



KirbyGram

May 2011

The latest news on Kirby Wilson and friends and the search for a cure for Sanfilippo Syndrome

What is Sanfilippo Syndrome?

Sanfilippo Syndrome is one of seven Mucopolysaccharide (MPS) disorders. There are four different enzyme deficiencies that cause Sanfilippo. The Sanfilippo disorders are described as type A, B, C, or D. There is very little difference between the four types, though there have been a few very mild cases of the B form reported where the children have remained relatively healthy into early adult life.

Children with Sanfilippo are missing an essential enzyme that breaks down a complex body sugar called heparan sulfate. This sugar slowly builds in the brain, stopping normal development and causing hyperactivity, sleep disorders, loss of speech, dementia and typically, death before adulthood. There is no cure yet.

While Sanfilippo occurs once in 24,000 births, successful research into the disease could apply directly to many of 5,000 other genetic disorders.

KIRBY UPDATE

Kirby turned 20 years old on April 15th, and the celebration started with Brad, Sue and Maggie having lunch at school with Kirby and her teacher, therapists, aides and friends. Sue comments, "We were thankful for Kirby's continued comfort and good health as we celebrated her 20th birthday. It was wonderful for us to spend time in her classroom and see the many Lyons Township High School staff members who care about our daughter." Sue continues, "We have been grateful throughout Kirby's time at LT for the teachers, therapists and aides who work tirelessly to assist Kirby in being the best she can be, but it was an unexpected privilege and honor to meet so many more who are involved in her day or just wanted to stop in and wish her well."

The day's celebration concluded at home with Kirby and her family enjoying her favorite dinner of pizza and Coke and a birthday cake befitting a princess, made by special friend and neighbor Claudia Saranecki.



The Birthday Princess

FUNDRAISING NEWS



A kiss for Kirby from Joe Avram – too fun!

Sweet 16

The Ritz-Carlton Chicago was the place to be on February 11th as 153 guests celebrated The Foundation's 16th Annual Sweetheart Dinner Dance. After enjoying a champagne cocktail reception, guests were treated to an elegant dinner and entertainment by Michael Lerich and his talented group of musicians, who have performed at the event for all 16 years. Fun was the comment heard time and time again from guests. The evening's generous sponsors, attendees and enthusiastic bidding on the silent auction enabled The Foundation to raise more than \$68,000.

Sue comments, "Brad and I are fortunate to have a loyal group of guests who remind us each year of how blessed our family truly is. In 1995, we told them of our daughter's affliction and The Foundation and asked them to donate in support of research toward "A Cure for Kirby." Little did anyone know at that time that 16 years later we'd still be asking them to honor our

daughter's life with their donations, as we now have been given hope for that cure. The depth of our donors' compassion and commitment has no boundaries."

Marquette University Continues for Kirby

Marquette University's Student-Athlete Advisory Council (SAAC) chose to fundraise for The Foundation with "Beating the Buzzer for Sanfilippo." It was held at the January 25th Golden Eagles men's basketball game against UCONN at the Bradley Center. A video clip on The Foundation was presented during the game, and at its conclusion, more than 50 student-athletes canvassed the crowd collecting more than \$2,000. This even was started five years ago as a way of honoring their fellow athlete

Maggie's little sister, Kirby. Members have chosen to continue their fundraising on behalf of Kirby, even after Maggie's graduation.

The Foundation Gives Thanks. . . .

To **Margaret Dawe, Nicholas Megofna, Mark Leavitt and Donna-Logan Gabel**, who designated The Foundation as their charity of choice in their employers' United Way campaigns. Thanks for uniting for Kirby!

To **Charlie Notarus** who honored **Ruth Notarus's** 70th birthday with a gift to The Foundation.

And to the many contributors who used the donation envelopes to give to The Foundation. Donations from our December newsletter totaled \$3,455.



Families' wish for a cure. (From left) Brad Wilson, Jennifer Siedman, Sue Wilson, Dave and Anna Kidwell, Stuart Siedman, Stacey Montgomery and Maggie Wilson.

FUNDRAISING NEWS

To the Families Working Together for the Cure. . .



What a smile!

Ben's Dream

A note from the Siedmans

It has been a busy year at the Siedman household. Jennifer took a new job, Noah is in the middle of the college search, Isabelle is a dedicated ballerina and Ben, who turned 15 in March, continues to inspire us with his ever-present smiles. Over the past year, we have seen a decline in Ben's ability to walk without support and have made the transition to both a gait trainer and a wheelchair. He has also begun having swallowing issues, so we have also graduated to smoothies and pureed foods. His language is infrequent, but still, if you ask him if he would like some "ice cream with hot....," he happily replies, "fudge." And we all celebrate and smile with happiness as we know we have enjoyed a moment seeing inside his soul.

