FALL 2023

INSIDE

FSIG Connection

News from the Fabry Support & Information Group

Woman finds empowerment in Fabry journey

COURTESY OF JESSICA TRACY
Jessica with her husband, daughter and son.

By Jessice Tracy
FSIG Contributor

When I was diagnosed with a disease called Fabry, I didn't fully understand what that meant.

Years before my diagnosis, I became extremely ill—to the point of being unable to hold up my own body weight. I couldn't grip things, my speech and memory were affected negatively, and I had immense pain I wouldn't wish on any individual. As I researched more, I found out that I've had Fabry symptoms since I was 4 years old.

That was just the beginning of the journey my family and I now call our lives. It might have started with me but, much to my dismay, it did not end with my struggles. I have Fabry disease as well as Hypermobility Ehlers Danlos Syndrome and chronic illness complications. I received my diagnosis in June 2021, and my son was diagnosed with Fabry that September.

My son had started experiencing unexplained

See EMPOWER, page 3

Family's 'crooked' path leads straight to diagnosis

By Susanna VanVickle
FabryDiseaseNews.com

(June 27, 2023) Our family's Fabry disease story started in the summer of 2019. I had driven a carload of teens from Dallas to my Cajun homeland for a youth camp, which was unexpectedly cut short because Hurricane Barry was poised to bear down. Frenzied, friendly camp staff helped us pack the kids and cargo in a hurry. We stopped in Lafayette at my sister's house before trying to beat the evacuation rush out of Acadiana.

When my brother-in-law, who is a physician assistant at a dermatologist's office, walked in from work, my son Anthony asked his uncle to examine some odd red dots on his stomach that had surprisingly started to bleed while he was at camp.

Being the diligent medic that he is, my brother-in-law took great care in examining the unusual dots which were clustered in the belly button and spread out

See PATH page 3

FSIG leader featured in STAT News article

Fabry hit 5 generations of his family

By Isabella Cueto
STATNews.com

(July 10, 2023) For Jack Johnson, getting diagnosed with Fabry disease at age 7 was more of a formality. He'd been experiencing symptoms for several years already, and had watched multiple family members struggle with the rare condition. But around 7 was when Johnson's pain started—triggered by exercise or being outdoors when it was too hot.

Fabry disease is characterized by a buildup of the fatty lipid Gb3. Often, people with Fabry disease can't sweat, making it difficult to regulate their body temperature. That was especially true for Johnson, who grew up on his family's dairy farm in Bakersfield, Calif., in the oft-scorching San Joaquin Valley. He was tasked with caring for the pigs, cooling them down in the midday sun.

"You've heard the expression, 'Sweat like a pig.' Well, most people don't know, but pigs do not sweat," he said. "When I was getting too hot, we also knew that the pigs were getting too hot."

See JACK, page 2

WELCOME

Dear Friends,

This year marks the 20th anniversary of access to the first treatment (Fabrazyme®) for Fabry disease in the US and the 5th year for the first pill form of treatment (Galafold®). It is also the first year for choice in ERT (Elfabrio®) for Americans.

The Fabry community has been discussing the desire for a pill to swallow and the potential of gene therapy for over 20 years. While programs struggle at times, research continues on these exciting possibilities. Research in other areas of Fabry are continually increasing knowledge and understanding.

We also have wonderful stories of coping with the various challenges that so many of us deal with on our Fabry journeys.

Jack

Jack Johnson, Executive Director

UPDATE

Tributes pour in after death of record holder & Fabry 'warrior'

Jason Liversidge, on whom we first reported in 2018, "died peacefully at home surrounded by his girls at 22.59 on the 5th August 2023. Thank you for being the best husband and father that we could ask for," wrote his wife, Liz, in a Facebook post.

The Fabry patient was diagnosed 10 years ago with motor neurone disease (MND), but went on to break world records for the fastest motorized wheelchair, climbing England's Mount Snowdon and abseiling down the cliffs of Humber Bridge.

Read story: bit.ly/Liversidge

JACK, continued from page 1

As part of the fifth generation of his family with Fabry, which is inherited via the X chromosome, he figured out how to avoid triggers.

Decades passed and Johnson never met another person outside of his family with Fabry. That's until 1996, when he decided at the urging of one of his doctors to start an online community, the Fabry Support & Information Group.

A husband, small farmer, and father to two sons, Johnson has watched over the past two decades as Fabry got therapies and increased recognition, but he says there is still more to do.

STAT spoke with Johnson about his advocacy work, the realities of living with an inherited and rare disease, and more. This interview has been edited for brevity and clarity.

What do you remember about being diagnosed with Fabry? My mother saw it in me when I was 4, and the first thing I really recall is talking to a doctor when I was 5. He said that he thought I probably had it, but he didn't take care of kids. At that point, I knew I had it but I don't recall learning that I had the disease—it was just kind of always there.

I got my diagnosis when I was 7 at UCLA. That I definitely remember, going in and going through all of the testing. It was kind of a formality.

