



A Cure From Our Own Bodies

The molecular basis for Sickle Cell Disease (SCD) has been known for 50 years, yet there has been no cure...

For over 30 years, Dr. Robert H. Broyles, a medical school professor and medical researcher in Oklahoma City, has dedicated his time and talent to finding a cure for SCD. He has recently discovered a protein grown in our bodies that will shut off the sickle cell gene. This same protein will turn on the fetal hemoglobin gene to replace the silenced sickle hemoglobin. There are people in the world where this substitution of fetal hemoglobin occurs naturally, and although they test positive for sickle cell disease, they suffer none of the debilitating effects of this painful disease.

Although the protein is grown in our own bodies, it is not found in red blood cells of children and adults. Preliminary lab tests show that by merely delivering this protein to the red blood precursor cells of SCD patients there is a switch gene expression. This treatment should be easy to deliver, and patents covering this discovery have recently been issued.



Alicia Bibbs, an SCCF founder & research student, is pictured with her brother Dominick who suffers from sickle cell disease and recently recovered from surgery to have his spleen and gall bladder removed.

A Letter From the President

Dear Friends of the Sickle Cell Cure Foundation,

Thank you for your supporting The Sickle Cell Cure Foundation, Inc. (SCCF). It has come a long way since its incorporation a little more than a year ago, and we have taken the first steps of many towards accomplishing our goal of bringing the cure we have discovered to clinics around the world. Below I have highlighted some of our recent activities.

Ongoing Research: Progress towards clinical trials

Incoming donations have allowed us to purchase supplies needed for safety trials in animals, which will be conducted in Dr. Broyles laboratory and the Animal Resources facilities of the University of Oklahoma Health Sciences Center. These studies are predicted to start January 1, 2008, and take approximately one year, including large studies in mice and limited studies in baboons.

With basic safety and efficacy shown in animals - that is, effectiveness in stopping sickle cell disease (SCD) and lack of dangerous side effects of our treatment - we will seek a business partner in the pharmaceutical industry and apply for NIH SBIR (Small Business Innovative Research) grants to fund combined Phase I and Phase II Clinical Trials in humans. These initial clinical trials in humans will also (most likely) have to be preceded by an out-sourced set of safety trials in rodents performed by a third-party, government-approved lab - a cost we also hope will be paid by our for-profit business partner.

This is an ambitious plan based on more funding coming into the SCCF in the near future and confirmation of the predicted safety of this very natural treatment.

Planning for a Grant Application to the Bill & Melinda Gates Foundation

We wish to recognize the tremendous help and interest shown by Mr. Gary Bricker during the last four months. Mr. Bricker has had a very impressive career in foreign service with the USAID for 28 years, including almost eight years in Zambia (Sub-Saharan Africa) as a Senior Economic Development Advisor and Deputy Program Officer, where he managed, designed, and evaluated an annual \$183 million HIV/AIDS program involving 50 charities, ten contractors, and dozens of largely faith-based groups. Mr. Bricker is analyzing the WHO data for the world's five regions with respect to prevalence and incidence of SCD and beta-thalassemias, the economic status of households, and the feasibility of delivering our treatment which is effective for this family of disorders. The good news is that this project is attractive financially and should attract a strong for-profit pharmaceutical partner to deliver this treatment. Mr. Bricker is currently drafting key parts of an application to the Gates Foundation that will pair the Americas with Africa to get this treatment to as many SCD patients as possible. With Mr. Bricker's guidance, the SCCF has come to embrace a global vision and an expanded mission. SCD is a truly global disease, affecting people in all counties in the tropical and subtropical regions around the world.

Continued page 3

Living With Sickle Cell Disease

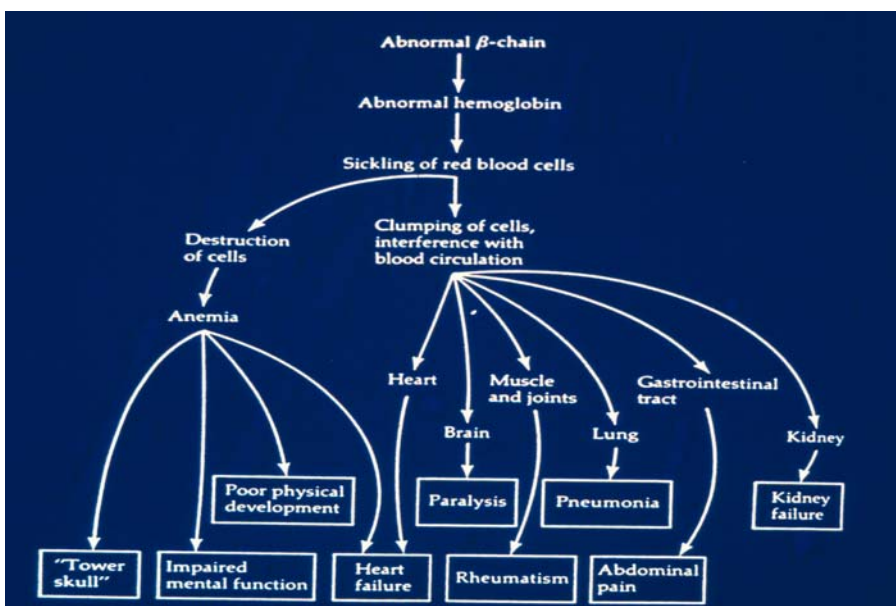
For thousands of Americans, living with sickle cell disease means a lifetime of painful episodes, blood transfusions and frequent trips to the hospital. These treatments can often cause complications that are just as bad or worse than the effects of the disease itself.

