Rett GAZETTE

Accelerating Research.
Empowering Families.

CLINICAL TRIALS 101

Rettsyndrome.org
ACCELERATING RESEARCH. EMPOWERING FAMILIES.

Over $41 Million Dollars Invested in Research to Date

Big, splashy headlines may grab your attention, but it is the results of the investments in research we should all be focused on. It is not how much money one invests but how it is invested and the outcome of the investments. As you will see throughout this edition of the Rett Gazette, Rettsyndrome.org has the best results of any Rett organization out there. It starts with a strategy grounded in peer reviewed research, giving us the greatest chance for success. Investments are made in a broad range of research projects focusing on Clinical research, Neuro-Habilitation Research, Translational Research, Basic Research and Mentored Training Fellowships. These initiatives give us the best chance of bringing treatments to all those suffering from Rett syndrome in the here and now as we continue our search for a cure. Rettsyndrome.org's investment in the clinical trials of Neuren Pharmaceutical's trofinetide, and the results of those studies, are just the most recent example of the Foundation's stewardship of the funds entrusted to us!

As a co-sponsor with the National Institutes of Health on the Natural History Study, Rettsyndrome.org has the credibility biotech and big pharma look for when considering a partner for clinical studies. From funding pharmacological and neuro-habilitation clinical studies, which will provide treatments on our path to a cure, to our Mentored Training Fellowship Program to ensure we have researchers and doctors who are skilled and trained to deal with Rett syndrome, Rettsyndrome.org is continuously looking for ways to accelerate the speed of science in a safe and efficacious way.

While the foundation can work on a national and international level, it is critical we have local and regional participation and support. With the designation of 14 Rett Syndrome Clinical Research Centers Of Excellence in 2016, a network has been established in which trials can be conducted. It is imperative that we have participation so that data collected can be from a large and diverse sampling, giving the Food & Drug Administration confidence in the results. This will help speed the process of getting treatments to market and improving the quality of life for those suffering from Rett syndrome. Do not believe anyone who tells you treatments and a cure can happen in a few years. The FDA process is long and arduous and can be frustrating at times. We understand the process and are doing all we can to accelerate 'research with results' to get treatments and a cure to market. But the FDA will not approve any treatment without first going through a very thorough clinical trial process that can take years.

As you will read throughout this issue, there are many opportunities for families to participate. From the Natural History Study to Clinical Studies, we need your help to ensure we have participation levels conducive to accelerating the process. Dr. Kaminsky's articles and his video series, Rett Rounds with Dr. K, give a good overview of; why your participation is needed, what one should expect when participating and the complexity and time required to get FDA approval for each and every step along the way. The sooner we complete these studies, the sooner we can move compounds and treatments into everyday use. Rettsyndrome.org is currently working with over a dozen companies that have compounds in differing stages of readiness for clinical trials. We will need your participation to ensure we get as many of these compounds to prescription drugs for the here and now as we continue funding research into the ultimate treatment and cure for Rett syndrome!

Gordy
COO, Rettsyndrome.org

Time, Time, Time.....

by Steve Kaminsky, PhD, Chief Science Officer

Steve Kaminsky, PhD

For years, exciting research results have been reported in Rett syndrome. We all get excited. Yet, there are no treatments available today for people with Rett syndrome. Many of you ask "Why does it take so long to move these results from the animal models forward to humans?"

A lot of work takes place in the time between discovering that a drug works in a mouse and testing that drug in a clinical trial in a human. We at Rettsyndrome.org do not look at this is as "lost" time, but rather it is time spent ensuring that the drug has the best possible chance of having an effect on the disease, and the lowest possible chance of causing harm. This work is termed "preclinical research" and it encompasses work that is usually done outside the university setting and and within the walls of the pharmaceutical industry. More importantly, there is a complex set of steps to give a compound a chance at being successful.

Although frustrating, these steps are necessary to getting a safe and effective drug to patients. The developers must do toxicology studies to show the U.S. Food and Drug Administration (FDA) that the drug is relatively safe and is likely to be effective. It also determines how to administer the drug and how much to give.

Furthermore, curing a mouse is not the same thing as curing a person. Animal models of a disease are just that — models. All of this preclinical work aims to minimize risk by finding out as much as possible about the drug before it is ever given to a person. On average, preclinical research takes five to seven years and costs several million dollars to complete according to FasterCures (a nonprofit organization dedicated to increasing the speed of drug discovery across all therapeutic areas). Once this work is done, the drug developer can apply to the FDA for approval to start clinical trials by submitting an Investigational New Drug (IND) application. If the IND is approved, the developer is cleared to start clinical trials.

These trials take another five to seven years to complete (and many more millions of dollars) before the developer can ask the FDA for approval to bring a drug to market. On average, it takes a drug about 12 years to get from discovery to market, and it costs about $1.8 billion per drug that works. Only about one drug in 10,000 actually makes it. However, due to the rigorous processes of preclinical research, about one in five drugs that get to an IND eventually make it through trials.

