Hematology-Oncology

Division Photo


Division Data Summary

<table>
<thead>
<tr>
<th>Research and Training Details</th>
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<tr>
<td>Number of Faculty</td>
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<td>Number of Joint Appointment Faculty</td>
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Significant Publications

J Clin Oncol 26(22): 3749-55


This study was the first to demonstrate that an agent, in this case, amifostine, administered before and during the cisplatin infusion can significantly reduce the risk of severe ototoxicity in patients with average-risk medulloblastoma receiving dose-intense chemotherapy.
Blood 112(10): 4284-91

Glycosylated hemoglobin (Hb A1c) is used to assess diabetic control for millions of American. This paper demonstrates that inter-individual variation in red blood cell lifespan can alter Hb A1c measurements sufficiently to affect clinical diabetic management.


We have observed that patients with XLP due to XIAP deficiency have normal populations of iNKT cell, thus differentiating them from patients with XLP due to SAP deficiency, and suggesting that XIAP is not a requirement for iNKT cell development as previously thought.

Blood 113(3): 696-704
Mullins, E. S., K. W. Kombrinck, K. E. Talmage, M. A. Shaw, D. P. Witte, J. M. Ullman, S. J. Degen, W. Sun, M. J. Flick and J. L. Degen (2009). "Genetic elimination of prothrombin in adult mice is not compatible with survival and results in spontaneous hemorrhagic events in both heart and brain."

This manuscript was the first report of a floxed soluble coagulation protein, prothrombin, and its necessity for maintenance of vascular integrity in the heart and central nervous system in adult mice. It was furthermore reported that prothrombin is essential in clearance of S. aureus from the peritoneum in an experimental setting of peritonitis.

Oncogene 27(35): 4798-808

This manuscript describes the transcriptional co-regulation of multiple components of the nuclear Fanconi anemia complex in synchrony with the cell cycle and through E2F/Rb pathways. Based on the data, transcriptional deregulation of individual FA genes - in addition to mutation – may contribute to the development of HPV-associated cancers.

Division Collaboration

Collaboration with Experimental Hematology & Cancer Biology; Pediatric & Thoracic Surgery; Developmental Biology-Students
Collaborating Faculty: J. Cancelas; T. Crombleholme; W. Baird

Collaboration with Translational Research Trials Office; Infectious Diseases; Immunobiology
Collaborating Faculty: R. Gillespie; N. Sawtell; D. Hildeman
Efficacy and safety of the oncolytic herpes simplex virus rRp450 alone and combined with cyclophosphamide. Mol Ther 16:879-885, 2008 (T. Cripe; M. Currier; Y. Mahller)

Collaboration with Biomedical Informatics; Developmental Biology-Students
Collaborating Faculty: B. Sakthivel; B. Aronow; W. Baird

Collaboration with Experimental Hematology & Cancer Biology; Pathology; Biostatistics & Epidemiology; Experimental Hematology & Cancer Biology
Collaborating Faculty: G. Johansson; M. Collins; K. Mi-Ok; N. Ratner
Effective in vivo targeting of the mTOR pathway in malignant peripheral nerve sheath tumors. Mol Cancer Ther 7:1237-1245, 2008. (T. Cripe; Y. Mahller; J. Perentesis)

Collaboration with Endocrinology; Behavioral Medicine & Clinical Psychology
Collaborating Faculty: S. Rose; A pilot study of oxandrolone in children with Fanconi Anemia and severe bone marrow failure (F. Smith)

Collaboration with Surgical Services
Collaborating Faculty: R. Azizkhan
COG, Surgery services for Oncology patients

Collaboration with UC Radiation Oncology
Collaborating Faculty: J. Breneman; Ruth Lavigne
Radiation Oncology clinical services for Hem/Onc patients; COG

Collaboration with Human Genetics
Collaborating Faculty: Liming Bao; T Smolarek
COG; Genetic services for HemOnc Patients

Collaboration with Pathology
Collaborating Faculty: M. Collins
COG; Pathology services

Collaboration with Behavioral Medicine and Clinical Psychology
Collaborating Faculty: D. Drotar; A. Pai
COG; Adherence Research

Collaboration with Radiology
Collaborating Faculty: M. Gelfand
COG; Cancer Nuclear Medicine services

