

Bone Marrow Transplantation and Immune Deficiency



Division Details

Division Data Summary

Research and Training Details

Number of Faculty	12
Number of Joint Appointment Faculty	4
Number of Research Fellows	2
Number of Research Students	1
Number of Support Personnel	25
Direct Annual Grant Support	\$719,207
Direct Annual Industry Support	\$88,225
Peer Reviewed Publications	29

Clinical Activities and Training

Number of Clinical Staff	9
Number of Clinical Fellows	5
Number of Other Students	1
Inpatient Encounters	11,363
Outpatient Encounters	4,379

Division Photo



Left to Right: R Marsh, K Myers, S Jodele, A Kumar, M Jordan, A Filipovich, S Davies, M Grimley, P Mehta, S Joshi

Significant Publications

Bindels, E.M., M. Havermans, S. Lugthart, C. Erpelinck, E. Wocjtowicz, A.V. Krivtsov, E. Rombouts, S.A. Armstrong, E. Taskesen, J.R. Haanstra, H.B. Beverloo, H. Dohner, W.A. Hudson, J.H. Kersey, R. Delwel, and **A.R. Kumar**. **EV11 is critical for the pathogenesis of a subset of MLL-AF9-rearranged AMLs.** *Blood*. 119(24): p. 5838-49. 2012.

This paper describes an important mechanism of leukemogenesis, relevant to etiology and treatment of leukemia in very young children.

Haines, H.L., B.L. Laskin, J. Goebel, **S.M. Davies**, H.J. Yin, J. Lawrence, P.A. Mehta, J.J. Bleesing, **A.H. Filipovich**, **R.A. Marsh**, and S. Jodele, **Blood, and not urine, BK viral load predicts renal outcome in children with hemorrhagic cystitis following hematopoietic stem cell transplantation.** *Biol Blood Marrow Transplant*. 17(10): p. 1512-9. 2011.

This paper describes for the first time the clinical importance of BK viremia in children after transplant. These findings have changed screening and therapy for this virus at our own and at other institutions.

Myers, K.C., J.J. Bleesing, **S.M. Davies**, X. Zhang, L.J. Martin, R. Mueller, R.E. Harris, **A.H. Filipovich**, M.B. Kovacic, S.I. Wells, and P.A. Mehta, **Impaired immune function in children with Fanconi anaemia.** *Br J Haematol*. 154(2): p. 234-40. 2011.

This paper is the first systematic description of immune system defects in fanconi Anemia.

Shin, C.R., J. Nathan, M. Alonso, N. Yazigi, S. Kocoshis, G. Tiao, and **S.M. Davies**, **Incidence of acute and**

chronic graft-versus-host disease and donor T-cell chimerism after small bowel or combined organ transplantation. *J Pediatr Surg.* 46(9): p. 1732-8. 2011.

This paper, written in collaboration with the department of surgery, is the largest description of GVHD after solid organ transplant in the literature and has lead to changes in screening and treatment at Cincinnati Children's Hospital Medical Center.

Zhang, K., **M.B. Jordan, R.A. Marsh**, J.A. Johnson, D. Kissell, J. Meller, J. Villanueva, K.A. Risma, Q. Wei, P.S. Klein, and **A.H. Filipovich**, **Hypomorphic mutations in PRF1, MUNC13-4, and STXBP2 are associated with adult-onset familial HLH.** *Blood.* 118(22): p. 5794-8. 2011

This paper, written in collaboration with the division of human genetics, describes the previously overlooked phenomenon of hemophagocytic lymphohistiocytosis in adults, and provides a mechanistic explanation for the clinical findings.