So why do I write all of this? It has been less than five years since trofinetide entered the Rett syndrome world. It started with a Phase 2 trial in older adolescents and adult women in 2013. Its success moved Neuren forward to test trofinetide in younger girls and early adolescents. And now today, Neuren is planning a Phase 3 clinical trial with trofinetide, and in the drug world, this is a very fast pace. We all would like the next trial to start tomorrow. Please know this drug has moved forward for treating Rett syndrome at a blazing pace.

The final point I want to make is that I want to remind everyone that clinical trials are not treatments. Clinical trials are experiments. And they may fail. Please do not look at them as getting a treatment for your special person with Rett syndrome, but rather look at clinical trials as a chance to walk a new path to either prove that a drug works, or that it does not. Either way you have been part of something that helps all that follow and you have made it possible to accelerate research for treatments and a cure for all those affected by Rett syndrome.

REFERENCE:
"Why Does It Take So Long To Go from Mouse to Man?"
ANE LARKINDALE, PH.D.
JANUARY 1, 2012 | QUEST Vol. 19, No. 1
http://quest.mda.org/article/why-does-it-take-so-long-go-mouse-man

Seeking Enrollment for the Natural History of Rett Syndrome, MECP2 Duplication & Rett Related Disorders

Thanks to the Rett community at large, the second rendition of the Natural History Study is underway at 15 sites around the US! We still continue to push for more participation in this critical study that seeks girls and boys of all ages with Rett syndrome (classical or atypical). We also need those with MECP2 Duplication, or related disorders that involve mutations in CDKL5, FoxG1, and other MeCP2 mutations that don't fulfill the consensus criteria for Rett syndrome.

What is the Natural History Study?

It is a five-year observational study that will involve the collection of information about the clinical features of RTT, MECP2 Dup, and RTT-related disorders, as well as information about quality of life.

What are the goals of the Natural History Study?

- Develop phenotype-genotype correlations in each disorder
- Develop, through complex neurophysiologic and neuroimaging, a better understanding of these markers of neubiologic involvement
- Develop a set of biomarkers through metabolic and proteomic studies in blood
- In Rett syndrome, this study will include a more in-depth look at X chromosome inactivation and in other related gene products such as BDNF
- Develop a set of behavioral outcome measures that will provide important endpoints for planned clinical trials
- Set the stage for translational studies and emerging clinical trials leading to disease modification

What can participants expect?

Physicians and other study personnel will

- Measure the size of your child's arm and waist
- Weigh and measure your child
- Record abnormal muscle movements
- Monitor all of the above over time

You will be asked:

- To provide medical records that describe your child's condition, including copies of their gene testing results
- To answer questions about what has changed with your child's condition since you were last seen
- To complete questionnaires about your child's condition and about quality of life

We hope you consider participating in this research study, as the research team is hoping to recruit about 1500 individuals of all ages and genders. You'll have a chance to contribute to research that will impact future development of more efficient clinical trial designs and progress toward treatments for Rett syndrome, MECP2 Duplication, and Rett related disorders.

To participate, please contact your preferred clinic. https://www.rarediseasesnetwork.org/cms/rett/Learn-More/Participating-Centers.

UCSF Benioff Children's Hospitals Oakland receives Rettsyndrome.org Clinical Research Center of Excellence Award

UCSF Benioff Children's Hospitals and Katie's Clinic for Rett Syndrome and Related Disorders, led by Medical Director Dr. Mary Jones, was the 4th clinic nationwide to receive this award at a celebration luncheon on Friday, Feb 24th.

Also recognized were John and Kathy Corpus, and Sol and Christine Varon, who have raised millions of dollars through the Samantha Corpus Foundation and the Sarah Varon Foundation for Rettsyndrome.org, enabling some of the most important and relevant clinical research projects accomplished to date.

The luncheon, attended by over 70 families, clinicians, donors, supporters, and community providers, began with opening remarks from Dr. Bert Lubin, Associate Dean of Children's Health. The UCSF Oakland clinic now sees over 200 girls, boys and women with Rett, MECP2 Duplication, CDKL5, and FOXG1 syndromes. They have contributed to multiple publications, developed Primary Care Guidelines, have spoken at conference, and have conducted clinical research on the use of vibration platforms to affect bone density. They have also conducted research on the benefits of hippotherapy and eye gaze communication. They have engaged the community by educating them about Rett syndrome.

Gordy Rich, COO, presented the award, "Our children and adults with Rett syndrome rely on you for treatment plans, and advance research and care practices. In recognition of our partnership and respect for your dedication, we name Katie's Clinic as one of our select Rettsyndrome.org Clinical Research Centers of Excellence."

