| Date               | Title                                                                 | Abstract/Results                                                                                                                                                                                                 |
|-------------------|----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| April 30, 2020    | Photoacoustic imaging of kidney fibrosis for assessing pretransplant organ quality | Roughly 10% of the world's population has chronic kidney disease (CKD).                                                                                                                                               |
| March 17, 2016    | High Resolution Ultrasonography for Assessment of Renal Cysts in the PCK Rat Model of Autosomal Recessive Polycystic Kidney Disease | Background/Aims: The PCK rat model of polycystic kidney disease is characterized by the progressive development of renal medullary cysts.                                                                        |
| November 01, 2012 | Functional polycystin-1 dosage governs autosomal dominant polycystic kidney disease severity | Autosomal dominant polycystic kidney disease (ADPKD) is caused by mutations to PKD1 or PKD2, triggering progressive cystogenesis and typically leading to kidney failure.                                             |
| March 01, 2021    | Exogenous hydrogen sulfide and miR-21 antagonism attenuates macrophage-mediated inflammation in ischemia reperfusion injury of the aged kidney | Ischemia reperfusion injury (IRI) is a common cause of acute kidney injury (AKI) in the aging population.                                                                                                           |
| February 23, 2021 | Visualized podocyte-targeting and focused ultrasound responsive glucocorticoid nano-delivery system against immune-associated nephropathy without glucocorticoid side effect | Glucocorticoids are widely used in the treatment of nephritis, however, its dose-dependent side effects, such as the increased risk of infection and mortality.                                                            |
| February 23, 2021 | Ranolazine alleviates contrast-associated acute kidney injury through modulation of calcium independent oxidative stress and apoptosis | This study investigates the role of ranolazine in contrast-associated acute kidney injury (CA-AKI) and potential mechanisms.                                                                                        |
| January 28, 2021  | Experimental myocardial infarction elicits time-dependent patterns of vascular hypoxia in peripheral organs and in the brain | Aims: Microvascular alterations occurring after myocardial infarction (MI) may represent a risk factor for multi-organ failure.                                                                                       |
| December 30, 2020 | Ultrasound Molecular Imaging of Renal Cell Carcinoma: VEGFR targeted therapy monitored with VEGFR1 and FSHR targeted microbubbles | Recent treatment developments for metastatic renal cell carcinoma offer combinations of immunotherapies or immunotherapy associated with tyrosine kinase inhibitors.                                               |
| 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.                                                                                                                     |
| October 19, 2020  | Impaired angiotensin II type 1 receptor signaling contributes to sepsis induced acute kidney injury | Background: In sepsis-induced acute kidney injury (SI-AKI), renal blood flow (RBF) may be elevated despite decreased glomerular filtration.                                                                          |
| October 19, 2020  | Fufang Xueshuantong alleviates diabetic retinopathy by activating the PPAR signalling pathway and complement and coagulation cascades | Ethnopharmacological relevance: Fufang Xueshuantong (FXST) is a traditional Chinese patent medicine composed of Panax notoginseng (Burkill) F.H.Chen (2005).                                                          |
| October 01, 2020  | Albumin-constrained large-scale synthesis of renal clearable ferrous sulfide quantum dots for T1-Weighted MR imaging and phototheranostics of tumors | Ultrasmall-sized iron-based nanoparticles are showing increasing potentials to be alternatives as T1-weighted magnetic resonance imaging (MRI) contrast agents.                                                 |
| January 01, 2020  | Dysbiotic 1carbon 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  | PRMT1 promotes neuroblastoma cell survival through ATF5 | Aberrant expression of protein arginine methyltransferases (PRMTs) has been implicated in a number of cancers, making PRMTs potential therapeutic targets.                                                               |
| January 01, 2020  | Targeted beta therapy of prostate cancer with 177Lu-labelled Miltuximab® antibody against glypican-1 (GPC-1) | Purpose: Chimeric antibody Miltuximab®, a human IgG1 engineered from the parent antibody MIL-38, is in clinical development for solid tumour therapy.                                                               |