Collaboration with Orthopaedics
Collaborating Faculty: CT Mehlman
COG; Brain Tumor research and clinical services

Collaboration with Experimental Hematology & Cancer Biology
Collaborating Faculty: J. Mulloy
Leukemia Research; COG

Collaboration with Endocrinology
Collaborating Faculty: S. Rose; M. Rutter
COG; FA research, NeurOncology Research, Endocrinology services as part of clinic

Collaboration with University of Cincinnati
Collaborating Faculty: George Thomas
COG; Drug Development

Collaboration with Pediatric & Thoracic Surgery
Collaborating Faculty: G. Tiao
COG; Cancer Surgery

Collaboration with Clinical Pharmacology
Collaborating Faculty: A. Vinks
COG; Developmental Therapeutics research; Neurofibromatosis clinical research, New fellowship program in Developmental Therapeutics

Collaboration with Anesthesia
Collaborating Faculty: N. Weidner
COG; Palliative care and pain

Collaboration with PM&R
Collaborating Faculty: D. Pruit
NeuroOncology Clinic

Collaboration with University of Cincinnati - Oncology
Collaborating Faculty: M Gerena-Lewis
Medical Oncology and NeuroOncology services

Collaboration with Experimental Hematology & Cancer Biology
Collaborating Faculty: P. Malik
Comprehensive Sickle Cell Center; Gene Transfer into Hematopoietic Stem Cells. (C. Joiner)

Collaboration with University of Cincinnati – Division of Hematology Oncology
Collaborating Faculty: Robert Franco, George Atweh
Comprehensive Sickle Cell Center; Sickle Cell pathophysiology, Fetal Hemoglobin Induction

Collaboration with University of Cincinnati – Division of Endocrinology
Collaborating Faculty: Robert Franco; Robert Cohen
Comprehensive Sickle Cell Center: Red Blood Cell Survival and hemoglobin glycosylation.

Collaboration with Developmental Biology
Collaborating Faculty: Jay Degen
Hemophilia, Thrombophilia program: Role of coagulation programs in cancer metastasis (J. Palumbo)

Collaboration with Behavioral Medicine & Clinical Psychology
Collaborating Faculty: Monica Mitchell
Comprehensive Sickle Cell Center; Adherence to hydroxyurea therapy. (K. Kalinyak)

Collaboration with Developmental Biology
Collaborating Faculty: Dr. Jay Degen

Collaboration with Clinical Pharmacology ; Experimental Hematology & Cancer Biology
Collaborating Faculty: A. Vinks; P Malik
Comprehensive Sickle Cell Center; Zileuton therapy for sickle cell disease (K. Kalinyak, C. Joiner)

Collaboration with Experimental Hematology & Cancer Biology; Pulmonary Medicine
Collaborating Faculty: P. Malik; W. Hardie
Comprehensive Sickle Cell Center; Inflammation in Sickle Cell Disease. (K. Kalinyak)

Collaboration with Experimental Hematology & Cancer Biology; Cardiology; Pulmonary Medicine; Radiology
Collaborating Faculty: P. Malik; J. Towbin; W. Gottliebson; C. Kerschmar; R. Fleck
Comprehensive Sickle Cell Center; Cardiovascular Complications of Sickle Cell Disease. (K. Kalinyak, C. Joiner)

Collaboration with Experimental Hematology & Cancer Biology
Collaborating Faculty: Y. Zheng
Comprehensive Sickle Cell Center; Signaling pathways in red blood cells. (T. Kalfa)

Collaboration with Department of Anesthesia
Collaborating Faculty: D. Kurth
Hematology Program; Clinical evaluation of transcutaneous hemoglobin analysis. (K. Kalinyak, C. Joiner)

Collaboration with Radiology ; Neurosurgery; Pathology
Collaborating Faculty: A. Towbin; T. Maugans; H. Yin

Collaboration with Surgery; Radiology; Pathology
Collaborating Faculty: M. Leonis; G. Tiao; F. Ryckman; A. Towbin; A. Gupta
Hepatoblastoma Working Group (L. Wagner)