Division Publications

1. 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.
2. Bindels EM, Havermans M, Lugthart S, Erpelinck C, Wocjtowicz E, Krivtsov AV, Rombouts E, Armstrong SA, Taskesen E, Haanstra JR, Beverloo HB, Dohner H, Hudson WA, Kersey JH, Delwel R, Kumar AR. **EVI1 is critical for the pathogenesis of a subset of MLL-AF9-rearranged AMLs.** *Blood.* 2012; 119:5838-49.
3. Carpenter PA, Meshinchi S, Davies SM. **Transplantation for AML in children.** *Biol Blood Marrow Transplant.* 2012; 18:S33-9.
4. Davies SM. **Getting to the heart of the matter.** *J Clin Oncol.* 2012; 30:1399-400.
5. Davies SM, Levine JE. **The 2012 education supplement on hematopoietic cell transplantation.** *Biol Blood Marrow Transplant.* 2012; 18:S1.
6. Dorris K, Fouladi M, Davies SM, Perentesis JP, Lawrence JM, Chow LM, Assa'ad A, Uygungil B, Jodele S. **Severe allergic reactions to thiol-based cytoprotective agents mesna and amifostine in a child with a supratentorial primitive neuroectodermal tumor.** *J Pediatr Hematol Oncol.* 2011; 33:e250-2.
7. Du W, Rani R, Sipple J, Schick J, Myers KC, Mehta P, Andreassen PR, Davies SM, Pang Q. **The FA pathway counteracts oxidative stress through selective protection of antioxidant defense gene promoters.** *Blood.* 2012; 119:4142-51.
8. Dvorak CC, Bollard CM, El-Bietar J, Filipovich A. **Complications of transplant for nonmalignant disorders: autoimmune cytopenias, opportunistic infections, and PTLD.** *Biol Blood Marrow Transplant.* 2012; 18:S101-10.
9. Fernandes JF, Rocha V, Labopin M, Neven B, Moshous D, Gennery AR, Friedrich W, Porta F, Diaz de Heredia C, Wall D, Bertrand Y, Veys P, Slatter M, Schulz A, Chan KW, Grimley M, Ayas M, Gungor T, Ebell W, Bonfim C, Kalwak K, Taupin P, Blanche S, Gaspar HB, Landais P, Fischer A, Gluckman E, Cavazzana-Calvo M. **Transplantation in patients with SCID: mismatched related stem cells or unrelated cord blood?** *Blood.* 2012; 119:2949-55.
10. Haines HL, Laskin BL, Goebel J, Davies SM, Yin HJ, Lawrence J, Mehta PA, Bleesing JJ, Filipovich AH, Marsh RA, Jodele S. **Blood, and not urine, BK viral load predicts renal outcome in children with hemorrhagic cystitis following hematopoietic stem cell transplantation.** *Biol Blood Marrow Transplant.* 2011; 17:1512-9.
11. Jodele S, Bleesing JJ, Mehta PA, Filipovich AH, Laskin BL, Goebel J, Pinkard SL, Davies SM. **Successful early intervention for hyperacute transplant-associated thrombotic microangiopathy following pediatric**