| January 01, 2020  | Ultrasound measurement of change in kidney volume is a sensitive indicator of severity of renal parenchymal injury | Non-invasive determination of the severity of parenchymal injury in acute kidney injury (AKI) remains challenging.                                                                                               |
| Date            | Title                                                                 | Abstract                                                                                                                                                                                                 |
|-----------------|-----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 | **Acute kidney injury promotes development of papillary renal cell adenoma and carcinoma from renal progenitor cells** | Acute tissue injury causes DNA damage and repair processes involving increased cell mitosis and polyploidization, leading to cell function alterations.                                                          |
| 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 | **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.                                                                                                                                  |
| 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.                                                                            |
| February 01, 2019 | **Down-regulation of MYCN protein by CX-5461 leads to neuroblastoma tumor growth suppression** | Purpose: MYCN oncogene amplification is an independent predictor of poor prognosis in neuroblastoma.                                                                                                         |
| January 23, 2019 | **The orphan nuclear receptor RORα is a potential endogenous protector in renal ischemia/reperfusion injury** | Emerging evidence indicates that retinoid-related orphan receptor (ROR)α, a member of the ROR nuclear receptor subfamily, mediates key cellular adapti                                                        |
| January 01, 2019 | **Quantitative Proteomics of Th-MYCN Transgenic Mice Reveals Aurora Kinase Inhibitor Altered Metabolic Pathways and Enhanced ACADM To Suppress Neuroblastoma Progression** | Neuroblastoma is a neural crest-derived embryonal tumor and accounts for about 15% of all cancer deaths in children.                                                                                          |
| January 01, 2019 | **Sitagliptin and shock wave-supported peripheral blood derived endothelial progenitor cell therapy effectively preserves residual renal function in chronic kidney disease in rat—role of dipeptidyl peptidase 4 inhibition** | This study tested whether sitagliptin and shock wave (SW)-assisted circulatory-derived autologous endothelial progenitor cell (EPC) therapy would effe                                                             |
| 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 | **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 targeted nanopart                                                   |
| December 17, 2018 | **Evaluation of renal oxygen saturation using photoacoustic imaging for the early prediction of chronic renal function in a model of ischemia-induced acute kidney injury** | Purpose: To evaluate the utility of photoacoustic imaging in measuring changes in renal oxygen saturation after ischemia-induced acute kidney injury.                                                             |
| December 17, 2018 | **Renoprotective effects of tolvaptan in hypertensive heart failure rats depend on renal decongestion** | The vasopressin type 2 receptor antagonist tolvaptan may have renoprotective effects in patients with heart failure (HF).                                                                                  |
| December 12, 2018 | **A rat model of acute kidney injury through systemic hypoperfusion evaluated by micro-US, color and PW-Doppler** | Aim To create an animal model of acute renal ischemia induced by systemic hypoperfusion, controllable and reproducible to study, in real time, hemorrh.                                                      |
| October 16, 2018 | **Vanin-1 in Renal Pelvic Urine Reflects Kidney Injury in a Rat Model of Hydronephrosis** | Urinary tract obstruction and the subsequent development of hydronephrosis can cause kidney injuries, which results in chronic kidney disease.                                                            |
| September 01, 2018 | **Combined application of Indocyanine green (ICG) and laser lead to targeted tumor cell destruction** | Purpose: Precise excision of neuroblastoma is challenging, especially when tumors adhere to vital structures.                                                                                               |
| Date           | Title                                                                                          | Abstract                                                                                                                                                                                                 |
|---------------|------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| May 29, 2018  | Performances of a Pristine Graphene-Microbubble Hybrid Construct as Dual Imaging Contrast Agent and Assessment of Its Biodistribution by Photoacoustic Imaging | Coupling near-infrared (NIR) nanoscale absorbing materials with microbubbles (MBs) can generate a multifunctional dual imaging contrast agent.                                                            |
