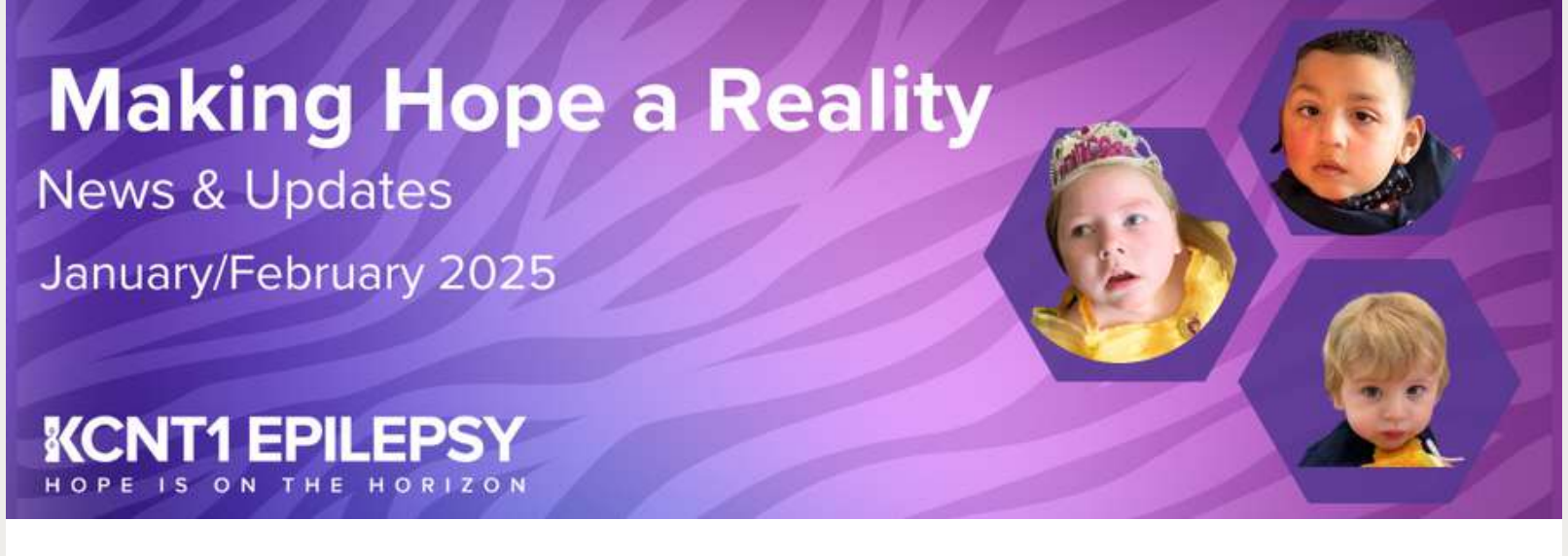


Dear Families, Grandparents and Supporters,

As we step into **2025**, we do so with both **heavy hearts and renewed determination**. January was a difficult month for our community, as we said goodbye to two beloved children and two cherished grandparents. Our thoughts and deepest sympathies are with these families. We also opened the year welcoming a record **17 new families** into our community with children ranging in age from 1 week old to 8 years old, and across all known KCNT1 phenotypes. We have our first ever known patients in Paraguay and Maldives, as well as several more across Europe, the United States, Canada, Brazil and Australia. We are grateful that more families are receiving early genetic testing, and as a result, more families are finding the support, advice, and friendship that we know here within our community.

2025 also brings renewed hope. For the first time, **clinical trials for KCNT1 are on the horizon**. While the two announced treatments are still in preclinical testing and have yet to go to the FDA, we are committed to ensuring that families are prepared. When the time comes, we want you and your doctors to have the information and resources needed to navigate potential trial participation.

As we move forward together, we remain grateful for this community and your unwavering support. **Thank you for standing with us—let's make 2025 a year of progress, advocacy, and hope.**

With gratitude and enthusiasm,

The KCNT1 Epilepsy Foundation Team

Mark Your Calendars

February 6th 3pm ET: Webinar- Transition to Adulthood/Life Stage Checklist Webinar by our partner DEE-P Connection **Register**

Feb 16th 2:00 ET : Grandparents Zoom Call. Register

Feb 22nd 3:00 ET: (tentative) Virtual Meeting: KCNT1 Pathway to Trials **Educational Series**: Meet Actio Biosciences. Join us for a KCNT1 community webinar to learn more about the science behind Actio's KCNT1 treatment. Register

February 24th-26th: EveryLife Foundation Rare Disease Week on Capitol Hill **Register**

Feb 27th: Parent Live-stream Gaming Fundraiser on Tiltify Tune in

February 27th & 28th: FDA-NIH Rare Disease Day in-person or virtually **Register**

March 11th 7pm ET: Conversations with Newly Diagnosed Families Register

March 17th, 9am: In-Person Family Meet up, London – RSVP https://forms.office.com/r/83EYTkG0UX

March 21st: In-Person Family Meet up, Paris, France : RSVP

June 13 & 14: In-person family conference in Philadelphia and Million Dollar Bike Ride (MDBR) – interest form

February is Rare Disease Month—Join Us in Raising Awareness!

