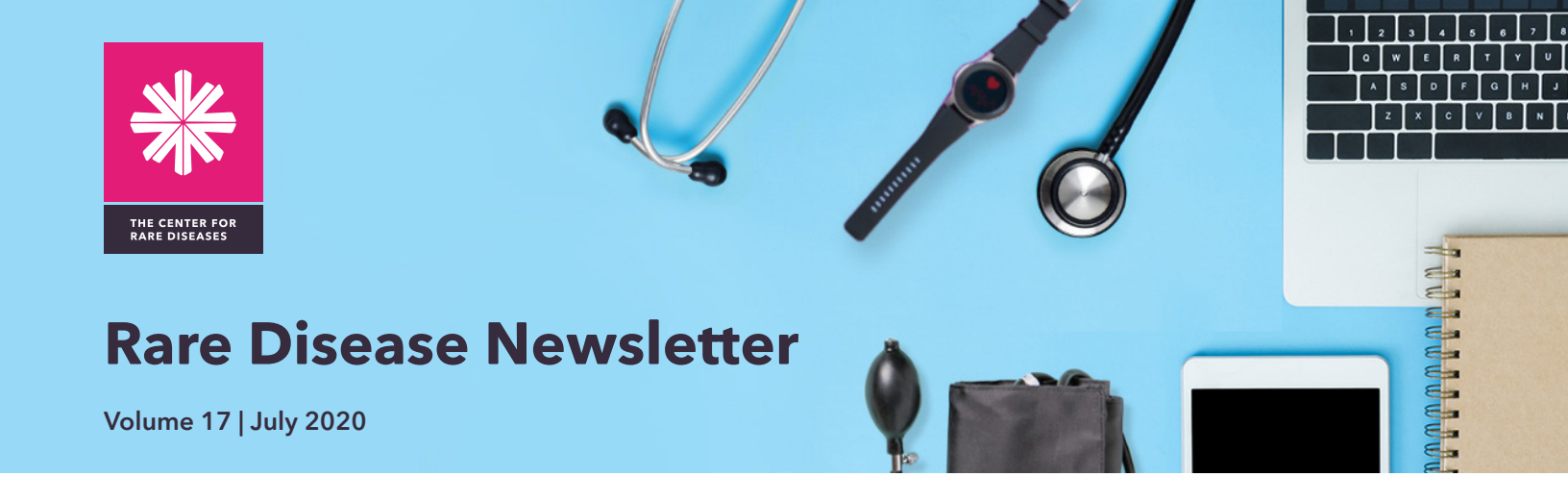


THE CENTER FOR RARE DISEASES

Rare Disease Newsletter

Volume 17 | July 2020

Welcome to the seventeenth edition of the rare disease newsletter.

A few months has changed the world of clinical research into a very different place. This issue includes a summary of work PRA has done to understand the impact of COVID19 on the rare disease patient community and to rare disease research.

To learn more or to obtain support for a specific clinical study or project, please contact us. You can reach the entire team by emailing us at **PRACenterForRareDiseases@prahs.com**.

Statement of Purpose

We are guided by patients who understand better than anyone else that rare disease alters entire lives. We are transforming clinical research into meaningful healthcare options through patient partnerships, data analytics, and technology solutions.

We envision a world where every rare disease patient has meaningful treatment. We relentlessly work with patients, clinicians and industry to re-define what a clinical trial can be and to transform the clinical development ecosystem.

Edition Highlights

Impact of COVID-19 on the Rare Disease Community

On 01 Apr, the Center for Rare Diseases hosted two 'listening' sessions with patients and representatives from patient advocacy groups to understand the impact of the COVID19 pandemic on the rare disease community. Patients and advocates representing more than 40 rare diseases attended the sessions!

These interactive webinars were moderated by Kendall James-Davis, Patient Advocacy Manager, with panelists Scott Schliebner, Senior Vice President and Amy Raymond, Director of Therapeutic Expertise. The conversation covered topics including recent FDA guidances on conducting clinical trials during the COVID19 crisis, options to keep current trials going through the use of technology and virtual site visits, and what COVID19 might mean to the long-term future of rare disease research.