| April 12, 2018| Sodium bicarbonate loading limits tubular cast formation independent of glomerular injury and proteinuria in dahl salt-sensitive rats | Sodium bicarbonate (NaHCO3) slows the decline in kidney function in patients with chronic kidney disease (CKD), yet the mechanisms mediating this effect are unclear. |
| March 09, 2018| Apelin impairs myogenic response to induce diabetic nephropathy in mice                        | The cause of the invalid reaction of smooth muscle cells to mechanical stimulation that results in a dysfunctional myogenic response that mediates the disease process. |
| January 01, 2018| Innate Immune Cells Are Regulated by Axl in Hypertensive Kidney                                | The balance between adaptive and innate immunity in kidney damage in salt-dependent hypertension is unclear.                                                                                                |
| 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| Perfusion Computer Tomography Assessment of the Effect of Angiotensin II On Blood Flow Distribution in Rabbits with Intrarenal VX2 Tumors | Background/Aims: Unlike other organs, which only have one set of capillary network, the renal microvasculature consists of two sets of capillary net.                                                               |
| January 01, 2018| Tissue-penetrating, hypoxia-responsive echogenic polymersomes for drug delivery to solid tumors | Hypoxia in solid tumors facilitates the progression of the disease, develops resistance to chemo and radiotherapy, and contributes to relapse.                                                                  |
| November 01, 2017| mTORC1 Couples Nucleotide Synthesis to Nucleotide Demand Resulting in a Targetable Metabolic Vulnerability | The mechanistic target of rapamycin complex 1 (mTORC1) supports proliferation through parallel induction of key anabolic processes, including protein, metabolism, and growth. |
| August 01, 2017 | Measuring Absolute Blood Perfusion in Mice Using Dynamic Contrast-Enhanced Ultrasound           | We investigated the feasibility of estimating absolute tissue blood perfusion using dynamic contrast-enhanced ultrasound (CEUS) imaging in mice.                                                             |
| 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 transgenic mouse model. |
| 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 10, 2017 | A heart–brain–kidney network controls adaptation to cardiac stress through tissue macrophage activation | Heart failure is a complex clinical syndrome characterized by insufficient cardiac function.                                                                                                                  |
| 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 | Prostaglandin E 2 regulates renal function in C57/BL6 mouse with 5/6 nephrectomy               | AIMS: To investigate the roles of cyclooxygenases (COX) and their metabolites in C57/BL6 mice with 5/6 nephrectomy, an animal model of chronic renal failure.                                                        |
| February 28, 2017| Serelaxin as a potential treatment for renal dysfunction in cirrhosis: Preclinical evaluation and results of a randomized phase 2 trial | BACKGROUND: Chronic liver scarring from any cause leads to cirrhosis, portal hypertension, and a progressive decline in renal blood flow and renal function. |
| Date                | Title                                                                 | Abstract                                                                 |
|---------------------|----------------------------------------------------------------------|--------------------------------------------------------------------------|
| February 01, 2017   | Enhancing the anti-multiple myeloma efficiency in a cancer stem cell xenograft model by conjugating the ABCG2 antibody with microbubbles for a targeted delivery of ultrasound mediated epirubicin | Background: Although multiple myeloma (MM) treatment has improved in the last decade, it remains largely incurable. |
| 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    | Experimental imaging in orthotopic renal cell carcinoma xenograft models: comparative evaluation of high-resolution 3D ultrasonography, in-vivo micro-CT and 9.4T MRI | In this study, we aimed to comparatively evaluate high-resolution 3D ultrasonography (hrUS), in-vivo micro-CT (μCT) and 9.4T MRI for the monitoring of |
| January 01, 2016    | Manipulation of variables in local controlled release vincristine treatment in neuroblastoma                      | Introduction Local drug delivery minimizes systemic toxicity while delivering high-dose chemotherapy for neuroblastoma patients. |
| 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. |
| November 15, 2016   | Lack of an apparent role for endothelin 1 in the prolonged reduction in renal perfusion following severe unilateral ischemia reperfusion injury in the mouse | Abstract Therapeutic approaches to block the progression from acute kidney injury to chronic kidney disease are currently lacking. |