At that point, was your family aware that several relatives had Fabry? Everybody knew. My grandfather was the first one diagnosed and that's when I was 1. And he had four brothers, and four of the five boys had Fabry. So my mother knew what to look for.

When you were growing up, there were no treatments for Fabry. Did you have to adjust to avoid things that were risky, or that might trigger your symptoms? I was OK until second grade. In first grade, I won ribbons and things like that, doing track and field at school. But when I turned 7, that's when the pain really started. And it was oftentimes brought on by physical exertion or getting too hot.

And so, yeah, that knocked me out of being able to participate in track and field. P.E. was difficult for me most of the time, and I wasn't able to do any kind of team sports like baseball or anything like that because it was in the summer and it was just too hot.

When I got into junior high, I didn't have to do P.E. anymore, but they didn't know what to do with me. So I had to go with my class and just, like, sit on the bleachers and watch everybody else do their thing.

How did your family talk about Fabry, if you did? We didn't talk about it a whole lot except to say there were...

Read full story: bit.ly/5gens

EMPOWER, continued from page 1

symptoms at age 5, including ENT issues, leg and foot pain, and food intolerances. I've had many hardships in my life, and in some ways, I truly believe it was preparing me for this newly found, unwanted journey of medical enlightenment.

Becoming an advocate for chronic illness and genetic disorders has become second nature to me, having spent so many years in fight-or-flight mode. I've battled for answers for myself as well as my children, but in all the chaos, I've found many who live the same way we do. It's disheartening and also comforting to know that support is there, with others simply finding their way through the fog like we are.

Having a support system is more than just a shoulder to lean on—it's also having someone say they believe you, your pain, your symptoms, your feelings, all the systematic breakdowns of living with Fabry disease. It's making sure people understand they are not alone, whether that be with the support of family, friends, newfound comradery or a mental health professional.

While my symptoms have improved since finding emotional support (through family, friends, a therapist and a team of doctors), I struggle daily finding balance with my medications such as Galafold, knowing my limitations, utilizing self-care and eating properly. My motto is, "One moment at a time."

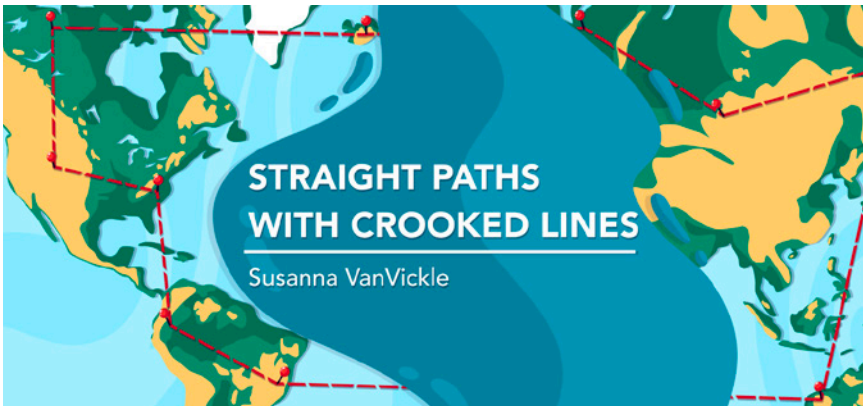
There are moments I crave and mourn the life I had before, then moments where I take things as they come, but I never give up, even on my worst days. I will go on for my family, for myself and for anyone else who feels they have no voice when theirs should be the loudest.

When our isolation takes a toll, it's so important to find your team. That's just one of the reasons I started my blog, "Empowered by Illness," and now my podcast, "Empowered by Illness – Living with Genetic Disorders."

I've made it my goal to spread awareness not only about Fabry, but other genetic disorders, so that caregivers of children and adults with these disorders never have to feel alone again. If we continue to work together as a community of fighters, we can make changes in research and genetic testing, and expose the fact that females can have just as severe symptoms.

So just remember, when you feel all alone and think no one understands, there are so many of us in a similar situation that you can never truly be alone. Find your people, your pattern, your strength to keep fighting. You can read my story at bit.ly/MommyMadness or listen to Empowered by Illness through Spotify, Audible, iHeart Radio, Amazon Music and YouTube (youtube.com/@jtracy8584) Be kind to others but, most importantly, be kind to yourself.

PATH, continued from page 1



across my son's torso and even his extremities. He had never seen this before, he remarked. Thinking nothing more about it, we left that night and made it home in the wee hours. The next day, I received a shocking phone call. My brother-in-law had painstakingly researched the dots, which he now knew to be angiokeratomas, and had matched what he found with many other symptoms that he knew Anthony and his twin brother had complained of since childhood. With great seriousness in his voice, he told me it could be a rare lysosomal storage disorder called Fabry disease and that I should take him to a pediatric dermatologist as soon as I could.

> He told me it could be a rare lysosomal storage disorder called Fabry and that I should take him to a pediatric dermatologist as soon as I could

The next week, we found ourselves in the office of a dermatologist who agreed to see my son after hours because we told him that we suspected Fabry disease. My teenage son, in nothing but his boxer briefs, sat awkwardly on the exam table while the doctor pulled a textbook off the shelf and showed us how his case matched the description of Fabry. As the news of this rare disease settled upon us, the entire nursing staff walked in to take pictures and observe this kid who was the practice's first Fabry patient ever.

