

Bone Marrow Transplantation and Immune Deficiency

RESEARCH AND TRAINING DETAILS



[Click to view members](#)

Faculty	17
Joint Appointment Faculty	3
Research Fellows	2
Support Personnel	35
Direct Annual Grant Support	\$814,445
Direct Annual Industry Support	\$468,042
Peer Reviewed Publications	45

CLINICAL ACTIVITIES AND TRAINING

Clinical Staff	4
Staff Physicians	7
Clinical Fellows	7
Other Students	2
Inpatient Encounters	10,400
Outpatient Encounters	6,344

Division Publications

1. Alcamo AM, Pinchasik DE, Mo JQ, Grimley MS, O'Brien MM. **Successful Treatment of Disseminated Adenovirus Infection in an Infant With Acute Lymphoblastic Leukemia.** *J Pediatr Hematol Oncol.* 2014; 37:e178-e181.
2. Appelberg R, Moreira D, Barreira-Silva P, Borges M, Silva L, Dinis-Oliveira RJ, Resende M, Correia-Neves M, Jordan MB, Ferreira NC, Abrunhosa AJ, Silvestre R. **The Warburg effect in mycobacterial granulomas is dependent on the recruitment and activation of macrophages by interferon-gamma.** *Immunology.* 2015; 145:498-507.
3. Aydin SE, Kilic SS, Aytekin C, Kumar A, Porras O, Kainulainen L, Kostyuchenko L, Genel F, Kutukculer N, Karaca N, Gonzalez-Granado L, Abbott J, Al-Zahrani D, Rezaei N, Baz Z, Thiel J, Ehl S, Marodi L, Orange JS, Sawalle-Belohradsky J, Keles S, Holland SM, Sanal O, Ayvaz DC, Tezcan I, Al-Mousa H, Alsum Z, Hawwari A, Metin A, Matthes-Martin S, Honig M, Schulz A, Picard C, Barlogis V, Gennery A, Ifversen M, van Montfrans J, Kuijpers T, Bredius R, Duckers G, Al-Herz W, Pai SY, Geha R, Notheis G, Schwarze CP, Tavit B, Azik F, Bienemann K, Grimbacher B, Heinz V, Gaspar HB, Aydin R, Hagl B, Gathmann B, Belohradsky BH, Ochs HD, Chatila T, Renner ED, Su H, Freeman AF, Engelhardt K, Albert MH, inborn errors working party of E. **DOCK8 deficiency: clinical and immunological phenotype and treatment options - a review of 136 patients.** *J Clin Immunol.* 2015; 35:189-98.
4. Ballen KK, Joffe S, Brazauskas R, Wang Z, Aljurf MD, Akpek G, Dandoy C, Frangoul HA, Freytes CO, Khera N, Lazarus HM, LeMaistre CF, Mehta P, Parsons SK, Szwajcer D, Ustun C, Wood WA, Majhail NS. **Hospital length of stay in the first 100 days after allogeneic hematopoietic cell transplantation for acute leukemia in remission: comparison among alternative graft sources.** *Biol Blood Marrow Transplant.* 2014; 20:1819-27.
5. Carmo M, Risma KA, Arumugam P, Tiwari S, Hontz AE, Montiel-Equihua CA, Alonso-Ferrero ME, Blundell MP, Schambach A, Baum C, Malik P, Thrasher AJ, Jordan MB, Gaspar HB. **Perforin gene transfer into hematopoietic stem cells improves immune dysregulation in murine models of perforin deficiency.** *Mol Ther.* 2015; 23:737-45.
6. Chlon TM, Hoskins EE, Mayhew CN, Wikenheiser-Brokamp KA, Davies SM, Mehta P, Myers KC, Wells JM, Wells SI. **High-risk human papillomavirus E6 protein promotes reprogramming of Fanconi anemia patient cells through repression of p53 but does not allow for sustained growth of induced pluripotent stem cells.** *J Virol.* 2014; 88:11315-26.
7. Dandoy C, Grimley M. **Secondary Hemophagocytic Lymphohistiocytosis (HLH) from a Presumed Brown Recluse Spider Bite.** *J Clin Immunol.* 2014; 34:544-7.
8. Dandoy CE, Davies SM, Flesch L, Hayward M, Koons C, Coleman K, Jacobs J, McKenna LA, Olomajeye A, Olson C, Powers J, Shoemaker K, Jodele S, Alessandrini E, Weiss B. **A team-based approach to reducing cardiac monitor alarms.** *Pediatrics.* 2014; 134:e1686-94.
9. Dandoy CE, Davies SM, Hirsch R, Chima RS, Paff Z, Cash M, Ryan TD, Lane A, El-Bietar J, Myers KC, Jodele S. **Abnormal echocardiography 7 days after stem cell transplantation may be an early indicator of thrombotic microangiopathy.** *Biol Blood Marrow Transplant.* 2015; 21:113-8.
10. Dandoy CE, Kukreja KU, Gruppo RA, Patel MN, Tarango C. **Outcomes in children with deep vein thrombosis managed with percutaneous endovascular thrombolysis.** *Pediatr Radiol.* 2015; 45:719-26.
11. Davies SM. **Making a little go a long way.** *Blood.* 2015; 125:2877-8.
12. Duncan CN, Majhail NS, Brazauskas R, Wang Z, Cahn JY, Frangoul HA, Hayashi RJ, Hsu JW, Kamble RT, Kasow