Paige Nues, Dr. Mary Jones, Dr. Bert Lubin, Gordy Rich

Also in attendance were Dr. Uta Francke, Professor Emeritus at Stanford and a founding geneticist of the MECP2 gene disease-causing mutation, and Dr. Dag Yasui, Sr. Research Scientist and team, from UCDavis. Paige, Jesse, and Katie Nues also attended and Katie, who now, at 14 years old, still has Rett syndrome but an above-average healthy and happy for a child with this diagnosis and the R168X mutation. Thanks to all who have learned from her and all other patients, and have served in her care for over 12 years at this wonderful hospital.

Photographs courtesy of Debbie Lee

UCSF Benioff Children's Hospitals Oakland hospital administration, Rett clinic team, families and friends

STARS Study — Evaluation of the Efficacy, Safety, and Tolerability of Sarizotan in Rett Syndrome with Respiratory Symptoms

Newron Pharmaceuticals is conducting a clinical research trial to evaluate the safety, tolerability and efficacy of Sarizotan. This is a Phase 2/3, study that will investigate whether Sarizotan can reduce respiratory abnormalities in patients with Rett syndrome. This is a 24-week study and patients will be randomized into 3 groups – low dose and high dose of Sarizotan, and placebo-control group. They seek to enroll 129 patients.

Patients may be eligible who*:

- Female or male older than 6 years of age
- A body weight greater than 10 kg (22 lbs.)
- Experience a minimum of 10 episodes of breath holding (apnea) while awake during the day

The study is being conducted at several locations in the US and globally in Italy, India, UK and Australia. If you are interested to learn more about this study, please visit http://www.rettsyndrome.org/research/clinical-trials.

Newron is offering reasonable travel expense reimbursements for study participants through Rettland in USA to the STARS Study. Please contact admin@rettland.org for STARS travel reimbursement information.

WHY WE ARE IN THE STARS TRIAL

Kimberly Ann

Our **28-year old daughter** is pretty high functioning. She can walk, has a few words, and although she has stereotypic hand movements, she uses them pretty well to eat and hold a cup for bits at a time. Breathing, mood, and seizures have been her biggest struggles. She has been breath-holding until her stomach bloats and her fingers and toes turn blue for as long as we can remember. She even loses her balance and falls sometimes during a breath-hold. When we heard about this study, we knew we had to do it.

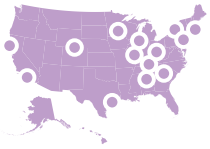
We don't know if she is on the drug or the placebo, but **it's given us Hope for something that will help!** We have also done the Natural History Study for many years. It takes planning. We don't live too far from the clinic, but our daughter needs lots of breaks from the car to walk around or she gets upset, or she'll need to use the restroom. That makes it about a 4-hour drive each way. It's worth it though. **I'd do anything for her,** and she trusted me when we asked her if she wanted to do this. The Primary Investigator has known our daughter for over 20 years now, and we trust her in his hands. They are so kind. Rettland has helped with our gas and meal expenses, which has really helped us to be able to do this.

https://www.rettsyndrome.org/research/clinical-trials

We are leading the revolution in **Rett syndrome research**

51 years later, Dr. Andreas Rett (est. 1966) would be proud

Our Research Strategy
Best in class → Results Here and Now



Four (4) multi-site clinical studies advancing safe and effective pharmacological interventions, more in the pipeline

Pharmacological companies **seek out our Scout program** to test and fail fast or succeed in moving more potential drugs into real treatments

The only co-sponsor and administrative coordinator of the 15-site NIH Natural History Study enrolling over 1,200 patients

Funder and trusted steward of the Rett syndrome tissue research bank at Harvard which is open to ALL Rett researchers

Rettsyndrome.org is funding international databases, RettBASE and InterRett, that have **OPEN-ACCESS** to all researchers

Only clinical and basic science fellowship training program in the United States specifically designed for training tomorrow's Rett syndrome researchers

The only foundation concerned with establishing Neuro-Habilitation standards

Full Spectrum Strategy
Research Towards Cure

Our strategy yields results in the here and now as we continue to fund and drive fundamental research towards a cure, and foster next-gen researchers and clinicians through our Fellowship program.

- ✓ Information
- ✓ Education
- ✓ Connectivity

Empowerment → Through Knowledge

Rett parents on staff as well as filling volunteer positions, ready to help

A comprehensive, information packed website with a state by state resource guide

Biennial Family Conference bringing the best, most relevant resources together

Support and management of Special Interest Networks as well as parent email Listserv - The RettNet

Full-time Family Development Manager to help families with their fundraising efforts

We are results driven for **here & now** improvements in quality of life for all with Rett syndrome

Clinical Trials Update

by Steve Kaminsky, PhD, Chief Science Officer

I have been part of Rettsyndrome.org for over five years now, and if asked what has changed most during that time, I would say the single largest change is the number of clinical trials taking place for Rett syndrome. In 2012, there were very few clinical trials looking at possible candidate drugs that could treat more than just the symptoms associated with Rett syndrome.

