KIDNEYWEEK 2017

New Orleans, LA • Oct 31 - Nov 5

Abstract Categories

Acute Kidney Injury

001 AKI: Basic Basic studies on AKI pathophysiology in models ranging from cultured cells or subcellular reconstitution experiments to animal studies involving renal ischemia, cellular nucleotide depletion, oxidative injury, or hypoxia. Includes studies dealing with the cell and molecular biology, proteomics, and genomics of AKI.

002 AKI: Repair and Regeneration Basic studies focusing on mechanisms of repair from cell injury associated with AKI.

003 AKI: Clinical and Translational Clinical studies of AKI including epidemiology, outcomes, and clinical trials such as delayed function following transplantation. Includes clinical tubular disorders not mentioned above, toxic nephropathy, and any disease process resulting in AKI in the clinical setting.

Bioengineering and Informatics

101 Bioengineering and Informatics All aspects of bioengineering and informatics, high quality science which applies novel technologies to more traditional renal disciplines to advance our continuing commitment to improved patient care. Includes abstracts that cover the entire gamut of basic and applied bioengineering and informatics, from the molecular to the whole animal level and from ex-vivo modeling to clinical trials. Includes hemodynamics and fluid dynamics; local delivery of drugs, cells, genes, and chemicals; nanotechnology and sensors; bioinformatics; imaging; and advanced and innovative technologies.

Cell Biology

201 Cell Signaling, Oxidative Stress Studies of cell signaling and oxidative stress pathways in glomerular, tubulointerstitial, and vascular cells. Signals mediated by protein kinases or phosphatases, lipid mediators, and phospholipids—including metabolites of arachidonic acid through cyclooxygenases and lipooxygenases. Oxidative stress and redox signaling, generation of reactive oxygen species through mitochondria, NADPH oxidases, antioxidant enzymes, and transcription factors that regulate pro and antioxidant pathways. Signaling pathways regulated by glucose, advanced glycation end products, and free fatty acids. Cell-cell interaction signals, calcium, ion channels, and gap junctions.

202 Apoptosis, Proliferation, Autophagy, Cell Senescence, Cell Transformation Studies of ligands, receptors, metabolites, complement components, intracellular mediators, ER stress, cell cycle proteins, mitochondrial and nuclear DNA, proteins, lipids, enzymes, related to hypertrophy, contractility, proliferation, autophagy, apoptosis, necrosis, or cell transformation.

203 Growth Factors, Chemokines, Autacoids Studies of the regulation of expression, synthesis, release, binding, attachment, and sequestration by extracellular matrix proteins; mechanism of action including endocrine, autocrine, and paracrine effects.

204 Extracellular Matrix Biology, Fibrosis, Cell Adhesion Experimental studies related to the role of the extracellular matrix and its receptors in kidney diseases. Studies on the expression of components of the extracellular matrix and on assembly of higher order structures. In vivo and in vitro studies on the effect of extracellular matrix and matrix receptors on cell structure and function—including signal transduction pathways activated by integrins and other matrix receptors. Studies on renal fibrosis.

Chronic Kidney Disease (Non-Dialysis)

301 CKD: Risk Factors for Incidence and Progression Patient-based studies of CKD addressing traditional and novel risk factors for CKD incidence and progression.

302 CKD: Estimating Equations, Incidence, Prevalence, Special Populations Studies of CKD epidemiology in children and adults for the application and reliability of glomerular filtration rate estimating equations, with particular reference to population-specific results.

303 CKD: Epidemiology, Outcomes – Cardiovascular Population-based, observational studies on CKD epidemiology and cardiovascular events, morbidity, and mortality outcomes.

304 CKD: Epidemiology, Outcomes – Non-Cardiovascular Population-based, observational studies on non-cardiovascular CKD epidemiology, morbidity, and mortality outcomes.

305 CKD: Clinical Trials and Tubulointerstitial Disorders Interim or final results of interventional clinical (including non-randomized and non-controlled) trials of CKD.

306 CKD: Cognitive Dysfunction, Depression, Quality of Life Observational studies addressing cognitive dysfunction, psychiatric comorbidities, and ethics of CKD patient management—including depression, quality of life, and palliative care in CKD patients.