Collaboration with University of Cincinnati Genome Research Institute
Collaborating Faculty: G. Thomas
Correlative studies for COG trial chaired by Lars Wagner
Collaboration with Radiology; Pathology
Collaborating Faculty: A. Towbin; M. Collins; H. Yin
Chordoma in Children and Young Adults (R. Nagarajan)

Collaboration with University of Cincinnati Internal Medicine; Human Genetics; Physical Medicine and Rehabilitation; Endocrinology and Neuropsychology
Collaborating Faculty: M. Gerena-Lewis; D. Pruitt; S. Rose; M. Rutter
Clinical services for Cancer Survivor Center

Collaboration with Radiology; Nephrology; Urology
Collaborating Faculty: A. Towbin; J. Bissler; B. DeFoor
Characterization of Clinical Correlates in Children with Complex Renal Cysts. (J. Geller)

Collaboration with Nephrology; Pathology
Collaborating Faculty: J. Bissler; J. Mo
Translocation Renal Cell Carcinoma Associated with Immunosuppressive Therapy in Two Patients with Refractory Focal Segmental Glomerulosclerosis (J. Geller)

Collaboration with Pathology; General Pediatrics
Collaborating Faculty: A. Gupta; C. Ebens
Wilms Tumor, Aniridia, Genitourinary malformation, and Mental Retardation (WAGR Syndrome) associated with Congenital Extrahepatic Biliary Atresia. (J. Geller)

Collaboration with Nephrology; Human Genetics
Collaborating Faculty: J. Bissler; N. Leslie; T. Smolarek
Characterization of Constitutional 11p15 Abnormalities in Wilms’ Tumor Predisposed Patients. (J. Geller)

Collaboration with Hepatology; Liver Transplant
Collaborating Faculty: J. Nathan; G. Tiao; F. Ryckman; M. Alonso; M. Leonis; J. Bucuvalas; K. Campbell
Early Chemotherapy Response and Identification of Liver Transplant Candidates in Patients with Unresectable Hepatoblastoma (J. Geller, L. Wagner)

Collaboration with Pathology
Collaborating Faculty: A. Gupta; M. Khalequzzaman; K. Bove
Well Differentiated Hepatocellular Neoplasms in Children: Are immunostains helpful? (J. Geller)

Collaboration with Hepatology; Liver Transplant
Collaborating Faculty: M. Leonis; G. Tiao
Hepatic Tumor Markers post-Liver Transplantation (J. Geller)

Collaboration with Ophthalmology (UC)
Collaborating Faculty: J. Augsburger
Topotecan in the treatment of relapsed/refractory intraocular retinoblastoma (J. Geller)

Collaboration with Ophthalmology (UC, CCHMC); Radiology; Pathology (UC)
Collaborating Faculty: J. Augsburger; R. North; B. Jones; Z. Correa
Topotecan, Vincristine and subconjunctival Carboplatin to treat recurrent/refractory intraocular retinoblastoma (J. Geller)

Collaboration with Interventional Radiology
Collaborating Faculty: J. Augsburger; T. Abruzzo
Intra-arterial chemotherapy in the treatment of retinoblastoma (J. Geller)

Collaboration with Radiology; Neurosurgery
Collaborating Faculty: B. Jones; F. Mangano
The Clinical Heterogeneity of Desmoplastic Infantile Ganglioglioma (J. Geller, T. Hummel)

Collaboration with Adolescent Medicine and Gynecology; General Surgery; Pathology
Collaborating Faculty: L. Ayensu-Coker; L. Breech; R. Dasgupta; R. McMasters
Management of Ovarian Masses at Cincinnati Children’s Hospital Medical Center (J. Geller)
Faculty Members

Franklin O. Smith, MD,  Professor; Marjory J. Johnson Endowed Chair; Director, Hematology/Oncology; Director, Hematology/Oncology Fellowship Program
  Research Interests: Acute myeloid leukemia

Michael Absalon, MD, PhD,  Assistant Professor Clinical
  Research Interests: New therapeutics; ataxia telangietasia; DNA damage response mechanisms

Denise M. Adams, MD,  Associate Professor Clinical; Inpatient Clinical Director; Medical Director of Comprehensive Hemangiomas and Vascular Malformation Clinic;
  Research Interests: Research in angiogenesis, endothelial cell proliferation, vascular anomalies.

