

Global perspectives:

HAEi MAGAZINE · ISSUE 3/2017



Patient story

Dana Shapiro

Fears about HAE turned into motivation

A unique and deeply enriching experience

The first weekend of August 2017 around 50 youngsters and 25 care givers from all over the world met in Frankfurt, Germany in order to take part in the first ever HAEi Youngster's Summer Camp.



Dear HAEi Friends,

The HAEi Executive Committee had the great honor and privilege of sponsoring and then attending the August 2017 HAEi Youngster's Summer Camp in Frankfurt, Germany. We were treated to a birds-eye view of the enthusiasm, intelligence, and talent exhibited by the remarkable youngsters who attended.

The Executive Committee's investment in our youth is aimed at nurturing and training future leaders of the global HAE advocacy movement. Based on what we observed in Frankfurt, the cadre of extremely bright young advocates are ready, willing, and able to get involved! We look forward to conducting another exciting Youth Program at HAE Global Conference 16-18 May 2018.

Every day, the HAEi team asks itself, "What can we do today to help patients improve their quality of life?" In some cases that means helping member organizations broaden access to medicines that are already available. In altogether too many countries, however, modern HAE medicines are either restricted by the government/insurers or not available at all.

My dear HAEi friends, we must never accept (and work hard to fight) government/ insurance reluctance to enable the quality of life that is possible with access to modern HAE medicines. HAEi cares deeply and is set up to help, so we urge member organizations to take advantage of the experience and expertise of the HAEi Regional Patient Advocates. These highly motivated and seasoned HAEi friends can help get your advocacy program started and work with you to develop strategies and activities that will yield results.

Many HAEi friends are aware that due to a manufacturing issue, production of the Cinryze brand of C1 inhibitor has been halted since mid August 2017. At this point, the USA and a few other countries are affected. I would like to use this space to bring you the latest information:

- Shire does not yet know when Cinryze manufacturing will resume, but is "...working around the clock – 24 hours a day – to resolve this situation."
- Upon learning about the potential shortage, CSL Behring immediately began working with their manufacturing teams to increase the global supply of C1-inhibitor. Nevertheless, CSL Behring reports that at this juncture they are not positioned to supply the entire C1-inhibitor prophylaxis market.
- As many HAEi friends know, CSL Behring's HAEGARDA subcutaneous C1 Inhibitor product for preventing HAE attacks won FDA approval on 23 June 2017. The company has experienced a higher than expected demand for HAEGARDA which, in the USA, is causing processing delays, and potential delays for new patients wishing to obtain the medicine.

We strongly recommend that patients in affected countries act now and contact their doctors to establish a back-up plan that enables quick access to an alternative medicine should one be needed. Other than HAEGARDA, which, so far, has only been approved in the USA, patients and their physicians can consider acute attack therapies such as Firazyr, Kalbitor (only in the USA), Berinert, and Ruconest.

Please check the HAEi website for updates on the availability of Cinryze.

Warmest regards,

Anthony J. Castaldo
President, HAEi

Cover photo

HAEi Youngster's Summer Camp:
A unique and deeply
enriching experience.
Read more on page 8

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HAEi is a global non-profit
umbrella organization
dedicated to working with a
network of national HAE member
organizations to
raise awareness of HAE

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Vienna waits for you

17-20 May 2018 the global HAE community will again unite for the HAE Global Conference in Vienna, Austria.

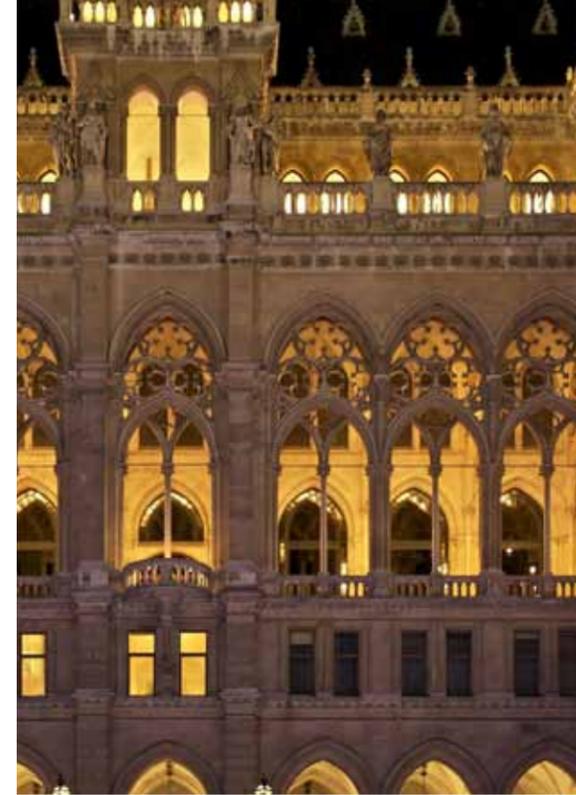
“Once again, we welcome HAE patients, caregivers, healthcare professionals, and industry representatives to the largest international gathering of its kind solely with a focus on HAE”, says HAEi President, Anthony J. Castaldo.

The theme for the 2018 HAE Global Conference is “Take Control of HAE”, where the aim continuously is to find ways to improve time to diagnosis, to secure lifesaving therapies and get funding for these – allowing HAE friends around the world to lead a safer life and fulfill their life’s potential.

“Registration will open later in 2017 - and since we again offer some extremely attractive registration rates and conditions, anyone interested in attending should already now contact their national member organization and let them know about their interest in this exciting conference, where we expect to gather some 650-700 people,” says HAEi Executive Director, Henrik Balle Boysen.

A robust program will focus on a number of important areas:

- Patient identification and diagnosis—training (including a toolkit handout) that reinforces the importance of testing for every member of a family affected by HAE, including relatives.
- Education regarding currently available medicines as well as therapies undergoing clinical trials.
- Advocacy training on strategies and techniques for (1) building a solid local HAE organization, (2) persuading health ministry’s and/or insurers to provide access to and reimbursement for HAE medicines.
- Training for raising HAE awareness by strategic use of social media, holding local events, and obtaining local press coverage.
- Youth Advocacy – there will be a separate track that enables young patients to interact, share their stories, get together with expert physicians to learn more about HAE medicines, and learn about advocacy from the HAEi Regional Patient Advocates.



