Cancer and Blood Diseases Institute

Division Details

Division Data Summary

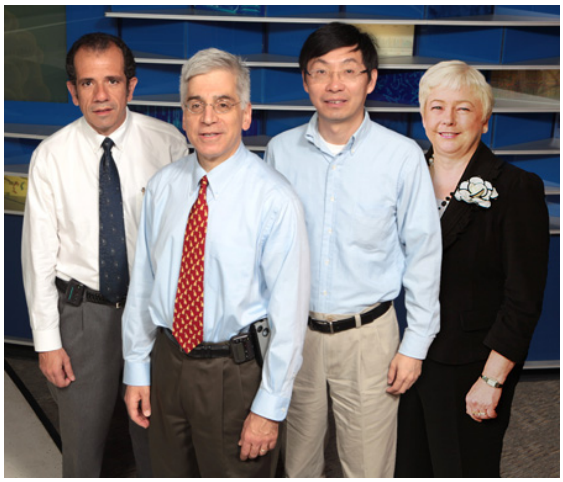
Research and Training Details

Number of Faculty	**41**
Number of Joint Appointment Faculty	**10**
Number of Research Fellows	**9**
Number of Research Students	**1**
Number of Support Personnel	**217**
Peer Reviewed Publications	**144**

Clinical Activities and Training

Number of Clinical Staff	**19**
Number of Clinical Fellows	**17**
Number of Other Students	**7**
Inpatient Encounters	**23,569**
Outpatient Encounters	**15,475**

Division Photo



Left to Right: J Palumbo, J Perentesis, Y Zheng, S Davies

Significant Accomplishments

Gene therapy for SCID

Children with severe combined immune deficiency (SCID) are born lacking an essential gene that allows the immune system to fight infections. Untreated, SCID is fatal, with the children typically dying of overwhelming infection in the first two years of life. Children with SCID can be successfully treated with a bone marrow transplant that replaces the defective immune system cells with new ones. Unfortunately, some children with SCID will not have a suitable donor, and some who do have a transplant will have serious complications. A multi-center international gene therapy study, using a viral vector manufactured at Cincinnati Children's, takes the child's own cells and inserts a normal copy of the defective gene into the child's own cells. With this approach there is no need for a matched donor and no need for chemotherapy, which leads to fewer complications. Lisa Filipovich, MD, is leading the study at Cincinnati Children's and the first child has been enrolled and treated. We anticipate that gene therapy will become an important treatment option for babies with SCID, and may allow cure for all the children with fewer complications.

Participation in Clinical Trial Consortia Grows

With the acceptance of our application to join the National Cancer Institute-funded Pediatric Brain Tumor Consortium (PBTC), Cincinnati Children's became the only pediatric cancer program in the US participating in all four selective national early-phase clinical research consortia: the NCI Pediatric Phase I/Pilot Consortium, the NCI New Approaches to Neuroblastoma Consortium, the PBTC, and the Department of Defense-funded Neurofibromatosis Clinical Consortium.

The PBTC is the premiere national multidisciplinary cooperative research group developing new therapies for CNS tumors of childhood. It has a highly competitive application process, which makes Cincinnati Children's one of only 11 participating centers. In addition, Maryam Fouladi, MD, MSc, Professor of Pediatrics and Medical Director of Neuro-Oncology, has been elected to serve as national chair of the PBTC.

Experimental Hematology and Cancer Biology

Humoral and paracrine signals from the bone marrow hematopoietic microenvironment control blood generating stem cell activity during regenerative hematopoiesis. A group led by Jose Cancelas, MD, PhD, reported in *Proceedings of the National Academy of Sciences, USA,* that Connexin-43, a molecule involved in cell-cell communications, exerts a protective role and regulates the blood producing progenitor cell reactive oxygen species content through ROS transfer to the bone marrow microenvironment. This effect results in blood stem cell protection during stress hematopoietic regeneration under chemo or radiation therapies.

