



Barth Syndrome  
Foundation

www.barthsyndrome.org

# Barth Syndrome Journal

Volume 18, Issue 2 ~ Fall 2018

*Saving lives through education, advances in treatment, and finding a cure for Barth syndrome.*

## BSF Makes History with PFDD Meeting in Florida

*By Emily Milligan, Executive Director, Barth Syndrome Foundation (BSF)*



July 18, 2018, went down in the record books for the Barth syndrome (BTHS) community. BSF became the 14<sup>th</sup> organization of more than 7,000 rare diseases to host an externally-led Patient-Focused Drug Development (PFDD) Meeting with the U.S. Food and Drug Administration (FDA).

The PFDD meeting was a pivotal event in BSF's history to increase awareness and educate the FDA about the challenges of living with BTHS and influence regulatory decision making. The half-day event followed the successful model that the FDA developed to host similar meetings and focused primarily on a range of viewpoints of BTHS. Panelists and speakers covered symptoms and impacts on daily life that are most important to affected individuals and their perspectives on existing and future treatments. Shanon Woodward from the FDA's Center for Drug Evaluation and Research, commented, *"We are incredibly grateful for the opportunity they provided us in sharing their stories."*

BSF leads the global research and advocacy efforts to create a world without BTHS, while providing ongoing education and community for affected individuals and their families. As a result, BSF decided to approach the meeting differently. *"We took a calculated risk to hold the PFDD meeting in Clearwater, Florida, and not in Washington, DC,"* said Shelley Bowen, Director of Family Services. In keeping with the underlying value of the PFDD meeting, BSF capitalized on the largest turnout ever of its biennial international conference and appealed to the FDA to come to the community's meeting.

More than 25% of the Barth syndrome community representing more than 12 countries, converged to voice experiences and perspectives of living with and caring for someone with BTHS. Marc Boutin, Chief Executive Officer of the National Health Council, who has been a long-standing advocate of collecting input and information from patients to inform drug research, remarked, *"The participation by the Barth community demonstrates the power of the patient voice to inform the development of new treatments."*

BSF's goal is to deliver effective therapies into the hands of affected individuals and their caregivers. There is only one way to achieve this goal: Collaboration across the research and development (R&D) continuum. In addition to 7 members from the FDA, 28 members from industry and 40 academic researchers joined 204 caregivers and affected individuals to participate in the event. *"This was a community experience, with people and professionals from around the globe working for one cause,"* said Matthew Toth, BSF Science Director.

*(Cont'd on page 2)*

# BSF Makes History With PFDD Meeting in Florida

*(Cont'd from page 1)*

In looking forward, the conclusion of the PFDD meeting represented a beginning, not an end. The Voice of the Patient report is scheduled for an end of 2018/early 2019 release and publication to the FDA's website. The report will further BSF's contribution to inform researchers and regulators alike, to prioritize clinical outcomes and to accelerate approvals of therapies in order to strive for a world in which there is no longer loss of life or suffering from BTHS.

Furthermore, and if not more important, the PFDD meeting prompted an honest discourse of courage and hope to further unify the Barth community. *"The PFDD meeting was great. It was like hearing everything I had been keeping in my head about my son. It wasn't easy to hear, but it was necessary. Now let's do something about it!"* said Joe Wald, parent of a young son with BTHS. BSF is more united than ever, in part because even more people now have joined the quest for a better future for affected children and adults, their families, and generations to come.

## Profiles in Courage: The Externally-Led Patient-Focused Drug Development Meeting

*By Arnold Strauss, MD, Professor of Pediatrics, University of Cincinnati and Cincinnati Children's Hospital, Cincinnati, OH; Scientific and Medical Advisory Board, Barth Syndrome Foundation (BSF)*

I hope you were present on July 18, 2018, with me and many members of the BSF Scientific and Medical Advisory Board (SMAB) at the afternoon long externally-led Patient-Focused Drug Development (PFDD) Meeting. If you were not able to attend, please find five hours to view the event at <https://www.barthsyndrome.org/newsevents/pfddmeeting/livestreaming.html>. It was an extraordinary event for several reasons.

First, it was, we believe, the very first time that Federal Drug Administration (FDA) officials travelled away from Washington to attend a PFDD meeting. Second, it was an opportunity for all of us involved in BSF to focus on the long awaited possibility that drug therapy to improve Barth syndrome (BTHS) is on the horizon, a welcome development, long overdue. Third, the presentations, family and patient videos, and discussion provided poignant, impactful, and emotional descriptions of the clinical manifestations, family burden, and difficult outcomes for all to hear and feel. For the FDA representatives, this was a time to learn about BTHS and the need for intervention and specific therapies. This was, of course, the goal, and the goal was admirably achieved for all of us.