- KA, Khera N, Lazarus HM, Loren AW, Marks DI, Maziarz RT, Mehta P, Myers KC, Norkin M, Pidala JA, Porter DL, Reddy V, Saber W, Savani BN, Schouten HC, Steinberg A, Wall DA, Warwick AB, Wood WA, Yu LC, Jacobsohn DA, Sorror ML. **Long-term survival and late effects among one-year survivors of second allogeneic hematopoietic cell transplantation for relapsed acute leukemia and myelodysplastic syndromes.** *Biol Blood Marrow Transplant.* 2015; 21:151-8.
13. Dvorak CC, Hassan A, Slatter MA, Honig M, Lankester AC, Buckley RH, Pulsipher MA, Davis JH, Gungor T, Gabriel M, Bleesing JH, Bunin N, Sedlacek P, Connelly JA, Crawford DF, Notarangelo LD, Pai SY, Hassid J, Veys P, Gennery AR, Cowan MJ. **Comparison of outcomes of hematopoietic stem cell transplantation without chemotherapy conditioning by using matched sibling and unrelated donors for treatment of severe combined immunodeficiency.** *J Allergy Clin Immunol.* 2014; 134:935-943 e15.
14. Flynn EK, Kamat A, Lach FP, Donovan FX, Kimble DC, Narisu N, Sanborn E, Boulad F, Davies SM, Gillio AP, 3rd, Harris RE, MacMillan ML, Wagner JE, Smogorzewska A, Auerbach AD, Ostrander EA, Chandrasekharappa SC. **Comprehensive analysis of pathogenic deletion variants in Fanconi anemia genes.** *Hum Mutat.* 2014; 35:1342-53.
15. Gamis AS, Alonzo TA, Meshinchi S, Sung L, Gerbing RB, Raimondi SC, Hirsch BA, Kahwash SB, Heerema-McKenney A, Winter L, Glick K, Davies SM, Byron P, Smith FO, Aplenc R. **Gemtuzumab ozogamicin in children and adolescents with de novo acute myeloid leukemia improves event-free survival by reducing relapse risk: results from the randomized phase III Children's Oncology Group trial AAML0531.** *J Clin Oncol.* 2014; 32:3021-32.
16. Gass D, Dewire M, Chow L, Rose SR, Lawson S, Stevenson C, Pai AL, Jones B, Sutton M, Lane A, Pruitt D, Fouladi M, Hummel TR. **Pediatric tectal plate gliomas: a review of clinical outcomes, endocrinopathies, and neuropsychological sequelae.** *J Neurooncol.* 2015; 122:169-77.
17. Gifford CE, Weingartner E, Villanueva J, Johnson J, Zhang K, Filipovich AH, Bleesing JJ, Marsh RA. **Clinical flow cytometric screening of SAP and XIAP expression accurately identifies patients with SH2D1A and XIAP/BIRC4 mutations.** *Cytometry B Clin Cytom.* 2014; 86:263-71.
18. Hacein-Bey-Abina S, Pai SY, Gaspar HB, Armand M, Berry CC, Blanche S, Bleesing J, Blondeau J, de Boer H, Buckland KF, Caccavelli L, Cros G, De Oliveira S, Fernandez KS, Guo D, Harris CE, Hopkins G, Lehmann LE, Lim A, London WB, van der Loo JC, Malani N, Male F, Malik P, Marinovic MA, McNicol AM, Moshous D, Neven B, Oleastro M, Picard C, Ritz J, Rivat C, Schambach A, Shaw KL, Sherman EA, Silberstein LE, Six E, Touzot F, Tsytsykova A, Xu-Bayford J, Baum C, Bushman FD, Fischer A, Kohn DB, Filipovich AH, Notarangelo LD, Cavazzana M, Williams DA, Thrasher AJ. **A modified gamma-retrovirus vector for X-linked severe combined immunodeficiency.** *N Engl J Med.* 2014; 371:1407-17.
19. Haines HL, Bleesing JJ, Davies SM, Hornung L, Jordan MB, Marsh RA, Filipovich AH. **Outcomes of donor lymphocyte infusion for treatment of mixed donor chimerism after a reduced-intensity preparative regimen for pediatric patients with nonmalignant diseases.** *Biol Blood Marrow Transplant.* 2015; 21:288-92.
20. Hamadani M, Hari PN, Zhang Y, Carreras J, Akpek G, Aljurf MD, Ayala E, Bachanova V, Chen AI, Chen YB, Costa LJ, Fenske TS, Freytes CO, Ganguly S, Hertzberg MS, Holmberg LA, Inwards DJ, Kamble RT, Kanfer EJ, Lazarus HM, Marks DI, Nishihori T, Olsson R, Reddy NM, Rizzieri DA, Savani BN, Solh M, Vose JM, Wirk B, Maloney DG, Smith SM, Montoto S, Saber W, Alpdogan O, Cashen A, Dandoy C, Finke R, Gale R, Gibson J, Hsu JW, Janakiraman N, Laughlin MJ, Lill M, Cairo MS, Munker R, Rowlings PA, Schouten HC, Shea TC, Stiff PJ, Waller EK. **Early failure of frontline rituximab-containing chemo-immunotherapy in diffuse large B cell lymphoma does not predict futility**