February is **Rare Disease Month**, a time to amplify the voices of our community and advocate for policies that support those living with a rare disease. It all culminates on **Rare Disease Day (February 28)**, when advocates, families, and organizations will come together on **Capitol Hill** to raise awareness and push for critical policy changes.

How Can You Help?

We need **your voice** to make an impact! Here are ways you can help us spread awareness and drive change this month:

Update Your Social Media Profiles and Tag Us – Show your support by using Rare Disease Month-themed profile frames and banners and posting your photos wearing stripes!
Like, Share & Spread Awareness – Help amplify our message by engaging with our posts. Every share reaches new people!
Share Your Story – Your experiences are powerful. If you're comfortable, share your journey with us so we can highlight it on our pages. Complete this form.
Use Hashtags – Help raise awareness by using #RareDiseaseDay #KCNT1 #KCNT1epilepsy #RareButStrong in your social media posts.

Fundraise to Support Our Mission

This year, we're launching a **Rare Disease Day Fundraiser** to support research and advocacy. You can make a difference by starting a fundraiser or creating a **team** **fundraising page** today!

Start your fundraiser

Share Your Story

Every family's journey to a diagnosis of KCNT1 is different. Every family situation is different, and how each family adjusts is different. Please share your story and help us spread awareness for KCNT1 related disorders. ***Start here***

Census Count: Help Us Get an Accurate Picture

We are also kicking off our **inaugural census count** to better understand how many families are affected. This data is critical in advocating for research funding and clinical trials. Please join us in making sure every voice is counted!

Be Counted! Let's see how many families we have by February 28th!

Together, we can raise awareness, advocate for better policies, and show the world the **strength of our rare disease community**. Let's make **Rare Disease Month** a time of action and impact

Be Counted!

Science and Research News

Breaking News: Two Companies Announce KCNT1 Programs

We are hopeful and excited to be entering the era of clinical trials for KCNT1-specific therapeutics. These trials carry the potential to transform hope into reality, giving our children a renewed chance at health, development, and joy.

Actio Biosciences was the first to announce they are developing an oral, first-in-class small molecule inhibitor, ABS-1230, for the treatment of KCNT1-related epilepsy. ABS-1230 is designed to inhibit the overactive ion channel and reduce seizure frequency. Meet the co-Founder, Dr David Goldstein, PhD, on Saturday, February 22 when he sits down with Foundation co-founder, Justin West to learn more about the science behind their program what steps have to be taken to move this from the lab to patients. Registration link is here. **Please note the time is tentative**.

In addition to Actio Biosciences, another company with a different therapeutic approach announced their program and published their scientific results: **Atalanta Therapeutics**.

Researchers at Atalanta have been exploring the use of a specialized molecule called divalent small interfering RNA (di-siRNA) to target and reduce the activity of the faulty KCNT1 gene. In preclinical studies using mouse models with the same genetic mutation, administering di-siRNA directly into the brain's ventricular system (a method known as intracerebroventricular administration) resulted in a significant reduction in seizure activity.This effect was both rapid and long-lasting, suggesting that di-siRNA could effectively suppress the abnormal brain activity caused by the KCNT1 mutation.

This research offers hope for future treatments that specifically target the underlying genetic cause of the seizures.The company developing this approach will be taking their data to the FDA to apply for approval to start a clinical trial. If the trial is approved, we will be sharing that information with our community. While these findings are preliminary and based on animal studies, they represent a significant step toward developing more effective therapies for this challenging condition.

We will be hosting a call with Atalanta to learn more in the near future.

Understanding Clinical Trials

The path to developing new treatments takes time, dedication, and many scientific steps. Before a potential therapy reaches families, researchers work through a careful and detailed process to ensure its safety and effectiveness.

The journey to new treatments begins with **preclinical research**, where scientists explore potential therapies in laboratory settings and animal models to assess their safety and effectiveness. When a treatment shows promise, researchers take the next step by submitting an **Investigational New Drug (IND) application** to regulatory authorities.

This application includes critical data gathered from **observational studies, natural history research, biobanks, and biomarker studies**—all of which rely on patient participation. By contributing to these studies, families play a vital role in advancing potential treatments and bringing us closer to future clinical trials.

Clinical Trial Phases & Considerations

Clinical trials are conducted in **phases**, each designed to assess different aspects of a drug's safety and effectiveness.

Phase 1: Focuses on safety, usually in a small group of participants.