- hematopoietic stem cell transplantation.** *Pediatr Transplant.* 2012; 16:E39-42.
12. Jordan MB, Allen CE, Weitzman S, Filipovich AH, McClain KL. **How I treat hemophagocytic lymphohistiocytosis.** *Blood.* 2011; 118:4041-52.
13. Kuras Z, Kucher V, Gordon SM, Neumeier L, Chimote AA, Filipovich AH, Conforti L. **Modulation of K(V)1.3 channels by protein kinase A I in T lymphocytes is mediated by the disc large 1-tyrosine kinase Lck complex.** *Am J Physiol Cell Physiol.* 2012; 302:C1504-12.
14. Laskin BL, Goebel J, Davies SM, Jodele S. **Small vessels, big trouble in the kidneys and beyond: hematopoietic stem cell transplantation-associated thrombotic microangiopathy.** *Blood.* 2011; 118:1452-62.
15. Marsh RA, Filipovich AH. **Familial hemophagocytic lymphohistiocytosis and X-linked lymphoproliferative disease.** *Ann N Y Acad Sci.* 2011; 1238:106-21.
16. Marsh RA, Jordan MB, Filipovich AH. **Reduced-intensity conditioning haematopoietic cell transplantation for haemophagocytic lymphohistiocytosis: an important step forward.** *Br J Haematol.* 2011; 154:556-63.
17. Mizukawa B, Wei J, Shrestha M, Wunderlich M, Chou FS, Griesinger A, Harris CE, Kumar AR, Zheng Y, Williams DA, Mulloy JC. **Inhibition of Rac GTPase signaling and downstream prosurvival Bcl-2 proteins as combination targeted therapy in MLL-AF9 leukemia.** *Blood.* 2011; 118:5235-45.
18. Myers K, Davies SM, Harris RE, Spunt SL, Smolarek T, Zimmerman S, McMasters R, Wagner L, Mueller R, Auerbach AD, Mehta PA. **The clinical phenotype of children with Fanconi anemia caused by biallelic FANCD1/BRCA2 mutations.** *Pediatr Blood Cancer.* 2012; 58:462-5.
19. Myers KC, Bleesing JJ, Davies SM, Zhang X, Martin LJ, Mueller R, Harris RE, Filipovich AH, Kovacic MB, Wells SI, Mehta PA. **Impaired immune function in children with Fanconi anaemia.** *Br J Haematol.* 2011; 154:234-40.
20. Nemecek ER, Ellis K, He W, Bunin NJ, Bajwa RS, Cheerva A, Cairo MS, Dvorak C, Duval M, Davies S, Eapen M, Gross TG, Hussein AA, MacMillan ML, Mehta PA, Pulsipher MA, Seber A, Woolfrey AE, Frangoul HA, Carpenter PA. **Outcome of myeloablative conditioning and unrelated donor hematopoietic cell transplantation for childhood acute lymphoblastic leukemia in third remission.** *Biol Blood Marrow Transplant.* 2011; 17:1833-40.
21. Pennarola BW, Rodday AM, Mayer DK, Ratichek SJ, Davies SM, Syrjala KL, Patel S, Bingen K, Kupst MJ, Schwartz L, Guinan EC, Hibbard JH, Parsons SK. **Factors associated with parental activation in pediatric hematopoietic stem cell transplant.** *Med Care Res Rev.* 2012; 69:194-214.
22. Rani R, Jordan MB, Divanovic S, Herbert DR. **IFN-gamma-driven IDO production from macrophages protects IL-4Ralpha-deficient mice against lethality during Schistosoma mansoni infection.** *Am J Pathol.* 2012; 180:2001-8.
23. Risma K, Jordan MB. **Hemophagocytic lymphohistiocytosis: updates and evolving concepts.** *Curr Opin Pediatr.* 2012; 24:9-15.
24. Sam TN, Kersey JH, Linabery AM, Johnson KJ, Heerema NA, Hilden JM, Davies SM, Reaman GH, Ross JA. **MLL gene rearrangements in infant leukemia vary with age at diagnosis and selected demographic factors: a Children's Oncology Group (COG) study.** *Pediatr Blood Cancer.* 2012; 58:836-9.
25. Shin CR, Nathan J, Alonso M, Yazigi N, Kocoshis S, Tiao G, Davies SM. **Incidence of acute and chronic graft-versus-host disease and donor T-cell chimerism after small bowel or combined organ transplantation.** *J Pediatr Surg.* 2011; 46:1732-8.
26. Tolar J, Mehta PA, Walters MC. **Hematopoietic cell transplantation for nonmalignant disorders.** *Biol Blood Marrow Transplant.* 2012; 18:S166-71.
27. Trottestam H, Horne A, Arico M, Egeler RM, Filipovich AH, Gadner H, Imashuku S, Ladisch S, Webb D, Janka G, Henter JL. **Chemoimmunotherapy for hemophagocytic lymphohistiocytosis: long-term results of the HLH-94 treatment protocol.** *Blood.* 2011; 118:4577-84.

28. Veys P, Wynn RF, Ahn KW, Samarasinghe S, He W, Bonney D, Craddock J, Cornish J, Davies SM, Dvorak CC, Duerst RE, Gross TG, Kapoor N, Kitko C, Krance RA, Leung W, Lewis VA, Steward C, Wagner JE, Carpenter PA, Eapen M. **Impact of immune modulation with in vivo T-cell depletion and myeloablative total body irradiation conditioning on outcomes after unrelated donor transplantation for childhood acute lymphoblastic leukemia.** *Blood*. 2012; 119:6155-61.
29. Zhang K, Jordan MB, Marsh RA, Johnson JA, Kissell D, Meller J, Villanueva J, Risma KA, Wei Q, Klein PS, Filipovich AH. **Hypomorphic mutations in PRF1, MUNC13-4, and STXBP2 are associated with adult-onset familial HLH.** *Blood*. 2011; 118:5794-8.

