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| November 01, 2017 | Exploration of melanoma metastases in mice brains using endogenous contrast photoacoustic imaging | Photoacoustic imaging (PAI) provides real time non-invasive and contrast agent free monitoring of some endogenous compounds concentrations that provid |
| January 01, 2020 | In vivo photoacoustic imaging dynamically monitors the structural and functional changes of ischemic stroke at a very early stage | Ischemic stroke (IS) is one of the leading causes of death and accounts for 85% of stroke cases. |
| January 01, 2019 | Central action of rapamycin on early ischemic injury and related cardiac depression following experimental subarachnoid hemorrhage | Early brain injury and related cardiac consequences play a key role in the devastating outcomes after subarachnoid hemorrhage (SAH). |
| January 01, 2019 | Photoacoustic imaging of gold nanorods in the brain delivered via microbubble-assisted focused ultrasound: a tool for in vivo molecular neuroimaging | The protective barriers of the CNS present challenges during the treatment and monitoring of diseases. |
| 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 03, 2018 | Splenic involvement in umbilical cord matrix-derived mesenchymal stromal cell-mediated effects following traumatic spinal cord injury | Background: The spleen plays an important role in erythrocyte turnover, adaptive immunity, antibody production, and the mobilization of monocytes/macr |
| October 12, 2018 | Sonodynamic Therapy on Intracranial Glioblastoma Xenografts Using Sinoporphyrin Sodium Delivered by Ultrasound with Microbubbles | —Sonodynamic therapy (SDT) is a promising nonin-vasive method for cancer treatment. |
| September 01, 2018 | Laser-activated perfluorocarbon nanodroplets: a new tool for blood brain barrier opening | A major obstacle in the monitoring and treatment of neurological diseases is the blood brain barrier (BBB), a semipermeable barrier that prevents the |
| April 20, 2018 | Magnetic resonance and photoacoustic imaging of brain tumor mediated by mesenchymal stem cell labeled with multifunctional nanoparticle introduced via carotid artery injection | OBJECTIVE: To evaluate the feasibility of visualizing bone marrow-derived human mesenchymal stem cells (MSCs) labeled with a gold-coated magnetic reso |

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| April 19, 2018 | Quantifying solid stress and elastic energy from excised or in situ tumors | Solid stress, distinct from both tissue stiffness and fluid pressure, is a mechanical stress that is often elevated in both murine and human tumors. |
| January 01, 2018 | Highly Crystalline Multicolor Carbon Nanodots for Dual-Modal Imaging-Guided Photothermal Therapy of Glioma | Imaging-guided site-specific photothermal therapy (PTT) of glioma and other tumors in central nervous system presents a great challenge for the current |
| 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 | Immune response mediates cardiac dysfunction after traumatic brain injury | Cardiovascular complications are common after TBI and are associated with increased morbidity and mortality. |
| 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 brain ^{1–4} . |
| January 01, 2018 | Platelet bio-nanobubbles as microvascular recanalization nanoformulation for acute ischemic stroke lesion theranostics | |
| October 05, 2017 | A cerebellar window for intravital imaging of normal and disease states in mice | The cerebellum is a prominent part of the vertebrate hindbrain that is critically involved in the regulation of important body functions such as movem |
| June 01, 2017 | Astrocyte heme oxygenase-1 reduces mortality and improves outcome after collagenase-induced intracerebral hemorrhage | Pharmacotherapies that increase CNS expression of heme oxygenase-1 (HO-1) and other antioxidant proteins have improved outcome in experimental models |
| 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 |