Today parents call and ask, "Which trial is right for us?" The response is always the same. We give a vague response, because, only a parent can choose which trial is right for a given family. Advice is given in a general way, and we simply point to the various blogs and posts we have written, to help answer questions one should consider before entering a clinical trial. Visit here to view Rett Rounds by Dr. K **https://www.rettsyndrome.org/research/rettrounds/drk**

With that said, it has been an exciting last 12 months. There are many clinical trials around the globe. Two that Rettsyndrome.org sponsored, the IGF-1 trial out of Boston Children's Hospital and Neuren Pharmaceutical's pediatric trial with trofinetide, have been closed and data is being analyzed as I write this. The IGF-1 data has not been made available as of yet, since the investigators are preparing their study for publication. We look forward to seeing the data and determining if there is a way forward with IGF-1.

In March, Neuren Pharmaceuticals reported that trofinetide had significant clinical benefit in their Phase 2 clinical trial in girls with Rett syndrome aged 5 to 15. Clinical improvements of approximately 15% from baseline were observed, and Rett syndrome physicians believe these to be clinically meaningful, particularly in a short duration trial. Neuren's trial was a double-blind, randomized, placebo controlled study that tested three doses of trofinetide compared with placebo in 82 subjects at 12 trial sites in the US. This study showed that trofinetide was well tolerated and had a good safety profile in these younger subjects, with no dose-limiting effects observed. The highest dose of trofinetide achieved statistically significant clinical benefit compared with placebo for each of three syndrome-specific efficacy measures, the Rett Syndrome Behavior Questionnaire (RSBQ), the Clinical Global Impression of Improvement (CGI-I) and the Rett Syndrome Domain Specific Concerns. Physicians and caregivers saw real change in girls receiving the highest dose — to reiterate, the data was statistically significant and clinically meaningful. And furthermore, rather than simply addressing isolated symptoms, there was strong evidence that the high dose of trofinetide showed improvement across multiple symptoms, indicating that trofinetide has the potential for disease modification. A "disease-modifying therapy" means that a drug can modify or change the course of a disease. This could be a real game changer for Rett syndrome.

Neuren now intends to meet with the US Food and Drug Administration (FDA) to discuss their plans for a pivotal trial commencing in 2018 using the RSBQ as a primary efficacy measure, supported by the CGI-I as a key secondary efficacy measure. In parallel, as previously reported, Neuren will now move to complete the necessary chronic toxicity studies and manufacturing scale-up.

As we move through 2017, we will be sponsoring yet another trial with Anavex Life Sciences and are working with over a dozen companies in our pre-clinical trial Scout program. Thank you for your support whether it be through donations and/or getting involved with the trials and Natural History Study! Without you, we could not have seen all this progress in the last 5 years. We hope to have more trials coming online in the next 5 years. We at Rettsyndrome.org are very proud to have supported these studies that exhibit research with results, and we believe, that the best is yet to come.

IMPACT REPORT
2016

Rettsyndrome.org
ACCELERATING RESEARCH. EMPOWERING FAMILIES.

OUR MISSION

Accelerate full spectrum research for treatments and a cure for Rett syndrome

Empower families with information, education and connectivity

LOOKING AHEAD

2017

- Launch of new Phase 2 clinical trial with Anavex 2-73
- Data analysis of the completed Phase 2 clinical trials with trofinetide and IGF-1
- Enrollments to the NHS at 14 Rett syndrome Clinical Research Centers of Excellence throughout the U.S.

DONATE
www.rettsyndrome.org/donate

PARTICIPATE
www.rettsyndrome.org/get-involved

SIGN UP
www.rettsyndrome.org/join

Rettsyndrome.org

Rettsyndrome.org is a 501c(3) non-profit corporation registered as the International Rett Syndrome Foundation and established in 2007 through the strategic merger of the Rett Syndrome Research Foundation and the International Rett Syndrome Association.

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Rettsyndrome.org
ACCELERATING RESEARCH. EMPOWERING FAMILIES.

IMPACT REPORT
2016

$40M
COMMITTED TO RESEARCH THROUGH 2016

We are leading the revolution in Rett syndrome research

$5.0M+
RAISED

$3.4M
COMMITTED TO RESEARCH PROGRAM SERVICES IN 2016

40
ACTIVE RESEARCH & GRANT PROJECTS

11.7K
DONORS

46
MAJOR FUNDRAISERS

89
FAMILY FUNDRAISERS

212
NEW PARENTS JOINED RETTSYNDROME.ORG

186K
UNIQUE USERS TO WWW.RETTSYNDROME.ORG

3 STAR CHARITY
WE'VE EARNED ONE OF CHARITY NAVIGATOR'S HIGHEST RATING

2016 HIGHLIGHTS

We invested $3.4 million to support new research grants, to continue current research programs.

Rettsyndrome.org designated 14 clinics as Research Centers of Excellence.