Faculty, Staff, and Trainees

Faculty Members

Stella Davies, MBBS, PhD, MRCP, Professor

Leadership Jacob G. Schmidlapp Endowed Chair; Director, Bone Marrow Transplantation and Immune Deficiency; Executive Co-Director, Cancer and Blood Diseases Institute; Director, Division of Bone Marrow Transplantation and Immune Deficiency

Research Interests Blood and Marrow Transplant, Fanconi anemia and other marrow failure disorders, Pharmacogenetics and Pharmacokinetics, Survivorship Research, and BMT for Children with Leukemia.

Jacob Bleesing, MD, PhD, Associate Professor

Research Interests Clinical Investigation of Primary Immunodeficiency Disorders, with emphasis on disorders of immunodysregulation and B-cell disorders

Alexandra Filipovich, MD, Professor

Leadership Ralph J. Stolle Chair in Clinical Immunology; Director, Immunodeficiency and; Medical Director, Diagnostic Laboratory

Research Interests Histiocytic disorders, primary immune deficiency disorders and Immunoreconstitution Following Pediatric Stem Cell Transplantation

Michael Grimley, MD, Associate Professor

Research Interests Bone marrow transplantation for children with malignant and non-malignant disorders and treatment of chronic GVHD.

Richard Harris, MD, Professor

Research Interests Transplantation for children with bone marrow failure syndromes and aplastic anemia

Sonata Jodele, MD, Assistant Professor

Research Interests Phase I clinical trials; stem cell transplantation; high risk pediatric malignancies; childhood neuroblastoma, Ewing's sarcoma, renal complications of transplantation.

Sarita Joshi, MD, Assistant Professor

Research Interests Management of Diamond-Blackfan anemia, transplantation for hemoglobinopathies, and autologous transplantation for malignancy.

Ashish Kumar, MD, PhD, Assistant Professor

Research Interests Etiology of childhood leukemia, transplantation of children with malignancy and primary immune deficiencies.

Rebecca Marsh, MD, Assistant Professor

Research Interests Pathogenesis of HLH with XIAP deficiency, diagnostic laboratory assays, improving

outcomes of allogeneic BMT in primary immune deficiencies, use of reduced intensity conditioning regimens.

Parinda Mehta, MD, Associate Professor

Research Interests Blood and Marrow Transplant, Fanconi anemia and other failure disorders, Pharmacogenetics and Pharmacokinetics

Kasiani Myers, MD, Instructor

Research Interests Blood and Marrow Transplant, Fanconi anemia and other marrow failure disorders, longitudinal studies of hematopoiesis

Janos Sumegi, MD, PhD, Professor

Research Interests Lymphoproliferative disease, Hemophagocytic Lymphohistiocytosis, Usher syndrome, etiology of childhood sarcomas.

Joint Appointment Faculty Members

Mark Johnson, MD, Assistant Professor (Child Psychiatry)

Research Interests Psychiatric support of bone marrow transplant patients

Michael Jordan, MD, Associate Professor (Immunobiology)

Research Interests Regulation of the immune response; immunotherapy of cancer, animal models of hemophagocytic disorders.

