

PLEASE READ THIS DOCUMENT CAREFULLY

SOME OF THE CATEGORIES HAVE CHANGED

Cell and Transport Physiology

Abstracts submitted to this category should focus on aspects of epithelial cell biology, cellular and molecular physiology and integrative physiology relevant to normal and abnormal fluid, electrolyte and acid-base homeostasis. Includes studies of genetic disorders of electrolyte balance and acid-base homeostasis.

001 ACID-BASE Studies of normal or abnormal transport of H⁺, 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). Includes studies of genetic disorders of acid-base homeostasis.

002 WATER/UREA/VASOPRESSIN Studies of normal or abnormal transport of water and urea. Regulation and expression of vasopressin receptors and of water channels and urea transporters. Studies of urine concentrating ability and its regulation. Includes clinical studies of disorders of tonicity.

003 INORGANIC IONS (NA, K, CL) Studies of normal or abnormal transport of Na⁺, K⁺, and Cl⁻. Regulation and expression of channels and transporters mediating inorganic ion transport. Includes studies of genetic disorders of electrolyte balance.

004 ORGANIC SOLUTES/OSMOLYTES/ RENAL METABOLISM Studies of normal or abnormal transport of organic solutes. Regulation and expression of organic solute transporters. Cell volume regulation and osmotic regulation of gene expression. Renal cell energy metabolism, amino acid metabolism, and ammoniogenesis.

005 PROTEIN SORTING/EPITHELIAL POLARITY Studies of protein synthesis, intracellular protein trafficking, membrane protein distribution, endocytosis and exocytosis in epithelial cells. Generation and maintenance of cell polarity, and disruption of epithelial polarity in disease states.

Development/Cystic and Other Inherited Kidney Diseases/Genetics of Common Kidney Diseases/Systems Biology

Abstracts submitted to this category should focus on the genetics and developmental biology of the normal kidney, on studies of basic and clinical characteristics of inherited kidney diseases, the genetic epidemiology and gene mapping of common kidney diseases or genomic/proteomic/systems biology approaches to understand kidney disease pathogenesis. Studies may be in humans, animal models, or in vitro. Exceptions include studies examining genetic disorders of fluid, electrolyte and acid-base homeostasis. These studies should be submitted to Categories 001–005, as appropriate.

101 DEVELOPMENTAL BIOLOGY/STEM CELLS Experimental studies related to all aspects of fetal development, organogenesis or related ontogeny, cell differentiation and cell fate. Includes work on the identification and manipulation of renal progenitor or stem cells.

102 INHERITED CYSTIC KIDNEY DISEASES AND OTHER MENDELIAN SYNDROMES Studies on all aspects of inherited cystic kidney disease (autosomal recessive and dominant polycystic kidney disease, nephronophthisis, medullary cystic kidney disease, and others), including those on the molecular genetics, cell biology, biochemistry, pathophysiology and clinical features of this group of disorders. Studies on relevant aspects of tubular morphogenesis may be included. Includes reports of animal models and in vitro systems (animal and human). Characterization of the natural history of other monogenic diseases, description of syndromes with renal or urogenital phenotypes, genetic epidemiology and population genetics, prenatal and perinatal genetics and genetic counseling.

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103 GENETIC EPIDEMIOLOGY/GENE MAPPING-COMMON KIDNEY DISEASES (COMPLEX TRAITS) Studies of linkage and association, QTL mapping, physical

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mapping and gene identification, mutation detection, SNP analysis, gene structure/function, chromosomal abnormalities/cytogenetics, “genetical genomics,” and other novel gene mapping methodologies for complex traits (including nephrosclerosis/diabetic nephropathy/CKD). Includes studies of humans and animal models.

104 GENOMICS/PROTEOMICS/SYSTEMS BIOLOGY OF RENAL DISEASE Studies can be in any species and focus on biomarker discovery, higher order genome organization analysis, comparative genomics and evolutionary relationships or use high throughput methodologies such as large scale genome-wide expression profiling of mRNA transcripts or proteins, genome-wide protein interaction mapping and novel statistical and mathematical methods for large dataset analyses.

