



USHER 1F
COLLABORATIVE

NEWSLETTER

June 2021



Diego's Brighter Future

By Nicolas and Marisa Forte of Ontario, Canada.

Diego Forte is a fearless warrior who never gives up. Having poor balance, one of the three symptoms of Usher 1F, he is great at taking tumbles but an expert at getting back up.

On New Year's Eve 2017, it was like any other. We had a nice family dinner and watched the ball drop. Shortly after, we were racing to the hospital as Diego wouldn't wait a minute later to be born. Luckily, we made it just in time and he made his appearance shortly after midnight on January 1st.

As a newborn, he failed his infant hearing tests, which was a red flag for us. Shortly after, he was diagnosed with profound hearing loss. Thankfully, we learned he was a great candidate for cochlear implants, and we agreed to have the surgery as he would be the only non-hearing person in our family. Although we were feeling some shock and disbelief, we forged on with further testing and later learned of his Usher 1F diagnosis. This confirmed that there will be a gradual loss of vision due to retinitis pigmentosa.

Regardless of his disability, he is a very dynamic boy with specific likes and a driven attitude. Diego loves swimming, gymnastics, arts and crafts, and outdoor play. With the constant Covid-19 closures, he's often stuck at home as recreational programs are usually canceled. In the race for a cure, Diego should not have to be robbed anymore from life's wonders.

After feeling alone in this fight, we were relieved to learn there are many families affected by this brutal disease. It wasn't until our family joined the Usher 1F Collaborative that we were connected with detailed and scientific information and resources. We also learned of the amazing teams that are tirelessly working on finding the cure for Usher 1F.

Please help us spread awareness and donate! There is power in numbers, and the more people that can get involved, the better our chances are of finding a cure! Let's beat the clock and find that miracle! ♦

The Usher 1F Cereal Challenge



Zachary Root with his personalized box of Post Fruity Pebbles

It seems as if every day we are hearing about the newest viral trend on the internet. Some are photos, some are videos, and of course, there is a never-ending stream of viral memes. We are thrilled to share that one of the most recent trends online was our very own #Usher1FCerealChallenge!

This campaign to both spread awareness and raise funding for research is the brainchild of our very own Root family in New Jersey. In thinking both about how Usher 1F affects individuals and what their son Zachary's favorite food is, an ingenious concept arose. Why not ask people to simulate one of the symptoms of those who have Usher 1F? And thus, the Cereal Challenge was born. How can someone do something as seemingly simple as preparing a bowl of cereal when they do not have the ability to see?

On February 13th, the first participants donned blindfolds and felt around their kitchens attempting to gather a bowl, cereal, milk, and a spoon and subsequently prepare the classic breakfast meal.

With a little help from his parents and his dad's college friends from the University of Arizona, Zachary's Usher 1F Cereal Challenge took off! With over \$150,000 raised and over one thousand videos, people all over the world have accepted the challenge!

We were even more excited when some of the most famous cereal brands and their iconic mascots accepted the challenge. Not only did Kellogg's donate \$20,000, but also we saw Snap, Crackle, and Pop blindfolded on Instagram, and we saw their friends Tony the Tiger, Toucan Sam, and the Apple Jacks team attempt to prepare a bowl of cereal as well. Post Cereals donated \$1000 and accepted the challenge, gifting Zachary with a one-of-a-kind personalized box of Fruity Pebbles.

In addition to these icons from the world of cereal, we have also seen many celebrities accept the challenge.

#Usher1FCerealChallenge



Snap, Crackle and Pop take the Cereal Challenge
Photo credit: Kellogg Company

Athletes such as Oshane Ximines (New York Giants), Miles Wood (New Jersey Devils), Obi Toppin (New York Knicks), and former Yankees player James J. Leyritz joined in. We also had actors, including Tovah Feldshuh, Bradford Anderson, Jared Gertner, Geoff Stults and Rena Strober, share the challenge with their thousands of followers.

We were especially moved to see our own researchers at the University of Oregon, Monte Westerfield and Jennifer Phillips, take the challenge. There were even groups of students at the Epstein School (Atlanta), the Summit Speech School (New Jersey), and the West Essex Middle School (New Jersey) that accepted the challenge.