Sickle cell disease (SCD) is an inherited genetic disorder that affects red blood cells. The presence of Hemoglobin S, an abnormal hemoglobin, causes these blood cells to grow in the shape of a sickle and makes it difficult for them to pass through small blood vessels. When these vessels become blocked, oxygen has trouble reaching the tissues since hemoglobin is an oxygen carrying molecule. Tissue that does not receive normal blood flow often becomes damaged, including tissue of the lungs, spleen, liver and kidneys.

Living with Sickle cell disease is painful and can inhibit a person from living a normal life. Too much activity can cause pain crisis and stroke. Currently the main treatments for SCD are blood transfusions, which can cause toxic build up of iron, and antibiotics to prevent infections caused by damage to the spleen, pain management, and surgery. Each of these treatments causes more complications. Even with multi-disciplinary treatment, the average life expectancy for someone who suffers from SCD is only about 40-to-45 years.

FACTS ABOUT SICKLE CELL DISEASE (SCD)

- * SCD affects primarily people of African descent, but it has also been found in people of Portuguese, Spanish, French Corsicans, Sardinians, Sicilians, mainland Italians, Greeks, Turks and Cypriots. Sickle cell disease also appears in Middle Eastern countries and Asia. SCD is the most frequently occurring genetic disease on earth.
- * Approximately 1 in 12 Americans are carriers of the Sickle Cell Trait. Many more are afflicted worldwide.
- * The average life expectancy of someone who suffers from SCD in America is about 40 years. Where treatments are not readily available, they often die in early childhood.
- * SCD causes lung tissue damage, pain episodes and stroke. The blockage of blood flow caused by sickled cells also causes damage to most organs including the spleen, kidneys and liver.
- * People who suffer from SCD have mostly hemoglobin S, an abnormal form of hemoglobin. However, all people are born with hemoglobin F, or fetal hemoglobin, which does not sickle. Normally, by six months of age, hemoglobin F expression switches to hemoglobin A, normal hemoglobin, or in the case of someone who suffers from SCD, hemoglobin S.
- * The Sickle Cell Cure Foundation's cure is based on introducing a protein which causes a reversal of this switch, from HbS back to HbF. There are some people in which this occurs naturally, and they do not suffer any of the symptoms of sickle cell disease.



The figure to the right shows the effects that SCD can have on the body.



**The Sickle Cell Cure
Foundation, Inc.**

**SCCF Board Members
Appointed**

We have had four SCCF Board meetings in 2007 in which we have discussed and planned strategies for raising funds and raising community awareness. The current officers and board members are:

Robert H. Broyles, PhD
President

Robert A. Floyd, PhD
Vice-President

Emily J. Curry
Secretary-Treasurer

Visar Belegu, PhD

Annette Johnson, BS, RN

Janice Francis-Smith

Pamela C. Fischer, PhD

Jean McLaughlin

Paula Davidson Wood, JD

SCCF Financial Summary 6/28/06 - 1/10/07

| | |
|---------------------------------------|----------------------------|
| <u>Income</u> (donations) | \$19,750.63 |
| <u>Expenses</u> (by category): | |
| <i>Initial filing fees</i> | \$800.00 |
| <i>Patent & legal fees</i> | \$11,357.78 |
| <i>Research expenses</i> | \$6,000.00 |
| <u>Miscellaneous:</u> | |
| <i>Telephone</i> | \$491.96 |
| <i>Postage</i> | \$ 26.40 |
| <i>Printing costs</i> | \$490.90 |
| <i>Grant writing</i> | \$ 50.00 |
| <i>Total Expenses Paid</i> | <u>-\$19,217.04</u> |
| <u>Current balance</u> | \$ 323.59 |

Activities Continued

International and National Exposure

In the past year and four months, Dr. Broyles has been invited to speak at four national and international scientific conferences where sickle cell disease is an important topic. The first invitation came from the National Sickle Cell Centers program for their national meeting in Memphis, Tennessee, sponsored by St. Jude's Children's Research Hospital, in April of 2006. This was followed by an oral presentation at the annual American Society of Hematology meeting in Orlando, Florida, in December of 2006. In April of 2007, Dr. Broyles' was invited to speak in the Presidential Symposium of the International Biolron Society Congress in Kyoto, Japan. And as this newsletter goes to press, Dr. Broyles will be presenting a talk to attendees of the annual meeting of the Society for Free Radical Biology & Medicine in Washington, D.C., on November 15, 2007.