| June 01, 2016       | High-resolution renal perfusion mapping using contrast-enhanced ultrasonography in ischemia-reperfusion injury monitors changes in renal microperfusion | Alterations in renal microperfusion play an important role in the development of acute kidney injury with long-term consequences. |
| May 01, 2016        | Food Restriction Ameliorates the Development of Polycystic Kidney Disease                                      | Autosomal dominant polycystic kidney disease (ADPKD) is a genetic disorder characterized by the accumulation of kidney cysts that ultimately leads to |
| February 01, 2016   | Cytosolic Phospholipase A 2 α Is Essential for Renal Dysfunction and End-Organ Damage Associated With Angiotensin II-Induced Hypertension | BACKGROUND: The kidney plays an important role in regulating blood pressure (BP). |
| January 01, 2015    | Renal Denervation Attenuates Multi-Organ Fibrosis and Improves Vascular Remodeling in Rats with Transverse Aortic Constriction Induced Cardiomyopathy | Background/Aims: To investigate the effects of renal denervation (RDN) on multi-organ fibrosis and vascular remodeling in cardiomyopathy. |
| January 01, 2015    | EVALUATION OF THE APPLICABILITY OF DOPPLER VELOCIMETRY FOR MONITORING ACUTE KIDNEY INJURY IN RATS                  | Animal models of renal disease have been used in the study of pathogenesis and therapeutic protocols. |
| January 01, 2015    | Myocardial Infarction Promoted the Contrast-Induced Nephropathy by Renal Injury                                  | Abstract Background: The morbidity of myocardial infarction is keeping raise in this decade. |
| June 22, 2015       | Impaired Coronary and Renal Vasculat Function in Spontaneously Type 2 Diabetic Leptin-Deficient Mice               | Background: Type 2 diabetes is associated with macro- and microvascular complications in man. |
| April 30, 2015      | Effect of Sodium-Glucose Cotransport Inhibition on Polycystic Kidney Disease Progression in PCK Rats              | The sodium-glucose-cotransporter-2 (SGLT2) inhibitor dapagliflozin (DAPA) induces glucosuria and osmotic diuresis via inhibition of renal glucose re |
| January 01, 2015    | Urine Stasis Predisposes to Urinary Tract Infection by an Opportunistic Ureapathogen in the Megabladder (Mgb) Mouse | PURPOSE: Urinary stasis is a risk factor for recurrent urinary tract infection (UTI). |
| January 01, 2015    | Kidney adysplasia and variable hydronephrosis, a new mutation affecting the odd - Skipped related 1 gene in the mouse, causes variable defects in kidney development and hydronephrosis | Many genes, including odd-skipped related 1 (Osr1), are involved in regulation of mammalian kidney development. |
| Date       | Title                                                                 | Study Details                                                                                                                                                                                                 |
|------------|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| January 01, 2015 | **Erythropoietin accelerates the regeneration of ureteral function in a murine model of obstructive uropathy.** | PURPOSE: Unilateral ureteral obstruction halts ureteral peristalsis, and may cause pain and lead to infection.                                                                                                    |
| January 01, 2015 | **Collecting Duct-Derived Cells Display Mesenchymal Stem Cell Properties and Retain Selective In Vitro and In Vivo Epithelial Capacity.** | We previously described a mesenchymal stem cell (MSC)-like population within the adult mouse kidney that displays long-term colony-forming efficiency,                                                              |
| August 01, 2014  | **Investigation and identification of etiologies involved in the development of acquired hydronephrosis in aged laboratory mice with the use of high-frequency ultrasound imaging.** | Laboratory mice develop naturally occurring lesions that affect biomedical research.                                                                                                                        |
| June 01, 2014    | **Endoplasmic reticulum stress effector CCAAT/enhancer-binding protein homologous protein (CHOP) regulates chronic kidney disease-induced vascular calcification.** | BACKGROUND: Cardiovascular diseases such as atherosclerosis and vascular calcification are a major cause of death in patients with chronic kidney disease.                                                   |
| May 01, 2014     | **Increased myocardial ischemia-reperfusion injury in renal failure involves cardiac adiponectin signal deficiency.** | Increased myocardial ischemia-reperfusion injury in renal failure involves cardiac adiponectin signal deficiency                                                                                         |
| January 01, 2014  | **The small fibrinopeptide Bβ15-42 as renoprotective agent preserving the endothelial and vascular integrity in early ischemia reperfusion injury in the mouse kidney.** | Disruption of the renal endothelial integrity is pivotal for the development of a vascular leak, tissue edema and consequently acute kidney injury.                                                      |