Tissue damage induced by ionizing radiation in the hematopoietic and gastrointestinal systems is the major cause of lethality in radiological emergency scenarios and underlies some deleterious side effects in children undergoing radiation therapy. The identification of target-specific interventions that confer radiomitigating activity is an unmet challenge. Hartmut Geiger, PhD, in collaboration with several other researchers at Cincinnati Children's, Wisconsin and Arkansas, identified the thrombomodulin (Thbd)-activated protein C (aPC) pathway as a new mechanism for the mitigation of total body irradiation-induced mortality. Reporting in the journal *Nature Medicine*, they show that pharmacologic augmentation of the activity of the Thbd-aPC pathway by recombinant Thbd or aPC might offer a rational approach to the mitigation of tissue injury and lethality caused by ionizing radiation.

Small molecule targeted therapy has been hindered by an issue of druggability of target molecules. In a study published in *Chemistry and Biology*, Yi Zheng, PhD, led a group of chemical biologists to devise a novel approach of rational design of chemical compounds that selectively bind to and inhibit RhoA GTPase, a critical cell signal transducer with a globular structure involved in cancer cell proliferation and neuronal disorders. Their discovery suggests that design and search for low affinity binding chemicals tethered by proper linkers may be useful for rational targeting of "undruggable" biological molecules.

Hematology Division

The Hematology Division offers state-of-the-art testing for a variety of complex hematological diagnoses. Over the last year, the Sickle Cell Center, in collaboration with Human Genetics, has launched a genetics-based hemoglobinopathy diagnostic service, making Cincinnati Children's one of only a few centers in the US that offer comprehensive genetic testing for hemoglobinopathies. Our Special Hemostasis Laboratory has expanded our repertoire of diagnostic studies available for the diagnosis and management of children with bleeding and thrombotic disorders. We recently added several new tests for the detailed diagnosis and characterization of Von Willebrand disease, the most common bleeding disorder in children, making us the only facility in the region offering these assays. We have also added several new tests for the evaluation of platelet function abnormalities, making our laboratory one of the few laboratories nationally with the capability to diagnose children with platelet disorders.

Division Publications

1. Akbar H, Shang X, Perveen R, Berryman M, Funk K, Johnson JF, Tandon NN, Zheng Y. **Gene targeting implicates Cdc42 GTPase in GPVI and non-GPVI mediated platelet filopodia formation, secretion and**

aggregation. *PLoS One*. 2011; 6:e22117.
2. Ali AM, Pradhan A, Singh TR, Du C, Li J, Wahengbam K, Grassman E, Auerbach AD, Pang Q, Meetei AR. **FAAP20: a novel ubiquitin-binding FA nuclear core complex protein required for functional integrity of the FA-BRCA DNA repair pathway**. *Blood*. 2012; 119:3285-94.
3. Bhatia S, Davies SM, Scott Baker K, Pulsipher MA, Hansen JA. **NCI, NHLBI first international consensus conference on late effects after pediatric hematopoietic cell transplantation: etiology and pathogenesis of late effects after HCT performed in childhood--methodologic challenges**. *Biol Blood Marrow Transplant*. 2011; 17:1428-35.
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13. Chernoguz A, Crawford K, Donovan E, Vandersall A, Berglund C, Cripe TP, Frischer JS. **EGFR inhibition fails to suppress vascular proliferation and tumor growth in a Ewing's sarcoma model**. *J Surg Res*. 2012; 173:1-9.
14. Chow LM, Baker SJ. **Capturing the molecular and biological diversity of high-grade astrocytoma in genetically engineered mouse models**. *Oncotarget*. 2012; 3:67-77.
15. Davies SM. **Getting to the heart of the matter**. *J Clin Oncol*. 2012; 30:1399-400.
16. Davies SM, Levine JE. **The 2012 education supplement on hematopoietic cell transplantation**. *Biol Blood Marrow Transplant*. 2012; 18:S1.
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Grants, Contracts, and Industry Agreements