Our **Ben's Dream** efforts are focused on supporting Dr. Haiyan Fu and the remarkable progress she

has made with gene therapy. We were honored to travel to Chicago in February, and, along with family and friends, attend the *Sweetheart Gala*. Another Boston family is honoring its daughter, Jessica, by hosting the *Jog for Jessie*, a 5K road race to support Dr. Fu's research. And with the hope of a treatment on the horizon, the Montgomery family of Iowa will host its golf outing, *Links for Lucas*, and we will, after a 4-year hiatus, resurrect *Birdies for Ben* with the goal of realizing a clinical trial within Ben's lifetime.

As we have often been known to quote, "The thousand-mile journey starts with just one step." We are thankful to be taking those steps with The Children's Medical Research Foundation and feel confident that together we can



Jeff and Kimberly

complete this journey toward a cure.

Jeff Fowler donated to The Foundation in honor of his sister, **Kimberly**. Following are some of his thoughts that remind us, as parents, just how lucky we are to have such incredibly great kids.

"Please accept this donation to your research foundation in honor of my sister, Kimberly Fowler. Although I am still currently a student at Michigan State University, I realize how important it is to support foundations and charities engaged in improving the lives of others, especially one that hits so close to home.

It may not be a large sum of money, however I hope that my donation and others like it can collectively help to cure this condition and provide some answers as to how to improve the patients' quality of life. God has blessed us all with these angels, and it is my hope that with this donation and subsequent ones in the future, I can help and give back to these kids who have changed my life for the best."

Angela and Luis Guajardo, of Edinburg, TX, sent a donation in celebration of Kirby's 20th birthday and in honor of their child, **Karina**. Angela comments, "As our daughter gets older, it's a smaller circle of children her age that are still fighting their way thru this disorder." We thank the Guarjardos for their support of our mission of a cure and hope of breaking out from that circle!

(continued on page 4)

(continued from page 3)



Carley with Mandy Zukowski

David and Barb Trocheck and family, of Diamond, OH, joined our campaign for a cure with a donation in honor of their daughter, **Carley**.

Carley's physical therapist, Mandy Zukowski and her husband Bruce will be hosting the Third Annual Hiram Golf Outing in Lake Milton on July 6th. This year's proceeds will honor Carley and our campaign for a cure. For more information, please contact The Foundation at 708/784-0631.

News From Connecticut

A donation was received from **Diane Couture, Rhianna Logan's** aunt, with the following enclosure that talks of gratitude.

Diane starts by talking about how The Foundation's mission of a cure gives her hope and her angelic niece Rhianna inspires her. She continues, "Part of Rhianna's school program at home is a monthly inspirational theme – a wall in her classroom proudly displays What We Are Grateful

For messages, a sparkling Christmas tree in December and soon Spring happy flowers. At the end of 2010, I tucked a large paper heart on the wall, under the Christmas tree, to thank the women in Rhianna's life who show her compassion, respect, smiles and laughs, and encouragement every day! In their honor, I send you this donation."

Annual holiday fundraising efforts by **Artisan's Marketplace** raised \$449 for The Foundation. This really does show the Logans that the fundraising name "Stars for Hope" is not just about ornaments, but also the generosity of the many "stars" within their community who keep Rhianna's Hope shining bright.

A donation was received from **Peter and Joanne Brandien** in honor of Rhianna and their friends and Foundation supporters **Alan and Donna Theriault**.

The Foundation thanks **Dennis Colgan and Laurel Daggett** for their continued support of "a cure for all kids."

We also thank the many people who donated in response to **Gene and Cynthia Logan's** plea for support of The Foundation and its campaign to support the testing necessary for human trial.



Auntie Diane serves up a special cake for Rhianna's 18th birthday.