of autologous hematopoietic cell transplantation. *Biol Blood Marrow Transplant.* 2014; 20:1729-36.

21. Heinze KE, Rodday AM, Nolan MT, Bingen K, Kupst MJ, Patel SK, Syrjala K, Harris L, Recklitis C, Schwartz L, Davies S, Guinan EC, Noll R, Chang G, Parsons SK. **The impact of pediatric blood and marrow transplant on parents: introduction of the parent impact scale.** *Health Qual Life Outcomes.* 2015; 13:46.
22. Jodele S, Davies SM, Lane A, Khoury J, Dandoy C, Goebel J, Myers K, Grimley M, Bleesing J, El-Bietar J, Wallace G, Chima RS, Paff Z, Laskin BL. **Diagnostic and risk criteria for HSCT-associated thrombotic microangiopathy: a study in children and young adults.** *Blood.* 2014; 124:645-53.
23. Jodele S, Laskin BL, Dandoy CE, Myers KC, El-Bietar J, Davies SM, Goebel J, Dixon BP. **A new paradigm: Diagnosis and management of HSCT-associated thrombotic microangiopathy as multi-system endothelial injury.** *Blood Rev.* 2015; 29:191-204.
24. Katzenellenbogen RA, Carter JJ, Stern JE, Butsch Kovacic MS, Mehta PA, Sauter SL, Galloway DA, Winer RL. **Skin and mucosal human papillomavirus seroprevalence in persons with fanconi anemia.** *Clin Vaccine Immunol.* 2015; 22:413-20.
25. Kaufman KM, Linghu B, Szustakowski JD, Husami A, Yang F, Zhang K, Filipovich AH, Fall N, Harley JB, Nirmala NR, Grom AA. **Whole-exome sequencing reveals overlap between macrophage activation syndrome in systemic juvenile idiopathic arthritis and familial hemophagocytic lymphohistiocytosis.** *Arthritis Rheumatol.* 2014; 66:3486-95.
26. Khandelwal P, Davies SM, Grimley MS, Jordan MB, Curtis BR, Jodele S, Marsh R, Filipovich AJ. **Bortezomib for refractory autoimmunity in pediatrics.** *Biol Blood Marrow Transplant.* 2014; 20:1654-9.
27. Kukreja KU, Lungren MP, Patel MN, Johnson ND, Racadio JM, Dandoy C, Tarango C. **Endovascular venous thrombolysis in children younger than 24 months.** *J Vasc Interv Radiol.* 2014; 25:1158-64.
28. Lane A, Segura-Cabrera A, Komurov K. **A comparative survey of functional footprints of EGFR pathway mutations in human cancers.** *Oncogene.* 2014; 33:5078-89.
29. Laskin BL, Nehus E, Goebel J, Furth S, Davies SM, Jodele S. **Estimated versus measured glomerular filtration rate in children before hematopoietic cell transplantation.** *Biol Blood Marrow Transplant.* 2014; 20:2056-61.
30. Li J, Figueira SK, Vrazo AC, Binkowski BF, Butler BL, Tabata Y, Filipovich A, Jordan MB, Risma KA. **Real-time detection of CTL function reveals distinct patterns of caspase activation mediated by Fas versus granzyme B.** *J Immunol.* 2014; 193:519-28.
31. Li X, Li L, Li J, Sipple J, Schick J, Mehta PA, Davies SM, Dasgupta B, Waclaw RR, Pang Q. **Concomitant inactivation of foxo3a and fancc or fancd2 reveals a two-tier protection from oxidative stress-induced hydrocephalus.** *Antioxid Redox Signal.* 2014; 21:1675-92.
32. Marsh RA, Bleesing JJ, Chandrakasan S, Jordan MB, Davies SM, Filipovich AH. **Reduced-intensity conditioning hematopoietic cell transplantation is an effective treatment for patients with SLAM-associated protein deficiency/X-linked lymphoproliferative disease type 1.** *Biol Blood Marrow Transplant.* 2014; 20:1641-5.
33. Myers KC, Dandoy C, El-Bietar J, Davies SM, Jodele S. **Veno-occlusive disease of the liver in the absence of elevation in bilirubin in pediatric patients after hematopoietic stem cell transplantation.** *Biol Blood Marrow Transplant.* 2015; 21:379-81.
34. Niss O, Sholl A, Bleesing JJ, Hildeman DA. **IL-10/Janus kinase/signal transducer and activator of transcription 3**

