

2009 Abstract Review Categories

Red Cell Physiology and Disorders

Abstracts submitted to categories 101-112 will generally exclude studies of transplantation for red cell disorders and anemias, regardless of cause (see categories 721 or 722). Studies of erythroid differentiation and erythropoiesis should be submitted to categories 501-507.

101. Red Cell Erythropoiesis Structure and Function, Metabolism, and Survival (Including Iron)
Includes clinical and basic studies of normal or abnormal RBC membranes, proteins, and enzymes. Includes clinical and basic studies of anemia caused by systemic disease, red cell underproduction, and red cell overproduction. Includes anemia of the elderly, pathophysiology of anemia of chronic disease and inflammation (not related to perturbed iron metabolism), anemia of malaria, hemolytic anemia associated with paroxysmal nocturnal hemoglobinuria, other congenital anemias that do not lead to marrow failure. Includes physiology, pathophysiology, and management of all nutrition deficiencies excluding iron (see category 102). Studies of autoimmune hemolytic anemia (AIHA) are appropriate here, but consider also lymphocyte biology (203) or transfusion medicine (401) for some studies of immunodiagnosis, immunophenotyping, or immunotherapy in AIHA.
102. Regulation of Iron Metabolism
Includes physiology, pathophysiology, and management of the regulation of iron uptake, iron-dependent protein synthesis, and intrinsic disorders of heme synthesis. This category includes the genetics of iron overload syndromes, as well as the evaluation or treatment of hemochromatosis. Studies of the pathobiology, diagnosis, and treatment of iron deficiency are also appropriate.
111. Hemoglobinopathies, excluding Thalassemia
Includes clinical and basic studies of sickle cell disease and sickle thalassemia, as well as new or known hemoglobinopathies. Also includes post-translational modulation of normal or abnormal hemoglobins.
112. Thalassemia and Globin Gene Regulation
Includes clinical and basic studies of alpha or beta thalassemia, persistence of hemoglobin F and investigation of control mechanisms of both normal or abnormal globin gene transcription.

Leukocytes, Inflammation and Immunology

Abstracts submitted to categories 201-203 will generally exclude proliferation or differentiation of leukocytes and their precursors (see categories 501-507), leukemias (categories 601-615, 631, 632), post-transplantation lymphoproliferative disorders, GVHD/GVL activity and lymphocyte depletion (in vivo or in vitro) in stem cell processing (categories 701-711).

201. Granulocytes, Monocytes and Macrophages
Includes clinical and basic studies of normal or abnormal neutrophils or their precursors, monocytes, eosinophils, basophils or mast cells. Also includes some clinical, but primarily basic studies of all humoral and cell-surface molecules which modulate chemotaxis, phagocytic function or other inflammatory response to injury and infection. See also category 203 for interleukins, interferons and other lymphokines. Generally excludes growth factor therapy of neutropenias (see category 504) and transplantation or gene therapy of leukocyte disorders (see categories 701-733, 801). Studies of CGD, Gaucher's disease or autoimmune neutropenias are appropriate here or in category 202 if the focus is on immunocompromised host infections.
203. Lymphocytes, Lymphocyte Activation, and Immunodeficiency, Including HIV and Other Infections
Includes clinical and basic studies of morphology, developmental biology and function of B and T cells, natural killer cells, dendritic cells, other immune active cells, antigen presentation or antibody production. Also includes interleukins, interferons, and related lymphokines which modulate immune cell function. Generally excludes paraproteinemias, dyscrasias, and amyloidosis (see categories 641-642 and 651-653). Studies of immune dysfunction intrinsic to hematologic malignancies may be better suited to categories 611-642, but include here studies of infectious complications of drug-induced myelotoxicity, including chemotherapy of hematologic malignancy or solid tumors