For his age, Anthony was exceptionally confident, muscular, and capable. The unexpected news and unsettling attention, however, made him feel like a freak. Bewildered, we listened as a well-intentioned dermatologist warned Anthony to stop playing football, wrestling, and working in the sun until he had extensive evaluations by a cardiologist, nephrologist, neurologist, and other specialists. And since Anthony's fraternal twin brother, Michael, had the same symptoms, we were told Michael also must have the disease.

The only thing that was clear in our minds on the ride home from the dermatologist's was that Fabry was bad news and that my twins' lives would never be the same. I prayed silently as I drove, and my strong boy stoically stared out the window. I can't remember exactly what he said but it was something about the inconvenience of doctor visits — and I knew he was way underestimating the time he would be spending with specialists in the coming months.

The weather, the abrupt upheaval of camp, and the fact that we were leaving our beloved Acadiana prematurely were exasperating (crooked lines), but maybe in the grand scheme what seemed problematic was actually providential (a straight path). Had we not stopped by a dermatologist PA's house the day Anthony's angiokeratomas broke open, and had he not known our family history of GI issues, foot pain, inexplicable fevers, and abdominal pain before doing his research, my kids could have gone undiagnosed for years or decades.

Crooked lines led us straight to an answer we didn't know we needed.

Read full story: bit.ly/FabryStory

Fabry kids today can have different lives

By Jerry Walter
FabryDiseaseNews.com

(Aug. 23, 2023) This month, my niece Katrina posted a happy birthday message on Facebook to her daughter, Isabella, my grandniece who turned 8 years old this month. Katrina describes her as sweet, spunky, and stubborn. I'm not surprised to hear she's stubborn, as the trait seems to be in our family genes. Like the Fabry disease gene, stubbornness comes out in me and several other family members.

Stubbornness isn't always a bad thing. I give it credit for helping me overcome many obstacles I've faced on what I call "a road less traveled," my column's theme. Many times, I refused to give up against great adversity. I've been near death a few times. I've gratefully lived much longer than I expected with Fabry.

Isabella—like me, one of her brothers, her mother, her first uncle, and her grandmother (my sister)—has Fabry. Many more extended family members have it, too, but because our family tree continues to grow and branch out, it's hard to keep track of everyone.

The road people with Fabry travel can be extremely difficult, frightening, and painful. The disease is a multisystem disorder, with many common effects that adversely affect quality of life—and it can be life-threatening over time. Isabella is experiencing a couple of firsts this month. She went to her first concert with one of her brothers, Landon, to see Kidz Bop.

Isabella's other first this month is a major event: She started biweekly intravenous (IV) infusions of enzyme replacement therapy (ERT) to treat Fabry. Starting ERT is a big deal for children and parents alike. When parents think about their children and the pain of the IV needle sticks, the hours lost to lengthy infusions, the days of missed school, and the ongoing symptoms of Fabry, it can be very daunting.

Starting ERT reminds me of the saying, "It's going to get worse before it gets better." Fabry symptoms don't usually subside immediately. ERT seems to awaken nerves and cause more pain initially and for a while. At least, that was true for me when I started ERT.

But because Isabella is young, she may not experience this phenomenon.

In contrast to Isabella, I started ERT at 48 years old. Since then, I've had more than 500 infusions over 20 years, which means I've been stuck with an IV needle about 1,000 times. On average, I get two sticks a visit. It's not the most fun thing I do in my life, but I'm grateful to still be upright and doing well.

I have had a few bumps on my road, however, culminating in a heart transplant about three years ago. I'd like to get ERT for another 10 or 20 years; it'd give me something amazing to talk about.

By starting ERT at an early age, perhaps Isabella can live a much better and longer life than she might otherwise. Treatment can slow or even halt the disease progression in various organs and tissues, so she may not experience significant dysfunction or damage in her brain, kidneys, and heart. It may also improve other symptoms to give her a better life.

We hope children like Isabella won't need ERT for 20 years; we hope improved treatments with easier delivery methods won't require infusions. Meanwhile, along with being brave, as she was for her first infusion, I trust that she'll also find her stubbornness useful as she builds resilience to meet the challenges of traveling her own road less traveled.

I've had a glimpse at Isabella's and her brother Ryan's potential futures. (Landon, it turns out, does not have Fabry.) I have several friends with children who started ERT at early ages and are now at the age of most college students. They excel in sports like baseball, track and field, and martial arts. Ryan, 16, plays on a baseball team, and Isabella is learning gymnastics.

I hope the neuropathic pain, chronic gastrointestinal problems, reduced ability to perspire, frequent overheating from physical activity, extensive missed school, and low self-esteem I and many others experienced in childhood won't be part of the journey for Isabella, Ryan, or any other child.