- signaling dysregulates Bim expression in autoimmune lymphoproliferative syndrome.** *J Allergy Clin Immunol.* 2015; 135:762-70.
35. Oshima K, Imai K, Albert MH, Bittner TC, Strauss G, Filipovich AH, Morio T, Kapoor N, Dalal J, Schultz KR, Casper JT, Notarangelo LD, Ochs HD, Nonoyama S. **Hematopoietic Stem Cell Transplantation for X-Linked Thrombocytopenia With Mutations in the WAS gene.** *J Clin Immunol.* 2014; .
36. Pai SY, Logan BR, Griffith LM, Buckley RH, Parrott RE, Dvorak CC, Kapoor N, Hanson IC, Filipovich AH, Jyonouchi S, Sullivan KE, Small TN, Burroughs L, Skoda-Smith S, Haight AE, Grizzle A, Pulsipher MA, Chan KW, Fuleihan RL, Haddad E, Loecheit B, Aquino VM, Gillio A, Davis J, Knutsen A, Smith AR, Moore TB, Schroeder ML, Goldman FD, Connelly JA, Porteus MH, Xiang Q, Shearer WT, Fleisher TA, Kohn DB, Puck JM, Notarangelo LD, Cowan MJ, O'Reilly RJ. **Transplantation outcomes for severe combined immunodeficiency, 2000-2009.** *N Engl J Med.* 2014; 371:434-46.
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38. Roychoudhury J, Clark JP, Gracia-Maldonado G, Unnisa Z, Wunderlich M, Link KA, Dasgupta N, Aronow B, Huang G, Mulloy JC, Kumar AR. **MEIS1 regulates an HLF-oxidative stress axis in MLL-fusion gene leukemia.** *Blood.* 2015; 125:2544-52.
39. Salloum R, DeWire M, Lane A, Goldman S, Hummel T, Chow L, Miles L, Sutton M, Stevenson C, Fouladi M, Leach J. **Patterns of progression in pediatric patients with high-grade glioma or diffuse intrinsic pontine glioma treated with Bevacizumab-based therapy at diagnosis.** *J Neurooncol.* 2015; 121:591-8.
40. Sauter SL, Wells SI, Zhang X, Hoskins EE, Davies SM, Myers KC, Mueller R, Panicker G, Unger ER, Sivaprasad U, Brown DR, Mehta PA, Butsch Kovacic M. **Oral human papillomavirus is common in individuals with fanconi anemia.** *Cancer Epidemiol Biomarkers Prev.* 2015; 24:864-72.
41. Sharma A, Myers K, Ye Z, D'Orazio J. **Dyskeratosis congenita caused by a novel TERT point mutation in siblings with pancytopenia and exudative retinopathy.** *Pediatr Blood Cancer.* 2014; 61:2302-4.
42. Sobecks RM, Wang T, Askar M, Gallagher MM, Haagenson M, Spellman S, Fernandez-Vina M, Malmberg KJ, Muller C, Battiwalla M, Gajewski J, Verneris MR, Ringden O, Marino S, Davies S, Dehn J, Bornhauser M, Inamoto Y, Woolfrey A, Shaw P, Pollack M, Weisdorf D, Miller J, Hurley C, Lee SJ, Hsu K. **Impact of KIR and HLA Genotypes on Outcomes after Reduced-Intensity Conditioning Hematopoietic Cell Transplantation.** *Biol Blood Marrow Transplant.* 2015; .