Also, there will be an educational and networking session for nurses specializing in HAE as well as a scientific track allowing researchers to share their work and identify future research priorities.

Similar to previous conferences, HAEi is offering travel grants to as many patients and caregivers (close relatives) as possible. However, based on the experience from the last two global conferences, HAEi will introduce a new policy for everybody receiving a travel grant.

“As always, we try to be as flexible as possible with travel dates, but we expect that everybody who has received a travel grant – or who participates at any of the reduced conference rates – will be at the venue and actively participate in the conference sessions on Friday and Saturday. Arrival will be on 17 May 2018 and departure on 20 May 2018, but for those who want to come earlier and/or stay longer, we will offer the option of booking extra room nights at our conference rate”, says Henrik Balle Boysen:

“When checking in at the Hilton Vienna, the hotel will block an amount on the participant’s credit card. At checkout, this amount will be released again once the conference sessions on both 18 and 19 May have been attended. Consequently, it is very important to remember to scan the personal conference badge, both when entering a session Friday and Saturday, and when leaving the session again. Saturday late afternoon/early evening we will then look at the attendance for each of the participants. Should someone fail to show up to the sessions on Friday and Saturday, he or she will be charged the full amount. However, since we expect everybody to attend the sessions the likelihood of anyone being charged is very small.”

The agenda for the 2018 HAE Global Conference will be updated on www.haei.org/haegc18 as it evolves. Please make sure that you sign up for the e-mailed conference updates via the website.

You might be wondering if you haven’t heard the title of this article before. Indeed, you have. It comes from a song from American singer-songwriter and pianist Billy Joel who in 1977 included the song “Vienna” on his album “The Stranger”. And that’s just how it is: Vienna waits for you





It was one of my best experiences in my life, I enjoyed every moment! If I had the chance to do it again, I would do it without thinking. ”



A unique and deeply enriching experience

The first weekend of August 2017 around 50 youngsters and 25 care givers from all over the world met in Frankfurt, Germany in order to take part in the first ever HAEi Youngster's Summer Camp.

“The main idea of the camp was to help HAE youngsters worldwide build their relationships and their personal network, to empower them, and to give them a chance to have fun. And judging from the response we had during and after the camp that seems to be just what they did”, says HAEi Executive Director Henrik Balle Boysen.

Have a look at some of the many pictures provided by HAEi Executive Committee member Fiona Wardman. You just might be able to spot someone you know from Argentina, Austria, Australia, Brazil, Canada, Denmark, Ecuador, Germany, Greece, Ireland, Israel, Macedonia, Mexico, New Zealand, Peru, Poland, Russia, Serbia, Spain, Turkey, United Kingdom, or United States of America.

The quotes on these pages are from the participants in the 2017 HAEi Younger's Summer Camp.



It was a wonderful event that really brought the kids together. The bonds they made in just a short time were amazing. I actually said to my son yesterday that being one of a few in a room without HAE made me feel abnormal and he agreed that he felt so comfortable among so many others he could relate to. Thank you for putting this together and inviting us.



HAEi has a special Youngster's Summer Camp 2017 website – please feel free to have a look at www.haei.org/ysc2017.

” The first summer camp was a success! It was a unique experience that I will never forget. I hope I can share all the teachings that have been passed on to other young people and doctors.





Here are the main results of a questionnaire that was sent to the participants after the camp:

- Rates their experience at the camp as either 'excellent' or 'good' – 95 %
- Would attend an HAEi Youngster's Summer Camp in the future – 100 %
- Would recommend attending an HAEi Youngster's Summer Camp to other youngsters with HAE – 100 %

- 46 percent are going to **do something differently** as a result of the HAEi Youngster's Summer Camp, including spreading new knowledge and raising awareness among other patients and doctors, working towards getting the right medication available for free, and keeping in touch with new friends to learn from and help each other
- When asked to rate each of the activities, for 8 out of the 9 activities, the majority of respondents said they "loved it! 😊😊" or "enjoyed it 😊"

“Knowing people who really understands us is as important as having the right medication. It's not that easy to explain to everyone around us what it is to live with this disease, and knowing that someone beside us really knows makes us feel really relaxed and comfortable. Hope to see everyone again really soon and that doctors continue showing the passion about investigating this disease as Inma and Markus showed to us. Thank you very much again for giving us the opportunity to know you and know each other.



“HAEi family is everywhere around the world, we are not alone. Youngsters can be part of this community too and they are the most important of it because they are the future of our organization.



“Thank you so much for all the hard work you put into this camp! I learned so much and formed great friendships from all over the world. Everyone felt like family as soon as we walked through the door and I'm so sad it's over but can't wait to meet up with my HAE family again!



“A unique, necessary, deeply enriching experience for young people and their families.

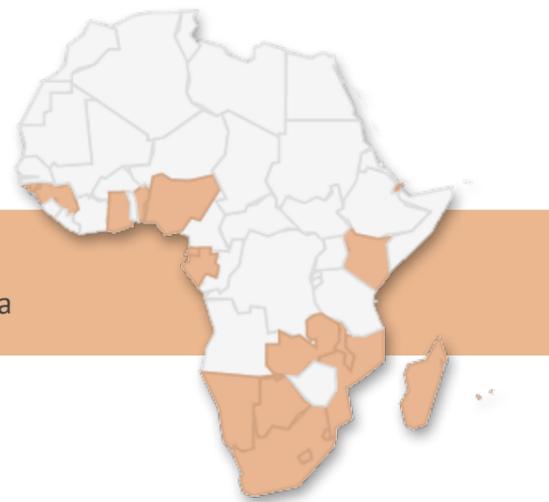


News from the Regional Patient Advocates

HAEi regularly receives progress updates from the Regional Patient Advocates and you can read more about their work on the following pages. However, it is only possible to feature a few countries each time, if possible different from issue to issue. You can find out more about the RPAs on the HAEi website and check which countries each RPA supports via the interactive map – have a look at www.haei.org.



Patricia Karani
Sub-Saharan Africa



IN GENERAL

I joined HAEi as a Regional Patient Representative in July and have been working to establish contacts and introduce myself to doctors, patients and member organizations in the countries in my region. I have established a WhatsApp group for HAE patients in Sub-Saharan Africa and patients from Uganda, South Africa, and Kenya have joined the discussion.