Mediators, Signaling, Cell Growth, Apoptosis, and Neoplasia

Abstracts submitted to Categories 201–203 should be concerned with the mechanism of action of ligands, receptors, or intracellular mediators. Studies can address normal physiological or pathophysiological states, in vivo or in vitro, so long as the focus of the study is the mechanism of action of the ligand, receptor, or intracellular mediator in the process. Exceptions include studies examining the mechanisms of action associated with regulation of acid-base transporters, water or urea transport, inorganic ion (Na, K, Cl) transport, organic solute transport or protein sorting and epithelial polarity. These studies should be submitted to Categories 001–005, as appropriate. If the study addresses issues other than the mechanisms of action of a ligand, receptor or intracellular mediator, it should be submitted to the appropriate physiological or pathophysiological state category, such as acute kidney injury (Category 401), hypertension (Category 301), immune system function (Category 501), etc. Abstracts submitted to Category 204 should be concerned with the regulation of cell growth, including hypertrophy, hyperplasia, neoplasia, and apoptosis. Studies examining the regulation and role of growth factors, intracellular mediators and nuclear proteins in these growth processes are all appropriate for Category 204.

201 HORMONES/PEPTIDES/GROWTH FACTORS

Studies of the ligand itself including steroids, thyroid hormones, hypothalamic/pituitary hormones and peptides, natriuretic peptides, catecholamines, neuropeptides and neurotransmitters. Endothelin, nitric oxide, or other vasoactive endothelial factors should be submitted to Categories 301 or 303, as appropriate. Erythropoietin and

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related factors should be submitted to Category 705, as appropriate. Studies directly related to the regulation of cell growth or apoptosis should be submitted to Cat. 204.

202 LIPID MEDIATORS/EICOSANOIDS Studies of lipid mediators, including metabolites of arachidonic acid, sphingolipids and their receptors.

203 CELL SIGNALING Studies of cellular signaling pathways, including those mediated by protein kinases, G proteins, adapter molecules and other non-lipid-mediated pathways. Signaling directly relevant to control of the cell cycle or apoptosis should be submitted to Category 204. Signaling by extracellular matrix receptors should be submitted to Category 504.

204 CELL GROWTH, CELL PROLIFERATION, APOPTOSIS, AND NEOPLASIA Studies of ligands, receptors, intracellular mediators or cell cycle proteins associated with normal or reparative hyperplasia, hypertrophy, neoplastic growth or cell death.

Hemodynamics, Hypertension, and Vascular Regulation

Abstracts submitted to this category may be studies in humans, animal models, or in vitro experiments. Studies in specific disorders (e.g., diabetic renal disease or nephrotic syndrome) are suitable only if the chief focus is the regulation or pathophysiology of blood pressure or blood flow.

301 HYPERTENSION: BASIC Studies on the mechanisms and pathophysiology of hypertension, including circulating factors, neural control and smooth muscle physiology. In vivo (animal), isolated organ, cellular and subcellular experiments are equally suitable.

302 HYPERTENSION: CLINICAL Studies on the diagnosis, management, and outcome of hypertension, and pharmacology of antihypertensive agents. Includes renovascular, essential, and endocrine hypertension, as well as hypertensive disorders of pregnancy.

303 VASCULAR PHYSIOLOGY/RENAL HEMODYNAMICS Studies of regulatory mechanisms involved in the structural or functional homeostasis of the circulatory

system using animal or human material.

304 VASCULAR PATHOLOGY Studies on the origins and/or mechanisms of structural or functional abnormalities of the circulatory system using animal or human material.

Pathophysiology of Kidney Disease

Abstracts submitted to this category are generally limited to in vitro (cellular/subcellular) experiments, isolated organ studies, or animal models. Renal pathophysiology in human patients may be suitable if the focus is mechanism of the disease, rather than a treatment or diagnostic method of benefit to the patient.

401 ACUTE KIDNEY INJURY: BASIC Basic studies on the pathophysiology of AKI in models ranging from cultured cells or subcellular reconstitution experiments to animal or human studies involving renal ischemia, cellular nucleotide depletion, oxidative injury, or hypoxia. Included in this category will be abstracts dealing with the cell and molecular biology, proteomics, and genomics of AKI.