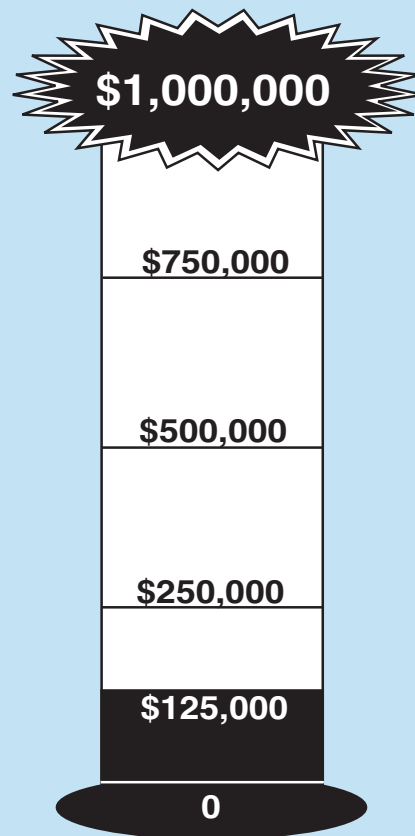
WE NEED YOUR HELP!

In December, you received a brochure outlining our campaign to raise \$1 million by October of this year. As we explained, these are estimated funds necessary for Dr. Haiyan Fu of The Research Institute at Nationwide Children's Hospital in Columbus, OH, to perform the medical studies required for FDA approval of human trial.

We are happy to report that through the efforts of other families and foundations, funds have been raised and grants issued to Dr. Fu and The Research Institute at Nationwide total \$125,000 to date. And, with each passing month, more and more families are joining forces to make the \$1 million a reality.

It is The Children's Medical Research Foundation's goal to raise \$350,000 this summer to enable us to contribute toward these studies as well as the other research offering hope of a lifesaving treatment.

We are asking you to like The Children's Medical Research Foundation on Facebook and visit (www.curekirby.org/a-cure-is-in-reach) to be one of the first to watch our YouTube video. Then, share the video and tell your friends to do the same. Donate what you can, whether it be \$1, \$5 or \$100. Help us to make a cure for Sanfilippo the next YouTube sensation.



RESEARCH UPDATE

Haiyan Fu, PhD, Center for Gene Therapy, The Research Institute at Nationwide Children's Hospital

Mucopolysaccharidosis (MPS) III (Sanfilippo Syndrome) are a group of four devastating genetic diseases. These diseases manifest predominantly the central nervous system (CNS), including the brain and spinal cord. The greatest challenge for treating MPS III has been the blood-brain barrier (BBB). The BBB prevent therapeutics from entering the CNS.

MPS IIIB

We have developed an efficient gene therapy procedure to treat MPS IIIB. We have made an AAV9 vector that has the ability to cross the blood-brain-barrier. This AAV9 vector carries the gene for NAGLU, the enzyme missing in MPS IIIB patients. By a singly intravenous injection of this AAV9-NAGLU vector, we were able to restore the NAGLU enzyme activity and correct the lysosomal storage pathology throughout the brain, spinal cord and

multiple somatic tissues in adult MPSIIIB mice. Most importantly, the AAV9-vector-treated mice showed significant behavioral improvement and survived to a normal lifespan. In addition, this approach is minimally invasive and the IV injection itself has minimal risk to patients. With the generous support from Sanfilippo families and friends and Ben's Dream – The Sanfilippo Research Foundation, the experiments of this project are still ongoing.

(continued on page 6)

RESEARCH UPDATE

(continued from page 5)

We believe that we are in a very good position to move our AAV9-gene-therapy approach to clinical trial. We have established a strong team with the goal of obtaining the approval from the FDA for a Phase I/II clinical trial in patients with MPS IIIB. Led by Dr. Kevin Flanigan, MD and professor of neurology, we have submitted a Pre-pre-IND package to the FDA and have a pre-pre-IND meeting scheduled with the FDA. This Pre-pre-IND interaction is for us to get advices from the FDA on specific requirements for the Pre-IND toxicology/safety testing of our approach in animals. This Pre-IND toxicology testing is absolutely required for obtaining the FDA approval for our planned MPS IIIB gene therapy clinical trial.

Additional plans and efforts have been made to prepare for moving this MPS IIIB gene therapy to a clinical trial:

- 1) We have submitted translational grant application to the NIH;
- 2) We are planning to establish a MPS III patient registry;
- 3) Establish and validate the stable high yield vector producing cell line; and
- 4) Produce clinical grade AAV9 vectors needed for the planned clinical trial, which is required by the FDA when submitting the IND (Investigational New Drug) application.