SOUTH AFRICA

I have made contact with Adrienne De Jongh from HAE South Africa, and we have identified two doctors in South Africa motivated to support HAE patients. One of the doctors, Dr. Michael Levin, is a member of the Allergy Foundation of South Africa (AFSA) and has included information on HAE on the AFSA website. Also through the AFSA website, they have issued an open invitation to HAE patients to join their new service for patients with HAE. AFSA wants to work with HAE patients, to help advocate for better treatment options, more awareness of the disease, and to find people

who are not yet diagnosed. The page can be found at www.allergyfoundation.co.za/supporters-club/patient-organisations/angioedema-support. I have also scheduled a meeting between HAEi and South African doctors and patients for October 2017.

NIGERIA

I am in contact with Dr. Muhammad Aliyu from Nigeria, who is a general practitioner at the Turunuku Rural Hospital in Igabi. He highlighted that there are a number of diagnoses suggesting HAE in his region; however, conclusive diagnostics have not been established. Dr. Aliyu is interested in supporting HAE patients in Nigeria and to work with me to try and establish a patient support group for Nigeria.

Roles of the Regional Patient Advocates

- Supporting the member organizations already in place
- Assisting in setting up new groups in countries with no existing organization



Natasa Angjeleska
South East Europe/Balkans



IN GENERAL

The HAEi SEE Regional Workshop is only a few weeks away and there has been quite a lot of work related to preparing for and organizing the meeting. I am delighted to confirm that the number of participating countries is now 11, following receipt of confirmation from Albania.

ALBANIA

I have been providing assistance and answering questions from a number of new patients in Albania regarding HAE. I also continue to support doctors and patients in Albania in their efforts to secure access to modern HAE medication.

CROATIA

Social media continues to be a great way to share information and this month, accessible medical papers have been shared within the Facebook patient communities for HAE Balkan and HAE Croatia to help increase the information and education on HAE within these countries.

MACEDONIA

HAE Macedonia has been working with representatives from the Ministry of Health and a number of physicians to ensure enough medication is available for all HAE patients in Macedonia. As part of this, they have determined the quantities of HAE medications needed for Macedonian patients and will be working to ensure this is made available. The organization has also been in contact with the Minister of Finance to stress the need for increased funding for rare disease treatments, including HAE medications and are in contact with the Doctor's Chamber of Macedonia and the Macedonian Doctors' Association regarding the lobbying activities of rare disease patients concerning the changes in the Health Protection Law.



Javier Santana
Latin America



IN GENERAL

Since taking up the post of HAEi RPA for Latin America eight months ago, I have been working with the countries in my region to establish what their needs are and how HAEi could help. Across the region, awareness of HAE is low and there are few modern medications available. HAEi will work to support the efforts of organizations in these countries through attendance at meetings with health ministers, educating physicians, policy and government agencies on HAE, high-quality materials in Spanish (in addition to publications such as “State of Management of HAE in Latin America” available in Spanish and Portuguese via the publications section of www.haei.org and education for patients, doctors and policy makers. I am working with the countries on their specific requests.

 **CHILE**

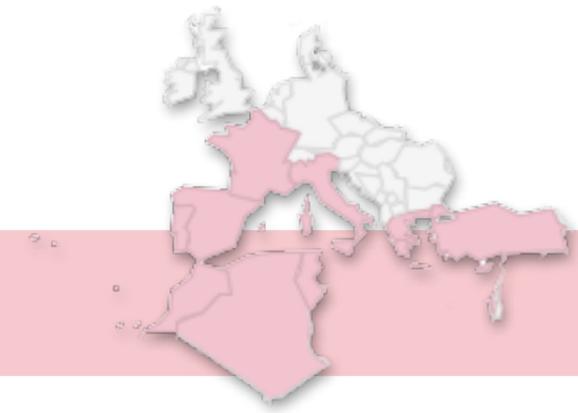
In June, Angioedema Hereditario Chile hosted a medical symposium focusing on HAE. The event was a great success and was covered by the local press. Lorena Merino participated in a TV News interview where they discussed HAE and the current situation regarding the lack of HAE treatment and its absence from the government health plan. You can see the interview in Spanish at <https://youtu.be/m3bH1fZOQRw>.

 **PERU**

I have been assisting the Peru member organization to complete the template documents to enable them to have their own website, hosted by HAEi. The website is now live and Asociación Peruana de Angioedema Hereditario and its patient community are thrilled to have this new resource to support HAE patients in their country. To see their site please visit www.haei.org/peru.



Maria Ferron
Mediterranean



IN GENERAL

I continue to work throughout my region, together with the patient organizations and healthcare professionals in the field, towards raising awareness of HAE and improving lives of patients with HAE.