Read full story: bit.ly/EarlyERT

PHOTOS COURTESY OF KATRINA WHITAKER

Isabella trains in gymnastics (top) and gets her first ERT infusion.

Mother struggled to find Fabry doctor

By Susanna VanVickle
FabryDiseaseNews.com

(July 18, 2023) My twin teenage sons—Anthony and Michael—got their Fabry diagnosis through a circuitous summer trip. The conclusive genetic announcement by the dermatologist who diagnosed my son Anthony resounded like a gunshot at the start of a race. In our case, it was like a marathon we hadn't trained for.

Initially, we worked the phones, making call after call to every friend and family member we could think of in the medical field, to ask if they knew about Fabry disease or had seen a patient with it. Some said they had to study it to pass their board exams, but no one we knew had ever attended to anyone with it.

We didn't want to take a risk with someone who didn't have experience treating the disease, so we kept calling, searching, and praying. Then a friend searching on Google found Dr. Raphael Schiffmann. I called immediately and left a message. That day, a friendly voice called me back. It was Schiffmann, who enthusiastically offered to see the boys before the week's end.

Feeling burdened by the unknown, my husband and I accompanied our twins into a small, sterile exam room. Shortly after, the tension in the room evaporated when a man with a broad smile, thick accent, and the aura of Santa Claus appeared.

In his own jolly way, Schiffmann asked several questions while pulling one ancient apparatus after another from a leather doctor's bag. He spent two hours examining the boys and getting to know their stories.

While he was certain their lab work would confirm Fabry disease, he reassured the boys that they would be able to live normal lives. Schiffmann explained the gravity of the disease with gentleness and charm. He pointed out that the pain and other problems Michael and Anthony had been experiencing since childhood were evidence of Fabry disease.

Lightbulbs went off for all of us. The boys had played tackle football since they were 6, but a couple years later, they began complaining of foot pain when they practiced. A physical therapist suggested it might be plantar fasciitis, so we bought insoles for their shoes, and they continued to play through the pain all of these years. Abdominal pains led to false alarms about appendicitis or irritable bowel syndrome. We never imagined the culprit behind everything was a genetic mutation. The road ahead was daunting, but we soon discovered that we didn't have to run this marathon alone.

Read full story: bit.ly/FabryQuest

3-tier newborn screening works well on large scale

By Patricia Inácio, PhD
FabryDiseaseNews.com

(July 28, 2023) Incorporating a three-tiered approach to newborn screening (NBS) makes it highly feasible for large-scale programs, according to a recent study conducted in Brazil.

This comprehensive method—involving enzyme analysis, biomarker examination, and genetic testing—can ensure timely intervention and optimal care for newborns.

Using this approach, researchers in Brazil identified two cases of Fabry disease among five other lysosomal storage disorders. Of the 20,066 newborns analyzed, 99 of them (0.49%) had an enzyme activity level below the established cutoff. The study was published in the journal *Molecular Genetics and Metabolism.*

Read full story: bit.ly/3TierScreen

Skeletal muscle mass lower in children with Fabry disease

National Institutes of Health
(July 21, 2023) A new report indicates that low skeletal muscle mass may be an early manifestation of Fabry disease. The report was published in *Orphanet Journal of Rare Diseases*.

This is the first study to examine body composition and muscle mass in early Fabry disease patients. Low skeletal muscle mass is a common early symptom in children with Fabry disease, suggesting that skeletal muscle is significantly affected in the early stages of Fabry.

The report found no significant difference between the body mass indexes (BMIs) of children with Fabry and those without. ..

Children who were diagnosed with FD in the Children's Hospital of Zhejiang University School of Medicine from July 2014 to December 2022 were enrolled. Clinical data were obtained from medical records. A total of 18 children (14 boys and four girls) were enrolled. Thirteen boys had the classical phenotype, and five children (one boy with the N215S mutation and four girls) had the late-onset phenotype.

Eight patients (61.5%) with the classical phenotype had a significant reduction in muscle mass index, ASM index and LLSM index values compared with age- and sex- matched Chinese controls. Late-onset patients also had mild low skeletal muscle mass compared to controls. Whether underweight is common in the early stage of FD and body composition analysis to determine the cause have not been reported.

Read full story: bit.ly/FabryMuscle

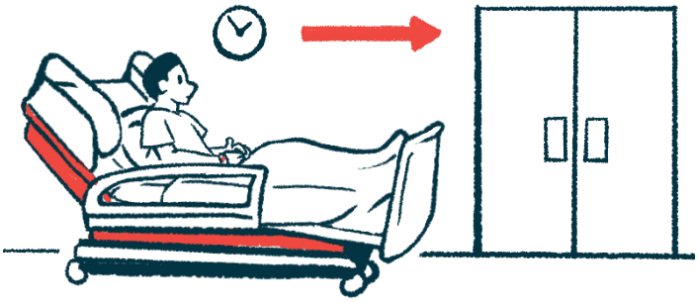
Heart, kidney transplants a success in late-onset Fabry

Case report: Man received 2 organs 7 years apart

By Margarida Maia, PhD
FabryDiseaseNews.com

(Sept. 22, 2023) A man diagnosed in his 60s with late-onset Fabry disease had an "uneventful" recovery after receiving both a heart and a kidney transplant in surgeries seven years apart, according to a new case report.