Hemostasis, Thrombosis and Vascular Wall Biology

301. Platelet Activation and Biochemistry
Includes primarily basic studies of platelet activation, including signal transduction and gene expression. Also includes basic studies of biochemical or morphological determinants of platelet function. May include some clinical studies of abnormal platelet activation, if the focus is on molecular or cellular processes, and in vitro clinical studies, such as development of diagnostic platelet function tests.
302. Vascular Wall Biology, Endothelial Progenitor Cells and Platelet Adhesion
Includes clinical and basic studies of angiogenesis, ontogeny, morphology, molecular biology or physiology of endothelium, endothelial progenitor cells, hemangioblasts or blood vessels, or interaction with platelets or clotting factors. Includes expression, regulation or characterization of platelet adhesion molecules, von Willebrand factor, or structural proteins. Generally excludes clinical thrombosis (see categories 331-332), unless the focus is on molecular or cellular processes. Some studies on vascular interaction with leukocytes or other inflammatory mediators may be better suited to category 201.
311. Disorders of Platelet Number or Function
Includes primarily clinical studies of thrombocytopenia, including autoimmune, alloimmune, infectious and drug-related causes as well as intrinsic and secondary disorders of platelet dysfunction. Includes ITP and TTP. Studies of megakaryopoiesis are better suited to category 501 and myeloproliferative disorders leading to abnormal platelet count are generally better suited to category 634.

321. **Blood Coagulation and Fibrinolytic Factors**
Includes primarily basic studies of all clotting factors, fibrinolytic proteins, calcium, lipids, and related molecules which take part in blood coagulation or fibrinolysis as well as enzymes or proteases involved in their synthesis or degradation. Also includes gene expression and regulation. May include some in vitro clinical studies, such as diagnostic assay methods or development of laboratory tests for coagulopathy.
322. **Disorders of Coagulation or Fibrinolysis**
Includes primarily clinical studies of disorders of coagulation, von Willebrand's disease or related bleeding diatheses. Excludes abnormal bleeding due to thrombocytopenia or platelet dysfunction. Studies of processing or handling of fractionated blood or plasma components used to treat hemophilia or coagulopathy may be better suited to category 401.
331. **Pathophysiology of Thrombosis**
Includes primarily clinical studies of thrombosis or hypercoagulability. May include some in vitro studies, such as development of laboratory tests for hypercoagulability.
332. **Antithrombotic Therapy**
Includes clinical studies of anticoagulants, antiplatelet agents, or thrombolytic agents. May include some in vitro studies, such as development of laboratory tests for monitoring anticoagulant therapy.

Transfusion Medicine

401. **Basic Science and Clinical Practice in Blood Transfusion**
Includes clinical and basic studies of collection, handling, storage, or administration of blood or blood components. Also includes RBC or platelet antigen testing, prevention/detection/treatment of blood-borne infection, complications, and cost analysis. Generally excludes HIV infection, except screening or prevention. Also excludes stem cell processing for transplantation (see category 711).

Hematopoiesis

Abstracts submitted to categories 501-507 should have as their primary focus cellular and molecular events involved in normal and reconstitutive hematopoiesis. Studies of similar mechanisms in the context of neoplastic transformation should be submitted to categories 601-603.

501. **Hematopoietic Stem and Progenitor Biology**
Cellular and molecular biology of all hematopoietic and non-hematopoietic stem cells, including their ability to differentiate to cell lineages belonging to various somatic tissues. Excludes preclinical or clinical transplantation-related uses of stem cell technology and processing (see category 711), mesenchymal stem cells (see category 506), and malignant stem cells (see category 507).
503. **Hematopoiesis - Regulation of Gene Transcription**
Includes only basic studies at the level of genes, promoters or transcription factors which regulate hematopoietic cell proliferation or differentiation.
504. **Hematopoiesis - Cytokines, Signal Transduction, Apoptosis, and Cell Cycle Regulation**
Includes studies dealing with hematopoietic growth factor activation, signaling intermediates and their targeting genes, including structural studies of the cytokines and cytokine receptors themselves. Also includes studies of clinical efficacy of growth factor analogues. Includes any cellular event that initiates, mediates, or promotes differentiation or phases of the cell cycle, including commitment to and execution of apoptosis.
506. **Hematopoiesis - Microenvironment, Cell Adhesion and Mesenchymal Stem Cells**
Includes basic and possibly some in vivo studies of stromal cells or any cell surface molecules that participate in modulation of differentiating hematopoietic progenitors in situ or in vitro. Also includes studies of mesenchymal cells, their characterization, in vivo and in vitro biology, transplantability, and interaction with hematopoietic stem cells.
507. **Hematopoiesis – Malignant Stem and Progenitor Cells**
Includes only basic studies of malignant stem and progenitor cells.
508. **Bone Marrow Failure**
Focuses on clinical and basic studies of hematopoietic cell underproduction including severe aplastic anemia, Fanconi anemia, Diamond-Blackfan anemia, Dyskeratosis congenital, Schwachman Diamond syndrome, and bone marrow failure associated with paroxysmal nocturnal hemoglobinuria.