 **MALTA**

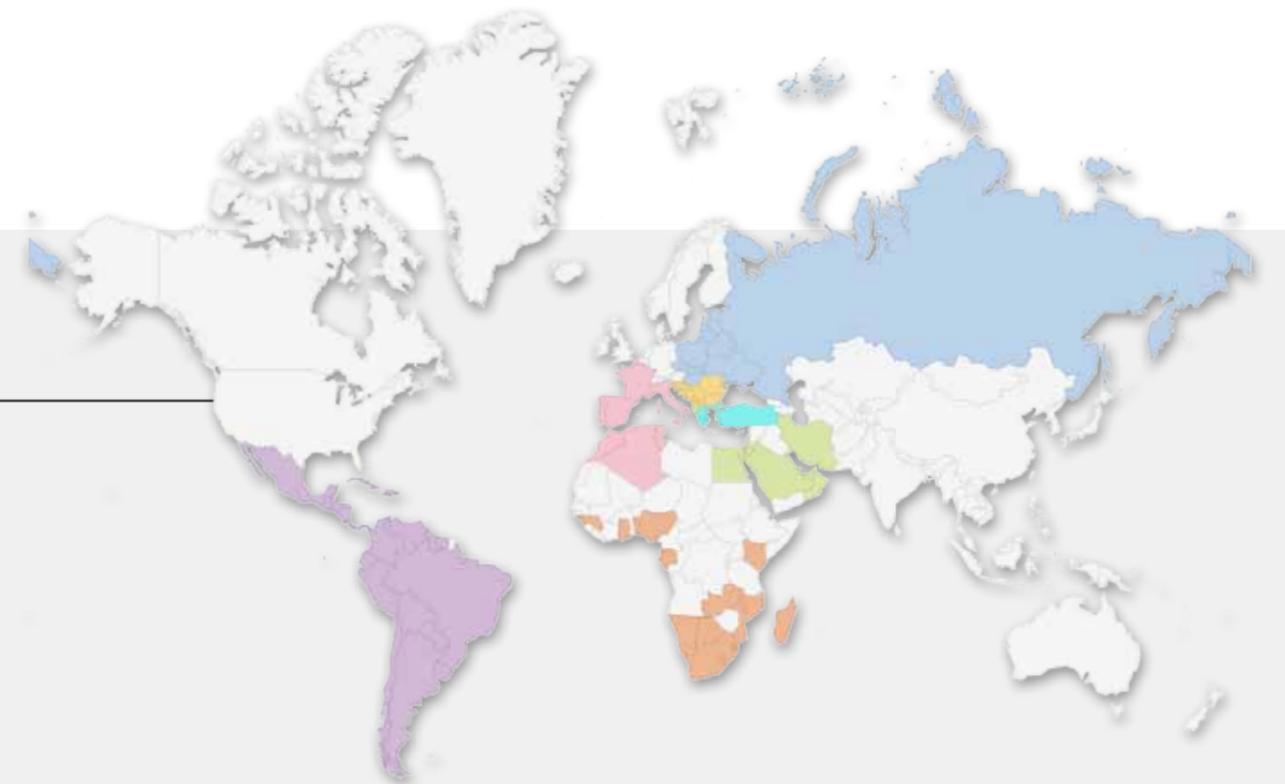
We have received some more great news from Malta this month. Mater Dei hospital has had a very encouraging meeting with CSL Behring, and it is hoped that increased access to medications including novel formulations may be available in Malta in the future. Although it may still be some time until these additional medications are available, it is a really positive step forward for HAE patients in Malta.

 **PORTUGAL**

I have been working with Dr. Macarena Piñedo from Faro Hospital to support the proposal for a tourist program in Algarve. The idea behind the program is to get in touch with HAE patients that plan to visit the area before their trip, in order to fully understand their pathology and prepare and guide the emergency rooms accordingly. Dr. Piñedo's contact details can be found on the HAEi world map at www.haei.org.

The Regional Patient Advocates

- **Michal Rutkowski**; Central and Eastern Europe
- **Maria Ferron Smith**; Mediterranean
- **Natasa Angjeleska**; South East Europe/Balkans
- **Patricia Karani**; Sub-Sahara Africa
- **Javier Santana**; Latin America
- **Rashad Matraji**; Gulf Region and Middle East
- **Maria Ferron and Natasa Angjeleska**





Will you come walking in Vienna?

In May 2016 HAEi and the Spanish national organization AEDAF launched a three-day walk on the Camino de Santiago in northwestern Spain. Around 80 people from 14 countries – Argentina, Australia, Brazil, Canada, Denmark, Hungary, Italy, Japan, Mexico, New Zealand, Spain, Sweden, USA, and Venezuela – took part in this first truly global HAE awareness event organized by HAEi.

Since the event was such a success HAEi and AEDAF decided to try once more in May 2017. This time 30 patients, caregivers, doctors, and others from seven countries – Argentina, Denmark, Malta, Mexico, South Africa, Spain, and USA – joined in and walked four stages over four days.

HAEi would have liked to arrange a third edition of the Camino Walk in 2018, but since the HAE Global Conference is taking place in Vienna, Austria 17-20 May 2018, the organization has been looking at places to walk in and around the Austrian capital.

“The part of the Camino that we have been walking connects to a huge network of pilgrimage routes covering most of Europe and all leading to Santiago de Compostela. As Vienna is located on one of these many pilgrimage roads – the Jakobsweg – it seems pretty obvious to do some walking there”, says the HAEi Communications Manager Steen Bjerre:

“Instead of having a setup much like the first two walks where everybody has to do quite a lot of steps in order to take part in the event we are looking into the possibility of having three or four distances to choose from. One short stage might be around five kilometers through central Vienna, thereby allowing the conference participants in general to take part, while other stages might be somewhat longer and therefore ideal for those with more time and better training.”

HAEi hopes to be able to present the upcoming walking event by the end of the year.



We are never going back to the dark days

The US HAEA National Patient Summit taking place in Bloomington, Minnesota 17-19 September 2017 was by far the largest HAE gathering ever – and probably one of the most important ones as well.

In his opening remarks to the approximately 800 participants the US HAEA President Anthony J. Castaldo stated that “no one will get in our way in our work to improve patients’ lives” as he underlined that “we are never going back to the dark days” and that there will be no regression from what the organization has achieved to date. Furthermore, Professor Marc Reidl – participating in the summit in his capacity as member of the US HAEA Medical Advisory Board – called it “one of the most important meetings” of its kind and reminded the audience, “the patient should always be at the center of what is going on”.

Indeed, the patients were at the center of the summit as it provided the information and tools necessary to help the members of the US HAEA community successfully manage their HAE. In the words of Mr. Castaldo:

“The HAEA continues to provide a variety of vitally important services aimed at helping our community achieve lifelong health. To that end, we have bolstered our mission by aligning our staff and operations along four major high priority areas of focus – four pillars: Health, Advocacy, Engagement, and Advances in Research. This year’s summit focuses on you, the patient/caregiver, and our ambitious plans to continue serving the HAE community with exciting programs and activities within each of these four pillars.”

Mr. Castaldo had a special welcome for the members of the US HAEA Youth Leadership Council, a new program aimed at identifying the needs of young HAE patients and their caregivers through a volunteer peer group.