307 CKD: Health Services, Disparities, Prevention Studies on health and preventive services that involve CKD and their outcomes—including depression, quality of life, and palliative care in CKD patients.

308 Mechanisms of Tubulointerstitial Fibrosis Studies in cell and animal models that relate to AKI–CKD transition, interstitial fibrosis, capillary dropout, and paracrine signaling in the tubulointerstitium.

Abstract Categories

Developmental Biology and Inherited Kidney Diseases

401 Developmental Biology Experimental studies related to all aspects of embryology, fetal development, organogenesis, or related ontogeny.

402 Stem Cells Studies related to the generation, isolation, and manipulation of stem cells—including directed cell differentiation, mesenchymal stem cells, and applications for tissue repair, tissue engineering, and disease modeling.

403 Pediatric Nephrology Clinical, epidemiological, and management studies of pediatric diseases.

Diabetes

501 Diabetes Mellitus and Obesity: Basic – Experimental Studies using cell or animal models including studies of molecular and cell biology, biochemistry or pathology of glucose, hormonal, and metabolic actions, or other basic mechanisms that cause diabetes or diabetic complications or obesity and its complications. Includes in vivo human studies that characterize systems biologic (e.g., genetic, transcriptomic, epigenetic, metabolomic) alterations, or other pathophysiologic processes that mediate diabetes, obesity, and their complications.

502 Diabetes Mellitus and Obesity: Clinical Clinical studies of diabetes mellitus or obesity and their complications—including nephropathy and associated syndromes such as metabolic syndrome. Includes studies of epidemiology, natural history, pathology, biomarkers, pharmacology, clinical trials, and special issues related to ESRD in persons with diabetes or obesity.

503 Diabetes Mellitus and Obesity: Translational Studies using cell, animal models, and/or human samples that inform mechanisms underpinning renal pathology caused by obesity or type-1 or type-2 diabetes that could translate into to improved human health.

Dialysis

601 Standard Hemodialysis for ESRD Studies of dialysis adequacy and dose and their measurements—including modeling of urea, middle molecules, and other parameters. Studies of membranes, flux, solute transport, dialysis solutions, reuse, and anticoagulation.

602 Dialysis for AKI: Hemodialysis, CRRT, SLED, Others All aspects of dialysis therapy for AKI including novel approaches, novel technologies, and comparative and outcome studies.

603 Hemodialysis: Vascular Access Epidemiology, biology, surveillance, maintenance, and repair of dialysis vascular access—including clinical and outcome studies.

604 Home and Frequent Dialysis All aspects of home dialysis and frequent dialysis—including novel technologies, clinical studies, quality of life, outcomes, and financial aspects.

605 Dialysis: Anemia and Iron Metabolism Studies of anemia and iron metabolism in dialysis patients—including etiology, pathophysiology, treatment, and outcomes.

606 Dialysis: Epidemiology, Outcomes, Clinical Trials – Cardiovascular Studies on cardiovascular outcomes including morbidity and mortality related to chronic dialysis (either hemodialysis or peritoneal dialysis); clinical trials; population-based, observational studies and health services research. Includes comparative research between dialysis modalities, transplant, or other medical treatments. Includes interim reports from clinical trials in progress or other studies.

607 Dialysis: Epidemiology, Outcomes, Clinical Trials – Non-Cardiovascular Studies on non-cardiovascular outcomes including morbidity and mortality related to chronic dialysis (either hemodialysis or peritoneal dialysis); clinical trials, population-based, observational studies and health services research—including comparative research between dialysis modalities or other treatments. Includes comparisons between dialysis modalities, transplant or other medical treatments. Includes interim reports from clinical trials in progress or other studies.

608 Peritoneal Dialysis Clinical trials, population-based, observational studies, and health services research on PD methods, techniques, catheter placement, infectious and non-infectious complications, membrane function (biology and clinical), solute transport, and dialysis adequacy.

609 Dialysis: Palliative and End-of-Life Care Studies on palliative and end-of-life care—including physical and psychosocial symptom management, patient-provider communication, prognostication, ethical considerations, withdrawal of dialysis, and conservative therapy.