402 DIABETES MELLITUS: BASIC Studies using in vivo and in vitro animal models, including cell biology or biochemistry of hyperglycemia, insulin or IGF actions, or other molecular mechanisms that cause diabetes or diabetic complications. May include human studies that characterize genetic or other pathophysiologic processes that mediate diabetes and its complications. Genetic epidemiology and gene mapping studies should be submitted to Category 104.

403 CHRONIC KIDNEY DISEASE: BASIC Basic studies of CKD pathophysiology using cell or animal models or human studies that define molecular mechanisms involved in initiation and/or progression of chronic nephron injury, excluding diabetic nephropathy (see Category 402). Included in this category will be abstracts dealing with the cell and molecular biology, proteomics and genomics of CKD. Genetic epidemiology and gene mapping studies should be submitted to Category 104.

Renal Pathology Abstracts submitted to this category include basic/experimental work dealing with the biology of disease pathogenesis, including basic biological

mechanisms, cell and whole animal studies. This should include antibodies and antibody-mediated injury, cell-mediated mechanisms and immune cell-mediated injury, cytokines that regulate the immune system and primary studies of the immune system as it relates to the kidney. These categories also include the biology and pathophysiology of the extracellular matrix and experimental and clinical pathology.

501 BASIC/EXPERIMENTAL IMMUNOLOGY

Basic/experimental work in immunology where immune mechanisms and immune-mediated renal disease are the primary focus. This 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.

502 BASIC/EXPERIMENTAL INFLAMMATION Basic/experimental work dealing with inflammatory systems, including oxidants, enzymes, coagulation, growth factors, complement, angiostatic and angiogenic factors and cytokines that up and down-regulate inflammatory events.

503 BASIC/EXPERIMENTAL PATHOLOGY Basic/experimental work focusing on aspects of cell, organ, and whole animal pathology where the focus is on growth factors and factors that regulate differentiation, cell injury, apoptosis and other areas relevant to pathology.

504 EXTRACELLULAR MATRIX BIOLOGY, FIBROSIS, AND CELL ADHESION

Experimental studies related to the role of the extracellular matrix and its receptors in kidney development and function. 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.

505 GLOMERULAR CELL BIOLOGY Basic experimental and translational studies dealing with the mechanistic role of glomerular cells (podocytes, endothelial and mesangial cells) in normal glomerular biology and in the pathogenesis of nephrotic

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syndrome and progressive glomerular diseases. In vivo and in vitro studies of proteins that regulate the structural maintenance and sustained function of the glomerular filter.

506 CLINICAL/DIAGNOSTIC RENAL PATHOLOGY AND LABORATORY MEDICINE
Studies dealing with diagnostic and prognostic anatomic renal pathology or with laboratory medicine procedures used to evaluate renal diseases, excluding transplant pathology (Categories 601–604). Abstracts dealing with a specific disease or pathologic process may be submitted in this category or in Categories 102, 103, 302, 503–505, 901 or 904.

Transplantation

Abstracts submitted to this category may deal broadly or specifically with all aspects of renal transplantation, including items dealing with related ethical issues. Pathophysiologic aspects of native renal function associated with transplantation of non-renal organs may be better suited to Categories 901–907 or 401–403.

601 TRANSPLANTATION IMMUNOBIOLOGY, OTHER THAN TOLERANCE Basic experimental work using animal models (in vitro or in vivo) or in vitro human studies that focus on the following: A) basic mechanisms of lymphocyte biology relevant to transplantation (including T cell activation, costimulation, 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, genetic analysis of rejecting organ), C) novel immunotherapeutic agents; immunology and pharmacology of immunosuppression (animal models and in vitro studies), D) stem cell biology relevant to transplantation, E) experimental animal models of organ preservation.

Studies related to tolerance in animals or humans should be submitted to Category 602. Studies focusing on clinical efficacy of novel immunosuppressive regimens in humans should be submitted to Category 603. Studies limited to nephrotoxicity of specific drugs are generally better suited to Category 604.

602 TRANSPLANTATION TOLERANCE, ANIMAL MODELS AND HUMANS Basic experimental work using animal models or humans that focus on A) devising and evaluating approaches to induce, measure and maintain immune tolerance to

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transplanted allogeneic or xenogeneic organs or tissues (including clinical trials of tolerance regimens in humans), B) deciphering mechanisms of T and B cell tolerance to transplanted organs or tissues in animals or humans (including deletion, regulation, and anergy).