This year’s summit theme was “Stand Up Strong”, a unifying call to action for the HAE community and a celebration of work being done by HAE Heroes who make a difference every day by raising HAE awareness within their communities. These are a number of the many topics presented to the participants in the summit:

- An HAE Health Panel discussion with the participation of Professor Riedl and Nurse Navigator Teri Templeton from the US HAEA Angioedema Center at University of California San Diego as well as the HAEA Health Advocates Sally Urbaniak and Troyce Venturella and moderated by the HAEA Chief Operations Officer Pam King,
- A Legislative Advocacy Panel presentation with HAEA Patient Advocate John Williamson, HAEA Patient Hero Douglas Selsor, and Dane Christiansen from the Health and Medicine Counsel of Washington moderated by Anthony J. Castaldo,
- A Patient Engagement presentation with the HAEA Patient Advocates Christine Selva, Sherry Swanson, and Jenny Barnes moderated by the HAEA Director of Patient Advocacy and Engagement Lois Perry,
- An Advances in Research Panel with Professors Riedl, Bruce Zuraw, and Sandra Christiansen moderated by HAEA Director of Research Janet Long,
- A presentation on Specialized Medicines for Rare Diseases by Patrick Collins, Senior Director of Healthcare Policy and External Affairs for CSL Behring,
- A presentation on Therapeutic Options today and in the future by Professors Jonathan Bernstein and William Lumry,
- A Physicians Q&A panel moderated by Professor Zuraw,
- Presentations by CSL Behring, Shire, Pharming, KalVista, and BioCryst,
- Youth programs with educational sessions, fun activities and time to get to know other kids and teens in the HAEA community,
- And finally an HAE IN-MOTION 5K walk/run on the morning of the last day of the summit.

The next US HAEA National Patient Summit is scheduled to take place in the fall of 2019.

News from around the Globe



AUSTRALIA AND NEW ZEALAND

www.haeaustralasia.org.au

From President Fiona Wardman:

HAE Australasia had youngsters from both Australia and New Zealand take part in the HAEi Youngsters Summer Camp in Frankfurt, Germany at the beginning of August. Everyone had a great time, and it was fantastic to watch the interaction between the youngsters, how they made life long friendships with others around the world who knows exactly what they are going through. None of us are alone, and the future looks very bright.

Sadly we have had to say goodbye to Amanda Tionisio from the HAE Australasia Board. Amanda helped build the organization from the beginning six years ago with her passion for helping families with young children with HAE. Amanda was instrumental in getting our Facebook page up and running and made a huge contribution with her 'Jump for HAE' skydiving fundraising event. We are pleased to have added two new members to the Board. Dr. Connie Katelaris, and Evelien De Bruin. HAE Australasia have a lot of work ahead of us in the coming year, and we are excited to have the additional skills that Connie and Evelien bring to the Board.

HAE Australasia are continuing with HAE Healthy Minds Workshops, and Meet Ups and would like to hear from patients and carers within Australia and New Zealand who would like us to bring these initiatives to them.

We have teamed up with US HAEA and HAE UK to bring you The Brady Club International. This is an online initiative for HAE children and their families. It's a great place for kids to learn about HAE, play educational games and puzzles, submit stories, and there is lots of great information to help them through understanding HAE. Register at www.brady.haea.org.



CANADA

www.haecanada.org

Youth Camp participation: Both Paige and Makayla Gunderson participated in the HAEi Youth Summer Camp in Frankfurt, Germany early August. Here is a quote from Paige's article on the camp:

"For me this was a big eye opener. Before this trip all the people I knew with HAE was my mum, my sister, Anne Rowe and I knew of a couple HAE Canada committee members with HAE, though none my age. To see a room full of people all around my age going through the same thing was crazy. That's when HAE international really sunk in for me."

And her sister Makayla writes:

"On the last day we got to talk to two HAE specialists and ask them questions. I had never been sat down and formally told what actually happens when our body swells. One of the doctors explained to us the process of what happens when we get an attack. It was so fascinating to hear and know how the medication works with our body when we have an attack and how to prevent one from happening."

You can read Paige and Makayla's stories at www.haecanada.org/category/blog/news-1.

Upcoming meetings: 4 November 2017 HAE Canada will have its next Patient Education Day in conjunction with the HAE Canada Annual General Meeting. Both events are taking place in Toronto, Ontario.



CHILE

www.angioedemahereditario.cl

From the Chilean HAEi contact Lorena Merino:

We are working a lot with the dissemination of HAE information, appearing on TV and in the written media. Also, we have run a diagnostic campaign for relatives of people diagnosed or those who have crises due to HAE. Patients will also be given an identification card from HAE Chile. In May, we started handing out a Patient's Guide – and in June a symposium was held for doctors, including a roundtable discussion on HAE. Among the participants were Dr. Konrad Bork and Dr. Mel Berger as well as Ms. Andrea Martones, who is a lawyer from the Ministry of Health.



CHINA

www.haei.org/location/hae-in-china

From the HAE Australasia President Fiona Wardman:

I was invited by Shire to speak at the 12th Annual ICORD Conference and 6th China Rare Disease Summit which was held in Beijing China 7-10 September 2017.

For patients in China with rare diseases there isn't a lot of support or treatments available, and with potentially 25,000 or more HAE patients in China alone, most of them undiagnosed, and the ones that are have little to no options for treatment. This conference highlighted the need for change.

Thankfully the Chinese Government are looking to improve the framework for these patients, and this will hopefully mean that in the near future patients will have support and access to available treatments.

I was asked to present in three sessions. My first presentation was my personal story, and the benefits of a dedicated support group like HAE Australasia. My second presentation was alongside Dr. Zhi from China, and Professor Konrad Bork from Germany, and I presented on HAEi, and what can be achieved through a rare disease international network. My third presentation was to the Chinese media on the successes that HAEi have had.

The conference was a great success, and there is an undertaking from us at HAEi to help support the Chinese HAE patients, Dr. Zhi and other doctors in China, along with CORD to start their own patient dedicated HAE support group so that they can advocate for treatment options, help educate and support others around their country.



COSTA RICA

www.facebook.com/aehcostarica

From Lisa Layera:

HAE patients gathered in late August to officially found La Asociacion Angioedema Hereditario de Costa Rica. Three doctors have joined the medical advisory board and a national registry has been launched. A study of patients is being designed in connection with the medical advisory board.

The major issue is that currently no first line medications, as recommended by international consensus, are available in Costa Rica. Patients are administered fresh frozen plasma or given Danazol as the only treatment options. Five new generation medicines are now available and more effective than either of these options, with far fewer dangerous side effects. New international treatment guidelines unanimously recommend these new generation medicines over the previous therapies, Danazol and fresh frozen plasma. It is our hope that Costa Rica can join Latin neighbors such as Mexico, Chile, Brazil, Colombia, and Argentina in having access to first line treatments.

