

**Previous Awardees:**

Baylor College of Medicine, Houston, TX  
 A. Maresso – Designer medicines for evolving pathogens – 3 years, \$996,678  
 P. Hotez – Chagas disease vaccine combining RNA and protein technologies – 1 year, \$674,504

Boston Children's Hospital, Boston, MA  
 L. Zon – Strategies for bone marrow inflammation in clonal hematopoiesis and leukemia – 3 years, \$1,500,000

Massachusetts Eye and Ear, Boston, MA  
 J. Arboleda-Velasquez – Antibody targeting APOE interactions with glycosaminoglycans – 3 years, \$1,200,000

Memorial Sloan Kettering Cancer Center, New York, NY  
 G. Diehl – Developmental regulation of microbiota-specific inflammatory T cells – 3 years, \$1,499,940

Rice University, Houston, TX  
 G. Bao – A generalizable platform for in vivo genome editing – 3 years, \$900,000

Stanford University, Stanford, CA  
 M. Wernig – Towards next generation brain cell therapies- 3 years, \$1,200,000

The University of Texas Medical Branch, Galveston, TX  
 Pei-Yong Shi – Development of an engineered Zika virus for glioblastoma therapy – 2 years, \$1,000,000

The University of Texas Rio Grande Valley, McAllen, TX  
 Obstetrics & Gynecology Residency Program in the Mid-Rio Grande Valley – 3 years, \$3,000,000

Vanderbilt University Medical Center, Nashville, TN  
 Pietenpol and Cortez – Defining a new pathway to treat MYC-driven cancers – 3 years, \$1,500,000

**Dr. Hildenbrand Receives Grant from the Donaghue Foundation Greater Value Portfolio****The Delaware Comprehensive Sickle Cell Center of Biomedical Research Excellence**

(SCD COBRE) under the leadership of **E. Anders Kolb, MD**, is delighted to announce that one of our Research Project Leads, **Dr. Aimee Hildenbrand**, received a new grant from the *Donaghue Foundation Greater Value Portfolio* for two years in the amount of \$311,738. The title of Dr. Hildenbrand's project is *Leveraging Virtual Reality to Improve Shared Decision-making for Sickle Cell Disease Treatments*. A brief description of the project and overview of key project team members are provided below.

Sickle cell disease (SCD) is a chronic illness associated with severe complications, poor quality of life, and early mortality. Risk for complications and premature death sharply rises among adolescents and young adults (AYA) when chronic organ damage is compounded by inconsistent follow-up and reduced preventive care. Safe, efficacious, and cost-effective therapies are available for individuals with SCD, but pervasive research-to-practice gaps limit the reach of these treatments. In turn, underuse of disease-modifying therapies contributes to preventable disease complications and substantial costs to patients and health care systems.

To address this gap, we are developing and evaluating a multicomponent shared decision-making (SDM) toolkit for AYA with SCD (e.g., clinician training, patient/caregiver decision aids, clinic implementation tools). One innovative component of this toolkit with high potential to increase health care value is CyberCell, a virtual reality (VR) health education program for AYA with SCD. CyberCell provides immersive, interactive, and evidence-based education about SCD and treatment options with the goal of facilitating deeper learning and increasing motivation for health behavior change. The proposed project will expand the VR component to include newer disease-modifying therapies (Aim 1), refine and optimize the VR component (Aim 2), and evaluate its effectiveness when delivered as part of the broader SDM intervention (Aim 3). This study will be conducted at a comprehensive, multi-site pediatric hematology/oncology care center with a well-established and productive research infrastructure. Use of an Accelerated Creation-to-Sustainment study design and deep engagement of stakeholders will ensure that findings can be integrated into practice and policy.

**Key Personnel:**

Aimee Hildenbrand, PhD (PI) – Nemours Center for Healthcare Delivery Science  
**Corinna Schultz, MD, MSHP** (Co-I) – Nemours Center for Cancer and Blood Disorders  
 Lori Crosby, PsyD (Co-I) – Cincinnati Children's Hospital Medical Center  
**Melissa Alderfer, PhD** (Co-I) – Nemours Center for Healthcare Delivery Science  
**Melanie Pitone, MD** (Co-I) – Nemours Center for Health Delivery Innovation  
 Fredric Freeman, MS (VR Design and Development) – Sam Houston State University  
 Sherman Finch, MS (VR Design and Development) – Sam Houston State University  
**Maria Carmen Diaz, MD, FAAP, FACEP** (Expert Consultant) – Nemours Institute for Clinical Excellence  
 Roger Azevedo, PhD (Expert Consultant) – University of Central Florida