Dr. Arnold Strauss

Fourth, and to me the most incredible, the afternoon was a **"Profile in Courage"**. This is the title of a book by then Senator Jack Kennedy, read during my youth, but it is a highly apt description of those who presented, commented, and participated. **Courage** because of the open, frank, and difficult subjects mentioned, including the deaths of beloved family members, sons and brothers; of struggles with addiction and depression; of fighting to live through chronic fatigue every day; of taking many medications and shots to fend off infection and heart failure; and of nutritional challenges. **Courage** because of knowing future outcomes, while dealing with those symptoms. **Courage** to participate in clinical studies despite fatigue, uncertainty, pain, and the stress of doing so because BTHS patients and parents know that this is the only path to new knowledge and finding new therapies. And to participate in such studies over many years of attendance at BTHS meetings without the certainty of benefit to oneself. I know from discussions with several SMAB members who attended and with many family members that the **courage** of the participants was obvious and greatly admired. And, that **courage** to be open and frank provided even greater incentive to the scientists and clinicians to give our best, to push forward as quickly as possible, and to make a difference for BTHS patients NOW. I have been at several BTHS meetings, worked in the laboratory with BTHS animal models, and cared for BTHS patients for over 20 years. The PFDD meeting was the most concentrated and forceful lesson to go faster that I have experienced in all of those years.

During the PFDD meeting, I was seated with one of the FDA representatives, a biochemical geneticist. Both by watching her response and talking with her during the breaks, it was apparent that the message got through. We shared some tears during the presentations, we watched every second of the videos, and we never touched our smart phones. I am certain that this event will carry over to the time that the FDA reviews potential treatments and will help to expedite that review so that interventions can move forward. I also believe that the impact will go beyond BTHS because so many other rare genetic disorders require similar review. I think the BTHS story will facilitate approval of interventions, including gene therapies, for other rare and orphan diseases through the FDA.

*(Cont'd on page 3)*

# BSF Makes History With PFDD Meeting in Florida

*(Cont'd from page 2)*

For myself and the members of the SMAB, I thank the presenters at the PFDD meeting, those who commented, and all of the BTHS families and patients for your amazing **courage**, your honesty, your humility, your hard work, and your friendship. On July 18, you were a **"Profile in Courage"** for all to see and hear. You made a difference for the future.

## The Personal Growth of a Panelist

*By Peter (age 31, BTHS), The Netherlands*

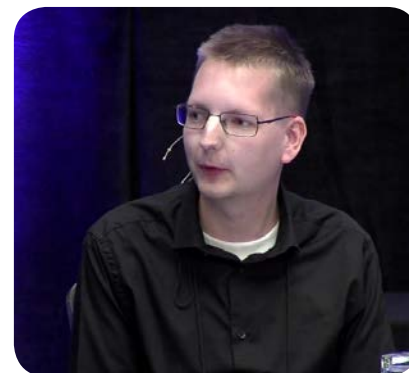
The PFDD meeting was a huge success in many ways. Not only did we succeed in painting a compelling picture to the FDA about how much we are willing to risk for a possible cure or treatment of the entire syndrome rather than individual symptoms, but participating has led to great personal development as well. Before I was invited to join the panel, I could not have imagined speaking to such a crowd.

Writing my story was rather challenging. Normally I deal with my limitations and everything that comes with it one issue at a time, and that is also how I wrote my story: topic by topic. When I was satisfied with each part and read through the entire thing for the first time, I was shocked by my own experiences. For me this was also the first time I had faced all consequences of BTHS at once. It is a common defense mechanism to downplay issues, but eventually you have to face reality to improve matters for yourself. In contributing to the PFDD meeting it was necessary for me to do that and it made a world of difference.

In the past, I always compared myself to healthy people and set goals based on what portion of their activities I should be able to do too. My body often disagreed and this led to frequent disappointment for me and others when I had to cancel plans. My speech made me realize that my condition is worse than I had been willing to admit. Though this may sound negative and was a harsh truth to me, it caused a change in my approach to life.

I now make much fewer plans in advance, consider my energy every morning and adapt my goals to what is really possible. Instead of disappointment when looking back on my day in the evening, I now sometimes surprise myself by having done more than planned. It is still frustrating to look back on the past weeks and on goals I still haven't accomplished though, so a cure or treatment is still equally welcome.

The support of the people involved in the preparation has been wonderful, the feedback from the community to my delivery was very empowering, and I felt truly inspired by the audience participation. A big thank you is definitely in place for everyone who has helped me through this experience and I'm happy to have helped in this way. Now, I am looking forward to the various ongoing research projects to reach a stage where the FDA gets involved so we can really see the impact of this meeting on others.