610 Dialysis: Infection All aspects of infection prevention, infection control, and infectious processes in the dialysis setting.

Fluid, Electrolytes, and Acid-Base

701 Acid-Base: Basic Studies of normal or abnormal transport of H+, ammonia/ammonium, bicarbonate, and other forms of acid-base equivalents. Regulation and expression of acid-base transporters such as Na+-H+ exchangers, Cl--HCO3- exchangers, Na+-HCO3- cotransporters, H+-ATPases.

Abstract Categories

Fluid, Electrolytes, and Acid-Base (cont.)

702 Water/Urea/Vasopressin, Organic Solutes Studies of normal or abnormal transport of water and urea. Regulation and expression of vasopressin receptors, water channels, and urea transporters. Studies of urine concentration and its regulation. Cell volume regulation and osmotic regulation of gene expression. Studies of normal or abnormal transport of organic solutes. Renal cell energy metabolism, amino acid metabolism, and ammoniagenesis.

703 Na+, K+, Cl- Basic Studies of normal or abnormal transport of Na+, K+, and Cl-. Regulation and expression of channels and transporters mediating transport of Na+, K+, and Cl-. Includes studies of protein sorting and epithelial biology.

704 Fluid, Electrolyte, Acid-Base Disorders Clinical studies of disorders of fluid, electrolyte, and acid-base balance—including hypovolemia, edematous disorders, hyponatremia, hypernatremia, hypokalemia, hyperkalemia, metabolic or respiratory acidosis, metabolic or respiratory alkalosis, and methods and goals of fluid resuscitation. Includes Mendelian diseases of electrolyte and acid-base balance.

Genetic Diseases of the Kidney

801 Cystic Kidney Diseases Studies on all aspects of inherited cystic kidney disease—including autosomal recessive and autosomal dominant polycystic kidney disease (ADPKD and ARPKD), nephronophthisis, medullary cystic kidney disease, and other cystic conditions. Includes clinical, genetic, cell biological, biochemical, and pathophysiological analysis of this group of disorders, employing human populations, animal models, and cellular or in vitro systems.

802 Non-Cystic Mendelian Diseases Studies on all aspects of non-cystic monogenic diseases and syndromes with renal or urogenital phenotypes. Includes clinical, genetic, cell biological, biochemical, and pathophysiological analysis of this group of disorders, employing human populations, animal models, and cellular or in vitro systems.

803 Genetic Epidemiology and Other Genetic Studies of Common Kidney Diseases Genetic studies of all aspects of complex traits, including nephrosclerosis/diabetic nephropathy/CKD, to identify and characterize genetic risk factors associated with these common disorders employing human populations and animal models.

Geriatric Nephrology

901 Geriatric Nephrology Basic, clinical, and health services research relevant to the field of geriatric nephrology. Specific focus areas are age-related changes in kidney structure and function; CKD epidemiology and outcomes in older adults; kidney transplant in older adults; management of older adults receiving chronic dialysis; AKI in the elderly; management of older adults with CKD; and advance care planning and end-of-life care in older adults with CKD.

Glomerular Disorders

1001 Glomerular: Basic/Experimental Immunology and Inflammation Basic/experimental works in immunology where immune mechanisms and immune-mediated renal disease are the primary focus. Basic/experimental works dealing with inflammatory systems as they relate to glomerular and interstitial diseases—including oxidants, enzymes, coagulation, growth factors, complement, angiostatic and angiogenic factors, and cytokines—that up- and down-regulate inflammatory events. Includes in vivo models of autoimmunity as well as basic and applied studies of immunoregulation, antibodies, antibody-mediated injury, cell mediated immunity, cytokines, and chemokines in the immune system and primary studies of the immune system as it relates to the kidney.

1002 Glomerular: Basic/Experimental Pathology Basic/experimental work focusing on aspects of cell, organ, and whole animal pathology where the focus is factors that regulate differentiation, cell injury, apoptosis, and other areas relevant to pathology.