| January 01, 2014  | **Routes of Delivery for CpG and Anti-CD137 for the Treatment of Orthotopic Kidney Tumors in Mice.** | We have found previously that the tumor cell lines, Renca (a renal cancer) and MC38 (a colon tumor) which had been injected subcutaneously in mice, co                                                                 |
| January 01, 2014  | **Targeting cancer stem-like cells as an approach to defeating cellular heterogeneity in Ewing sarcoma.** | Plasticity in cancer stem-like cells (CSC) may provide a key basis for cancer heterogeneity and therapeutic response.                                                                                           |
| December 01, 2013 | **Renal Retention of Lipid Microbubbles: A Potential Mechanism for Flank Discomfort During Ultrasound Contrast Administration.** | BACKGROUND: The etiology of flank pain sometimes experienced during the administration of ultrasound contrast agents is unknown.                                                                               |
| August 01, 2013   | **Matrix metalloproteinase inhibition mitigates renovascular remodeling in salt-sensitive hypertension.** | Extracellular matrix (ECM) remodeling is the hallmark of hypertensive nephropathy.                                                                                                                          |
| May 01, 2013      | **Struvite Urolithiasis and Chronic Urinary Tract Infection in a Murine Model of Urinary Diversion.** | OBJECTIVE: To characterize the clinical course after cutaneous vesicostomy (CV) in megabladder (mgb(-/-)) mice with functional urinary bladder obstruction.                                                 |
| April 01, 2013    | **Inhibition of p38 MAPK attenuates renal atrophy and fibrosis in a murine renal artery stenosis model.** | Renal artery stenosis (RAS) is an important cause of chronic renal dysfunction.                                                                                                                             |
| January 01, 2013  | **Molecular basis of renal adaptation in a murine model of congenital obstructive nephropathy.** | Congenital obstructive nephropathy is a common cause of chronic kidney disease and a leading indication for renal transplant in children.                                                                     |
| January 01, 2013  | **Progressive development of polycystic kidney disease in the mouse model expressing Pkd1 extracellular domain.** | Autosomal dominant polycystic kidney disease (ADPKD) is characterized by slow progression of multiple cysts in both kidneys that lead to renal insuffi                                                                 |
| November 01, 2012 | **Use of ultrasound to assess renal reperfusion and P-selectin expression following unilateral renal ischemia.** | Renal ischemia-reperfusion injury is a major cause of acute kidney injury that carries a high mortality rate and increases the risk of later development.                                                             |
| June 06, 2012     | **A validated tumorgraft model reveals activity of dovitinib against renal cell carcinoma.** | Most anticancer drugs entering clinical trials fail to achieve approval from the U.S. Food and Drug Administration.                                                                                         |
| Date            | Title                                                                 | Abstract                                                                                                                                 |
|-----------------|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| May 15, 2012    | Dependence of Wilms tumor cells on signaling through insulin-like growth factor 1 in an orthotopic xenograft model targetable by specific receptor inhibition | We have previously demonstrated an increased DNA copy number and expression of IGF1R to be associated with poor outcome in Wilms tumors. |
| January 01, 2011| Kidney Development                                                   | Ultrasound (US) is the most common and least invasive modality for clinical imaging of the kidney.                                        |
| January 01, 2011| Ultrasound Imaging of the Murine Kidney                              | Ultrasound (US) is the most common and least invasive modality for clinical imaging of the kidney.                                        |
| October 01, 2011| Silencing of Hypoxia-Inducible Factor-1 Gene Attenuated Angiotensin II-Induced Renal Injury in Sprague-Dawley Rats | Although it has been shown that upregulation of hypoxia-inducible factor (HIF)-1α is protective in acute ischemic renal injury, long-term overactivation |
| December 01, 2010| Pathogenesis of Renal Injury in the Megabladder Mouse: A Genetic Model of Congenital Obstructive Nephropathy | Congenital obstructive nephropathy (CON) is the most common cause of chronic renal failure in children, often leading to end stage renal disease. |
| July 01, 2009   | Novel use of ultrasound to examine regional blood flow in the mouse kidney. | Conventional methods used for measuring regional renal blood flow, such as laser-Doppler flowmetry, are highly invasive, and each measurement is restr. |
| January 01, 2008| Monitoring kidney safety in drug development: Emerging technologies and their implications | Drug-induced kidney injury is a serious and not uncommon adverse event which needs to be considered during drug development. |