To date, we have awarded over $40 million cumulative research dollars in a quest to accelerate treatments and find a cure.

DoD FUNDING

Rettsyndrome.org, along with board members and families, undertook an ambitious advocacy campaign to enable Rett syndrome research to be funded by the Department of Defense. The campaign was a success and Rett syndrome is one of only 40 areas of study eligible for up to $278 million of DoD research funds in 2016.

CLINICAL TRIALS

Trofinetide (NNZ-2566)

- Phase 2 trial in children ages (5-15) started enrollment in March 2016 and closed enrollment in November 2016.
- A total of 82 subjects were enrolled to the study.
- Concurrently, Neuren Pharmaceuticals is working with the FDA to design a Phase 3 pivotal study with trofinetide as a treatment for Rett syndrome.

IGF-1

- Completed enrollment and trial study visits of 30 subjects.
- Final data analysis is ongoing.

Fundraising Update + Preview

Thank you to the generous donors who contributed to the February "I Love Someone with Rett Syndrome" campaign. There were 422 donors with gifts ranging in size. This effort showcased the love we all have for those with Rett syndrome and how the contributions impact the lives of our girls and women. You help provide the necessary tools for research and family support. Thank you!

Color Run Recap

Rettsyndrome.org is proud to announce our first partnership with the Color Run in 2017 in multiple cities across the country! As a charity partner, Rettsyndrome.org recruits and provides volunteers to assist the Color Run with multiple event duties in return for a $40 donation per volunteer! Hundreds of volunteers have assisted in Phoenix, St. Louis, Fort Lauderdale and Fayetteville this spring! Other cities include: Chicago, Louisville and Hershey. We are excited to expand this partnership and look forward to raising FUNds while having FUN! Interested in partnering with a Color Run in your city in 2017-2018? Contact Family Development Manager, Jackie Piscatelli, jpiscatelli@rettsyndrome.org or 978.500.2495, to start the process.

2017 EVENTS

Visit **www.rettsyndrome.org/events-calendar** for the full list of events.

JUNE

- **June 30** Scarborough, ME
  Rip it for Rett Golf Tournament

JULY

- **July 14** Milwaukee, WI, Craft a Cure for Keira
- **July 30** Bellaire, MI, Scramble for a Cure Golf Tournament

AUGUST

- **August 4** San Diego, Rett Syndrome Charity Golf Classic
- **August 10** Victor, ID Casting for a Cure

SEPTEMBER

- **September 2** Pittsburgh, PA Strollathon
- **September 9** Hastings, NE Strollathon
- **September 23** Grand Rapids, MI Strollathon
- **September 24** Portland, OR Strollathon
- **September 30** 2nd Annual LA Feast & Fundraiser

OCTOBER

- **October 1** Hoboken, NJ Strollathon
- **October 7** Lakeland, FL Strollathon
- **October 8** Savage, MN Strollathon
- **October 14** Sparks, OK Strollathon
- **October 28** 1st Annual Purple Pumpkin Party, Tulare, CA
- **October 29** Grapevine, TX Strollathon

October Awareness is coming!

October Awareness is just a few months away and it is never too early to start your planning. If you want to host your own awareness campaign or event, let us help you! Contact Family Development Manager, Jackie Piscatelli, jpiscatelli@rettsyndrome.org or 978.500.2495, for ideas and assistance!

Front row (seated): Mike Greenfiled; Leslie Greenfield, Director, NJRSA; Carl Rasso, NJRSA Board, Robin Diamond, NJRSA Board

Back row (standing): Gerard Saydah, NJRSA Board; Carla Benetatos, NJRSA Board; Dr. Alan Percy, Jane Lane, RN, Steven Kaminsky, PhD; Christie Borden; Gordy Rich, Rettsyndrome.org Board.

NJRSA Celebrates 25 Years!

Thank you for your participation and support!

Thanks to the incredible generosity of so many, the 25th Annual Silent Angels Gala, held on March 4th at Westmont Country Club, NJ, raised close to $95K with proceeds benefiting three Rett syndrome organizations including Rettsyndrome.org. Over 200 guests were in attendance including Rettsyndrome.org Chief Operating Officer, Gordy Rich, as well as Chief Science Officer, Dr. Steve Kaminsky, and the astute Dr. Alan Percy and Jane Lane, RN. Guests enjoyed a formal sit-down dinner, live & silent auction, music, dancing and more!

Rettsyndrome.org was happy to honor Leslie, Mike and Heather Greenfield for their 25 years of dedication and service to the Rett syndrome community. A truly magical evening!

Cammy Can: Still a Cinderella Story

Cammy Can's crew light up the event night with their smiles.

Thank you for your participation and support!

The 6th Annual Cammy Can Cinderella Story, held on March 18th at Sidebar in Chicago, brought in a record breaking $161,000 — money that will be used to accelerate research and empower families.