1003 Glomerular: Cell Biology Basic studies of mesangial, epithelial, and endothelial cells of the glomerulus. Includes in vivo and in vitro studies of proteins that regulate the structural maintenance and sustained function of the glomerular filter.

1004 Clinical/Diagnostic Renal Pathology and Lab Medicine Studies dealing with diagnostic and prognostic anatomic renal pathology or with laboratory medicine procedures used to evaluate renal diseases. Includes transplant pathology.

1005 Clinical Glomerular Disorders Clinical and population studies that relate to the diagnosis and/or treatment of glomerular diseases, such as lupus nephritis, nephrotic syndrome, HIV/AIDS nephropathy, and hemolytic uremic syndrome/thrombotic thrombocytopenia.

Hypertension

1101 Hypertension: Basic and Experimental – Neural and Inflammatory Mechanisms Studies on the mechanisms and pathophysiology of hypertension involving neural control, neurotransmitters, the central/peripheral nervous system, inflammatory mediators, and innate/adaptive immune cells. Includes human, in vivo (animal), isolated organ, cellular, and subcellular experiments.

Abstract Categories

Hypertension (cont.)

1102 Hypertension: Basic and Experimental – Renal Causes and Consequences Studies on the mechanisms and pathophysiology of how the kidney contributes to hypertension and how hypertension leads to renal dysfunction and injury. Includes human, in vivo (animal), isolated organ, cellular, and subcellular experiments.

1103 Vascular Biology and Dysfunction Studies on the mechanisms, diagnosis, epidemiology, and clinical trials relating to vascular biology and vascular dysfunction in the context of BP and/or blood flow regulation. Includes human, in vivo (animal), isolated organ, cellular, and subcellular experiments.

1104 Hypertension: Clinical and Translational – Salt and Hypertension Studies on the mechanisms, pathophysiology, epidemiology, diagnosis, and management of salt-related hypertension—including salt-sensitive or salt-resistant hypertension in humans and animal models of salt-sensitive or salt-resistant hypertension.

1105 Hypertension: Clinical and Translational – Genetics and Epigenetics Studies on the mechanisms, pathophysiology, epidemiology, diagnosis, and management of genetic and epigenetic causes of hypertension in humans and animal models.

1106 Hypertension: Clinical and Translational – Secondary Causes Studies on the mechanisms, pathophysiology, epidemiology, diagnosis, management, and outcomes of hypertension due to secondary causes—including renovascular, endocrine, and hypertensive disorders of pregnancy in humans and animal models.

Divalent Ions: Physiology and Pathophysiology

1201 Mineral Disease: Ca/Mg/PO4 Clinical (epidemiological, human physiological, and interventional) and basic (in vitro and animal) research of normal tubular and whole body regulation of calcium, magnesium, and phosphorus homeostasis. Includes human, in vitro, and animal studies of diseases with abnormalities of calcium, magnesium, and phosphorus, their associations with clinical outcomes, and their treatment.

1202 Mineral Disease: Vitamin D, PTH, FGF-23, Klotho Clinical (epidemiological, human physiological, and interventional) and basic (in vitro and animal) research of PTH, 25(OH)D, $1,25(OH)_2D$, FGF-23, Klotho, and related hormones and their receptors, regulation of gene expression, physiologic and pharmacologic actions, and metabolism. Includes human, in vitro, and animal studies of diseases with abnormalities of calcium, magnesium, and phosphorus, their associations with clinical outcomes, and their treatment.

1203 Mineral Disease: CKD-Bone Basic and clinical studies on the diagnosis, therapy, complications, and outcomes of bone disease in CKD. Studies on the pathophysiology and etiology of bone disease using in vivo and in vitro animal and human studies. Includes treatment for the control and prevention of bone disease in CKD, dialysis, or transplant settings.

1204 Mineral Disease: Nephrolithiasis Studies on the metabolic, dietary, environmental, and genetic risk factors for nephrolithiasis. Chemistry of crystallization in urine, oxalate homeostasis, endogenous inhibitors of stone formation, and interactions between crystals and urothelium. Management of stones and therapies to reduce risk of recurrence. Includes clinical, animal, and in vitro studies.

1205 Vascular Calcification Studies of the mechanisms, diagnostics, epidemiology, and clinical trials relating to vascular calcification.