43. Winer RL, Huang CE, Cherne S, Stern JE, Butsch Kovacic MS, Mehta PA, Sauter SL, Galloway DA, Katzenellenbogen RA. **Detection of human papillomavirus in the oral cavities of persons with Fanconi anemia.** *Oral Dis.* 2015; 21:349-54.
44. Zhang K, Chandrakasan S, Chapman H, Valencia CA, Husami A, Kissell D, Johnson JA, Filipovich AH. **Synergistic defects of different molecules in the cytotoxic pathway lead to clinical familial hemophagocytic lymphohistiocytosis.** *Blood.* 2014; 124:1331-4.
45. Zhou J, Wu J, Li B, Liu D, Yu J, Yan X, Zheng S, Wang J, Zhang L, Zhang L, He F, Li Q, Chen A, Zhang Y, Zhao X, Guan Y, Zhao X, Yan J, Ni J, Nobrega MA, Lowenberg B, Delwel R, Valk PJ, Kumar A, Xie L, Tenen DG, Huang G,

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, Professor

Research Interests Clinical investigation of primary immunodeficiency disorders, with emphasis on disorders of immunodysregulation and B-cell disorders.

Sharat Chandra, MD, Assistant Professor

Research Interests Bone marrow transplantation for children with malignant and primary immune deficiency disorders.

Christopher Dandoy, MD, Instructor

Research Interests Primary focuses are on quality improvement, patient safety, and cardiopulmonary complications including pulmonary hypertension after bone marrow transplantation.

Javier El-Bietar, MD, Assistant Professor

Research Interests Bone marrow transplantation for malignant and nonmalignant diseases of childhood, transplant-associated complications and infections involving the gut.

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 Emeritus

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

Sonata Jodele, MD, Associate Professor

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

Pooja Khandelwal, MD, Assistant Professor

Research Interests Acute graft versus host disease; refractory autoimmune cytopenias post transplant; biology of engraftment syndrome.

Zeynep Kucuk, MD, Instructor

Research Interests Characterization and clinical investigation of primary immunodeficiency disorders including immune dysregulation disorders, autoimmune gastroenteropathy and epidemiology of HLH.