Bone Marrow Transplantation and Immune Deficiency

Grant and Contract Awards		Annual Direct
DAVIES, S		
Antileukemic Effect of NK Cells in HCT for Pediatric AML		
National Institutes of Health(St Jude's Children's Hospital)		
R01 CA 120583	08/01/07-06/30/12	$8,864
Childhood Cancer Survivor Study		
National Institutes of Health(St Jude's Children's Hospital)		
U24 CA 055727	12/01/11-11/30/16	$177,391
Children's Oncology Chair Award		
National Institutes of Health(Children's Oncology Group)		
U10 CA 098543	03/01/11-02/28/14	$12,831
Multicenter Pilot Trial of HSCT Lacking a Genotype Identical Donor		
Fanconi Anemia Research Fund		
	05/01/10-04/30/13	$1,160
Molecular Epidemiology of Pediatric Germ Cell Tumors		
National Institutes of Health(University of Minnesota)		
R01 CA151284	08/10/11-05/31/16	$21,219
FILIPOVICH, A		
Gene Therapy for SCID-X1 Using Self-Inactivating (SIN) Gammaretroviral Vector		
National Institutes of Health(Children's Hospital Boston)		
U01 AI 087628	09/01/10-08/31/15	$121,927
Hypoxia and Potassium Channel Activity in T Lymphocytes		
National Institutes of Health(University of Cincinnati)		
R01 CA 095286	06/01/09-04/30/12	$19,959
Rare Diseases Clinical Consortia for the Rare Diseases - Per Patient		
National Institutes of Health(The Regents of the Univ of California)		
U54 AI 082973	09/12/09-08/31/14	$60,333
KUMAR, A		
Molecular Pathogenesis of MLL-Fusion Gene Leukemia		
National Institutes of Health		
K08 CA 122191	08/19/09-06/30/12	$125,250
MARSH, R		
Studies to Determine Why ZIAP Defiency Leads to HLH		
Clinical Immunology Society		
	07/01/10-06/30/12	$85,000
MEHTA, P		
Quercetin in Patients with Fanconi Anemia, a Pilot Study		
Aplastic Anemia & MDS International Fdn		
	07/01/11-06/30/13	$27,273
SUMEGI, J		
Biomarkers in Primary and Secondary Hemophagocytic Lymphohistiocytosis		
Histiocytosis Association of America		
	01/01/12-12/31/12	$50,000
Identification of PAX3-NCOA1/NCOA2-Regulated Genes in Rhabdomyosarcoma		
Joanna McAfee Childhood Cancer Fdn. Inc.		
	01/01/12-12/31/12	$8,000

	Current Year Direct	**$719,207**

Industry Contracts

GRIMLEY, M

Chimerix, Inc	$86,647

HARRIS, R

Alexion Pharmaceuticals, Inc.	$1,578
Current Year Direct Receipts	**$88,225**

Service Collaborations

JOSHI, S

Nat Marrow Donor Pro	$1,500
Current Year Direct	**$1,500**

Funded Collaborative Efforts

BLEESING, J

NIAMS Multidisciplinary Clinical Research Center
National Institutes of Health

Lovell, D	08/18/08-07/30/13	3%

DAVIES, S

Nonadherence: Undermining Health Outcomes in Pediatric HSCT
National Institutes of Health

Pai	03/01/12-02/28/17	10%
	Total	**$808,932**

Experimental Hematology

Grant and Contract Awards		Annual Direct

ANDREASSEN, P

FANCD2 Monoubiquitination in DNA Damage Responses
National Institutes of Health

R01 HL 085587	07/08/08-06/30/13	$225,000

AZAM, M

To Study the Molecular Mechanisms of "BCR/ABL Addiction" in Chronic Myeloid Leukemia
Leukemia Research Foundation

	07/01/11-06/30/12	$100,000

Mitogenic Activities in Neurofibromatosis
National Institutes of Health

R01 CA155091	05/01/12-03/31/17	$207,500

CANCELAS-PEREZ, J

Gap Junction Intercellular Communication in Bone Marrow
Department of Defense Army

W81XWH1110296	04/01/11-09/30/12	$33,063

Improving Stem Cell Mobilization by the EGFR Inhibitor Erlotinib
National Institutes of Health(P2D Bioscience)

R34 HL 108403	02/15/12-01/31/13	$98,337

Rac GTPase Inhibition in Chronic Myelogenous Leukemia

National Institutes of Health
R01 HL 087159 04/06/09-02/28/13 $247,500

CHOI, K

Regulation of Cellular Growth and Differentiation
National Institutes of Health(University of Cincinnat)
T32 CA 059268 12/6/11-12/5/12 $49,998