Nephrology Education

1301 Educational Research Methods to translate research into practical improvements in nephrology education, methods to evaluate the effectiveness of education in nephrology and novel educational tools in nephrology and related disciplines. Includes studies on assessing educational deficits, developing educational tools or programs, implementing educational programs, assessing obstacles to the success of education, and assessing outcomes and changes in practice following education. Also includes studies pertaining to the education of either patients or physicians (postgraduate education, fellowship training, and continuing education for physicians).

1302 Fellows and Residents Case Reports Clinical cases or pedigrees that demonstrate novel clinical findings, illustrate classic conditions in new or unusual ways, or illuminate and expand knowledge concerning physiology, cell biology, genetics, or molecular mechanisms. These case reports should reflect an understanding of the relevant science and are eligible for poster presentation and publication only.

Nutrition, Inflammation, and Metabolism

1401 Nutrition, Inflammation, Metabolism Basic and patient-based studies addressing the metabolic and physiologic responses to nutrients (amino acids, fatty acids, carbohydrates, minerals, vitamins) and how they interface with kidney disease and its treatment along with the etiology and nutritional and metabolic consequences of local or systemic inflammation. Nutrition and energy expenditure, obesity, body composition, adipokines; hormones; uric acid, metabolic syndrome; nutrition status, malnutrition, diet therapies, nutrient gene interaction; inflammation, anti-inflammatory therapies.

Abstract Categories

Patient Safety

1501 Patient Safety Studies on practices or interventions to improve patient safety—including clinical decision aids and systems to reduce the risk of adverse events in various care settings. Safety problems may encompass, but are not limited to, inappropriate medication prescribing or dosing for patients with advanced CKD, inadequate monitoring, failure to identify CKD, and inappropriate diagnostic tests.

Pharmacokinetics, Pharmacodynamics, and Pharmacogenetics

1601 Pharmacokinetics, Pharmacodynamics, Pharmacogenomics Basic/experimental or clinical/translational studies assessing drug absorption, distribution, elimination (including specific pathways of metabolism, transport, and organ excretion and genetic differences for these), and/or drug response. Studies characterizing effects of kidney disease and/or renal replacement therapy or other extracorporeal treatments on PK or PD. Genome-wide association studies to assess the inherited basis of inter-individual differences in drug response are also included in this category.

Transplantation

1701 Transplantation: Basic and Experimental Basic and experimental work using animal models (in vitro or in vivo) that focus on the following: (a) basic mechanisms of lymphocyte biology relevant to transplantation including T cell activation, costimulation, and memory cell development; (b) basic mechanisms of allograft or xenograft rejection, mechanisms of rejection of cell transplants including allorecognition, cell trafficking, humoral and cellular effector functions, and genetic analysis of rejecting organ; (c) novel immunotherapeutic agents; (d) stem cell biology relevant to transplantation; (e) experimental animal models of organ preservation; (f) models that focus on devising and evaluating approaches to induce, measure, and maintain immune tolerance to transplanted allogeneic or xenogeneic organs or tissues; and (g) models that focus on deciphering mechanisms of T and B cell tolerance to transplanted organs or tissues including deletion, regulation, and anergy.

1702 Transplantation: Clinical and Translational Human studies focusing on all aspects of clinical management of kidney transplant recipients including: (a) final or interim reports of clinical trials with immunosuppression or other treatment protocols including clinical trials of tolerance regimens; (b) pharmacology of immunosuppression; (c) studies of delivery of care and organ allocation including ethical considerations; (d) studies of graft function and survival outcomes, morbidity, mortality, quality of life issues, and cost of transplantation; (e) studies on outcomes, including morbidity and mortality, related to transplantation in population based or observational studies; (f) effects of risk factors including donor factors and organ donation issues; and (g) studies on the causes, diagnosis, and management of post-transplant complications including acute and chronic rejection, delayed graft function, and chronic allograft dysfunction, infections, and extrarenal complications of renal transplantation. Includes studies dealing with translational research or in vitro studies—including biomarker discovery and validation, and immunomonitoring of kidney transplant recipients.