Phase 2: Evaluates effectiveness and side effects in a larger group.

Phase 3 & Beyond: Compares new treatments to existing options and assesses long-term impact.

We anticipate **KCNT1-specific clinical trials** from companies like **Actio, Atalanta,** and others, alongside broader epilepsy trials designed for **developmental and epileptic encephalopathies**. Some trials may be available in multiple countries, while others may initially launch in the U.S. with plans to expand later. Additionally, we expect some studies to explore the **off-label use of existing medications** that are already approved for other conditions.

What to Consider Before Participating in a Trial:

When considering a clinical trial, it's helpful to understand the details of participation so you can make the best decision for your child and family. Here are a few key questions to explore:

What are your goals for your child? Are you hoping for improved seizure control, better developmental outcomes, or access to an emerging treatment option?

How is the treatment given? Some trials may involve oral medication, IV infusions, or intrathecal (spinal) drug delivery.

What does participation involve? Trials may require regular outpatient visits, short hospital stays, or overnight monitoring, depending on the study's design.

Each trial will be unique, and understanding these details can help you feel informed and prepared. Families are encouraged to discuss options with their medical team to determine what aligns best with their child's needs. **Never hesitate to ask questions, follow up, or check in on new developments—being proactive is an important part of advocacy.** As you have all experienced, **you are your child's strongest advocate, and your persistence can make a difference!**

Why Talk to Your Neurologist Now?

Even if trials aren't open yet, discussing potential participation with your child's neurologist or epileptologist is crucial. They can:
- Assess eligibility and medical readiness.

- Advise on any current **treatment adjustments** that could improve readiness.

- Provide updates on upcoming trials and potential opportunities.

You can also check **clinicaltrials.gov** for recruiting studies.

By staying informed, engaged, and prepared, we can take the next step together toward potential treatments for our children. Let's make sure we're **ready for the future of KCNT1 therapeutics**!

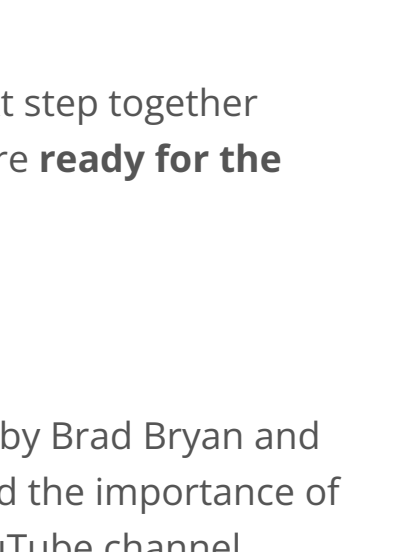
In Case you missed it!

Our **Pathway to Trials** webinar series, began with presentations by Brad Bryan and Ali Rosenberg, to educate families on clinical trial participation and the importance of data sharing. If you missed them, catch the recordings on our YouTube channel.

Watch on YouTube

Million Dollar Bike Ride Grantee Announced

We're excited to share that we have awarded the KCNT1 Epilepsy Foundation's Million Dollar Bike Ride (MDBR) grant to Dr. Jill Silverman, a Hartwell Fellow at the UC Davis MIND Institute. Dr. Silverman's lab is embarking on its first official study focused on KCNT1-related epilepsy using a novel mouse model carrying the KCNT1 G288S mutation, one of 64 known variants of the sodium-activated potassium channel gene. The research will explore how the KCNT1 mutation influences seizure severity, frequency, and progression across the lifespan.



Her lab will also investigate related issues such as sleep disturbances and respiratory challenges using advanced tools like electroencephalography (EEG) and whole-body plethysmography (WBP). We are excited about this partnership and hope it will pave the way for new treatments and better outcomes for our children. Thanks to all our families who helped fundraise for the Million Dollar Bike Ride and for the matching support from the University of Pennsylvania's Orphan Disease Center, she will receive $68,667 for her KCNT1 project. You made this grant award possible!

Community News

Rare Disease Community's Policy Recommendations for 2025

In collaboration with 209 leading rare disease patient advocacy organizations, we participated in an initiative that outlined **a set of priority policies** to support the rare disease community as the new Administration takes office. These policy priorities demonstrate a shared commitment to ensuring that the estimated 30 million Americans living with one or more of the 10,000 identified rare diseases have access to timely diagnoses, expert clinical care, and effective treatment options. Read the letter here.

Looking Ahead

We have big plans for 2025, including the hope of clinical trial announcements, more family-focused events and in-person meetups, and innovative research initiatives. Your continued involvement fuels our progress and inspires hope for the entire KCNT1 community.

Continue Your Support

Together we can do this!

Our Contact Information
{{Organization Name}}
{{Organization Address}}
{{Organization Phone}}
{{Organization Website}}

KCNT1 EPILEPSY
HOPE IS ON THE HORIZON