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| 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 26, 2017 | Ganglionic GFAP+ glial Gq-GPCR signaling enhances heart functions in vivo | The sympathetic nervous system (SNS) accelerates heart rate, increases cardiac contractility, and constricts resistance vessels. |
| 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 | Use of high-frequency ultrasound to study the prenatal development of cranial neural tube defects and hydrocephalus in Gldc - deficient mice | OBJECTIVE We used non-invasive high frequency ultrasound (HFUS) imaging to investigate embryonic brain development in a mouse model for neural tube de |
| 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 | Photoacoustic Imaging of Human Mesenchymal Stem Cells Labeled with Prussian Blue–Poly(L-lysine) Nanocomplexes | Acoustic imaging is affordable and accessible without ionizing radiation. |
| January 01, 2016 | Optical clearing and fluorescence deep-tissue imaging for 3D quantitative analysis of the brain tumor microenvironment | © 2017 The Author(s) Background: Three-dimensional visualization of the brain vasculature and its interactions with surrounding cells may shed light o |
| January 01, 2016 | MicroRNA-378 enhances radiation response in ectopic and orthotopic implantation models of glioblastoma | Glioblastoma multiforme (GBM) is the most common and highly malignant primary brain tumor, which is virtually incurable due to its therapeutic resista |
| January 01, 2016 | Cerebellar Exposure to Cell-Free Hemoglobin Following Preterm Intraventricular Hemorrhage: Causal in Cerebellar Damage? | Decreased cerebellar volume is associated with intraventricular hemorrhage (IVH) in very preterm infants and may be a principal component in neurodeve |

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| 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 | The brain microenvironment mediates resistance in luminal breast cancer to PI3K inhibition through HER3 activation | Although targeted therapies are often effective systemically, they fail to adequately control brain metastases. |
| December 01, 2016 | Acute cardiac support with intravenous milrinone promotes recovery from early brain injury in a murine model of severe subarachnoid hemorrhage | Early brain injury/ischemia (EBI) is a serious complication early after subarachnoid hemorrhage (SAH) that contributes to development of delayed cereb |
| December 01, 2016 | Challenging cardiac function post-spinal cord injury with dobutamine | There is general consensus that spinal cord injuries (SCI) above T6 result in altered sympathetic control of the heart, which negatively influences car |
| September 01, 2016 | Myocardial Ischemia/Reperfusion impairs neurogenesis and hippocampal-dependent learning and memory | The incidence of cognitive impairment in cardiovascular disease (CVD) patients has increased, adversely impacting quality of life and imposing a signi |
| May 10, 2016 | Functional and anatomical evidence of cerebral tissue hypoxia in young sickle cell anemia mice | Cerebral ischemia is a significant source of morbidity in children with sickle cell anemia; however, the mechanism of injury is poorly understood. |
| February 01, 2016 | Preclinical Efficacy of Ado-trastuzumab Emtansine in the Brain Microenvironment | Background: Central nervous system (CNS) metastases represent a major problem in the treatment of human epidermal growth factor receptor 2 (HER2)-posi |
| January 01, 2015 | Exploring Targeted Contrast-Enhanced Ultrasound to Detect Neural Inflammation: An Example of Standard Nomenclature | Targeted contrast-enhanced ultrasound (TCEUS) is an innovative method of molecular imaging used for detection of inflammatory biomarkers in vivo. |
| July 01, 2015 | Prophylactic Edaravone Prevents Transient Hypoxic-Ischemic Brain Injury | Background and Purpose— Hypoperfusion-induced thrombosis is an important mechanism for postsurgery stroke and cognitive decline, but there are no per |