Ashish Kumar, MD, PhD, Associate Professor

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

Adam Lane, PhD, Assistant Professor

Research Interests Adaptive designs for phase I/II clinical trials, survival analysis and structural equation modeling.

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, Assistant Professor

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.

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

Clinical Staff Members

- **Stephanie Benoit, MD**
- **Paulina Daniels, DO**
- **Teresa Finke, MD**
- **Ernest Lawhorn, MD**
- **Krista Nee, MD**
- **Lisa Petiniot, 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**

Trainees

- **Manar Abdalgani, MD**, PL-V, VCU Medical Center

- **Shanmuganathan Chandrakasan, MD**, PLVIII, Children's Hospital of Detroit
- **Blachy Dávila Saldaña, MD**, PLVIII, Oregon Health & Sciences University
- **Lynn Lee, MD**, PL-V, Cincinnati Children's Hospital Medical Center
- **Adam Nelson, MD**, PL-VII, Centre for Children's Cancer & Blood Disorders, Sydney Children's Hospital
- **Ahmad Rayes, MD**, PL-VI, SUNY Upstate Medical University
- **Seth Rotz, MD**, PL-V, Rainbow Babies & Children's Hospital and University Hospital, Case Medical Center

Grants, Contracts, and Industry Agreements

Grant and Contract Awards

Annual Direct

Davies, S

Molecular Epidemiology of Pediatric Germ Cell Tumors

National Institutes of Health(University of Minnesota)

R01 CA151284	8/10/2011-5/31/2016	\$11,370
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COG NCTN Network Group Operations Center

National Institutes of Health (Children's Hospital of Philadelphia)

U10 CA180886	4/11/2014-2/28/2019	\$5,775
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Childhood Cancer Survivor Study

National Institutes of Health (St Jude's Children's Hospital)

U24 CA055727	12/1/2011-11/30/2016	\$156,242
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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 AI087628	9/1/2010-8/31/2015	\$43,378
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Rare Diseases Clinical Consortia for the Rare Diseases

National Institutes of Health (Regents of University of California)

U54 AI082973	9/12/2009-8/31/2014	\$1,000
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Reduced-Intensity Conditioning for Children and Adult with Hemophagocytic Syndromes or Selected Primary Immune Deficiencies

National Institutes of Health(Children's Hospital of Philadelphia)

U01 HL069294	7/1/2013-6/30/2016	\$26,690
Consortium for Clinical and Translational Research in LCH		
St. Baldrick's Foundation (Dana Farber Cancer Institute)		
	7/1/2014-6/30/2019	\$12,200
Kumar, A		
The Role of MEIS1 in Hematopoiesis and Hematopoietic Transformation		
National Institutes of Health		
R01 HL111192	7/15/2012-4/30/2017	\$271,891
Mehta, P		
Personalizing Melphalan Dosing based on Novel Bedside Pharmacokinetics in Children Undergoing Bone Marrow Transplantation: A Pilot Study		
Cancer Free Kids		
	7/1/2014-6/30/2015	\$40,000
Phase I Study of Quercetin for the Treatment of Fanconi Anemia		
Food and Drug Administration		
R01 FD004383	9/16/2013-7/31/2016	\$133,433
Myers, K		
Chemoprevention of Leukemia in a Genetically Susceptible Population		
Conquer Cancer Foundation		
	7/1/2012-6/30/2015	\$62,466
Sumegi, J		
Comprehensive mRNA/miRNAs Expression Analysis in Familial Hemophagocytic Lymphohistiocytosis Type 2, using the C57BL/6-Prf1tm1sdz/J Murine Model		
Histiocytosis Association of America		
	1/1/2015-12/31/2015	\$50,000
	Current Year Direct	\$814,445

Industry Contracts

Davies, S

Novartis	\$118,566
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Prolacta Bioscience Inc	\$39,109
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Grimley, M

Chimerix, Inc	\$247,532
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Harris, R

Alexion Pharmaceuticals, Inc	\$1,001
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Jodele, S

Alexion Pharmaceuticals, Inc	\$7,700
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Jordan, M

NovImmune SA	\$32,436
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Mehta, P

Asellas Pharma US, Inc	\$21,698
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Current Year Direct Receipts	\$468,042
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Total	\$1,282,487
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