Jacob Bleesing, MD, PhD,  Associate Professor Clinical
  Research Interests: Clinical Investigation of Primary Immunodeficiency Disorders, with emphasis on disorders of immunodysregulation and B-cell disorders

Karen Burns, MD,  Assistant Professor Clinical
  Research Interests: Outcomes following cancer therapy and outcomes following bone sarcomas

Timothy Cripe, MD, PhD,  Professor; Director, Musculoskeletal Tumor Comprehensive Clinic; Director, Translational Research Trials Office
  Research Interests: Transcriptional regulation; genetic perturbations in cancer; gene therapy of cancer; gene transfer; transcriptional targeting; antiangiogenesis; viral oncolysis; viral oncogenesis

Stella M. Davies, MBBS, PhD, MRCP,  Professor; Jacob G. Schmidlapp Endowed Chair; Director, Blood and Marrow Transplant Program
  Research Interests: Clinical Investigation of Primary Immunodeficiency Disorders, with emphasis on disorders of immunodysregulation and B-cell disorders

Rachid Drissi, PhD,  Assistant Professor
  Research Interests: Examine telomere disruption signaling to DNA damage pathway

Alexandra Filipovich, MD,  Professor; Ralph J. Stolle Chair in Clinical Immunology; Director, Immunodeficiency and Histiocytosis Program; Medical Director, Diagnostic Laboratory
  Research Interests: Immunoreconstitution Following Pediatric Stem Cell Transplantation

Maryam Fouladi, MD, FRCP,  Associate Professor Clinical; Director, Neuro-Oncology Program
  Research Interests: Developing novel drugs for the treatment of children with recurrent or poor prognosis brain tumors

James I. Geller, MD,  Assistant Professor Clinical
  Research Interests: Solid and brain tumors, with a specific interest in new drug development. Leads renal, liver and retinoblastoma initiative

Ralph A Gruppo, MD,  Professor Clinical; Director, Hemophilia Thrombosis Center
  Research Interests: Coagulation; hemophilia; thrombosis

Richard E. Harris, MD,  Professor Clinical
  Research Interests: Transplantation for children with bone marrow failure syndromes and aplastic anemia

Trent Hummel, MD,  Instructor Clinical

Sonata Jodele, MD,  Assistant Professor Clinical
  Research Interests: Phase I clinical trials; new anticancer drug development; stem cell transplantation; high risk pediatric malignancies; childhood neuroblastoma

Clinton H. Joiner, MD, PhD,  Professor; Interim Director, Hematology Program
  Research Interests: Sickle cell disease and other hemoglobinopathies

Theodosia Kalfa, MD, PhD,  Assistant Professor
  Research Interests: study of erythropoiesis and red blood cell structural membrane biology

Karen Ann Kalinyak, MD,  Professor Clinical; Hematology Clinical Director
  Research Interests: Hematology; bone marrow failure; sickle cell anemia; hemoglobinopathy

Beatrice Lampkin, MD,  Professor Emerita; Jacob G. Schmidlapp Endowed Chair

Thomas Leemhuis, PhD,  Associate Professor

Rebecca Marsh, MD,  Instructor Clinical

Parinda Mehta, MD,  Assistant Professor
  Research Interests: Blood and Marrow Transplant, Fanconi anemia, Pharmacogenetics and Pharmacokinetics
Eric Mullins, MD, Instructor Clinical
Research Interests: Outcomes following cancer therapy and outcomes following bone sarcomas

Rajaram Nagarajan, MD, Assistant Professor Clinical
Research Interests: Interactions between the hemostatic system and innate immunity effecting tumor progression

Joseph S. Palumbo, MD, Research Assistant Professor
Research Interests: Interactions between the hemostatic system and innate immunity effecting tumor progression

John Perentesis, MD, Professor; Deb Kleisinger Endowed Chair and Professor of Pediatrics; Director, Oncology Program
Research Interests: Recombinant cancer therapeutics and molecular mechanisms for drug action

Janos Sumegi, MD, PhD, Professor
Research Interests: Lymphoproliferative disease, Hemophagocytic Lymphohistiocytosis, Usher syndrome

Lars Wagner, MD, Associate Professor Clinical
Research Interests: Treatment of neuroblastoma, sarcomas, and brain tumors