603 EPIDEMIOLOGY, OUTCOMES, CLINICAL TRIALS, AND HEALTH SERVICES RESEARCH Final or interim reports of clinical trials with immunosuppression or other treatment protocols, studies of graft function and survival outcomes, morbidity, mortality, quality of life issues and cost of transplantation. Studies on outcomes, including morbidity and mortality, related to transplantation in population based or observational studies. Effects of risk factors including donor factors and organ donation issues.

604 ALLOGRAFT DYSFUNCTION AND COMPLICATIONS 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. Human studies and animal and in vitro models can be submitted to this category.

Dialysis Abstracts submitted to this category should be concerned with the effects of dialysis or the dialysis process itself, including studies dealing with related ethical issues. Do not submit abstracts to this category simply because they were done on dialysis patients, if the point of the study is the underlying disease process. Human, animal and in vitro studies are all suitable in the dialysis section.

701 HEMODIALYSIS AND OTHER RENAL REPLACEMENT THERAPIES: METHODS, ACCESS, AND ADEQUACY Studies of methods of hemodialysis and other extracorporeal therapies, including hemofiltration and sorbents. 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, anticoagulation and frequency.

702 HEMODIALYSIS: VASCULAR ACCESS Studies of types, surveillance, maintenance and repair of vascular access, including stenosis, thrombosis and

infection.

703 PERITONEAL DIALYSIS: METHODS, ACCESS, AND ADEQUACY Studies of peritoneal dialysis methods and peritoneal dialysis access, including PD modality selection, dialysis solutions, catheter placement techniques and treatment of infection and non-infection-related complications. Studies of dialysis adequacy including evaluations of membrane function, solute transport and any clinical outcome trials, completed or in progress.

704 INFLAMMATION AND OXIDATION Studies of inflammation and/or oxidation related to risk factors, assessment, interventions, and outcomes. Complications of vascular access should be submitted to Category 702.

705 HEMODIALYSIS: ANEMIA, MALNUTRITION, AND METABOLISM Studies of anemia, malnutrition and metabolism in dialysis patients, including etiology, pathophysiology and treatment.

706 EPIDEMIOLOGY, OUTCOMES, AND CLINICAL TRIALS: CARDIOVASCULAR Studies on cardiovascular outcomes, including morbidity and mortality, related to chronic dialysis (either hemodialysis or peritoneal dialysis) in population-based or observational studies or clinical trials. Interim reports from clinical trials in progress or other studies may also be submitted.

707 EPIDEMIOLOGY, OUTCOMES, AND CLINICAL TRIALS: NON-CARDIOVASCULAR Studies on non-cardiovascular outcomes, including morbidity and mortality, related to chronic dialysis (either hemodialysis or peritoneal dialysis) in population-based or observational studies or clinical trials. Interim reports from clinical trials in progress or other studies may also be submitted. Includes comparisons between dialysis and transplant or other renal replacement therapies and studies of non-cardiovascular complications of dialysis that are not associated with inflammation or oxidation (Category 704). This category also includes health services studies examining outcomes such as quality of care, resource utilization and cost, as well as studies on ethical issues in dialysis.

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Mineral Metabolism

Abstracts submitted to this category may be studies in humans, animal models, or in vitro experiments. Studies of calcium as an intracellular signal may be better suited to Categories 203 (for renal cell biology) or 301 (for smooth muscle biology).

801 BONE DISEASE Clinical and basic studies on the diagnosis, therapy, and complications of bone disease in humans. Studies on the pathophysiology and etiology of bone disease using in vivo and in vitro animal and human studies. Includes adjunct treatment for the control or prevention of bone disease in CKD, dialysis, or transplant settings.

802 STONE DISEASE Studies on the metabolic, dietary, environmental, and genetic risk factors for nephrolithiasis. Chemistry of crystallization in urine, endogenous inhibitors of stone formation, and interactions between crystals and urothelium. Management of stones and therapies to reduce risk. Includes clinical, animal, and in vitro studies.