With all of this excitement, the Cereal Challenge was picked up by news outlets throughout the country in markets as large as New York City!

We want to thank every single person who has been involved for making this a profoundly bright moment in a year that has been challenging for so many reasons. Lastly, if you have yet to take the challenge, there's no better time than NOW! ◆

Introducing Sari Springer, Our New Board Member

Sari Springer joined the Usher 1F Collaborative board in January 2021. She has two nieces with Usher 1F, and so our work is very personal and meaningful for her. She has already stepped up, raising significant funds for research.

Sari is the Office Managing Partner at the Toronto office of Littler Mendelson P.C. She has been practicing law for almost 30 years and is a dedicated, compassionate, focused and efficient practitioner who leaves "no stone unturned" in servicing her clients. Sari has developed a hybrid practice, focusing on employment law as well as higher education law.

We are very excited to have Sari join us in our efforts for a cure. ◆





Usher 1F International Scientific Research Conference

On May 13th and 14th, 2021, Usher 1F Collaborative hosted a virtual international scientific research conference, Therapeutic Strategies for Large Protein Coding Genes in Usher Syndrome. We are grateful to the Chan Zuckerberg Initiative (CZI) for funding the conference through our Rare As One Project grant, as well as to our sponsors, The Ardent Companies, Associated Agencies, I. Halper Paper & Supplies, and Franklin Mutual Insurance.

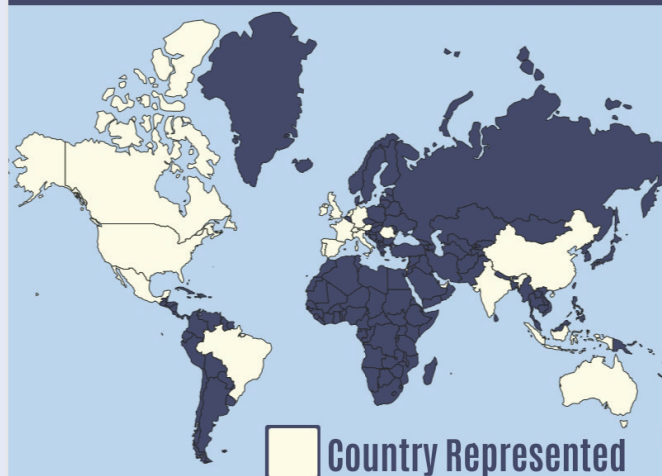
Because Usher 1F alone would have been a small topic for a major research conference, we opted to expand the focus to include other types of Usher syndrome caused, as is Usher 1F, by mutations in

large genes. Our goal for this meeting was to bring together investigators to share ideas and foster collaborations, both those whose areas of research focus on Usher syndrome, as well as those working on the development of relevant scientific approaches and tools.

Thanks also to our CZI grant, we were able to hire TalkingTree Creative to manage all the technical aspects of our conference. Even with a live virtual conference with speakers from all over the US, Canada, Europe, and Australia, the production was nearly flawless.

Usher 1F Collaborative Virtual Conference

Participant Snapshot



45%

Researchers &
Physicians

27%

Friends &
Family

10%

Medical & Grad.
Students

8%

Usher 1F
Patients

Usher 1F Collaborative president and co-founder Melissa Chaikof kicked off the meeting, welcoming all the attendees, stating that this is a deeply personal cause for her since her two daughters have Usher 1F but added that, through her work, she has come to care about all of those with Usher 1F who so desperately want a cure. Elliot Chaikof, MD, PhD, then served as host for the conference, introducing session moderators and asking and fielding questions after each talk.

Attendees were treated to presentations from our Usher 1F researchers, from scientists working on tools and therapies applicable to all types of retinitis pigmentosa (RP), including those for genome repair, and from those working on cures for Usher 1B, 1D, and 2A. Attendees and speakers were able to chat with others through the conference platform. Also included on the platform was an incredibly moving virtual exhibit from the Usher Syndrome Society, *Shine a Light on Usher Syndrome*, comprised of portraits and quotes from many with Usher Syndrome.