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| January 07, 2015 | Theranostic USPIO-Loaded Microbubbles for Mediating and Monitoring Blood-Brain Barrier Permeation. | Efficient and safe drug delivery across the blood-brain barrier (BBB) remains to be one of the major challenges of biomedical and (nano-) pharmaceutical |
| January 01, 2015 | A New Acute Impact-Compression Lumbar Spinal Cord Injury Model in the Rodent | Traumatic injury to the lumbar spinal cord results in complex central and peripheral nervous tissue damage causing significant neurobehavioural defici |
| January 01, 2015 | Quantitative correlational study of microbubble-enhanced ultrasound imaging and magnetic resonance imaging of glioma and early response to radiotherapy in a rat model | Purpose: Radiotherapy remains a major treatment method for malignant tumors. |
| November 01, 2014 | Very High Resolution Ultrasound Imaging for Real-Time Quantitative Visualization of Vascular Disruption after Spinal Cord Injury | Spinal cord injury (SCI) is characterized by vascular disruption with intramedullary hemorrhage, alterations in blood- spinal cord barrier integrity, |
| December 26, 2013 | Imaging of an Inflammatory Injury in the Newborn Rat Brain with Photoacoustic Tomography | BACKGROUND: The precise assessment of cerebral saturation changes during an inflammatory injury in the developing brain, such as seen in periventricul |
| 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 01, 2013 | SPIO-conjugated, doxorubicin-loaded microbubbles for concurrent MRI and focused-ultrasound enhanced brain-tumor drug delivery | The blood-brain barrier (BBB) can be temporarily and locally opened by focused ultrasound (FUS) in the presence of circulating microbubbles (MBs). |
| April 10, 2013 | Lmo4 Establishes Rostral Motor Cortex Projection Neuron Subtype Diversity | The mammalian neocortex is parcellated into anatomically and functionally distinct areas. |

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| March 14, 2013 | A Spinal Cord Window Chamber Model for In Vivo Longitudinal Multimodal Optical and Acoustic Imaging in a Murine Model | In vivo and direct imaging of the murine spinal cord and its vasculature using multimodal (optical and acoustic) imaging techniques could significantly |
| January 01, 2011 | High-Frequency Ultrasound in the Evaluation of Cerebral Intraventricular Haemorrhage in Preterm Rabbit Pups | Cerebral intraventricular haemorrhage (IVH) is the most common cause of severe neurologic impairment following preterm birth in human infants. |
| 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 innervated |
| September 15, 2011 | Mast Cell Targeting Hampers Prostate Adenocarcinoma Development but Promotes the Occurrence of Highly Malignant Neuroendocrine Cancers | Mast cells (MC) are c-Kit-expressing cells, best known for their primary involvement in allergic reactions, but recently reappraised as important players |
| September 01, 2011 | Functional micro-ultrasound imaging of rodent cerebral hemodynamics. | Healthy cerebral microcirculation is crucial to neuronal functioning. |
| April 29, 2011 | Preclinical Models for Neuroblastoma: Establishing a Baseline for Treatment | BACKGROUND: Preclinical models of pediatric cancers are essential for testing new chemotherapeutic combinations for clinical trials. |
| April 27, 2011 | Peripheral nervous system progenitors can be reprogrammed to produce myelinating oligodendrocytes and repair brain lesions. | Neural crest stem cells (NCSCs) give rise to the neurons and glia of the peripheral nervous system (PNS). |
| 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 (glioma) |
| September 01, 2010 | In vivo imaging of cerebral hemodynamics using high-frequency micro-ultrasound. | Assessment of cerebral vascular response is important in neuroscience research. |
| February 24, 2010 | Origin and Molecular Specification of Globus Pallidus Neurons | The mechanisms controlling the assembly of brain nuclei are poorly understood. |

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| February 23, 2010 | <u>Area-specific temporal control of corticospinal motor neuron differentiation by COUP-TFI</u> | Transcription factors with gradients of expression in neocortical progenitors give rise to distinct motor and sensory cortical areas by controlling th |
| July 01, 2009 | <u>Lmo4 and Clim1 Progressively Delineate Cortical Projection Neuron Subtypes during Development</u> | Molecular controls over the development of the exceptional neuronal subtype diversity of the cerebral cortex are now beginning to be identified. |
| March 01, 2009 | <u>Neural progenitors of the postnatal and adult mouse forebrain retain the ability to self-replicate, form neurospheres, and undergo multipotent differentiation in vivo.</u> | Somatic stem cells are reservoirs to replace lost cells or damaged tissue. |