DEGEN, J

Analysis of Staphylococcus Aureus Host Interactions
National Institutes of Health(Texas A & M)
R01 AI 020624 09/30/10-08/31/12 $51,239

Thrombin-Mediated Proteolysis in Neuroinflammatory Disease
National Institutes of Health
R01 HL096126 08/01/09-04/30/13 $247,500

DEGEN, J / MALIK P

Hemostatic Factors and Sickle Cell Disease
National Institutes of Health
R01 HL 112603 01/01/12-11/30/16 $250,000

FILIPPI, M

Regulation of Hematopoietic Stem Cell Self Renewal
National Institutes of Health
R21 HL 104458 08/01/10-07/31/12 $125,000

Regulation of Neutrophil Migration and Polarity
National Institutes of Health
R01 HL 090676 03/01/10-02/28/15 $247,500

FLICK, M

Mechanisms Linking the Hemostatic Protease Thrombin to Arthritic Disease
National Institutes of Health
R01 AR 056990 08/10/09-07/31/14 $171,072

Digestive Health Center - Pilot & Feasibility Study
National Institutes of Health
P30 DK 078392 (Bezerra) 06/01/12-05/31/13 $36,667

GEIGER, H

Activated Protein C for Treatment of Radiation Combined Injury
National Institutes of Health(Blood Center of Wisconsin, Inc.)
R33 AI 080557 09/13/10-08/31/13 $79,070

HUANG, G

Molecular Mechanisms of Leukemogenesis Mediated by MLL-Partial Tandem Duplication (MLL-PTD)
Ohio Cancer Research Associates
07/01/11-06/30/13 $27,273

Targeting the "Warburg Effect" in Cancer
Cancer Free Kids
06/01/12-05/31/13 $20,000

LINK, K

Environmental Carcinogenesis and Mutagenesis
National Institutes of Health(University of Cincinnati)
T32 ES 007250 09/01/10-06/30/12 $53,494

MALIK, P

Ameliorating Sickle Nephropathy and Pulmonary Hypertension
National Institutes of Health
R34 HL 108752 08/18/11-06/30/14 $150,000

Cincinnati Cell Characterization Core
National Institutes of Health(University of Maryland)
U01 HL 099997 09/01/10-04/30/13 $354,674

Development of Safe and Efficient Gene Therapy Strategies
National Institutes of Health(Fred Hutchinson Cancer Research Center)
R01 HL 098489 01/21/10-12/31/14 $48,833

PlGF-HIF 1a-miRNA Axis in Sickle Pulmonary Hypertension
National Institutes of Health(University of Southern California)
R01 HL111372 01/01/12-12/31/16 $161,480

Cincinnati Cell Characterization Core - Per assay
National Institutes of Health(University of Maryland)
U01 HL 099997 09/01/10-04/30/13 $18,986

Cincinnati Center for Clinical/Translational Sciences & Training
National Institutes of Health(University of Cincinnati)
UL1 RR 026314 04/03/09-03/31/14 $40,294

MEETEI, R

Functional and Molecular Characterization of Two New Members of the Bloom Syndrome Complex
Ohio Cancer Research Associates
07/01/10-06/30/12 $27,272

MULLOY, J

Next Generation DNMT-1 Depletion Therapy for Leukemia
Department of Defense Army(Cleveland Clin Lerner Col of Med of CWRU)
W81XWH-09-1-0671 09/01/09-09/01/12 $141,405

Novel Therapeutic Target in Leukemia Stem Cells
Alex's Lemonade Stand Foundation
07/01/10-06/30/12 $100,000

Rac Signaling in MLL Leukemia
The Leukemia and Lymphoma Society
07/01/10-06/30/15 $104,762

NASSAR, N

Ras, Cycling and Inhibition
National Institutes of Health
R01 CA115611 03/01/11-02/28/13 $108,236

OLSHAVSKY, N

Regulation of Cellular Growth and Differentiation
National Institutes of Health(University of Cincinnati)
T32 CA59268 12/06/10-12/05/12 $32,303

PAN, D

Genetic Therapy for CNS Manifestations in MPS I via BBB-Targeted Protein Delivery
National Institutes of Health
R01 NS 064330 09/30/08-08/31/13 $214,375

