2009 grantees

Selective Inhibition of HDAC1 and HDAC2 in Sickle Cell Disease
James E. Bradner, MD
Dana Farber Cancer Institute

PFAST: Patent Foramen Ovale and Stroke in Sickle Cell Disease
Michael M. Dowling, MD, PhD
University of Texas Southwestern Medical Center at Dallas

Clinical development of histone deacetylase inhibitors for the treatment of sickle cell disease
Benjamin L. Ebert, MD, PhD and Maureen Okam, MD, MPH
Brigham and Women Hospital

B-globin gene correction in hematopoietic stem cells for sickle cell disease
Donald B. Kohn, MD and Philip Gregory, PhD
University of California, Los Angeles and Sangamo Biosciences, Inc.

Whole-exome re-sequencing in sickle cell disease patients with extremely mild clinical course
Guillaume Lettre, PhD and Joel N. Hirschhorn, MD, PhD
Montreal Heart Institute, and Children’s Hospital Boston

2010 grantees

Erythrocyte Hydration Pathways as Modifiers in Sickle Cell Disease
Patrick G. Gallagher, MD
Yale University School of Medicine

Identification of Novel Factors and Mechanisms Influencing Expression of Fetal Hemoglobin
Derek A. Persons, MD, PhD and Andy C. Wilber, PhD
St. Jude Children’s Research Hospital and Southern Illinois University of Medicine

Genetic Predictors of Cerebrovascular Disease in Sickle Cell Anemia
Russell E. Ware, MD, PhD
St. Jude Children’s Research Hospital
2011 grantees

Molecular identification and inhibition of the deoxygenation-activated, calcium-permeable cation channel of the sickle erythrocyte, Psickle, a novel therapeutic target for treatment of sickle disease
Seth L Alper, MD, PhD
Beth Israel Deaconess Medical Center

NRF2 induction as novel treatment for sickle cell disease
Jen-Tsan A. Chi, MD, PhD & Marilyn J. Telen, MD
Duke University

Genomic Approaches to Prevent Red Blood Cell Alloimmunization in Patients with Sickle Cell Disease
Stella T Chou, MD & Connie M. Westhoff, PhD
Children's Hospital of Philadelphia and New York Blood Center

Modeling Sickle Cell Anemia with Induced Pluripotent Stem Cells
George Q Daley, MD, PhD
Children's Hospital Boston

Effects of the Adenosine 2A Receptor Agonist Regadenoson on Sickle Cell Vaso-occlusion and Inflammation
Joshua J Field, MD, MS & Jonathan Lindner
The Medical College Of Wisconsin and Oregon Health Sciences University

Nanoparticle-mediated correction of the sickle cell disease mutation
Peter M. Glazer, MD, PhD
Yale University

Reversal of Sickle Cell-Related Chronic Kidney Disease
Antonio Guasch, MD and Marianne E.M. Yee, MD, MSc
Emory University

Effect of Simvastatin Treatment on Vaso-occlusive Pain in Sickle Cell Disease
Carolyn C Hoppe, MD, MPH
Children’s Hospital & Research Center Oakland

Preclinical evaluation of globin gene transfer in mobilized SCD patient CD34+ cells
Michel Sadelain, MD, PhD & Patricia A. Shi, MD, MS
Memorial Sloan-Kettering Cancer Center and New York Blood Center
2012 grantees

Targeted derepression of fetal hemoglobin in sickle cell disease
James E. Bradner, MD
Dana Farber Cancer Institute

Translating genetic discoveries to improve sickle cell disease prognosis and treatment
Guillaume Lettre, PhD and Joel N. Hirschhorn, MD, PhD
Montreal Heart Institute, Children’s Hospital Boston

Genomic and Functional Analyses of Erythrocyte Hydration Pathways as Modifiers in Sickle Cell Disease
Patrick G. Gallagher, MD
Yale University School of Medicine

2013 grantees

Genome editing of the GWAS-marked BCL11A enhancer: an approach to HbF reactivation in sickle cell disease
Daniel E. Bauer MD, PhD and Stuart H Orkin, MD
Children’s Hospital Boston
Harvard Medical School

Examination of human samples with somatic mutations in hematopoietic stem cells to inform the biology of fetal hemoglobin induction
Benjamin L. Ebert MD, PhD and Maureen M. Okam MD, MPH
Brigham and Women's Hospital
Harvard Medical School

'SCD Biochip': Towards a Simple and Reliable Way to Monitor Sickle Cell Disease
Umut A. Gurkan, PhD and Jane A. Little, MD
Case Western Reserve University

Feasibility and efficacy of a home-based, computerized cognitive training program in pediatric sickle cell disease
Steven J. Hardy, PhD and Kristina K. Hardy, PhD
Children’s National Medical Center

Novel use Of Hydroxyurea in an African Region with Malaria
Chandy C. John, MD
Indiana University
The effects of hypoxia on red blood cell-dependent thrombin generation in sickle cell disease
Nigel S. Key, MB ChB and Kenneth Mann, MD
University of North Carolina at Chapel Hill and University of Vermont

Site-Specific Gene Modification in Hematopoietic Stem Cells for Sickle Cell Disease
Donald B. Kohn, MD
Regents University Of California Los Angeles

Gene Therapy for Sickle Cell Anemia
Punam Malik, MD
Cincinnati Children's Hospital Medical Center

Targeting Neutrophil Extracellular Traps in Sickle Cell Disease
Leslie V. Parise, PhD and Bruce A. Sullenger, PhD
University of North Carolina at Chapel Hill and Duke University Medical Center

Accurate and Inexpensive Point-of-Care Diagnosis of Sickle Cell Anemia
Rebecca R. Richards-Kortum, PhD
William Marsh Rice University

Risk Stratification for Clinical Severity of Sickle Cell Disease in Nigeria and Assessment of Efficacy and Safety during Treatment with Hydroxyurea
Bamidele Tayo, PhD and Victor R. Gordeuk, MD
Loyola University of Chicago and University of Illinois at Chicago

2015 grantees

High-resolution and high-throughput genome editing to determine minimal repressive sequences within the beta-globin gene cluster and establish lead compounds for therapeutic re-induction of fetal hemoglobin in SCD
Daniel E. Bauer, MD, PhD and Stuart S. Orkin, MD
Children's Hospital Boston

Expanding genomic approaches to transfusion therapy for patients with sickle cell disease
Stella T. Chou, MD and Connie M. Westhoff, PhD
Children's Hospital of Philadelphia and New York Blood Center

High-throughput Metabolite Profiling and Genetic Analyses to Identify Novel Predictive Biomarkers of SCD-related Complications
Marilyn J. Telen, MD and Guillaume Lettre, PhD
Duke University and Montreal Heart Institute
Genetic variants influencing the phenotypic expression of sickle cell anemia

Russell E. Ware, MD, PhD

Cincinnati Children's Hospital Medical Center