We were amazed and delighted by the crowd that turned out — a sold-out group of 225 people! Guests enjoyed a live & silent auction, a raffle with some great items, and fantastic food provided by Buona.

We are extremely grateful to all corporate sponsors for their generosity, including: IMC Charitable Chicago Foundation, Chicago Blackhawks, Attentive Industries, ETA Tru Inc, PBM&A, SideBar, Buona, Molly's Cookies, Green Door Promotions, and Ameripride.

The event could not have happened without generous participation of friends and businesses who donated items for the live and silent auctions. We are also grateful for every donor, attendees and raffle ticket purchaser, whose efforts helped to make the evening such a great success!

Finally, a deeply heartfelt thank you to the Babiarz Family for their dedication, creativity, and resourcefulness in making the 6th Annual Cammy Can Cinderella Story an event to remember!

We Can Improve the World

Noelle was diagnosed with Rett syndrome on March 10, 1998, at just 2 years of age. Despite what Rett syndrome has done to Noelle and the effects it has had on our lives, I have always believed Rett syndrome would be cured due to the formation of Rettsyndrome.org and the continuous research breakthroughs that have steadily come since the discovery of the gene in 1999.

Noelle's debilitating issue over the last two years has been breath holding, hyperventilating, and swallowing air. It has affected every aspect of her life and was the cause of her inability to eat by mouth the last 18 months. On December, I received a letter about the STARS Study. It is a research trial to evaluate the safety, tolerability, and efficacy of an investigational drug called Sarizotan in reducing respiratory abnormalities in patients with Rett syndrome. I decided now is the time to have Noelle participate in the research, to hopefully help her breathing issues, as well as so many girls who have the same problem. We traveled to Chicago for the screening visit on February 8th. There they took lots of history info and blood work. We came home with a radio monitor which Noelle wore 3 times a week, 6 hours a day, for 4 weeks to monitor her breathing abnormalities. Based on just two sessions of data she was accepted into the STARS study. So, we traveled back to Chicago to receive the drug/placebo (since it is a double blind study) and returned every 6-8 weeks. After six months in the trial, we will have the option to stay in the study for an additional six months with a guarantee to get the drug and not placebo. We are so excited to be part of this program.

Nicole and Noelle

Since we know that research takes money, we began having fundraisers in 2002, and our first event was the very first Strollathon in the country, co-chaired with my dear friend and Rett Mom, Kristy Kramer. We chaired several Harrisburg, PA Strollathons, galas, and the last few years I have had so much fun and raised a lot of money partnering with The Color Run in Hershey PA. What I found was these fundraisers we had were really one of the few things we could all be involved in as a family in hopes of improving Noelle's life and finding treatments and a cure for Rett syndrome.

As Noelle approaches her 21st Birthday, we will celebrate all her accomplishments as well as the deep satisfaction that despite Rett syndrome, she is having a great life surrounded by love, and participating in everything she can, including the STARS trial.

If you have ever emailed with Nicole, you know that she ends each email with the following quote: *"How wonderful it is that nobody need wait a single moment before starting to improve the world"* ~Anne Frank