PANG, Q

Role of FA Proteins in Hematopoiesis
National Institutes of Health
R01 HL 076712 04/01/10-03/31/15 $250,000

Role of Tumor Necrosis Factor in Leukemogenesis
The Leukemia and Lymphoma Society
07/01/08-06/30/13 $103,115

Targeted Improvement in Stem Cell Therapy for Leukemia and Bone Marrow Failure Syndromes
National Institutes of Health
R01 CA 157537 02/01/11-12/31/15 $207,500

PATEL, A

Identification and study of Novel Genes Critical to survival of MPNSTS
Department of Defense
W81XWH1110144 06/01/11-05/31/13 $50,000

RATNER, N

Cincinnati Center for Neurofibromatosis Research
National Institutes of Health
P50 NS 057531 09/15/08-06/30/13 $1,033,483

Ratner, N	Project A	$48,069
Cripe, T	Project B	$106,147
Rizvi, T	Project C	$81,328
Perentesis, J	Project 1	$297,055
Ratner, N	Project 2	$224,070
Ratner, N	Project 3	$276,814
		$

Mitogenic Activities in Neurofibromatosis
National Institutes of Health
R01 NS 028840 09/15/11-07/31/16 $231,250
Modelling Brain Defects in NF1
Department of Defense
W81XWH1010116 04/01/10-03/31/13 $251,091

STARCZYNOWSKI, D

Deregulation of TIFAB in Myelodysplastic Syndrome
American Society of Hematology
07/01/11-06/30/14 $50,000
Regulation and Function of TIFAB in Myelodysplastic Syndrome
Department of Defense
W81XWH1110468 06/01/11-05/31/14 $132,295
Identification and Characterization of Genes in del(5q) Myelodysplastic Syndrome
National Institutes of Health
R01 HL111103 12/05/11-11/30/16 $250,000

VAN DER LOO, J

AKTA Ready Liquid Chromatography System
National Institutes of Health
S10 RR 031721 07/01/11-06/30/12 $175,119

VARNEY, M

Environmental Carcinogenesis and Mutagenesis
National Institutes of Health(University of Cincinnati)
T32 ES 007250 05/01/12-04/30/14 $49,198

WU, J

STAT3 in Neurofibroma Tumorigenesis and Therapy
Department of Defense Army
W81XWH1110259 07/01/11-06/30/14 $129,364
STAT3 in Neurofibroma Tumorigenesis and Therapy
Ohio State University
08/01/10-07/31/12 $49,205

ZHENG, Y/ GEIGER, H

Lineage Determination and Tissue HomeOstasis in the Aged Hematopoietic System
National Institutes of Health

R01 AG 040118	08/01/11-07/31/16	$225,000

ZHENG, Y

Cincinnati Center for Excellence in Molecular Hematology
National Institutes of Health

P30 DK 090971	09/30/10-06/30/15		$482,569
Zheng, Y	Admin Core	$89,909	
Grabowsky, G	Genomics and Genetics Core	$63,000	
Cancelas, J	Cell Analysis and Sorting Core	$65,112	
Malik, P	Translational Core	$165,412	
Mulloy, J	Xenotransplant and Transgenic Core	$68,766	
Zheng, Y	Summer Students	$30,370	

Rac GTPase-Specific Small Molecular Inhibitors
National Institutes of Health

R01 CA 141341	03/24/09-01/31/14	$165,237

Training Program in Pediatric Hematologic and Oncologic Diseases
National Institutes of Health

T32 HL 091805	09/01/08-08/31/13	$164,652

Rac GTPases in the Mammalian Brain Development
National Institutes of Health (CCHMC (Developmental Biology-Dr. Kuan))