Brian D. Weiss, MD, Assistant Professor Clinical
Research Interests: Targeted Agents for Neurofibromatosis Type 1-Related Malignancies (including plexiform neurofibromas, optic pathway gliomas, and Juvenile Myelomonocytic Leukemia)

Susanne Wells, PhD, Associate Professor
Research Interests: Papillomavirus biology, molecular mechanisms of cellular growth and senescence

Joint Appointment Faculty Members

Michael Jordan, MD, Assistant Professor
Immunobiology
Regulation of the immune response; immunotherapy of cancer

Mi-Ok Kim, PhD, Assistant Professor
Center for Epidemiology and Biostatistics

Punam Malik, MD, Associate Professor
Experimental Hematology and Cancer Biology

Ahna Pai, PhD, Assistant Professor
Adherence Psychology

Sualius Sumanas, PhD, Assistant Professor
Developmental Biology

Mary Sutton, MD, Assistant Professor
Neurology

Clinical Staff Members

- Sarita Joshi, MBBS, MD
- Ernest Lawhorn, MD
- Anna Pesok, MD
- Philip Roehrs, MD
- Gregory Wallace, DO

Trainees

- Kathleen Dorris, MD, PL-IV, Children's Memorial Hospital, Northwestern University
- Teresa Finke, MD, PL-IV, IU School of Medicine Combined Medicine & Pediatrics
- Sarah Fitzgerald, MD, PL-IV, Rainbow Babies & Children's Hospital/University of Cleveland
- Alex George, MD, PhD, PL-IV, Cincinnati Children's Hospital Medical Center
- Adrienne Hammill, MD, PhD, PL-V, Cincinnati Children's Hospital Medical Center
- Theodore Johnson, MD, PhD, PL-V, Medical College of Georgia
- Sabine Mellor-Heineke, MD, PL-VI, Staedtisches Klinikum Braunschweig
- Benjamin Mizukawa, MD, PL-V, Cincinnati Children's Hospital Medical Center
- Kasiani Myers, MD, PL-V, Cincinnati Children's Hospital Medical Center
- Ajay Perumbeti, MD, PL-VII, Upstate Medical University
- Christine Phillips, MD, PL-VI, Children's Memorial Hospital Chicago
Significant Accomplishments

Oncology Program: New Translational Therapies for Brain Tumors

Our approach to brain tumors includes innovative surgical techniques, such as intra-operative magnetic resonance imaging (MRI), advanced “focused” radiosurgical techniques, and clinical research emanating from our laboratories using molecularly-targeted therapies and, in high dose chemotherapy applications – chemoprotection medications. These initiatives are led by CCHMC oncology faculty Drs. Maryam Fouladi and Trent Hummel with studies based at CCHMC, or extended to other pediatric centers by virtue of leadership roles in national consortia. One such protocol is an institutional pilot study for patients with newly diagnosed high-grade gliomas and diffuse intrinsic brain stem gliomas. This protocol incorporates a promising antiangiogenic agent with standard therapy and is also asking several important questions regarding the biology of these tumors, quality of life and functional outcome of patients with these poor-prognosis tumors.

Hematology Program: Sickle Cell Disease Clinical Research Network

Clinton H. Joiner, MD, PhD, was appointed Director of the Hematology Program. Dr. Joiner will continue as director of the Comprehensive Sickle Cell Center, which he has led since 1995.

Comprehensive Sickle Cell Center received a grant from the National Heart, Lung, and Blood Institute (NHLBI) to participate in the Sickle Cell Disease Clinical Research Network. The Center leads a consortium that includes University of Cincinnati, Ohio State University, and Nationwide Children's Hospital of Columbus that will conduct clinical trials of new treatments for sickle cell disease.

Blood and Marrow Transplantation Program: Genetic Studies

Researchers in the Blood and Marrow Transplant program are the first researchers in the US to investigate the clinical consequences of mutation in the gene BIRC4. Children with this genetic disorder have a lymphoproliferative disorder, with markedly increased risk of lymphoma and a defective immune system. The CCHMC researchers, lead by Drs. Lisa Filipovich and Rebecca Marsh have described a new diagnostic test for this disorder and are describing the clinical and immunological changes seen in this disorder. Many children with the BIRC44 gene defect have come to CCHMC for a bone marrow transplant to treat this disorder, and Dr. Marsh has received an NIH grant for more mechanistic studies to determine why the gene abnormalities lead to malfunction in the immune system.

