanical behavior and matrisome gene expression in the aneurysm-prone thoracic aorta of newborn lysyl oxidase knockout mice.	Mutations in lysyl oxidase (LOX) are associated with thoracic aortic aneurysm and dissection (TAAD). Mice that do not express Lox (Lox?/?
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.
January 01, 2016	Tissue-directed Implantation Using Ultrasound Visualization for Development of Biologically Relevant Metastatic Tumor Xenografts	Background: Advances in cancer therapeutics depend on reliable in vivo model systems.
January 01, 2016	Monitoring of Blood Vessel Density Using Contrast-Enhanced High Frequency Ultrasound May Facilitate Early Diagnosis of Lymph Node Metastasis	Time-dependent alterations in the ultrasonography characteristics of lymph nodes during early-stage metastasis have not been compared with those of tu
January 01, 2016	CD8αα intraepithelial lymphocytes arise from two main thymic precursors	TCRαβ+CD4−CD8α+CD8β− intestinal intraepithelial lymphocytes (CD8αα IELs) are an abundant population of thymus-derived T cells that protect the gut bar
January 01, 2016	Establishment of highly metastatic KRAS mutant lung cancer cell sublines in long-term three-dimensional low attachment cultures	Decreased cell-substratum adhesion is crucially involved in metastasis.
January 01, 2016	User-independent diffusion tensor imaging analysis pipelines in a rat model presenting ventriculomegalia: A comparison study	Automated analysis of diffusion tensor imaging (DTI) data is an appealing way to process large datasets in an unbiased manner.
January 01, 2016	Photoacoustic Imaging of Embryonic Stem Cell-Derived Cardiomyocytes in Living Hearts with Ultrasensitive Semiconducting Polymer Nanoparticles	Human embryonic stem cell-derived cardiomyocytes (hESC-CMs) have become promising tools to repair injured hearts.
January 01, 2015	Free-hand ultrasound guidance permits safe and efficient minimally invasive intrathymic injections in both young and aged mice	The goal of this study was to evaluate whether use of an aseptic free-hand approach to ultrasound-guided injection facilitates injection into the thym
November 06, 2013	Selective Permeabilization of the Blood-Brain Barrier at Sites of Metastasis	BACKGROUND: Effective chemotherapeutics for primary systemic tumors have limited access to brain metastases because of the blood-brain barrier (BBB).
May 16, 2012	In vivo Ultrasound and Photoacoustic Monitoring of Mesenchymal Stem Cells Labeled with Gold Nanotracers	Longitudinal monitoring of cells is required in order to understand the role of delivered stem cells in therapeutic neovascularization.
January 01, 2011	ROR Beta induces barrel-like neuronal clusters in the developing neocortex	Neurons in layer IV of the rodent whisker somatosensory cortex are tangentially organized in periodic clusters called barrels, each of which is innerv
June 01, 2011	Effects of a synthetic PEG-ylated Tie-2 agonist peptide on endotoxemic lung injury and mortality.	PURPOSE: To develop targeted molecular imaging probes for the noninvasive detection of breast cancer lymph node metastasis.
January 01, 2010	Echocardiography-Guided Intramyocardial Injection Method in a Murine Model	Cardiac regenerative therapy has received attention as a potentially revolutionary approach for treating the damaged heart.
January 01, 2010	Development of an orthotopic human pancreatic cancer xenograft model using ultrasound guided injection of cells.	Mice have been employed as models of cancer for over a century, providing significant advances in our understanding of this multifaceted family of dis

January 01, 2010	High-Resolution Ultrasound in Research of Mouse Orthotopic Glioma and Ultrasound-Guided Cell Implant	The purpose is to evaluate the feasibility of imaging mouse brain with high resolution ultrasound (HiRes US), and generation of mouse brain tumor (gli
January 01, 2009	An alternative method for intrathymic injections in mice	The thymus is a bi-lobed lymphatic organ located in the anterior portion of the ventral thoracic cavity, just behind the sternum.