HAE is a rare, life threatening disease producing frequent severely debilitating attacks of swelling and pain. The frequency and unpredictability of the attacks produce extreme lifestyle limitations for the patient and their family. The rarity of the disease, the diverse sites of swelling, and the diagnostic overlap with common illnesses create a difficult clinical diagnosis for physicians.

Frequency of attacks in the Costa Rican HAE population ranges from thrice-weekly to three to ten times a year with a three to five day recovery period following each attack. Throat swelling produces the appearance of asthma or anaphylaxis and can lead to tracheotomies and death. In Costa Rica, we know of one tracheotomy and one suspected mortality. Abdominal attacks mimic acute abdomen and multiple patients have had their appendix removed or closely avoided it on multiple occasions. One was hospitalized for a suspected 'ectopic pregnancy' later to be told it was a burst ovarian cyst due to the abdominal fluid detected. The youngest patient



here in San Jose, a 9-year-old female, has monthly abdominal attacks and each time must wait hours for pain medication to be administered while appendicitis is ruled out.

The first HAE patient in Costa Rica was diagnosed in 2009; there are now 21 blood confirmed cases of HAE and one acquired angioedema case. At the first meeting alone, five additional family members were suspected to have HAE and will undergo testing. Of this 'first generation' of patients, the majority suffered their first attack in early childhood but were not diagnosed until 30-40 years later. Statistically, Costa Rica has between 86 and 430 cases of HAE in its population; one family alone has seven confirmed cases.

Although the national committee which approves medications has declined to fund modern HAE treatments in the past, we are working with the medical advisory and with patients to better document current patient treatment with an emphasis on preventing the volume of hospital visits incurred by Costa Rican HAE patients which for some are over 70 visits each.

We are grateful that the Costa Rican Association of Allergists will sign a letter supporting modern treatments for HAE. Plans to have activities for Rare Disease Day and **hae day :-)** are already being made.

The daughter of an HAE patient designed multiple logos and one representing the cultural heritage of Costa Rica was chosen. It is inspired by oxcart wheels which were designed as a hybrid in the 19th century to withstand the seemingly impossible weeks long journey from the high central valley to the coast to deliver coffee beans to the outside world. These wheels

were designed not to get stuck in treacherous terrain. In that spirit, we remain hopeful and focused as a community that HAE patients will arrive at our goals: to gain access to modern treatments in order to live productive lives, that no Costa Rican should die of HAE, that HAE be recognized to the newly formed National Clinic of Rare Diseases.



One big thing we are trying to confront in Costa Rica is the patient community's desire to learn more and become better advocates but the double jeopardy they face that to do so they must travel to international conferences but they cannot qualify for assistance because they ironically do not have access to meds - the very thing they are fighting to achieve. I know how much the HAE conferences have meant to my advocacy and knowledge and believe in their hope and desire to attend the upcoming HAE Global Conference in Vienna in May 2018. As such, we are trying to do fundraising to try to buy medicine for at least one (but maybe more depending on how we do) so that a delegation might be able to travel to Vienna. Should any HAE patients/families/pharmaceuticals want to donate please have a look at <https://www.gofundme.com/Aeh-costa-rica>.



DENMARK, NORWAY AND SWEDEN

www.haescan.org

The next Scandinavian HAE conference will take place in Stockholm, Sweden 10-11 November 2017. The program includes keynote presentations by Prof. Markus Magerl and Prof. Anette Bygum as well as the HAEi President, Anthony J. Castaldo.

Furthermore, HAE Scandinavia (together with its medical advisory panel) is in the process of creating a Scandinavian Treatment Recommendation.



FINLAND

www.haefinland.org

From Maria Kalske, Chairman of HAE Finland:

HAE Finland is celebrating its 10th anniversary this year. During that time, the organization has influenced the availability of HAE medications in Finland both in hospitals and for home usage. Also, HAE Finland has had strong influence on the diagnostic and improvement of patient treatment. However, there is still a lot of work to be done for patients and their relatives.

To celebrate our anniversary HAE Finland is organizing an educational seminar for Finnish doctors and medical personnel. This has huge meaning for HAE Finland as we are doing everything we can to get better knowledge,

diagnostic as well as treatment of HAE in Finland. This goes well along with our history, since we have been working hard to get HAE medication available. Also we have put a lot of effort into making home medication possible. It is now available for some, but not for all. So our goal with this educational seminar is to provide the possibility to have more options of the doctors treating HAE patients. As things are today there are some areas in Finland with a few HAE specialists and some still without. The seminar takes place 1 December 2017 and it is free for Finnish doctors and medical personnel.



GERMANY

www.angiooedem.de

20 years is a good reason to celebrate and that is exactly what the German HAE organization will be doing at Swissôtel in Berlin on 18 November 2017. The program of the day will include these topics:

"After Quincke came Bork and Kreuz" (Prof. Magerl from Charité Berlin and Dr. Martinez Saguer from HZRM Mörfelden-Walldorf), "HAE Milestones" (Prof. Bork from Uniklinik Mainz), "Detective work in medicine" (Prof. Schäfer from Uniklinik Marburg), "The work of HAEi" (Executive Director Henrik Balle Boysen), "Results of the Online Survey of the University Hospital Ulm" (Dr. Greve from University Hospital Ulm), and "Future prospects in HAE therapy" (Dr. Aygören-Pürsün from the University Hospital of Frankfurt). Furthermore, there will be a cozy evening program.



MACEDONIA

<http://haei.org/haemacedonia>

The HAEi South Eastern European Workshop for patients and doctors will take place 29 September to 1 October 2017 in Skopje, Macedonia. Among the speakers are prof. Marco Cicardi, prof. Henriette Farkas as well as the HAEi President Anthony J. Castaldo and the HAEi Executive Director Henrik Balle Boysen.



PERU

www.haei.org/peru

Peru is yet another member organization that has chosen to have its website hosted via HAEi. Have a look at www.haei.org/peru. Bienvenidos a Asociación Peruana de Angioedema Hereditario!



POLAND

www.haei.org/pl

The second HAEi Central and Eastern European Workshop – and at the same time the fourth HAE conference of HAE Poland – will take place on 7-8 October 2017. The venue is the Westin Hotel in Warsaw, Poland.