Division Publications

9. Molkentin JD, Robbins J. With great power comes great responsibility: using mouse genetics to study cardiac


Grants, Contracts, and Industry Agreements

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<td>Oncolytic HSV Cancer Therapy in Immunocompetent Sarcoma Models</td>
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<td>Cincinnati Center for Neurofibromatosis Research - Core B</td>
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<td><strong>CTSA: Pilot and Collaborative Studies</strong></td>
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<td>Childhood Cancer Survivor Study</td>
<td>National Institutes of Health (St. Jude's Children's Hospital)</td>
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<td>Mechanisms of RET, PTC Rearrangements in Thyroid Center</td>
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<td>The Children's Oncology Group Chairs Grant</td>
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<td>DRISSI, R Decreasing Side Effects of Radiation Therapy for Cancer Patients</td>
<td>Cancer Free Kids</td>
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<td>FILIPOVICH, L Laboratory Diagnosis and Immunologic Characterization</td>
<td>National Institutes of Health</td>
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<td>Hypoxia and Potassium Channel Activity in T Lymphocytes</td>
<td>University of Cincinnati</td>
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<td>The Pediatric Brain Tumor Consortium</td>
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<td>A Study of Radiotherapy and Concurrent Bevacizumab</td>
<td>The Cure Starts Now Foundation</td>
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<td>Study of Radiotherapy and Concurrent Bevacizumab</td>
<td>Jeffrey Thomas Hayden Foundation</td>
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<td>Molecular Profiling of High-Grade Gliomas in Children</td>
<td>Cancer Free Kids</td>
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<td>GRUPPO, R Hemophilia Prevention Network</td>
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<td>Molecular and Clinical Biology of VWD</td>
<td>National Institutes of Health (Medical College of Wisconsin)</td>
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<td>Hemophilia and Thrombosis Center</td>
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<td>Hemophilia Comprehensive Care and Prevention Core Center for Bleeding Disorders</td>
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<td><strong>JOINER, C</strong></td>
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<td><strong>Cincinnati Comprehensive Sickle Cell Center</strong></td>
<td>National Institutes of Health</td>
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<td><strong>Cincinnati Sickle Cell Project</strong></td>
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<td><strong>Ohio Sickle Cell Alliance for Research</strong></td>
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<td><strong>RAC1 and RAC2 Guanosine Triphosphatases in Erythroid Function and Differentiation</strong></td>
<td>National Institutes of Health</td>
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<td><strong>Silent Cerebral Infarct Multi-Center Clinical Trial</strong></td>
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<td>National Institutes of Health (St. Jude's Children's Hospital)</td>
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<td><strong>Investigations into XIAP-Deficient X-linked Lymphoproliferative Disease</strong></td>
<td>National Institutes of Health</td>
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<td><strong>The Pathogenesis of XILP Due to XIAP Deficiency</strong></td>
<td>Histiocytosis Association of America</td>
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<td><strong>MIZUKAWA, B</strong></td>
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<td><strong>Pediatric Physician Scientist Program Award</strong></td>
<td>National Institutes of Health (Yale University School of Medicine University School of Medicine)</td>
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<td><strong>Training Program with Regulations of Cellular Growth and Differentiation</strong></td>
<td>National Institutes of Health (University of Cincinnati)</td>
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<td><strong>Thrombin and Thrombin Targets in Allergen Airway Inflammation</strong></td>
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<tr>
<td>NAGARAJAN, R</td>
<td>Genetic Epidemiology of Osteosarcoma</td>
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<td>PALUMBO, J</td>
<td>Mechanisms Linking Metastasis to Tumor Procoagulant and Innate Immunity</td>
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<td>PERENTESIS, J</td>
<td>Children's Oncology Group New Publication Committee</td>
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<td>Children's Oncology Group Phase I Consortium (Per Patient)</td>
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<td>Chairman's Award Children's Oncology Group</td>
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<td>Cincinnati Center for Neurofibromatosis Research - Project 1</td>
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<tr>
<td>PHILLIPS, C</td>
<td>Host Polymorphism and Acute Myelogenous Leukemia</td>
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<td>Pharmacogenetics in AML</td>
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<tr>
<td>SHOOK, L</td>
<td>Cincinnati Sickle Cell Newborn Screening Network</td>
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<tr>
<td>SMITH, F.</td>
<td>The Children's Oncology Group Chairs Grant</td>
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<tr>
<td>SUMEGI, J</td>
<td>Search for Growth Inhibitory Genes in Ewing's Sarcoma</td>
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<tr>
<td></td>
<td>Functional Identification of Genes Mutated in FHLH</td>
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### Revisiting the Candidate Regions for Familial Hemophagocytic Lymphohistiocytosis (FHLH)