In addition to sharing information, the sessions include survey questions for attendees to share how they were impacted by COVID19:

- 60% respondents indicated their research/trials were paused due to COVID19
- 50% expressed concerns within the patient communities about returning to sites
- >75% had not assessed or been involved in assessing remote/virtual technologies as a strategy to keep the research moving forward during the pandemic

A recording of the session may be viewed **here**.

Disease Spotlight: Relapsing Polychondritis

Relapsing polychondritis is a rare, progressive autoimmune disorder that causes episodes of cartilage and connective tissue inflammation, which can be very painful and result in permanent damage. This commonly occurs in one or both ears, the eyes, airway (larynx and trachea) and lungs, and the joints. Swelling and pain episodes can last a few days to several weeks. Patients with relapsing polychondritis may develop hearing and balance problems, vision loss. Severe cases can be fatal if the damage causes airway collapse or severely damages the heart and blood vessels.

Where Are We Today?

The underlying cause of relapsing polychondritis is not known. Treatments focus on mitigating pain and reducing inflammation to preserve the affected tissue. Commonly used medicines include anti-inflammatory drugs (NSAIDs), steroids, and immunosuppressive treatments.

There are two registries, The Autoimmune Registry and the Rheumatic Disease Biorepository, which are collecting observational data and blood, to help understand this and other autoimmune diseases.

In addition there are several patient organizations that patients with rheumatic and autoimmune disorders, including a few specific for relapsing polychondritis: Canadian Society for Relapsing Polychondritis (Canada) and Relapsing Polychondritis Foundation, Inc (US), and the Association Francophone contre la Polychondrite Chronique Atrophiante (France).

Foundation Spotlight: K-T Support Group

The K-T Support Group is an advocacy community that supports patient diagnosed with Klippel-Trenaunay Syndrome (KTS) and other vascular malformations. KTS is a disorder of the blood vessels ('vascular anomaly') in the soft tissues or bone, which typically results in a red birthmark (called a 'port-wine stain') and/or an overgrowth of an affected limb (length and/or girth). Depending on the severity of the presentation, patients quality of life may be impacted but orthopedic, surgical, and occupational therapies can be beneficial.

Due to the low prevalence of the disease (<1 in 1,000,000) and the complex clinical presentation, diagnosis of Klippel-Trenaunay Syndrome for some patients can be an long, arduous journey. There is no specific test to diagnose K-T but recent efforts to classify vascular anomalies has helped to clarify KTS from other similar conditions. Currently, there is no cure for KTS. The K-T Support Group helps newly-diagnosed patients to understand their condition and treatment options, as well as provides disease and symptom management guidelines for caregivers and clinicians.

Most vascular anomaly conditions are diagnosed during infancy, which can make it challenging for adult KTS patients to find appropriate care. To better understand this aspect and potential challenges for adult patients, the K-T Support Group is also conducting their own research via a survey to understand the transition to adult care.

The K-T Support Group, led by Melenee Finger, is also working directly with investigators through the Consortium of Investigators of Vascular Anomalies (CaNVAS) by representing patients and their interests within the consortium. More information about Klippel-Trenaunay syndrome and the K-T Support Group can be found **here**.

Meeting Highlights

Rare Disease Clinical Development: The Future is Here

On 03 Jun, PRA hosted a webinar entitled "Rare Disease Clinical Development: The Future is Here" to discuss the use of innovative approaches to rare disease clinical research.

The session was moderated by **Scott Schliebner**, Senior Vice President, Center for Rare Diseases and included several panelists:

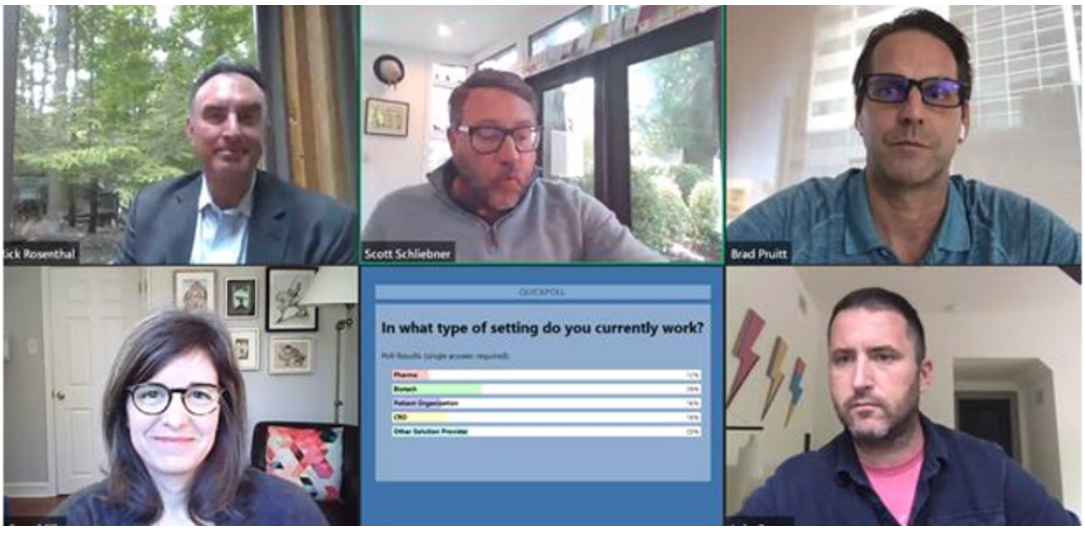
- **Rick Rosenthal**, Vice President, Commercial Effectiveness, Symphony Health
- **Luke Rosen**, Founder and Board Chair, KIF1A.org Vice President of Accelerated Development, Ovid Therapeutics
- **Juliane Mills**, Director of Therapeutic Expertise, Center for Rare Diseases
- **Dr. Brad Pruitt**, Executive Medical Director, PRA Health Sciences

Rare disease patients face many challenges when participating in a clinical trial. Historically, clinical trials have been designed without the consideration of patients, resulting in a research paradigm that is archaic and outdated. The current COVID19 paradigm has created a groundswell of interest and support for innovative solutions to bring clinical research into the 21st Century. The purpose of this webinar was to help attendees envision how these "futuristic" technologies are currently deployed in trials today.

Luke and Juliane offered insights on adopting a patient-focused mindset to de-risk clinical trials by designing clinical trials that are more feasible and realistic for patients, and strategies to quantify the burden of clinical trial participation. Rick commented on ways to use data to gather broad insights to help sponsors better identify patients, understand patient pathways, and monitor patients long-term safety. Brad provided several examples of utilizing mobile health to bring clinical trial visits into a patient's home, as opposed to requiring patients to frequently travel great distances to a clinic. A recording of the webinar is available **here**.

A Patient-Centric Research Paradigm for Rare Disease Drug Development | July 9

On 09 July, Scott Schliebner will be speaking at the MarketsandMarkets Digital Event on Orphan Drugs & Rare Diseases. Rare disease patients face numerous unique challenges when participating in a clinical trial. Historically, clinical trials have been designed without consideration of what is feasible for patients, resulting in a research paradigm that is inefficient and outdated. By adopting a patient-focused mindset we can reduce the burden of clinical trial participation by designing clinical trials that fit into the lives of patients. Leveraging technology allows patients to participate in clinical trials from their home, with clinical trials being brought directly to a broad diverse group of patients, as opposed to requiring patients to frequently travel great distances to a clinic. This patient-centric paradigm results in clinical trials that enroll more quickly and include a more diverse and representative group of patients. **Register here** to participate in this exciting 2-day event!



Webinar participants clockwise from upper left: Rick Rosenthal, Scott Schliebner, Brad Pruitt, Luke Rosen, Juliane Mills

In the Pipeline

Indication
Hypoparathyroidism – Phase III
Medicine, sickle cell disease
Alpha-thalassemia – Phase IIa
Hemophilia – Phase IV
ALS – Phase IIb
ALS – Phase IIb/III
Hereditary angioedema – Phase II, III
Euroendocrine tumors – Phase II
Necrobiotic lipoidica – Phase III
PKU – Phase 0, I/II
Meniere's disease – Phase III
Macrophage activation syndrome – Phase II/III
Diabetic macular edema

Newly Awarded Rare Disease Studies

Indication
Adult growth hormone deficiency – Phase III (Japan)
Immunoglobulin A nephropathy – Phase I/II
Alpha-thalassemia – Phase IIa

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