Mi-Ok Kim, PhD, Associate Professor (Biostatistics & Epidemiology)

Ahna Pai, PhD, Assistant Professor (Adherence Psychology in children receiving bone marrow transplantation)

Clinical Staff Members

- **Teresa Finke, MD**
- **Zahida Khan, MD**
- **Ernest Lawhorn, MD**
- **Gregory Wallace, DO**
- **Paula Cuthrell, RN, MSN, CFNP**
- **Jennifer Detzel, RN, MSN, CFNP**
- **Laura Diggs, RN, MSN, CNP**
- **Mary Ann Michael, RN, MSN, CPNP**
- **Gretchen Vaughn, RN, MSN, CNP**

Trainees

- **Shan Chandrakasan, MD**, PL-IV, Children's Hospital of Michigan
- **Anne Hladik, MD**, PL-IV, Baylor College of Medicine
- **Pooja Khandelwal, MD**, PL-V, University of Arizona College of Medicine
- **Omar Niss, MD**, PL-V, University of Nebraska Medical Center/Creighton University

Division Collaboration

Immunobiology » L. Grimes

MEIS1 and MLL-fusion leukemia: Research project investigating the role of MEIS1 in MLL-fusion leukemia using transgenic mice. (A. Kumar)

Experimental Hematology and Cancer Biology » J. Mulloy

Animal models of human leukemia: Research project aimed at developing xenograft mouse models of human leukemia using primary patient derived material. (A. Kumar)

Experimental Hematology and Cancer Biology » J. Mulloy and J. Cancelas

The molecular origin of monosomy 7 in very young children. Translational research project exploring the causes of monosomy 7. (P. Mehta, SM Davies)

Experimental Hematology and Cancer Biology » N. Ratner

MEIS1 and MPNSTs: Research project aimed at understanding the role of MEIS1 in malignant peripheral nerve sheath tumors (MPNST). (A. Kumar)

Nephrology; Biostatistics & Epidemiology » J. Goebel, B. Dixon, P. Devarajan, and J. Khoury

A Prospective Analysis of Clinical and Biochemical Markers for Pediatric Stem Cell Transplant-Associated Thrombotic Microangiopathy. Study open and more than half the needed patients enrolled. Preliminary data generated and grant applications submitted. (J. Bleesing, SM. Davies, A. Filipovich, R. Harris, S. Jodele, M. Jordan, S. Joshi, A. Kumar, R. Marsh, P. Mehta)

Critical Care; Radiology; Nephrology » H. Wong, S. Poynter, W. Ball, J. Leach, J. Goebel, and M. Mitsnefes

PRES working group

To identify patients at risk for PRES, outline uniform evaluation and therapy guidelines. (S. Jodele, SM Davies)

Nephrology » J. Goebel and BL Laskin

Blood, and Not Urine, BK Viral Load Predicts Renal Outcome in Children with Hemorrhagic Cystitis following Hematopoietic Stem Cell Transplantation. Biol Blood Marrow Transplant. 2011 (Jodele S Davies SM, Mehta PA, Bleesing JJ, Filipovich AH, Marsh RA).

Nephrology » J. Goebel and BL Laskin

Small vessels, big trouble in the kidneys and beyond: hematopoietic stem cell transplantation-associated thrombotic microangiopathy. (S Jodele, SM Davies).

Critical Care » R. Chima and D. Wheeler

BMT-PICU risk score index working group: To determine outcome predictors for BMT patients that are treated in PICU. To validate BMT-PICU risk score at CCHMC and later at collaborating institutions. (S Jodele, SM Davies)

Critical Care » R. Chima and D. Wheeler

Paper describing excellent outcomes for children admitted to PICU post-transplant admitted to PICU. (S Jodele, SM Davies)

Surgery ; Gastroenterology » J. Nathan, G.Tiao, M. Alonzo, N. Yazigi , and S. Kocoschis

Incidence of acute and chronic graft versus host disease and donor T-cell chimerism after small bowel or combined organ transplantation. In press in the Journal of Pediatric Surgery. (S. Jodele, S. Davies)

Surgery ; Dermatology » R. Azizkhan and A. Lucky

Preparation of a stem cell transplant protocol for children with epidermolysis bullosa. (S Jodele and SM Davies).

Genetics ; Pathology » T. Smoralek, S. Zimmerman , and R. McMasters

The clinical phenotype of children with Fanconi anemia caused by biallelic FANCD1/BRCA2 mutations. Pediatr Blood Cancer. 2011 (Myers K, Davies SM, Harris RE, Mehta PA).