Hematologic Malignancy

Abstracts submitted to categories 601-653 will generally exclude studies of cellular differentiation, dedifferentiation, cell cycle and apoptosis, unless applicable to oncogenesis or malignancy therapy/recovery. Transplantation for neoplasia or premalignant conditions (any location) should be submitted to categories 501-507.

601. **Chromosomal Rearrangements and DNA Repair**
Includes primarily basic studies of chromosome-level mechanisms and abnormalities involved in oncogenesis, DNA repair, and genomic instability. Generally excludes clinical cytogenetics, in situ hybridization and molecular genetics for prognosis or diagnosis (see category 611).
602. **Disordered Gene Expression in Hematologic Malignancy including Disordered Epigenetic Regulation**
Includes functional studies of transcription factors and altered gene expression patterns involved in oncogenesis. Includes disordered epigenetic regulation and epigenomics. May include leukemias, lymphomas, lymphoproliferative disorders, and other

- malignant or premalignant conditions. Generally excludes transcription regulation in hematopoiesis, normal differentiation, and ontogeny (see categories 501-507).
603. Oncogenes and Tumor Suppressors
Includes primarily basic studies of specific oncogenes, tumor suppressors, or related loci in oncogenesis. Includes non-transcription factor oncogenes, knockout and deficient tumor suppressor gene models. May include leukemias, lymphomas, lymphoproliferative disorders, and other malignant or premalignant conditions. Generally excludes oncogenes and tumor suppressor gene expression in hematopoiesis, normal differentiation, and ontogeny (see categories 501-507).
604. Molecular Pharmacology, Drug Resistance
Includes clinical and basic studies of interactions of therapeutic agents, potential agents, their receptors, binding sites and ligands. Also includes pharmacokinetics, drug transport, metabolism and P-glycoprotein expression and function.
611. Leukemias - Biology, Cytogenetics and Molecular Markers in Diagnosis and Prognosis
Includes in vitro and clinical correlation studies of karyotype, biochemical, histochemical, or morphologic markers in acute or chronic leukemias. May also include minimal residual detection and preclinical or developmental studies of markers intended for eventual application to diagnosis and prognosis.
612. Acute Lymphoblastic Leukemia – Biology and Pathophysiology
Includes primarily clinical studies of epidemiology, complications, follow-up, quality of life, and socioeconomic aspects of acute lymphocytic leukemias. May also include some studies of acute leukemia pathophysiology (systemic, cellular, or molecular) not covered in categories 601-604.
613. Acute Myeloid Leukemia – Biology and Pathophysiology
Includes primarily clinical studies of epidemiology, complications, follow-up, quality of life, and socioeconomic aspects of acute myelogenous leukemias. May also include some studies of acute leukemia pathophysiology (systemic, cellular, or molecular) not covered in categories 601-604.
614. Acute Lymphoblastic Leukemia - Therapy, excluding Transplantation
Includes clinical and animal model treatment using drug therapy, biological agents, immunotherapy, and vaccine development. For comparative trials of treatment regimens versus transplantation, see categories 731-733.
615. Acute Myeloid Leukemia - Therapy, excluding Transplantation