Just a few weeks ago HAE Poland launched a new website hosted via HAEi. Please feel free to have a look at www.haei.org/pl.



PUERTO RICO

www.facebook.com/haeapr

Anthony J. Castaldo, President of the US HAEA, and Janet Long, US HAEA Director of Research enjoyed hosting patients and family members in Puerto Rico during a special dinner and a movie event. Attendees previewed the "Special Blood" documentary, a poignant, heartfelt HAE documentary that chronicles the lives of four HAE patients. Guests were able to watch the English language documentary with Spanish subtitles while enjoying dinner, popcorn and refreshments. Look for the Digital Release of "Special Blood" at <http://radi.al/SpecialBlood>.



News from around the Globe



PHILIPPINES

www.haei.org/location/hae-in-the-philippines

From Country Representative Krizzia Lavone Alferez:

My family has the distinction of being the first HAE patients to be identified in the Philippines. Dr. Jovilia Abong, an Allergy/Immunology doctor who practices in the Manila metropolitan area made the HAE diagnosis. While serving as the President of the Philippine Society of Allergy, Asthma and Immunology, Dr. Abong had a meeting with HAEi President Anthony Castaldo, learned about HAEi, and passed that information along to me. I contacted HAEi and have had meetings with Mr. Castaldo and the President of the Philippine Society for Orphan Disorders.

We are working to set up a Philippine HAE organization and building an advocacy plan that establishes a path to gain access to modern HAE medicines. Currently, Danazol 200 mg is the only HAE treatment available, and it is not reimbursed by our health system. I am excited about our HAE mission here in the Philippines and look forward to working closely with HAEi to improve the lives of patients here in the Philippines. I wish good health to all!

OBUČENI DA SPASU

TRAŽI SE
DOKTOR ZA
HAE

ČAK DO **99%**
ŠANSE DA PREŽIVE
IMAJU **HAE** PACIJENTI
KOJI BLAGOVREMENO
PRIME TERAPIJU.



haei.org



SERBIA

<http://haei.org/rs>

From Sofija Popovic, HAE Serbia:

Following the successful first ever celebration of **hae day** :-) on 16 May 2017, when HAE Serbia hosted screening of the movie "Special Blood" at the Yugoslav Film Archive and when the most important landmarks of Belgrade, including the National Assembly, were lit up purple to show support for HAE patients in Serbia, HAE Serbia moves on with another awareness raising campaign in partnership with the global advertising agency TBWA.

The goal of the campaign is to raise awareness about HAE among the general population, and among health practitioners, especially in care centers where HAE patients will be treated. The last is particularly important, because starting from this year, thanks to the continuous efforts of HAE Serbia over the last six months, HAE medicines will be available to patients in Serbia for the first time.

The campaign is divided into two parts. The first focuses on raising awareness among the general population



and will consist of a creative billboard campaign and shopping mall promotions. Billboards with the headline "Dressed/trained (word play) to save" will show doctors in purple lab coats, giving basic information on HAE. Also, mannequin dolls dressed in purple lab coats will be placed in shop windows at the shopping malls with the information about HAE next to them.

The other part of the campaign focuses on care centers. The campaign going by the slogan "A doctor for HAE wanted" aims to ensure that registered patients are adequately taken care of and to raise awareness about HAE among health practitioners, since half of the HAE patients in Serbia still live without diagnosis. Purple coats – like the symbol showed on the billboards – will be distributed to allergists/immunologists, ER doctors, pediatricians and other doctors who might get in touch with (un)diagnosed HAE patients.

This campaign, which will help spread HAE awareness in Serbia and for which we from HAE Serbia are truly grateful, is a charitable donation of the TBWA agency and marketing network.



News from around the Globe



SLOVAKIA

www.haei.sk

Early August 2017 HAEi welcomed the 56th member of the global family as a formal HAE organization has now been formed in Slovakia. This is the first input from Michaela Bednárová:

HAE is a rare and little known disease in Slovakia. The number of HAE patients is 115, including 94 living. Because the number of HAE patients is still rising it is important to inform patients and doctors about this disease. That is why we founded the patient organization.

The main goal of the organization is improving the awareness of not only patients and doctors but also awareness of the society in general. The patients can

share their experience with disease and treatment more effectively. It is possible to get more information about current treatment and their effectiveness through the organization.

The general information is on our website www.haei.sk. We are at the beginning with the patient organization and we hope that HAE patients' life could be better and easier thanks to the organization. We expect that even though the number of patients will be still rising, the adequate care and guidance will be provided for them.



UNITED KINGDOM

www.haeuk.org

HAE Dissertation: One of the members of HAE UK, Philippa Adams, has completed a university dissertation on HAE, titled 'The Lived Experience of Women Who Have Hereditary Angioedema'. You can read the dissertation at www.haeuk.org/wp-content/uploads/2016/07/Pippa-HAE-Dissertation.pdf.

2nd Scottish Patient Day: The 1st Scottish patient day last year was very successful, with attendees keen to have another. Therefore HAE UK has arranged to hold the next day of its kind at the Grand Central Hotel in Glasgow on 30 September 2017. The theme for the event is 'My HAE life' and the program includes presentations from clinicians and patient experiences as well as breakout sessions in the afternoon.

Annual Patient Day: The HAE UK Annual Patient Day will be held at the Mercure St Paul's in Sheffield on 18 November 2017. The agenda is being finalized at the moment, including some excellent speakers as well as small breakout sessions to enable the participants to get together and discuss more specific things.

Advice line: HAE UK will soon be running a trial of a HAE advice line. This will be an opportunity to phone and speak to an immunology nurse about anything of concern. HAE UK is recruiting a team of volunteer nurses who will be available for short one-to-one conversations at a set time each week.

Video: The Peripheral Attacks video at www.peripheralattacks.co.uk has been made into a quick and easy to follow animation. It is now available from the HAE UK website and it can be used on its own or with the longer video to show the GP, nurse, school or employer, as a way of helping them understand more about HAE.

Diary app: A diary app for recording of treatment and attacks is now available to download from www.myhae.co.uk. The app is intended for use on iPhone 5, 6 and 7, and the most popular Android phones, but it will not work on a tablet or iPad.



