

Clinical Trials for Diabetes Treatment: Taking Steps along the Path to a Cure

Angelina is a dynamic teen. She shows grace on the stage as a ballerina and grit on the soccer field as a goalie. Recently doctors at ACH confirmed that the 16-year-old has type 1 diabetes. With type 1 diabetes, Angelina's immune system is mistakenly attacking her body's insulin-producing beta cells. As beta cells are destroyed, her diabetes will further develop.

After the diagnosis, Dr. Kathryn Thrailkill contacted Angelina's family. Would they consider participating in a study that screened the relatives of people with type 1 diabetes to find out if these family members are at risk for developing type 1 diabetes? The family agreed. Mom, dad, and Angelina's brother Landi were screened using a simple blood test to look for diabetes-related autoantibodies that may appear years before type 1 diabetes develops. Additional family members such as first cousins have also inquired about testing.

The family's screens were conducted at the Division of Endocrinology's Diabetes Clinic at ACH. ACH is an affiliate site for TrialNet's type 1 diabetes study group. This international study group of investigators is dedicated to the study, prevention, and early treatment of type 1 diabetes. TrialNet is supported by the National Institutes of Health, the US Department of Health and Human Services, Juvenile Diabetes Research Foundation International, and the American Diabetes Association. At ACH, Dr. Thrailkill oversees its involvement in natural history and diabetes intervention studies. In the natural history studies, she is screening families like Angelina's to find out if these family members are at risk for developing type 1 diabetes. Diabetes intervention studies involve determining whether new treatments can delay, or prevent, the onset of type 1 diabetes in individuals at greater risk and preserving insulin production in people newly diagnosed with type 1 diabetes.

The type 1 diabetes diagnosis also meant Angelina may be a candidate for a TrialNet clinical trial to see if a drug used by non-Hodgkin's lymphoma and rheumatoid arthritis patients could also stop or slow down the autoimmune system's attack thereby preserving the body's insulin. Though the study is not conducted at ACH, Dr. Thrailkill referred Angelina to the study coordinator. The connection would provide Angelina an opportunity to participate in a study that could help her, and the results could help others with type 1 diabetes.

Angelina and her mother flew in June to Miami for study-specific screening at TrialNet's regional clinical center at the University of Miami School of Medicine. The screening findings proved evidence that Angelina could be safely enrolled in the study. Angelina returned to Miami two weeks later and then once weekly for the following three weeks for intravenous infusions.



Angelina uses an insulin pump to help keep her blood glucose levels within her target range.

"Going to Miami is fun," Angelina says, but adds "it's cool to be in a study, too." Her friends think she's like Wonder Woman to be managing her diabetes and participating in the study. "It only makes me stronger when they support me," says Angelina. "We hope that the drug acts to save that little bit of insulin she has left," says Angelina's mother, "We hope to see any complications decrease as well."

Angelina and her mother will return to the clinical center for visits about every 3 months for the next two years. Angelina continues to be followed at ACH for her diabetes.

Angelina's diabetes has added another important activity to her schedule. The teen is now an ambassador for the Juvenile Diabetes Research Foundation. One of her JDRF activities involves helping with blood sugar testing at health fairs. "I want to reach out to kids like me and make connections to help people," she says of her involvement. Looking forward, she wants to find a career to continue helping people with diabetes.

Together Angelina and her family thank the doctors at ACH for their work and support for Angelina. Her mother wants to get the word out that there is hope for juveniles with diabetes. "We are glad to help researchers to develop a cure and are positive about their work," she says.



Established in 1989, Arkansas Children's Hospital Research Institute provides an on-site research environment for faculty of the University of Arkansas for Medical Sciences working on the Arkansas Children's Hospital campus. Over 120 pediatric researchers with expertise and experience that span the breadth of medical disciplines comprise ACHRI's roster of investigators who work to fulfill its mission to improve children's health, development, and well-being through high quality research. For more information, visit <http://achri.archildrens.org>.