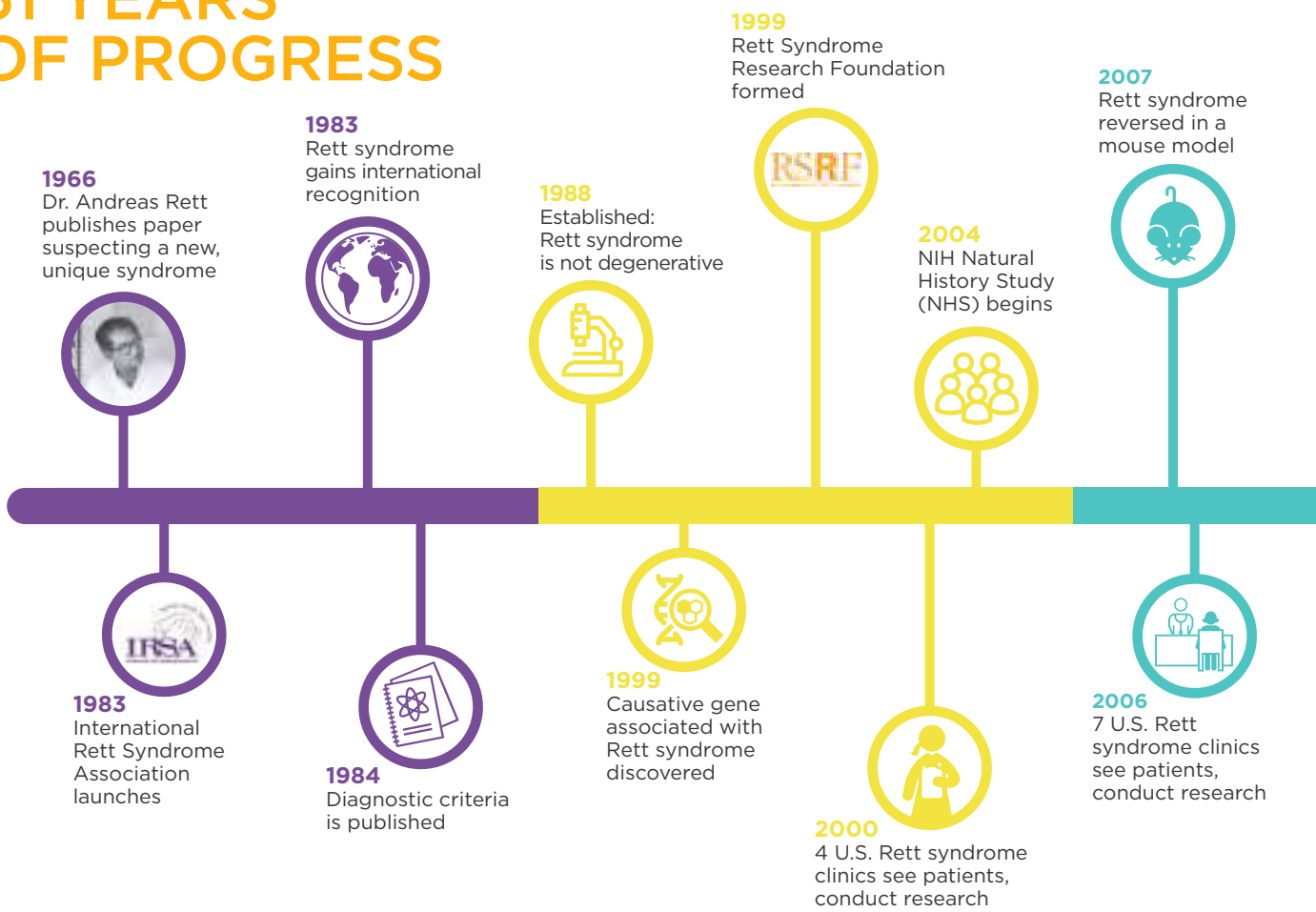
Nicole Karnash

RettGetaway
SEPT. 15-17, 2017 • SAN ANTONIO, TX

RettGetaway will be September 14-16, 2017 in San Antonio, Texas. We will have a special day at Morgan's Wonderland on September 15.

Visit https://www.rettsyndrome.org/special-events/for-families-rett-away for more information.

51 YEARS OF PROGRESS



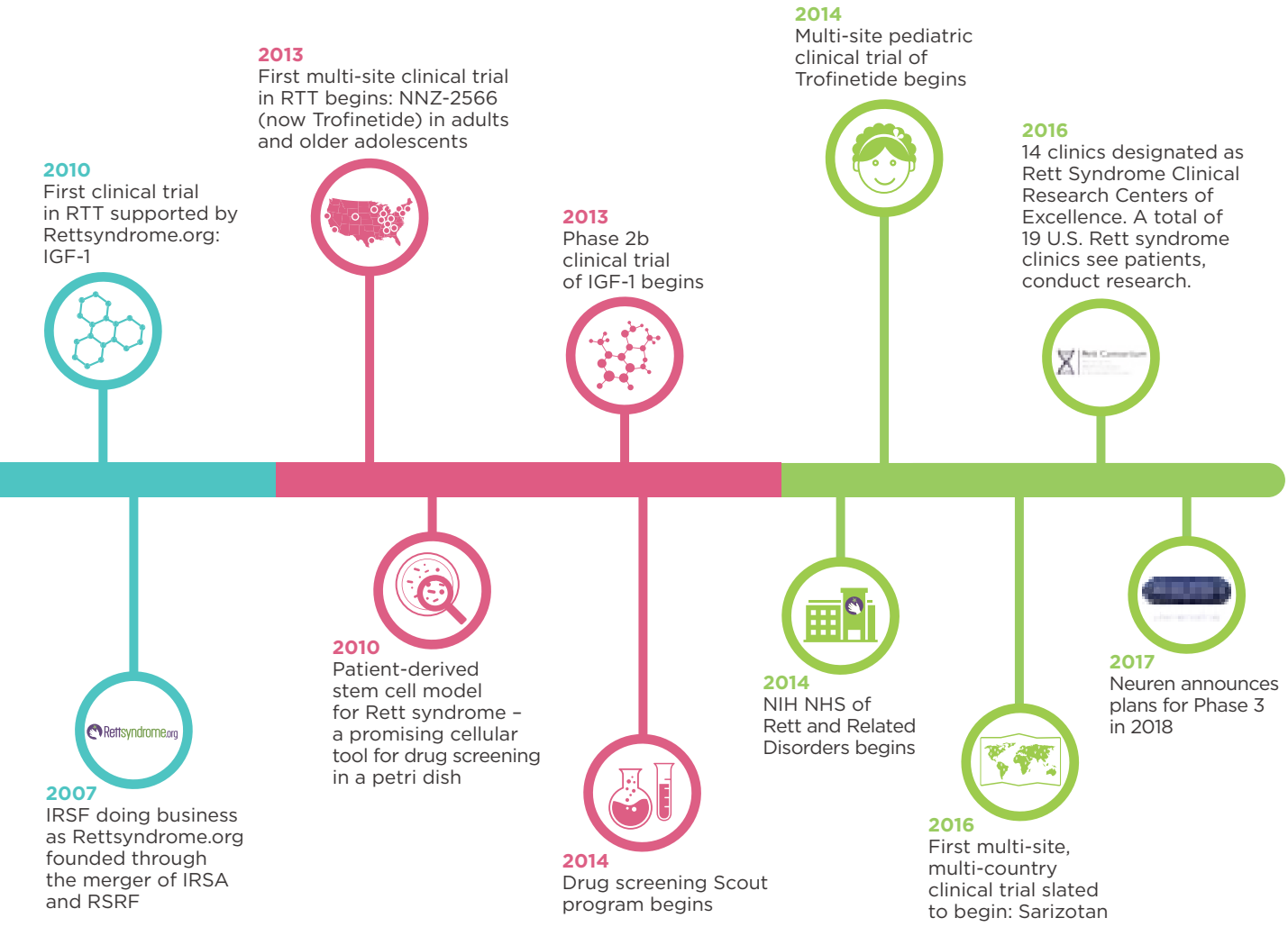
Clinical Trial Collaboration: Rettsyndrome.org & Anavex Life Sciences