"Heart and kidney transplants can play a major role in patients with Fabry disease who develop end organ damage," the researchers wrote. End organ damage refers to injuries that severely impair vital organs of the body to the point that the organ is close to entering into failure.



In this case, the man had "an excellent outcome" following the two transplants, the researchers noted.

"Our case report contributes to the concept that organ transplantation has a place in the management of patients with Fabry disease with end-stage organ dysfunction," the team concluded.

Late-onset Fabry disease has a "more variable disease course, in which patients are generally less severely affected" and its "disease manifestations may be limited to a single organ, presenting in the sixth to eighth decade of life," the researchers wrote.

Now, researchers in Ghana and the U.S. described the case of a man with late-onset Fabry who experienced damage to both the heart and the kidneys. He had two transplants separated by about seven years, both successful.

Heart and kidney problems "are the disease's 2 most important life-threatening manifestations and can contribute to higher ... mortality," the researchers wrote.

However they noted that "the benefit of dual organ transplantation in Fabry disease is not well established."

Further, "patients with multiple organ involvement have a higher disease burden that can impact the quality of life and mental health, resulting in poor transplant candidacy," they noted.

Read full story: bit.ly/FabryOrgan

3D echocardiogram can assess Fabry heart damage

By Marisa Wexler, MS
FabryDiseaseNews.com

(June 30, 2023) An imaging technology called 3D echocardiography, which allows clinicians to visualize the heart in three dimensions and measure the strain on heart tissue when the heart beats, may be useful for assessing heart damage among people with Fabry disease. That's according to a Czechian study published in the European Heart Journal *Cardiovascular Imaging*.

"While 2D analysis of myocardial [heart tissue] deformation and its clinical impact on [Fabry disease] have been evaluated before, no data on echocardiographic 3D LV deformation have been published previously," the scientists wrote. "Accordingly, our aim was to assess the feasibility of 3D echocardiographic LV strain, its relation to heart failure severity, and its impact on the long-term prognosis of patients with" Fabry disease.

Read full story: bit.ly/3dEcho

Rare double mutations linked to cardiac Fabry case in Japan

By Lindsey Shapiro, PhD
FabryDiseaseNews.com

(July 7, 2023) A rare pair of mutations were identified as the likely cause of Fabry disease for a young man with cardiac involvement in Japan who was successfully treated with Galafold (migalastat).

While the clinical significance of the two mutations has not been well established, researchers believe their combined effects were the cause of disease. The case report was published in *Molecular Genetics and Metabolism Reports*.

The researchers reported a familial case of Fabry disease in which a young man had two distinct mutations on his GLA gene. He was admitted to the hospital due to heart failure.

The man, in his 20s, was severely obese, but otherwise did not have health issues. A battery of heart imaging tests led to a diagnosis of idiopathic dilated cardiomyopathy, when the heart muscle is weakened and enlarged for an unknown reason.

The man continued heart treatment after discharge, and though he failed to lose weight, his heart gradually began to improve. During the course of his treatment, the doctors began to suspect the man had left ventricular hypertrophy, a thickened wall of the heart's main pumping chamber. They identified significantly reduced Gal A activity in the man's white blood cells, leading to a Fabry diagnosis.

Genetic analyses revealed two distinct mutations in different areas of the GLA gene. While double mutations have been reported in Fabry before, these ones "are rare and thus represent a novelty," the researchers noted.

Read full story: bit.ly/JapanFabry

UAE company, Sanofi to collaborate on rare diseases

This summer, the Abu Dhabi Health Services Company (SEHA), and Sanofi inked a collaboration agreement, to enhance diagnostic performance and accuracy in the field of rare diseases. The agreement will especially focus on expediting the screening process for lysosomal storage disorders and reducing the average diagnostic journey for rare disease patients.

Sanofi stated it will leverage its expertise in disease pathways to expedite the generation and application of clinical knowledge for the accurate diagnosis of patients with lysosomal storage disorders including Gaucher disease, Acid Sphingomyelinase Deficiency disease B and A/B, Pompe disease, Fabry disease, and Mucopolysaccharidosis diseases.

Read full story: bit.ly/FabryInk

Elfabrio soon available at low or no cost for Fabbers in England

By Lindsey Shapiro, PhD
FabryDiseaseNews.com

(Sept. 15, 2023) The National Institute for Health and Care Excellence in England has recommended that Elfabrio (pegunigalsidase alfa) be covered by the country's national health service and provided at low or no cost to adults with Fabry disease.

About 1,150 people in England are estimated to have Fabry, according to Chiesi Global Rare Diseases, which co-developed the ERT with Protalix BioTherapeutics.

Formerly called PRX-102, Elfabrio was approved in the U.K. for long-term ERT in adults with Fabry disease in August, following similar approvals in the European Union and the U.S. in May.