Experimental Hematology and Cancer Biology » K. Komurov

Investigating the role of MEIS1 in gliomas (Kumar A)

Oncology » J. Perentesis

Novel therapeutic approaches for EVI1+ leukemias(Kumar A)

Genetics » K. Zhang

Genotyping for PID and HLH (Filipovich, Bleesing)

Experimental Hematology and Cancer Biology » S. Wells

[The Fanconi Anemia Pathway Limits Human Papillomavirus Replication.](#) (P. Mehta, Davies, S.)

Experimental Hematology and Cancer Biology » Q. Pang

[Fanconi Anemia Links Reactive Oxygen Species to Insulin Resistance and Obesity.](#) (P. Mehta, Davies, S.)

Experimental Hematology and Cancer Biology » Q. Pang

[The FA pathway counteracts oxidative stress through selective protection of antioxidant defense gene promoters.](#) (P. Mehta, Davies, S., Myers, K.)

Experimental Hematology and Cancer Biology » Q. Pang

Etanercept Treatment in Fanconi Anaemia; Combined US and Italian Experience.(P. Mehta, Davies, S., Harris, R)

Experimental Hematology and Cancer Biology » Q. Pang

Ongoing collaboration on a translational study: Quercetin in patients with Fanconi anemia, a Pilot study (P. Mehta)

Experimental Hematology and Cancer Biology » J. Mulloy and J. Cancelas

Identify the cell of origin of the monosomy 7 clone in children with MDS arising in children with and without known genetic predisposition syndromes, and establish timing of onset in very young children (in utero vs ex utero). (P.Mehta)

Endocrinology » S. Rose and D. Elder

[Endocrine phenotype of children and adults with Fanconi anemia.](#) (P. Mehta, S. Davies, Myers, K.,Harris, R.)

Asthma Research » M. Butsch-Kovacic

HPV and Immune Function in Fanconi anemia: Research project investigating the epidemiology of HPV infection and the role of immune function in Fanconi Anemia. (P. Mehta)

Asthma Research » M. Butsch-Kovacic

Determination of antibody responses to natural infection with HPV and HPV vaccination in individuals with Fanconi anemia and to evaluate the predictors of effective or ineffective immune responses to HPV in individuals with FA. (P. Mehta)

Pharmacology » S. Vinks

Therapeutic Drug Monitoring of Voriconazole in pediatric BMT patients. . (P. Mehta)

Pharmacology » S. Vinks

Pharmacokinetics of every 4th day Micafungin in high risk pediatric BMT patients. (P. Mehta)

Pharmacology » S. Vinks

The Impact of Alemtuzumab Levels on Donor Chimerism and Graft Versus Host Disease Following Allogeneic Hematopoietic Cell Transplantation: A Prospective Study. . (P. Mehta)

Immunobiology » L. Grimes

Severe Congenital Neutropenia: Research project investigating novel genetic etiologies and molecular and cellular phenotypes of severe congenital neutropenia (K.Myers)

Asthma Research » M. Butsch Kovacic

HPV and Immune Function in Fanconi anemia: Research project investigating the epidemiology of HPV infection and the role of immune function in Fanconi Anemia. (K.Myers, P. Mehta)

Endocrinology » S. Rose

Endocrine function after RIC: Research project investigating endocrine function in pediatric patients after

reduced intensity bone marrow transplantation. (K.Myers)

Ophthalmology » T. Schwartz

Ophthalmic GHVD: Research project investigating the incidence, severity and treatment of ophthalmic graft versus host disease in patients with systemic GVHD after bone marrow transplant. (K.Myers)

Experimental Hematology and Cancer Biology » P. Malik

Gene therapy for Hemophagocytic Lymphohistiocytosis(M. Jordan)

Experimental Hematology and Cancer Biology » P. Malik

Novel methods to promote stem cell engraftment (M. Jordan)

Allergy and Immunology » K. Risma

Gene therapy for Hemophagocytic Lymphohistiocytosis (M. Jordan)

Allergy and Immunology » K. Risma

The biology of cytotoxicity: Genotype/phenotype correlations(M. Jordan)

Cellular and Molecular Immunology » D. Hildeman

Selective ablation of undesirable T cell responses (M. Jordan)