Histiocytosis Association of America

<table>
<thead>
<tr>
<th>Principal Investigator</th>
<th>Grant Number</th>
<th>Start Date - End Date</th>
<th>Amount Requested</th>
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<tbody>
<tr>
<td>WAGNER, L.</td>
<td>U01 CA 097452</td>
<td>08/01/07 - 01/31/09</td>
<td>$10,430 / $30,681</td>
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### Role and Regulation of the Human DEK Proto-Oncogene

National Institutes of Health

<table>
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<tr>
<th>Principal Investigator</th>
<th>Grant Number</th>
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<tr>
<td>WELLS, S.</td>
<td>R01 CA 116313</td>
<td>04/01/06 - 02/28/11</td>
<td>$172,353 / $887,500</td>
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### HPV Replication and Transformation in FA Squamous Cell

Fanconi Anemia Research Foundation

<table>
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<th>Grant Number</th>
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<td>03/01/09 - 02/28/11</td>
<td>$100,000 / $200,000</td>
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### Industry Contracts

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<th>Investigator</th>
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<tr>
<td>Kalinyak, K</td>
<td>Novartis Pharmaceuticals</td>
<td>$7,979</td>
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<tr>
<td>Geller, J</td>
<td>ArQule, Inc</td>
<td>$11,696</td>
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<td>Gruppo, R</td>
<td>Grifols, Inc.</td>
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<td>Novo Nordisk Pharmaceuticals</td>
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<td>Wyeth Pharmaceuticals</td>
<td>$9,291</td>
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<tr>
<td>Harris, R</td>
<td>Alexion Pharmaceuticals, Inc.</td>
<td>$5,582</td>
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<td>CHLA</td>
<td>$7,916</td>
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<tr>
<td>Mehta, P</td>
<td>Astellas Pharma US, Inc.</td>
<td>$4,928</td>
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<td>Smith, F</td>
<td>Clinical Trials Office</td>
<td>$53,686</td>
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<tr>
<td>Wagner, L</td>
<td>Amgen, Inc</td>
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### Current Year Direct Receipts

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<tr>
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<tr>
<td>Wagner, L</td>
<td>Amgen, Inc</td>
<td>$9,324</td>
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### Funded Collaborative Efforts

<table>
<thead>
<tr>
<th>Investigator</th>
<th>Project Description</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Bleesing, J</td>
<td>Cincinnati Multidisciplinary Clinical Research Center</td>
<td>3 %</td>
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<tr>
<td>Filipovich, L</td>
<td>Gene Expression in Pediatric Arthritis - Project 4</td>
<td>5 %</td>
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<tr>
<td>Kalinyak, K</td>
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<tr>
<td>Project Title</td>
<td>PI/Co-PI</td>
<td>Agency</td>
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<tr>
<td>Role of Placenta Growth Factor in Sickle ACS</td>
<td>Malik, Punam</td>
<td>NIH</td>
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<td>Neurobehavioral Late-Effects in Pediatric Brain Tumors</td>
<td>Perentesis, J</td>
<td>NIH</td>
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<td>Promoting Treatment Adherence in Adolescent Leukemia</td>
<td>Perentesis, J</td>
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<td>NF Consortium Development Infrastructure</td>
<td>Perentesis, J</td>
<td>UAB/DOD</td>
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<td>NF Consortium Development STOPn</td>
<td>Weiss, B</td>
<td>UAB/DOD</td>
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<tr>
<td><strong>Total</strong></td>
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