"We are delighted that NICE has recommended [Elfabrio], bringing a new treatment option for people living with Fabry disease across England," said Kamran Iqbal, physician and head of medical affairs, global rare diseases, at Chiesi U.K. and Ireland. "Fabry disease brings a multitude of complex symptoms and, since one therapy may not suit all, it is vital that patients have additional treatment options available to them."

Read full story: bit.ly/FabryEngland

First clinical site in China opens for Phase 2 trial of AL01211

By Andrea Lobo, PhD
FabryDiseaseNews.com

(Aug. 18, 2023) AceLink Therapeutics has opened its first clinical site in China for a Phase 2 clinical trial testing AL01211 as a treatment for Fabry disease.

The trial is actively screening and enrolling patients across six sites in China, including Shanghai's Ruijin Hospital. Five other sites are expected to open by the end of the year.

The study will evaluate the therapy's safety, efficacy, and pharmacological properties in men with classic Fabry disease not previously treated with other therapies for the disease. The company expects to present top-line data by the second half of 2024.

"The opening of our first clinical trial site in China demonstrates our ongoing commitment to Fabry Disease and is an important step in our efforts to provide these patients with a convenient, oral, therapeutic option," Pedro Huertas, MD, PhD, chief medical officer of AceLink Therapeutics, said in a press release.

Read full story: bit.ly/AL01211

'an evil that only affects about 500 Spaniards'

According to the Spanish Association of Mucopolysaccharidoses and Related Syndromes, Fabry patients are a needle in a haystack among nearly 3 million Spaniards. In fact, Fabry disease was not part of the MPS-Lysosomal association until 2008.

Read full story: bit.ly/Fabry500

FSIG

FSIG is a support group dedicated to dispensing information and encouraging mutual self-help as a means of emotional support.

FSIG was formed in 1996 by two Fabry patients and supportive family members with the hope that their particular understanding of this disease, combined with experience gathering information and working with doctors could benefit others.

FSIG is a nonprofit, tax-exempt organization and relies on charitable contributions to provide services to those with Fabry disease, their families and supportive others. Donations may be sent to the address below.

Please feel free to make copies of the FSIG Newsletter to share with your family, friends and others. We encourage anyone interested in FSIG or the newsletter to contact us so we can make sure you receive the next issue.

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MANAGING FABRY

Addressing pain, depression important for Fabry patients

By Marisa Wexler, MS
FabryDiseaseNews.com

(Sept. 8, 2023) People with Fabry disease who have burning limb pain or depression are more likely to report poor quality of life, a new study shows.

Addressing these issues may help them, researchers said in "Screening for health-related quality of life and its determinants in Fabry disease: A cross-sectional multicenter study," published in Molecular Genetics and Metabolism.

Living with a chronic disorder like Fabry disease can be stressful, and previous studies have suggested patients report worse quality of life than those without the disorder, leading an international team of scientists to try to identify factors that are independently associated with quality of life among people with the disease.

"Knowledge of the independent determinants of [health-related quality of life] could facilitate early identification of patients who need more intense psychological support and care, increased monitoring, and specifically targeted adjunctive treatment such as pain medication or antidepressants," the scientists wrote.

The study included data on 135 people with Fabry disease who received care at centers in Switzerland or Germany. Most were female with a median age in the late 40s and most were taking enzyme replacement therapy. The researchers collected data on their clinical status as well as demographic and socioeconomic factors.

Read full story: bit.ly/FabryQofL

SEE ALSO

Panel gives Fabry pain management advice

A Delphi panel consisting of 10 individuals came to a consensus on 21 of 24 aspects of pain management and assessment for patients. All panelists had expertise managing patients with Fabry disease in the United Kingdom.

More: bit.ly/FabryPain

Managing Fabry's emotional side

Pain, uncertainty, and sometimes guilt can make living with Fabry disease a challenge. It's important for everyone to take care of their mental and emotional health, but it's particularly so for people with Fabry disease.

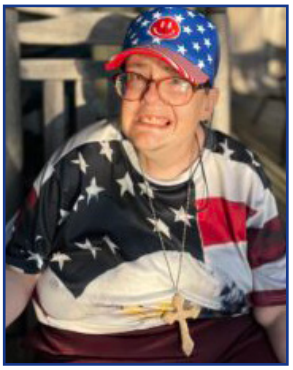
More: bit.ly/FabryEmotions

Those with Fabry understand kindness

By Susanna VanVickle
FabryDiseaseNews.com

(Aug. 29, 2023) I propose that Fabry patients, their family members, and their caregivers have much to teach the general population about kindness. The complexity of life with a rare disease gives us in the Fabry community eyes to see that human equality is much more than being the same, that every person deserves and needs love, and that people really are kind.

When I was 4 years old and living in the Philippines, my brother, Simon-Peter, was born with Prader-Willi syndrome, a rare genetic condition. He's now 40 years old, and every person he encounters becomes his friend.