Allergy and Immunology » M. Jordan

Immune profiling in Hemophagocytic Lymphohistiocytosis

Nephrology; Biostatistics ; Epidemiology » Dr.Prasad, Devarajan, J. Goebel, and J. Khoury

Project: “A Prospective Analysis of Clinical and Biochemical Markers for Pediatric Stem Cell Transplant-Associated Thrombotic Microangiopathy (TA-TMA)”

Project support:

1. P50 Application in response to RFA-DK-11-009 – Pediatric Centers of Excellence in Nephrology
2. Center for Clinical and Translational Science and Training (CCTST), University of Cincinnati Academic Health Center, T1 Pilot Grant

Genetics ; Hematology » K. Zhang and R. Gruppo

Project: “Complement gene testing in patients with hematopoietic stem cell transplant-associated thrombotic microangiopathy”

Project support: The Investigator Initiated Trial Grant from Alexion Therapeutics (S. Jodele, S. Davies)

Cardiology ; Critical Care ; Pathology » R. Hirsch, R. Chima, and D. Witte

Project: “Pulmonary Hypertension in Patients with Hematopoietic Stem Cell Transplant -Associated Thrombotic Microangiopathy”

Manuscript is accepted in Biology of Bone Marrow Transplantation journal (S. Jodele, S. Davies)

Nephrology » J. Goebel

Project: “Retrospective analysis of BK virus infections in an existing cohort of pediatric hematopoietic cell transplant recipients at Cincinnati Children’s Hospital Medical Center” (S. Jodele, S. Davies)

Nephrology ; Pathology » J.Goebel , H. Yin, and J. Khoury

Project: “Cystatin C to Estimate Renal Function in Bone Marrow Transplant and Oncology Patients”

Publication: Biol Blood Marrow Transplant. 2012 Jun 16 (S. Jodele, S. Davies)

Critical Care » R. Chima

Pediatric intensive care for patients undergoing hematopoietic stem cell transplantation. (S. Jodele, S. Davies)

Nephrology; Hoxworth Cell Therapy Team; Biostatistics; Epidemiology » J. Goebel, J. Khoury, and P. Carey

Project:“Does early initiation of therapeutic plasma exchange improve outcome in pediatric stem cell transplant-

associated thrombotic microangiopathy?" Publication: Transfusion. 2012 Jul 15. d (S. Jodele, S. Davies)

Critical Care; Biostatistics; Epidemiology » R. Chima and D. Wheeler

BMT-PICU risk score index working group.(S. Jodele, S, Davies)

Critical Care » R. Chima and D. Wheeler

Publication: Improved outcomes for stem cell transplant recipients requiring pediatric intensive care. Pediatr Crit Care Med. 2012 Jul 11 (S. Jodele, S. Davies)

Rheumatology; Human Genetics; Allergy » A. Grom, Barnes, K. Zhang, and K. Risma

Gene expression profiling of peripheral blood mononuclear cells from children with active hemophagocytic lymphohistiocytosis. (J. Sumegi, A. Filipovich)

Oncology; Human Genetics » L. Wagner and T. Smolarek

Assessment of minimal residual disease in ewing sarcoma. (J. Sumegi)

Grants, Contracts, and Industry Agreements

Grant and Contract Awards	Annual Direct
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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
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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
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Children's Oncology Chair Award

National Institutes of Health(Children's Oncology Group)

U10 CA 098543	03/01/11-02/28/14	\$12,831
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Multicenter Pilot Trial of HSCT Lacking a Genotype Identical Donor

Fanconi Anemia Research Fund

	05/01/10-04/30/13	\$1,160
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Molecular Epidemiology of Pediatric Germ Cell Tumors

National Institutes of Health(University of Minnesota)

R01 CA151284	08/10/11-05/31/16	\$21,219
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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
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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
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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
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KUMAR, A

Molecular Pathogenesis of MLL-Fusion Gene Leukemia

National Institutes of Health

K08 CA 122191	08/19/09-06/30/12	\$125,250
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MARSH, R

Studies to Determine Why ZIAP Deficiency 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