803 CALCIUM/MAGNESIUM/PHOSPHORUS In vivo and in vitro studies of regulation of calcium, magnesium, and phosphorus. Includes Na-Pi cotransport, sulfate and related anion transport, oxalate homeostasis, and regulation of whole body calcium flux/stores/receptors.

804 PARATHYROID HORMONE/VITAMIN D/ PHOSPHATONINS Studies of normal and disordered function and growth of parathyroid glands. Parathyroid hormone, vitamin D and related calcitropic hormones and their receptors, regulation of gene expression, physiologic and pharmacologic actions and metabolism.

Clinical Nephrology

Abstracts submitted to this category should concern the diagnosis, management, epidemiology, or socioeconomics of patients. Do not submit to these categories studies performed in animal models or in vitro experiments not directly related to clinical nephrology.

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901 CHRONIC KIDNEY DISEASE AND ITS COMPLICATIONS Patient-based studies of chronic kidney disease addressing traditional and non-traditional determinants of progression, and the evaluation and treatment of co-morbidities such as those related to cardiovascular disease, growth and quality of life. Includes studies of inflammation as a co-morbidity for progression of chronic kidney disease.

902 CHRONIC KIDNEY DISEASE: ESTIMATING EQUATIONS, INCIDENCE, PREVALENCE, AND SPECIAL POPULATIONS Studies of the epidemiology of chronic kidney disease in children and adults and the application and reliability of glomerular filtration rate estimating equations, with particular reference to population-specific results.

903 CHRONIC KIDNEY DISEASE: OUTCOMES, CLINICAL TRIALS, HEALTH SERVICES RESEARCH, AND ETHICS. Studies on outcomes, including morbidity and mortality, related to chronic kidney disease or progression of kidney disease in population-based, observational studies or clinical trials. Interim reports from clinical trials in progress or other studies may also be submitted. Studies on health services that involve chronic kidney disease and their outcomes including quality of life, resource utilization, and cost. Studies on ethical issues in chronic kidney disease. See other categories for other kidney/urological disorders (Category 907), dialysis (Categories 707-708), and transplantation (Category 603).

904 GLOMERULAR DISORDERS Clinical studies, excluding immunology of disorders of glomerular function. Includes most glomerulonephritides, lupus nephritis, nephrotic syndrome, HIV/AIDS nephropathy, and hemolytic uremic syndrome/thrombotic thrombocytopenic purpura. See Category 504 for matrix/cell-matrix interactions and fibrosis.

905 ELECTROLYTE AND ACID-BASE DISORDERS: Clinical studies of abnormalities in electrolyte and acid-base homeostasis in patients with normal kidney function and CKD.

906 DIABETES MELLITUS: CLINICAL Clinical studies of diabetes mellitus and its complications, including nephropathy, and associated syndromes, including metabolic

syndrome.

907 ACUTE KIDNEY INJURY: CLINICAL Clinical studies of acute kidney injury including epidemiology, outcomes and clinical trials including studies of AKI or delayed function following transplantation. Also includes clinical tubular disorders not mentioned above, toxic nephropathy, and any disease process resulting in acute kidney injury in the clinical setting.

908 OTHER KIDNEY/UROLOGICAL DISORDERS (not Chronic Kidney Disease) INCLUDING EPIDEMIOLOGY, OUTCOMES, CLINICAL TRIALS, HEALTH SERVICES RESEARCH, AND ETHICS Studies on outcomes, including morbidity and mortality, using population-based, observational studies or clinical trials related to kidney and urological disorders that are not encompassed within the acute or chronic kidney disease categories. Examples may include obstructive uropathy or renal cell carcinoma. Interim reports from clinical trials in progress or other studies may also be submitted. Studies on ethical issues and health services that involve topics not appropriate for the acute or chronic kidney disease categories and their outcomes including quality of life, resource utilization, and cost. See other categories for chronic kidney disease (Category 903), dialysis (Categories 707-708), and transplantation (Category 603).

Nephrology Education Abstracts submitted to this category should be concerned with research on physician and patient education with a focus on nephrology education. Includes methods to translate research into practical improvements in nephrology education.

1001 EDUCATIONAL RESEARCH

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. Studies may pertain to the education of either patients or physicians (postgraduate education, fellowship training and continuing education for physicians).