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Building on Our Legacy of Excellence in Sickle Cell Disease Research

National Heart, Lung, and Blood Institute

1948

- NHLBI-funded research helped discover how sickle cell disease is inherited.

1972

- Law established support for sickle cell disease screening, counseling, education, and research training.

1977

- Study helped understand growth, development, pain, and complications in patients who have sickle cell disease.

1986

- Landmark NHLBI-funded study showed an antibiotic could prevent deadly bacterial infections in children who have sickle cell disease.

1987

- An NHLBI-hosted panel of experts recommended newborn screening for sickle cell disease.

1995

- Landmark NHLBI-funded study showed hydroxyurea reduced pain crises, acute chest syndrome, hospitalizations, and transfusions.

1997

- NHLBI-funded STOP study found screening methods and continuous transfusions lowered the risk of stroke in certain patients who have sickle cell disease.

1998

- Based on NHLBI-funded research, the FDA approved hydroxyurea to prevent pain crises.

2001

- NHLBI-funded research led to improved ways to perform blood and bone marrow transplants in children who have sickle cell disease.

2005

- NHLBI-funded STOP II study found that stopping blood transfusions increased the risk of stroke in children who have sickle cell disease.

2009

- NHLBI study found chronic pain is common in patients who have sickle cell disease.
- NHLBI research led to improved ways to perform blood and bone marrow transplants in adults who have sickle cell disease.

2010

- Federal partnership formed to help understand how common sickle cell disease is in the United States.

2011

- NHLBI-funded BABY HUG study found hydroxyurea to be safe for young children who have sickle cell disease.

2014

- NHLBI published sickle cell disease Expert Panel Report to help patients receive appropriate care.
- NHLBI-funded researchers used gene editing to correct hemoglobin S gene in the laboratory for the first time.

2015

- The NHLBI launched a new effort to help understand and overcome barriers to care for patients who have sickle cell disease.

2016

- NHLBI-funded study found hydroxyurea as effective as blood transfusions at reducing risk factors for stroke in children who have sickle cell disease.

2018 and Beyond

- NHLBI-led Cure Sickle Cell Initiative launched to accelerate development of gene therapies to cure sickle cell disease. The Initiative complements other NHLBI research on sickle cell disease.

sicklecell.nhlbi.nih.gov