In January 2017, given the encouraging preclinical data of ANAVEX 2-73 in the Scout Program, Rettsyndrome.org decided to continue its partnership with Anavex and awarded Anavex an ANGEL (Advanced Neurotherapeutic Grant of Excellence) grant in order to commence a Phase 2 clinical trial in the US for patients with Rett syndrome. Anavex is committed to continue to work very closely with the entire Rett syndrome community in order to most efficiently and effectively design and execute a trial for Rett syndrome patients. The partnership aims to advance potential new treatment options for Rett syndrome.

ANAVEX 2-73 is a clinical stage, orally available, small molecule pharmaceutical. It activates the Sigma-1 receptor to induce cellular homeostasis by reducing protein misfolding, oxidative stress, mitochondrial dysfunction, inflammation and cellular stress. These are relevant in the pathophysiology of a wide spectrum of neurodegenerative and neurodevelopmental diseases.

In December 2016, Anavex presented top-line clinical data of ANAVEX 2-73 in Alzheimer's patients. Positive unexpected therapeutic response events, such as improvements in cognition and mood, balance and gait, were observed.

Given the converging beneficial effects of ANAVEX 2-73 on seizures, cognition and anxiety, as confirmed in prior independent studies, Anavex committed to exploring an indication with a very high unmet need, Rett syndrome. This might require the combined amelioration of those individual ailments. Details of the trial will be announced as soon as possible.



SO LONG, FAREWELL, AUF WIEDERSEHEN BUT NOT GOODBYE... THANK YOU FOR 17 SUCCESSFUL YEARS!

Our dear colleague Mary Joyce Griffin, Director of Administration, is retiring after seventeen years of a successful and meaningful career, dedicated in service to Rettsyndrome.org, our families, friends, and the organizations who support us. She is leaving behind a legacy of achievement that inspires all who know her. MJ follows her heart, is always willing to extend her helping hand, and has brought a sense of operational discipline and productivity to Rettsyndrome.org.

Many who know MJ are amazed and grateful for her deep knowledge, sense of calm, and common sense suggestions. She has been the voice of historical perspective and positivity during her tenure. We will miss her smiling face and ability to tell a good story.

Gordy Rich, Rettsyndrome.org's COO said, ***"As the first person hired when RSRF was formed, through the merger of IRSA & RSRF, MJ has been the constant we have all relied on. She will be greatly missed!"***

We would like to profoundly thank MJ for all that she has done. We know the best is yet to come for her and her family and wish her all the best in her retirement.

Rettsyndrome.org
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Keep us updated

My friends at Rettsyndrome.org care about having the most up to date information about you. Having your current information helps them work toward a cure for me and keeps you up to date on the signature events that fund the research.

There are other impactful things you can do when you sign up on Rettsyndrome.org's website. You can see how much money you've donated to support this worthwhile cause, explore the latest clinical trials, and even plan your own fundraiser!

Follow these simple steps to update your information!

1. Go to Rettsyndrome.org and at the top of the page click join/login
2. If you have a username on any of our sites you put that information in here
3. If you do not have a username click join Rettsyndrome.org under the login button on that page

Thank you for making sure that your information stays current. If you have any questions or need help, you can call my friends at Rettsyndrome.org at 1.800.818.7388 (RETT), and they will be happy to assist you.