Includes clinical and animal model treatment using drug therapy, biological agents, immunotherapy, and vaccine development. For comparative trials of treatment regimens versus transplantation, see categories 731-733.
621. Hodgkin's Lymphoma – Biology, excluding Therapy
Includes clinical and basic studies of diagnosis, prognosis (especially lymphoma-specific markers), epidemiology, complications, follow-up, quality of life and socioeconomic aspects of Hodgkin's lymphoma. Also includes some studies of Hodgkin's Disease pathophysiology (systemic, cellular, or molecular) not covered in categories 601-604.
622. Non-Hodgkin's Lymphoma – Biology, excluding Therapy
Includes clinical and basic studies of diagnosis, prognosis (especially lymphoma-specific markers), epidemiology, complications, follow-up, quality of life, and socioeconomic aspects of non-Hodgkin's lymphoma. Also includes some studies of NHL pathophysiology (systemic, cellular, or molecular) not covered in categories 601-604.
623. Lymphoma: Chemotherapy, excluding Pre-Clinical Models
Includes clinical treatment using drug therapy. Excludes transplantation. For comparative trials of treatment regimens versus transplantation, see categories 731-733.
624. Lymphoma: Therapy with Biologic Agents, excluding Pre-Clinical Models
Includes clinical treatment using biological agents, immunotherapy, and vaccine development, alone or in combination with chemotherapy. Excludes transplantation. For comparative trials of treatment regimens versus transplantation, see categories 731-733.
625. Lymphoma: Pre-Clinical – Chemotherapy and Biologic Agents
Includes animal models using drugs, biologic agents, immunotherapy, and vaccine development.
631. Chronic Myeloid Leukemia – Biology and Pathophysiology excluding Therapy
Includes basic studies of any aspect of CML, including pre-clinical and animal models of drug therapy, biological agents, immunotherapy and vaccine development as well as pathophysiology at cellular or molecular levels.
632. Chronic Myeloid Leukemia – Therapy
including diagnosis, prognosis, therapy, epidemiology, complications, follow-up, quality of life, and socioeconomic aspects. For comparative trials of treatment regimens versus transplantation, see categories 731-733.
633. Myelodysplastic Syndromes
Includes all clinical and basic studies of myelodysplastic syndromes, including RAEB and CMML: diagnosis, prognosis, epidemiology, complications, follow-up, quality of life, socioeconomic aspects, vaccines and treatment. For comparative trials of treatment regimens versus transplantation, see categories 731-733.
634. Myeloproliferative Syndromes
Includes all clinical and basic studies of myeloproliferative syndromes, including myelofibrosis, essential thrombocythemia, and polycythemia vera: diagnosis, prognosis, epidemiology, complications, follow-up, quality of life, socioeconomic aspects, vaccines and treatment. For comparative trials of treatment regimens versus transplantation, see categories 731-733.
641. CLL - Biology and Pathophysiology, excluding Therapy
Includes clinical and basic studies of diagnosis, prognosis (including CLL-specific markers), epidemiology, complications, follow-up, quality of life, and socioeconomic aspects of chronic lymphocytic leukemia, hairy cell leukemia, paraproteinemias, dyscrasias, or amyloidosis. May also include some studies of pathophysiology (systemic, cellular or molecular) not covered in categories 601-604.

