

Support the Cause, Become the Cure!

Bishop Rosie S. O'neal has personally set her heart and eyes upon her community and the issues affecting it earning her the well deserved title of "*Mother Nurture*". For the second consecutive year, Bishop Rosie S. O'neal & Koinonia Christian Center Church has set out to raise awareness of a disease that affects thousands right here in North Carolina. On June 14, 2008, Koinonia will host their Walk 4 Sickle Cell at the City Hotel and Bistro beginning at 8:30 AM to raise awareness of Sickle Cell Disease and the Sickle Cell Trait.

This 5K run/1 mile fun walk seeks to bring together people from all surrounding areas to Greenville to raise money to support East Carolina University's Camp Hope and the North Carolina Sickle Cell Foundation. ECU's Camp Hope is a program designed to give children diagnosed with Sickle Cell disease a chance to experience the fun and excitement of summer camp in a monitored environment. The children are able to fully exert themselves without putting their health at serious risk. Last year, Koinonia Christian Center Church spoke up on the behalf of people affected with Lupus raising over \$26,000 and bringing in over 300 participants.

Sickle Cell is an inherited disorder in which red blood cells are abnormally shaped. This abnormality can result in painful episodes, serious infections, chronic anemia, and damage to body organs. These complications can vary from person to person, depending on the type of sickle cell affecting each. Some people are for the most part relatively healthy, while others must be hospitalized frequently.

Sickle Cell Anemia affects mostly African Americans but has been found in other ethnic backgrounds such as those whose ancestors came from Mediterranean countries such as Turkey, Greece and Italy. Normal red blood cells have a life cycle of about 120 days, whereas sickle cells only live about 10 – 20 days. The shape of a normal red blood cell is like a doughnut and allows the blood cells to flow smoothly carrying oxygen to vital organs. The elongated-shaped sickle cells can get stuck in the blood stream causing painful episodes, difficulty breathing, fatigue, and in some cases, a stroke.

Aside from bone marrow transplants as treatment, there had been no know cure for sickle cell disease for humans. However, recent researchers from University of Alabama at Birmingham (UAB) alongside a team from Whitehead Institute have reported successfully treating sickle cell anemia in mouse models using Induced Pluripotent Stem (IPS), a new stem cell technique that uses skin cells and does not require embryos. The UAB/Whitehead teams took skin cells from the mouse models genetically engineered to have sickle cell disease and reprogrammed them into IPS cells by adding four genes to each cell.

The new genes remodeled the chromosomes that instruct a skin cell to be a skin cell, so that the cells revert into stem cells. The new blood stem cells began to function properly making normal red blood cells. The mice showed no signs of the disease and also did not reject the transplanted cells.