Highlights from our Usher 1F researchers include:

- Alex Hewitt, MD, PhD, from the Centre for Eye Research Australia on his work with base editing for the most common Usher 1F mutation
- Livia Carvalho, PhD, University of Western Australia, on her work with dual vector delivery of the Usher 1F gene
- Zubair Ahmed, PhD, University of Maryland, on his Usher 1F mouse model and testing of two promising drug therapies
- Vincent Tropepe, PhD, University of Toronto, on his development of a zebrafish model of Usher 1F to study disease mechanism and potential pathways to a cure
- Monte Westerfield, PhD, University of Oregon Institute of Neuroscience, on his Usher 1F zebrafish model and testing of two potential treatments
- David Corey, PhD, Harvard Medical School, on his development of three types of gene therapies for Usher 1F
- Budd Tucker, PhD, University of Iowa, on his work on stem cell therapy

Retinal specialists Katarina Stingl, MD, University of Tübingen, and Francesca Simonelli, MD, University of Campania, discussed the Usher 1F and Usher 1B, respectively, natural history studies. The concluding session was a treat with presentations by those in industry developing precision drugs for Usher Syndrome, including Editas Medicine, ProQR Therapeutics, and Eloxx Pharmaceuticals.

Over 300 persons registered for the conference from locations not just in the US but from all over the world. While we missed the personal face-to-face interactions more readily facilitated by an in-person conference, holding it online enabled more people to join us to benefit from the wealth of valuable information presented.

Elliot Chaikof closed the meeting, thanking everyone for joining us for our two-day conference, urging the scientists to continue their work, telling them, "We need your best ideas," adding that it is not only about caring but also curing. ♦



Announcing RUSH1F, the Usher 1F Natural History Study in Partnership with Foundation Fighting Blindness

We are thrilled to launch RUSH1F, the Usher 1F natural history study in partnership with Foundation Fighting Blindness, the world's leading private funding source for retinal degenerative research. Additional funding for the project will be provided by the Marjorie C. Adams Trust. We are excited and grateful to Foundation Fighting Blindness for the opportunity to partner to achieve this critical milestone for patients with Usher 1F.

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It is very important that in this upcoming trial we are able to provide clinical knowledge about this very rare disease. Only by means of international cooperation will we be able to progress to future research that can try to save the vision of affected persons with rare diseases. – DR. KATARINA STINGL
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The RUSH1F natural history study will follow 40 individuals with USH1F who are 8 years of age or older, assessing changes in their vision and retinal structure over four years. The primary goals of the study are to identify outcome measures for future clinical trials of emerging therapies. The Jaeb Center for Health Research in Tampa, Florida, will serve as the coordinating center for the study. Dr. Katarina Stingl, University of Tübingen in Germany, will serve as the chair of the international multicenter clinical trial group. “Genetic diseases with multiple sensory impairment such as Usher syndrome are the most common cause of combined deafness and blindness in adults. It is very important that in this upcoming trial we are able to provide clinical knowledge about this very rare disease. Only by means of international

cooperation will we be able to progress to future research that can try to save the vision of affected persons with rare diseases,” says Dr. Stingl.

“We are delighted to partner with the Usher 1F Collaborative and the Marjorie C. Adams Trust to launch a natural history study that will ultimately help advance clinical research for emerging therapies,” says Todd Durham, PhD, vice president of clinical development at the Foundation Fighting Blindness. “In a short period, the Usher 1F Collaborative has been very successful in moving the field forward through their funding of translational research to develop preclinical models of Usher 1F. It is exciting for us to be a part of a family-driven collaboration to expand disease knowledge and the potential for getting more treatments into the clinic.”

The overall cost of the USH1F natural history study will be more than \$2 million with Usher 1F Collaborative providing \$1 million in support and the Marjorie C. Adams Trust contributing \$115,000 in funding. Foundation Fighting Blindness will provide more than \$1 million to cover the remaining costs.

Investigators at 10 centers began enrolling study participants in May 2021. Information regarding the trial can be found at clinicaltrials.gov (NCT04765345) and the study protocol can be accessed on the Consortium's public website (public.jaeb.org/ffb). Individuals with USH1F who are interested in participating in this study are encouraged to contact staff at the Jaeb Center by email at ffb@jaeb.org or by phone at 813-975-8690. We encourage everyone with Usher 1F who meets the criteria to sign up for the study so that we will have the required data for a future clinical trial for everyone with Usher 1F. ♦