642. CLL - Therapy, excluding Transplantation
Includes clinical and animal model treatment using drug therapy, biological agents, immunotherapy, and vaccine development. For comparative trials of treatment regimens versus transplantation, see categories 731-733.
651. Myeloma - Biology and Pathophysiology, excluding Therapy
Includes studies of pathophysiology such as genomics (DNA, RNA, chromosomes), bone biology and the microenvironment (and how they may relate to disease progression) not covered in categories 601-604. Also includes clinical and basic studies of diagnosis, prognosis (including myeloma-specific markers), epidemiology, complications, follow-up, quality of life, and socioeconomic aspects of myeloma.
652. Myeloma - Pathophysiology and Preclinical Studies excluding Therapy
Includes signal transduction studies, animal and preclinical models as well as preclinical studies of novel emerging therapies
653. Myeloma - Therapy, excluding Transplantation
Includes treatment with drug therapy, biological agents, immunotherapy, and vaccine development. For comparative trials of treatment regimens versus transplantation, see categories 731-733.

Transplantation

701. Experimental Transplantation - Basic Biology, Immune Function, and Engraftment
Includes primarily animal models of transplantation, specific disease results, immune function and immune reconstitution, conditioning regimens, regimen-related toxicity, pharmacology, and pharmacokinetics. Also includes experimental development of alternative stem cell sources, mobilization, and cell selection. May also include chimerism, hematopoiesis, graft failure/rejection and use of growth factors in experimental models.
702. Experimental Transplantation - GVHD and GVL
Includes primarily animal models of histocompatibility, tolerance/nergy, immunosuppression, immune recovery, and prevention/management of infection or GVHD. Also includes graft-vs-leukemia models and methods and strategies for the prevention or detection of lymphoproliferation, relapse, minimal residual disease and secondary malignancy.
703. Tumor Immunotherapy
Includes experimental adoptive immunotherapy, model systems for inducing tumor-specific immunity, dendritic and other cell therapies, vaccines and regulation of tumor-specific tolerance, including regulatory T cells.
711. Cell Processing
Includes in vivo studies of stem cell mobilization, leukapheresis, and collection or handling methods for marrow, cord blood, or peripheral blood stem cells. Also includes ex vivo studies of cryopreservation techniques, stem cell selection, progenitor cell assays, stem cell expansion, and clinical applications of long-term bone marrow culture. Also includes human studies of methods for purging stem cell populations from contamination by malignant cells, T cells, or red cells. Clinical outcome studies of T cell depletion as a strategy for the prevention of GVHD are better suited for category 722.
721. Clinical Care - Transplantation Regimen Toxicities and Engraftment
Includes primarily human studies of regimen-related toxicities, pharmacology/pharmacokinetics, nutrition, analgesia, supportive care, treatment of nausea or vomiting, growth factor administration, transfusion support and cost of care. May also include studies of detection or modulation of chimerism, hematopoiesis, graft rejection/failure and veno-occlusive disease.
722. Clinical Care – Acute and Chronic GVHD, Infectious Complications and Immune Reconstitution of Transplantation
Includes only clinical studies of detection, prevention or management of acute GVHD or infection. May include all related methods and strategies, such as HLA typing, immunosuppression and T cell depletion as well as enhancement and monitoring of immune recovery. Also includes immunizations, infection prevention or treatment, supportive care and patient isolation.
723. Clinical Care - Recurrence, Secondary Neoplasia, and Late Complications after Transplantation
Includes primarily human studies of prevention, detection, or management of relapse, minimal residual disease, chronic GVHD, second transplants, and late toxicities of transplantation or its adjunct treatments. May include use of or problems with leukocyte infusions, adoptive immunotherapy, biological modifiers, and graft-vs-leukemia effects. Includes quality of life measures and complications unique to younger patients, such as growth and development, reproductive, or other organ system dysfunction.
731. Clinical Results - Allogeneic Matched Related Donor Transplantation
Includes only clinical studies of transplantation (marrow or PBSC) from HLA-identical siblings. Also includes, in such populations, results of preparative ablative or non-myeloablative regimens, disease-specific outcomes and comparative trials (chemotherapy-vs-transplant, allogeneic-vs-autologous, PBSC-vs-marrow). Excludes studies on complications or clinical care of the transplant patient (see categories 721-723).
732. Clinical Results - Alternative Donor Transplantation
Includes all other clinical studies of allogeneic transplant (marrow, cord blood, or PBSC) from mismatched related or unrelated donors. Also includes, in such populations, results of preparative regimens, disease-specific outcomes and comparative trials, particularly any studies of matched-vs-mismatched or unrelated donors. Excludes studies on complications or clinical care of the transplant patient (see categories 721-723).
733. Clinical Results - Autologous Transplantation
Includes only clinical studies of autologous stem cell transplantation and all studies of results from specific preparative regimens or outcomes in individual diseases. Also includes most studies of transplantation in high-dose chemotherapy rescue for patients with solid tumors. Excludes any studies of stem cell mobilization and processing whether used for autologous or allogeneic

transplantation (see category 711). May include comparative trials of autologous transplantation versus other non-transplantation modalities (compare categories 731, 732).

Gene Therapy and Transfer

801. Gene Therapy and Transfer

Includes basic studies of gene transfer techniques, including vector design, target cell physiology, and investigations of gene transfer efficiency. Also includes studies of marker gene insertion, vector-target cell interactions, and investigation of determinants of marker gene expression/regulation. Also includes preclinical and clinical applications of gene transfer and gene therapy in human disorders, in vivo animal models, and related settings.

Health Services and Outcomes Research

901. Health Outcomes Research

Includes studies relating to outcomes research, economics of hematologic services (cost-effectiveness analysis, cost-benefit/cost-utility analysis, resource utilization, epidemiology of cost and delivery of care), and quality of life (measurements, symptom management, and palliation)

902. Health Services and Education

Includes clinical pathways and practice guidelines, informatics (telemedicine, computer decision support), hematology education research (training programs, training and developing countries), and hematology in developing countries.