Peter

## Groundbreaking Meeting Shatters Barth Stereotypes

*By Lynn, Mother of Affected Individual, Canada*

Every BSF conference is an important event in our lives, and my son, Adam, and I have managed to attend each one since the beginning, many times accompanied by some of the family. We always learn a tremendous amount from the conferences, renew friendships and make new ones, and Adam participates in scientific research. The 2018 conference had some new elements to it, and one of those was the PFDD meeting.

The PFDD meeting marked a very important opportunity to hear from our population of affected individuals and families around the world, understand the direct impacts of Barth syndrome (BTHS), and gather opinions on priorities for the organization, research and possible treatments. In order to gather information from everyone who wanted to participate (including those watching online), polling software was acquired, and questions were posed real-time. People from all countries, all ages and levels of technical comfort were able to answer critical



(L-R) Lynn and Adam

*(Cont'd on page 4)*

# BSF Makes History With PFDD Meeting in Florida

*(Cont'd from page 3)*

questions and reflect their main issues and priorities. Thankfully, two of our BTHS affected individuals who are technology wizards, John and Peter, were available and helped people so everyone was ready to go. During the event, our AV crew assisted, and I monitored the responses coming in, so we were sure everyone was able to respond and see results in real-time.

The meeting itself was quite moving. After some introductory remarks, there were panels of affected individuals and parents who spoke. They covered different ages, countries and a variety of circumstances. One by one, they spoke about their own experiences and some of the stages they or their children have experienced. Each person who spoke shared extremely personal experiences and gave us a deeper level of insight into what people face as they live with and around BTHS. We heard from one of the founders of the organization who took us through the stages in her son's experience through to his tragic passing. We heard from several of the older affected individuals about their fatigue and struggles with daily living, and we heard from parents of younger children on how BTHS affects their family and how challenging seemingly simple things like eating and attending school can be for their sons.



Kate McCurdy shares her son's journey with BTHS

During the talks, the packed room was quiet, as families, researchers and clinicians all listened intently, along with the online audience. Between each panel, polling questions were asked of the audience in the room and online, and we watched as the responses were tracked and displayed for everyone. It was fascinating to watch the responses build so that we gained a comprehensive view of how key elements of the condition are affecting the population. After each segment, there was an opportunity for questions and open discussion, so others had the chance to speak.

There were many revelations during these few hours, and, as a parent, I found it emotional. We talk regularly to a subset of the affected young men and families, but there were still several surprises during this meeting. When the question of what areas are the most important to address, I was sure it would be the heart and the most obviously life-threatening areas would be top of the list. They were important, of course, but it was clear that daily living challenges, such as fatigue and muscle weakness, are critical to address. It was surprising just how much that affects the quality of life and that was reinforced during the most emotional portion of the meeting – the video of “Uncle Bob,” one of the oldest Barth affected individuals.

The “Uncle Bob” video helped us to see how the condition has affected Bob's life and how he has gone downhill over the years to the point where this man in his 50's is in a care facility and unable to function without assistance. Once able to be active and operating farm machinery, drive a vehicle and live a relatively “normal” life, Bob is now dependent on others for basic living and has only fond hopes of driving his truck again. This video showed us one possible future for affected individuals, even those with less severe heart function and neutropenia issues, if we are not able to find them suitable treatments or a cure to BTHS. I sincerely hope and believe that this, along with the open, honest information shared by the people at the meeting and on-line, has galvanized the science and medicine community so we can accelerate critical research and treatments for BTHS.



Moderator, James Valentine, polls questions from the audience at the PFDD meeting

## Industry Perspective of Barth Syndrome Foundation Externally-Led Patient-Focused Drug Development (PFDD) Meeting

Stealth Biotherapeutics, Inc. would like to thank the BSF for including us in the externally-led PFDD meeting. The information that the panelists presented was very impactful and informative. Learning what symptoms matter most to this patient population will continue to be helpful in designing clinical trials and determining the symptoms that matter most to patients. The information presented by not only those affected by Barth syndrome (BTHS) but also family members and caretakers will help to educate researchers, industry and the

*(Cont'd on page 5)*

# BSF Makes History With PFDD Meeting in Florida

*(Cont'd from page 4)*

FDA on the burden of the disease and the outcome measures that are most meaningful in this community. The panelists' experiences of living with BTHS help incorporate the patient voice in clinical development programs and will be helpful when incorporated into the FDA's risk-benefit analysis for potential new treatments for BTHS.



Emily Milligan



Dr. Colin Steward



(L-R) Panelists Peter, Jasmine, Kevin, Jacob and Nicole



(L-R) Panelists Nick, Amanda, Darryl, John and Kevin