Local Outreach

Beginning in the spring of 2007, we have been making an effort to inform as many local groups and influential citizens as possible about sickle cell disease (SCD,) our recent discovery of a probable cure, and the mission of the SCCF. . Our outreach activities have included the following:

April 28, 2007 - Dr. Broyles gave an invited presentation at the annual banquet of the Med-De-Phar Society (African-American-American physicians, dentists, and pharmacists).

April 28, 2007 - SCCF's poster and brochures were displayed at a table in the health information room of the national NAACP Exposition in Detroit, Michigan.

June 26, 2007 - Dr. Broyles attended a Capitol State Chamber of Commerce meeting and met State Senators Connie Johnson and Andrew Rice, and State Representatives Anastasia Pittman and Mike Shelton and informed them about our discovery and the SCCF.

September 8, 2007 - Sickle cell "Care to Walk for Life" at the OKC Zoo. Board Member Annette Johnson arranged for the SCCF to share a table with the CHO Pediatric Sickle cell Clinic. Annette and Dr. Broyles handed out many brochures and met a number of sickle cell patients and their families, as well as the President of the Sickle Cell Association of Oklahoma (whose main office is in Tulsa) and her associates, and former State Senator Angela Monson whose has been very active nationally in health care for under-represented minorities.

October 11, 2007 - Dr. Broyles met with Angela Monson and her colleague and aide Brian Corpening for two hours on October 11th; they both pledged to help with finding funding and raising national awareness of the SCCF and our work here in Oklahoma.

October 20, 2007 - Dr. Broyles attended a reception for and met Congressman Clyburn from South Carolina, an African-American who is the Democratic Whip. Dr. Broyles had an extended conversation with the Congressman's aide about sickle cell disease, our discovery, and the SCCF. Dr. Broyles also 'networked' with our state senators and representatives, the President and several faculty from Langston University, and met leaders of the Democratic party and the President of the state NAACP. Dr. Broyles has also been networking with venture capitalists and others interested in funding health research through receptions sponsored by i2e, a consulting firm that encourages scientists to develop discoveries into Oklahoma-based biotechnology companies.

October 27, 2007 - Dr. Broyles and Annette Johnson had a table with posters and brochures at the African American Health Summit sponsored by Integris, at Douglas High School where Tavis Smiley, PBS Late Night talk show host, was the keynote speaker. There were about 800 attendees at this event.

November 2, 2007 - Dr. Broyles led a discussion group at the state NAACP meeting in Lawton, on sickle cell, our discovery, and the mission of the SCCF, at the invitation of state NAACP President Anthony Douglas.

November 10, 2007 - Dr. Broyles and Annette Johnson met and talked to people at the SCCF table at the Health Fair sponsored by the Delta Sigma Theta Sorority at the Evangelistic Baptist Church on Martin Luther King Boulevard.

So, as you can see it has been a busy year! We are fortunate, because of our many friends and donors, to have kept pace with the new patent and legal fees as they have come in, for the U.S., Canada, Australia, and Europe, and to have continued paying off some of our accumulated debt to our European law firm in Munich. We are in good standing with all the patent offices that have reviewed and continue to service our patents, and awarded patent certificates continue to come in the mail (from seven countries, so far).

We are very, very grateful to all of you for your support that has made all of this possible. Included in this newsletter is a brief breakdown of how we have spent your donated dollars. As always, we will continue to tell you how we spend your generous donations and keep you informed of our progress - more frequently now that we have this newsletter up and running. We still have much work to be done, and we hope that as you round out your tax year, you will consider again donating to The Sickle Cell Cure Foundation and make us your top non-profit in your list of yearly giving.

All the best and happy holidays to everyone!

Yours truly,

Robert

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President, SCCF
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<http://w3.ouhsc.edu/biochem/broyles.htm>

Over Seventy Donors - Many, Many Thanks!

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*In Memory of Andrew Murray
 **In Honor of Maureen Harvey's
 Birthday
 ***In Honor of Dominick Bibbs

We still need your support

We thank all of our supporters who have helped us come so far in such a short amount of time. However, we still have a lot of work to do so that we can bring the cure to clinics around the world. We still need your support. Funds are needed for clinical validation and safety and efficacy trials. Without the financial support of concerned people like you, this cure will be delayed and thousands worldwide will continue to suffer and have pain-filled, foreshortened lives.

Remember, Your donations all go toward supporting the effort to bring the cure for sickle cell disease to clinics worldwide. The Sickle Cell Cure Foundation, Inc. (SCCF) has no overhead; all of its Board Members and scientific and medical staff serve on a volunteer basis. Because the Sickle Cell Cure Foundation, Inc. is 501(c)(3) nonprofit corporation, your donation is **tax-deductible**.

If you would like to make a donation to the Sickle Cell Cure Foundation, please complete and return the form printed below.

The Sickle Cell Cure Foundation, Inc.

212 ½ NW 20th Street, Oklahoma City, OK 73103

Name _____ Date _____

Mailing address _____

City, State, ZIP _____

Daytime telephone # _____ Amount of gift \$ _____

Donation made in honor of: _____

THANK YOU FOR YOUR SUPPORT! A PERSONAL LETTER OF THANKS AND RECEIPT USABLE FOR TAX PURPOSES WILL BE MAILED TO YOU.