R01 NS 056435	07/01/08-06/30/12	$165,237

ZHENG, Y / MULLOY J

Targeting Cdc42 in Leukemia Stem Cells
National Institutes of Health

R01 CA 150547	03/10/10-01/31/15	$201,275

Current Year Direct **$8,138,423**

Industry Contracts

FLICK, M

Novo Nordisk Pharmaceuticals	$53,159

MALIK, P

HemaQuest Pharmaceuticals, Inc	$4,719

MULLOY, J

Celgene Cellular Therapeutics	$63,229

Current Year Direct Receipts **$121,107**

Service Collaborations

GRASSMAN, E

Battelle	$183,361
Neogenomic	$11,593

Current Year Direct **$194,954**

Funded Collaborative Efforts

MALIK, P

Macrophage-based Human Gene Therapy for Hereditary PAP
National Institutes of Health
Trapnell, B 12/15/10-11/30/12 5%

Role of Anti-GM-CSF Antibodies in Myeloid Cell Function
National Institutes of Health
Trapnell, B 04/01/11-03/31/16 5%

ANDREASSEN, P

DNA Damage Response Pathways in Meiotic Sex Chromosome Inactivation
National Institutes of Health
Namekawa, F 08/01/11-07/31/16 7.5%

Total $8,454,484

Hematology

Grant and Contract Awards		Annual Direct

GRUPPO, R

ATHNdata.Quality Counts
American Thrombosis & Hemostatis Network
01/15/11-01/14/13 $10,315

Hemophilia And Thrombosis Center
Cascade Hemophilia Consortium(Hemophilia Foundation of Michigan)
06/01/03-05/31/13 $90,000

Hemophilia Comprehensive Care
Maternal and Child Health Bureau(Hemophilia Foundation of Michigan)
H30MC00015 06/01/04-05/31/12 $14,500

Public Health Surveillance for the Prevention of Complications of Bleeding and Clotting Disorders
Centers for Disease Control & Prevention(Hemophilia Foundation of Michigan)
U27 DD 000862 09/30/11-09/29/14 $17,000

Hemophilia Patient Handbook
Hemophilia Alliance Foundation
05/01/2012-04/30/2013 $5,000

JOINER, C

Cincinnati Sickle Cell Project
Health Resources & Services Admin (Ohio Department of Health)
03130011SK0411 07/01/1998-06/30/2012 $123,469

KALFA, T

Rac1 and Rac2 Guanosine Triphosphatases in Erythroid Function and Differentiation
National Institutes of Health
K08 HL 088126 02/11/08-11/30/12 $119,125

MULLINS, E

Mechanisms Linking Hemostatic Factors to Neuroinflammatory Disease
National Institutes of Health
K08 HL 105672 08/22/11-07/31/16 $121,375

SHOOK, L

Cincinnati Sickle Cell Newborn Screening Network
Health Resources & Services Admin
U38 MC 22218 06/01/11-05/31/15 $377,100

Sickle Cell Treatment Demonstration Program
Health Resources & Services Admin(University of Cincinnati)

U1EMC0755-06	09/01/11-08/31/14	$11,318
	Current Year Direct	**$889,202**

Industry Contracts

GRUPPO, R

Baxter Healthcare Corporation	$25,987
Bayer Healthcare Pharmaceuticals, Inc	$15,828
Novo Nordisk Pharmaceuticals	$34,798
PAREXEL International, LLC	$11,758
Wyeth Pharmaceuticals	$2,434
PTC Therapeutics, Inc	$1,540

KALFA, T

Baxter Healthcare Corporation	$6,884

KALINYAK, K

GlaxoSmithKline	$6,545

QUINN, C

GlycoMimetics, Inc.	$26,488
Lilly USA, LLC	$25,327

PALUMBO, J

Novo Nordisk Pharmaceuticals	$86,375
Current Year Direct Receipts	**$243,964**
Total	**$1,133,166**

Oncology

Grant and Contract Awards		Annual Direct

ADAMS, D

Phase II Study of Rapamycin for Complicated Vascular Anomalies
Food and Drug Administration
R01 FD 003712 09/25/09-07/31/13 $248,540

CHOW, L

Micro-RNA Expression in Pediatric High-Grade Glioma
Bear Necessities Pediatric Cancer Fdn
- 08/01/11-07/31/12 $40,000

Micro-RNA Expression in Pediatric High-Grade Glioma
Childhood Brain Tumor Foundation
- 09/01/11-08/31/13 $22,727

Molecular Targeting of High-Grade Astrocytoma
The Sontag Foundation
- 10/01/11-09/30/15 $130,435