Svitlana Garbuzova-Davis, Ph.D., D.Sc., Paul R. Sanberg, Ph.D., D.Sc., Center for Aging & Brain Repair, Department of Neurosurgery and Brain Repair, University of South Florida, College of Medicine

The blood-brain barrier (BBB) maintains proper homeostasis in the central nervous system (CNS) by separating the brain tissue from the systemic blood circulation. Normal brain function depends on the exchanges of various substances across the BBB, exchanges that are regulated by specialized BBB structure in the microvessel wall. BBB breakdown is hypothesized to be a key component in CNS associated pathologies such as Multiple Sclerosis, Alzheimer's disease, stroke, and ALS.

Recently, our research group at the University of South Florida has been studying BBB competence in an animal model of Sanfilippo Syndrome type B. We have shown that BBB structural and functional integrity are affected in microvessels of various brain structures in early and late symptomatic male and female mice. Endothelial cells and pericytes, cells composing the vascular wall, were highly vacuolated and contained GM3 gangliosides leading to cell damage. Also, a microaneurysm was identified adjacent to the ruptured endothelia, which led to vascular leakage.

Importantly, BBB damage was determined in brain structures known to experience pathological changes, such as neuron vacuolization leading to neuron degeneration. More detailed study results can be found in our recently published article (PLOS ONE, 2011 March 7; 6(3): e16601). Our findings on BBB impairment in MPS III B were well received during two invited presentations: at the Sanfilippo Symposium in Orlando, Florida in the Arnold Palmer Hospital for Children sponsored by the Arnold Palmer Medical Center Foundation on April 8th and at the INTR-11 Conference in Clearwater, Florida on May 5th.

This new discovery of microvascular functional and structural damage in a mouse model of MPS III B even at early disease stage may have implications for disease pathogenesis in human Sanfilippo disease. The important role that BBB dysfunction could play in Sanfilippo pathology makes it necessary to investigate this possible damage in MPS III patients. Determining competence of BBB in patients with MPS III is important for understanding additional mechanisms of disease pathogenesis and for developing pharmacological treatments. Currently, we are evaluating BBB condition in human MPS III tissue. We are grateful to The Children's Medical Research Foundation for supporting this study.

SAVE THE DATES

Trivia Night Returns!

It's back by popular demand. Our second Trivia Night will be held November 18th at The Community House in Hinsdale. Start gathering your team, and just maybe you could be awarded the coveted first place crowns. There will also be an award for the best table theme and décor. If you've never experienced a Trivia Night, it's time.

The 17th Annual Sweetheart Dinner Dance

Plans will soon be underway for the 17th Annual Sweetheart Dinner Dance to be held February 10, 2012, at the Four Seasons Hotel Chicago.

Please contact the Foundation at (708) 784-0631 for further details and to learn how you can help to make it a "sweetheart" of a night for Kirby and others like her.

FUNDRAISING OPPORTUNITIES

A Match For Kirby

Does your company have a matching gift program? It could double your support of the Foundation.

United Way Can Be For Kirby, Too

Does your company have United Way pledges at your workplace? Although we are not a United Way member, you can designate The Children's Medical Research Foundation as your recipient, and the funds will be forwarded to us through the United Way Campaign! Simply give your local United Way agency the Foundation name, address and our Federal ID #36-4033667.

Give Kirby Security

Tired of taxes? The Foundation now has a brokerage account

available that allows you to donate appreciated securities. Why pay tax on the gains when you can realize a charitable deduction of the full market value of your stocks . . . and it's for Kirby, too! Contact Sue Wilson at (708) 784-0631 to learn more.

Celebrate, And Make It For Kirby

Is there a special birthday coming up for a family member or friend? Are you looking for an alternative to the typical "over the hill" gift? Be different. In lieu of gifts, donate to The Children's Medical Research Foundation. Kirby always loves a party!

A Gift Like No Other

This holiday season give clients a donation to The Children's

Medical Research Foundation in their name. It's a gift that won't gather dust and goes far beyond any other.

Go Kasual For Kirby

Tired of wearing those heels, hose or ties five days a week? Why not suggest a "**Go Kasual For Kirby Day**" to your employer? It's a great way to give a "relaxing feel" to a workday and raise funds for the Foundation. Simply send a memo to co-workers explaining the day and set the "fee" to participate.

Still in school but want to help? How about a "**Hat Day**" done the same way! It's fun for the kids and a great way for them to participate in a good cause. No "fee," just leave an amount up to them.



**The Children's
Medical Research
Foundation, Inc.®**

P.O. Box 70
Western Springs, IL 60558

KirbyGram

PRESORT
FIRST-CLASS
U.S. POSTAGE
PAID
TINLEY PARK, IL
PERMIT NO. 222