He has a special gift for noticing the person who might be having a particularly difficult day or need a hug. I know I'm a better person because of Simon-Peter (shown at right), and he's had a transforming effect on countless others. My big-hearted brother and my three children with Fabry are reminders that humankind is not one melded entity.

Read full story: bit.ly/FabryStruggles

6 lessons from collaborating with drug industry reps

(July 28, 2023) It is well known that designing and executing clinical trials at any stage takes a village, involving stakeholders including manufacturers, patients and their families, clinicians, trial site teams, study coordinators, and regulators.

For clinical trials of rare disease drugs, the involvement of disease specialists—whether nephrologists, cardiologists, endocrinologists, or others—is also essential given a therapeutic area may be beyond most general healthcare practitioners' purview, as they are often not exposed to any of the 7,000 known rare diseases on a daily basis. Some clinical trials require longer time frames than others.

1. Focus on outcomes—like quality of life—that matter most to patients.
2. Collaborate with multidisciplinary specialists.
3. Patients must understand the consequences of clinical trial participation.
4. Use the trial design process as an opportunity to provide patients with standard care.
5. Talk about your collaborative experience with others.

Read full story: bit.ly/6TipsCollab

FDA approves AceLink's AL1211 Phase 2 trial

(June 23, 2023) AceLink Therapeutics' Phase 2 trial testing AL1211 as a treatment for Fabry disease has been cleared to launch by the U.S. Food and Drug Administration.

The trial will evaluate AL1211's safety and pharmacological properties in men diagnosed with classic Fabry who are willing to switch from their standard enzyme replacement therapy.

Standard enzyme replacement therapies work to provide a functional version of the missing enzyme, restoring the body's ability to break down Gb3. In contrast, AL1211, previously referred to as AL01211, is a substrate reduction therapy that acts by preventing the generation of fatty molecules like Gb3.

It does so by inhibiting glucosylceramide synthase (GCS), an enzyme that facilitates the first step in the production of glycosphingolipids, a diverse group of biologically active fatty molecules that includes Gb3. By blocking this enzyme, AL1211 works to reduce Gb3 toxic accumulation and related inflammation and improve organ function, ultimately slowing disease progression.

The therapy demonstrates high potency against GCS as well as other favorable pharmacological properties. These properties are expected to enable convenient once-daily oral dosing, offering a more convenient treatment approach compared to enzyme replacement therapy, according to the company.

Read full story: bit.ly/AL1211

Novel treatment shows promise in cell model of Fabry

(Aug. 4, 2023) Researchers have developed a novel treatment — an experimental substrate reduction therapy, or SRT — that may hold promise for Fabry disease, according to a new preclinical study.

The treatment is designed to reduce levels of Gb3 synthase (Gb3S), an enzyme involved in the production of globotriaosylceramide (Gb3), which accumulates to toxic levels in Fabry.

In a cell model of the disease, the new SRT was able to reduce Gb3S levels without compromising cell survival.

Read full story: bit.ly/FabryGb3S

New tech can help therapies reach brain

(Aug. 25, 2023) Chiesi Global Rare Diseases and Aliada Therapeutics are teaming up to advance a blood-brain barrier (BBB) crossing platform technology to deliver therapies for lysosomal storage disorders, including Fabry.

The BBB is a semipermeable membrane that limits what substances can pass from the bloodstream into the brain. As a result, certain medications can't reach it. Because many lysosomal storage disorders affect the central nervous system (CNS, the brain and spinal cord), treatments should also target the CNS. The collaboration will help leverage Aliada's platform to efficiently deliver therapeutics across the BBB.

"With this collaboration, we are expanding our strategy and presence in BBB-crossing technologies and hope to leverage our know-how in [lysosomal storage disorders] to support the development of an effective and differentiated drug delivery platform," Giacomo Chiesi, head of Chiesi, said in a press release "Our commitment to the development of new treatment options for people living with lysosomal storage disorders is global."

Read full story: bit.ly/FabryBBB

4DMT, FDA lift hold on Fabry gene therapy

(Nov. 3, 2023) 4D Molecular Therapeutics has reached an agreement with the U.S. FDA to lift the hold on a U.S.-based clinical trial testing 4D-310, an investigational gene therapy for Fabry.

The hold was based on safety data from the company's INGLAXA Phase 1/2 trials. One is taking place in the U.S. and another in Taiwan and Australia. Among the six patients dosed in both trials, three developed atypical hemolytic uremic syndrome (aHUS), a rare disorder marked by the destruction of red blood cells that carry oxygen in the bloodstream.

To address this, 4DMT launched a single safety study involving nonhuman primates to evaluate 4D-310 combined with an immunosuppressive regimen using rituximab and sirolimus (R/S) to lower the risk of aHUS and toxicity-related side effects.

Read full story: bit.ly/FDA-4DMT

ERT

Mom recalls twin sons' first ERT

PHOTOS COURTESY OF SUSANNA VANVICKLE

Michael VanVickle (left) of Dallas enjoys a complimentary popsicle while awaiting his first infusion in 2019. His twin brother, Anthony, receives his first infusion, and both are supported by their mother, Susanna.