Molecular Targeting of Pediatric High-Grade Glioma
St. Baldrick's Foundation
07/01/11-06/30/14 $110,000

CRIPE, T

Neurofibromatosis Preclinical Consortium Center Award
The Children's Tumor Foundation
2011-05-003 07/01/11-06/30/13 $136,364

Phase I Study of HSV1716 in Pediatric Non-CNS Solid Tumors
Food and Drug Administration
R01 FD 003717 09/01/10-08/31/13 $152,618

Acidic Phospholipid-Selective Treatment for Neuroblastoma
National Institutes of Health(University of Cincinnati)
R01 CA 158372 09/27/11-07/31/13 $12,760

DORRIS, K

Molecular Epidemiology in Children's Environmental Health
National Institutes of Health(University of Cincinnati)
T32 ES010957 10/01/10-09/30/12 $52,293

DRISSI, R

Biology Studies in the First Phase I Trial of a Telomerarase Inhibitor in Children with Refractory or Recurrent Solid Tumors and Lymphomas
Children's Cancer Research Fund
08/01/11-07/31/12 $40,000

FOULADI, M

Children's Oncology Group Phase I / Pilot Consortium
National Institutes of Health(National Childhood Cancer Foundation)
U10 CA 097452 09/16/11-07/31/12 $25,662

Establishment of an International Diffuse Intrinsic Pontine Glioma (DIPG) Registry
The Cure Starts Now Foundation
01/01/12-12/31/12 $155,000

The Pediatric Brain Tumor Consortium
National Institutes of Health(St Jude's Children's Hospital)
U01 CA 081457 04/01/08-03/31/13 $93,908

Children's Oncology Group Chair
National Institutes of Health(National Childhood Cancer Foundation)
U10 CA 098543 03/01/11-02/29/12 $12,500

HAMMILL, A

Ontogeny and Quantitative Multimodal Skin Imaging of Infantile Hemangiomas
The Society for Pediatric Dermatology
07/01/11-06/30/12 $6,500

PERENTESIS, J

Children's Oncology Group Phase I
National Institutes of Health(National Childhood Cancer Foundation)
U01 CA 097452 08/01/07-07/31/11 $23,918

Children's Oncology Group Phase I / Pilot Consortium
National Institutes of Health(National Childhood Cancer Foundation)
U01 CA 097452 09/01/06-07/31/12 $26,124

Cincinnati Children’s Hyundai Scholar in Cancer Survivorship
Hyundai Hope on Wheels
10/01/11-12/01/12 $100,000

Children's Oncology Group Phase I / Pilot Consortium - Per Patient
National Institutes of Health(National Childhood Cancer Foundation)
U01 CA 097452 09/01/06-07/31/12 $38,058

Children's Oncology Group Chair - Per Patient
National Institutes of Health(National Childhood Cancer Foundation)
U10 CA 098543 03/01/11-02/28/12 $57,840

POPE, J

Analysis of Antioxident Polymorphisms in Patients with Down Syndrome and CML
St. Baldrick's Foundation

	07/01/10-06/30/12		$70,804

WANG, P-Y

Virotherapy on Primary Neuroblastoma Cells
Alex's Lemonade Stand Foundation

	07/01/10-06/30/12		$41,250

WELLS, S

Fanconi Anemia and HPV Transformation
National Institutes of Health

R01 CA 102357	09/28/09-08/31/14		$191,834
		Current Year Direct	**$1,789,135**

Industry Contracts

FOULADI, M

Genentech, Inc			$30,800

GELLER, J

Bayer HealthCare Pharmaceuticals, Inc.			$25,000

WEISS, B

CHLA - NANT			$15,574

ABSALON, M

Children's Healthcare of Atlanta			$3,332

CRIPE, T

Jennerex Biotherapeutics			$88,250

WAGNER, L

Abraxis BioScience, LLC			$16,178
Amgen, Inc			$1,016
		Current Year Direct Receipts	**$180,150**

Funded Collaborative Efforts

WELLS, S

Fanconi Anemia as a Model for Susceptibility to Human Papillomavirus Infection
National Institutes of Health

Butsch-Kovacic	07/01/11-06/30/16		3%
		Total	**$1,969,285**