By Susanna VanVickle
FabryDiseaseNews.com

(Aug. 15, 2023) It was a typical school day for most 17-year-olds, but for my twin sons Michael and Anthony, there was nothing ordinary about Oct. 22, 2019. It was the first day of enzyme replacement therapy for both of them, to treat Fabry disease.

The adventure ahead was unpredictable, and navigating this new road with my sons brought ample emotions—joy and excitement about the prospect of improvement as well as fear and concern because of the unknown.

A team of competent medical professionals, pharmaceutical patient educators, and other aides had armed our family with information about the treatment the boys would be undergoing, yet even with that wide network of support, committing to ERT was no small feat. My kids, who previously had spent minimal time in doctors' offices, were about to embark upon a lifetime of bimonthly infusions. They were taking a courageous leap of faith.

The paperwork was not the most exasperating part of the morning—as a mom of twins, I am used to a double load—but we hadn't expected a two-hour wait for the infusions to actually begin. As newbies, we learned that the pharmacy is unable to mix the meds until the patients are on site, and some days are particularly busy. Now we know that long waits are often part of the ERT experience.

Michael tried to make the most of the wait time by raiding the snack stash and helping himself to popsicles and sodas. Anthony braced himself for a long day but managed to smile. While we were waiting, Dr. Raphael Schiffmann showed up to check on some patients. This providential encounter was one of many silver linings of that day. His presence brought us a sense of peace and confidence as the boys settled in for the hours ahead.

Read full story: bit.ly/ERTgift

Study: ERT may help improve bone health in males

By Marisa Wexler, MS
FabryDiseaseNews.com

(July 14, 2023) Enzyme replacement therapy can help to increase the bone density of male patients with Fabry disease, who tend to have lower bone mineral density, a study has found.

Female patients, by contrast, were found generally not to have low bone density, and ERT did not substantially change their measures. In the study, scientists in Japan analyzed data for 15 people with Fabry disease who were seen at their center, all of whom underwent standardized assessments to measure bone mineral density (BMD) in the lower spine and pelvis.

Read full story: bit.ly/ERTbone

Three steps to smoother ERT

By Susanna VanVickle
FabryDiseaseNews.com

(Sept. 12, 2023) My five kids are different in oh so many ways, which was abundantly clear from the varied responses when three of them were diagnosed with Fabry disease mutations.

Anthony, now 21, was introspective and curious when he learned about Fabry four years ago. He sought to learn as much as possible about his diagnosis. Michael, his twin, is extroverted and immediately reached out to friends and family, even using "terminal" to describe his rare disease.

Marisa was 9 when our family did the genetic testing for Fabry and discovered she has the gene mutation. Thankfully, she was not exhibiting symptoms at the time, but many tears were shed as she imagined what her friends would think or how this condition would affect her life.

Over the past four years, I've been determined to make treatment as comfortable as possible for my kids. The name of the game is "do what works best for you." Three simple steps:

1. Plan ahead: This step gave my kids who did not like missing school assignments plenty of time to talk to teachers about homework and get a head start on it if they wanted.

2. Have a special lunch: It's rare that our family eats out, so giving our kids a chance to order lunch from a restaurant or even pick a fun meal from the hospital café gave them something to look forward to.

3. Fight boredom: Having access to movies or shows made a huge difference for all of my kids (especially since at home, that's a luxury for weekends only).

Read full story: bit.ly/ERTsmooth

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Fabry mice produce missing enzyme with stem cell help

By Margarida Maia, PhD
FabryDiseaseNews.com

(July 21, 2023) Researchers have used stem cells as a "cargo ship" to carry genetic information to produce an enzyme that mimics the activity of alpha-galactosidase A, the enzyme missing in Fabry disease, according to a proof-of-concept study in mice.

When injected into a mouse model of Fabry disease, this enzyme, called alpha-N-acetylgalactosaminidase (mNAGA), was active in the liver, but not in other organs such as the heart and kidneys.

"However, in the future, it may be possible to enhance the amount of secreted mNAGA through genome editing" or to "directly deliver mNAGA to organs and tissues," the researchers said in a press release.

One of the main treatments for Fabry is enzyme replacement therapy (ERT). This involves intravenously infusing recombinant human GLA every few weeks. Some patients can develop antibodies against GLA, hindering the therapy's effectiveness. To get around this, the researchers used induced pluripotent stem cells (iPSCs) from a healthy person to restore GLA's activity. iPSCs can turn into almost any type of cell and are able to self-renew.

The researchers tweaked the cells' genetic information to turn off the GLA gene and inserted genetic information for a modified version of another enzyme called mNAGA that works just like GLA and may compensate for its absence. This was done to avoid a possible immune reaction against the healthy GLA enzyme.

When Fabry cardiomyocytes (heart cells) and fibroblasts (cells of the connective tissue), which had no GLA activity, were grown together in the lab with mNAGA-secreting iPSCs, GLA activity in these cells was restored by 24.7% and 41.8%, respectively.

Read full story: bit.ly/Fabrycargo

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