SWITZERLAND

www.hae-vereinigung.ch

24 June 2017 the 18th patient gathering of HAE Switzerland took place at Stadtspital Triemli in Zürich. The President Helene Saam welcomed some 50 HAE patients, family members, representatives from the industry, and HAE Experts. They listened to exciting lectures in the morning, and during a fine lunch there was a lively exchange, before the most modern hospital bed high-rise building in Switzerland was visited in the afternoon.

The Executive Committee of the HAE Switzerland took the opportunity to present the new logo.

The 16th gathering of the organization's members will take place 10 November 2017 at Restaurant Rebstock in Däniken.

Wir halten zusammen.



www.hae-vereinigung.ch

Schweizer Vereinigung für Betroffene,
Familienangehörige, Freunde und Ärzte

News from around the Globe



USA

www.haea.org

National Patient Summit: The US HAEA National Patient Summit took place 15-17 September 2017 in Bloomington, Minnesota. This year's theme, "Stand Up Strong", served as an electrifying call to action for the HAE community and a celebration of work being done by HAE heroes. HAE heroes are the people who make a difference every day by raising HAE awareness within their communities.



Capitol Hill Day: Patients, family members and staff arrived in Washington D.C. on 19 July and visited over 50 legislative offices as part of the US HAEA's Capitol Hill Day. The group met with decision makers to advocate on behalf of; 1) eliminating discrimination on pre-existing conditions; 2) keeping children on insurance until age 26; 3) prohibiting caps on insurance coverage; and 4) limiting out-of-pocket costs for patients. Together, these groups of HAEA Heroes are helping to make a difference in the lives of all patients with HAE.

FDA meeting: 25 September 2017 the US HAEA team and many from the patient community participated in a Patient-Focused Drug Development for Hereditary Angioedema (HAE) Public Meeting with the FDA. Patient-Focused Drug Development is part of FDA's performance commitment under the fifth authorization of the Prescription Drug User Fee Act (PDUFA V). The public meeting was intended to allow FDA to obtain patients' perspectives on the impact of HAE on daily life. FDA was also seeking patients' views on treatment approaches for HAE.



**US
HAEA
2017**
NATIONAL PATIENT SUMMIT
STAND UP STRONG

The SUMMIT is the HAEA members' chance to have one-on-one interaction with all of the HAE experts, hear about new therapies coming out, meet the US HAEA Patient Advocates, and much more.

HAE IN-MOTION 5K: The next HAE IN-MOTION 5K Run/Walk will take place on 7 October 2017 in Roger Williams Park, Carousel Village, Providence, Rhode Island.

If you can't make it to that one, there is another chance 22 October 2017 at Chatfield State Park in Littleton, Colorado - and one more on 18 November 2017 at Camp Mabry in Austin, Texas.

Get your website hosted at haei.org

A growing number of national HAE organizations have their own websites with their own individual hosting solution. However, some of them would like to change hosting or altogether change the look and content of their websites. And others would like to just have a website at all.

"In order to accommodate any such national HAE organization we have established a system under the HAEi website allowing us to host national websites as well as provide them with templates for an individualized website - naturally all in their native language", says HAEi Executive Director, Henrik Balle Boysen.

At this point national websites have been launched for the first 10 national organizations:

- Greece: <http://haei.org/greece/>
- Hungary: <http://haei.org/hungary/>
- Iceland: <http://haei.org/iceland/>
- Kenya: <http://haei.org/haekenya/>
- Macedonia: <http://haei.org/haemacedonia/>
- Peru: <http://haei.org/peru/>
- Poland: <http://haei.org/pl/>
- Serbia: <http://haei.org/rs/>
- Spain: <http://www.angioedema-aedaf.org>
- Turkey: <http://haei.org/turkey/>

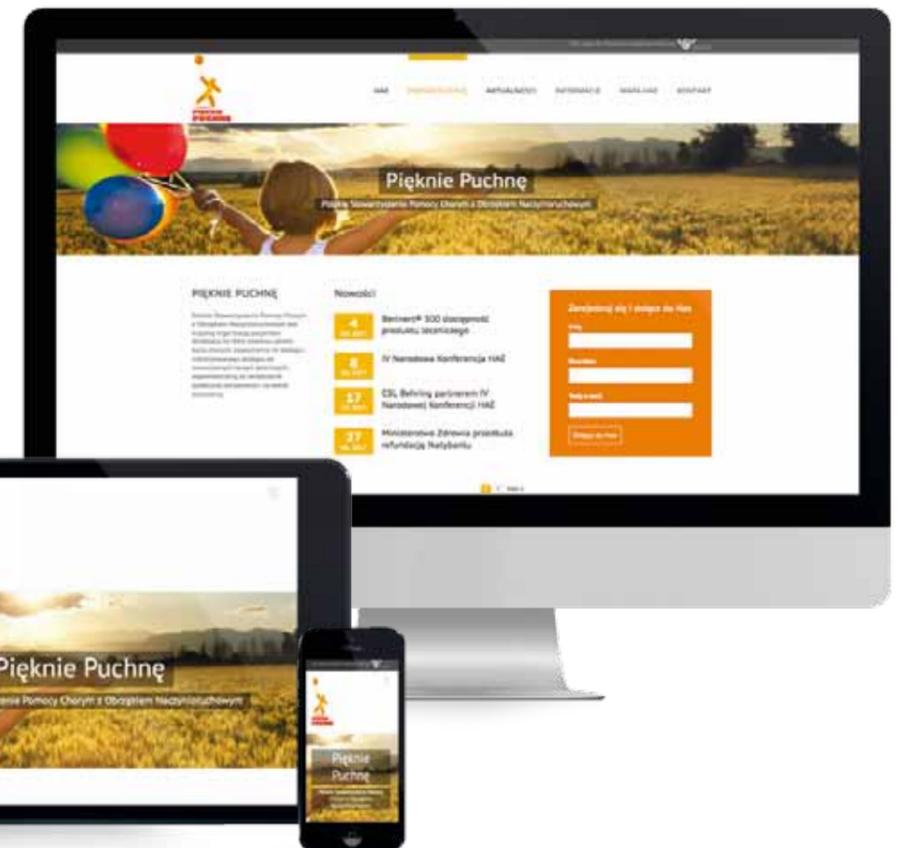
"We are preparing a few more at the moment and hopefully many more will join us within the next year", says Henrik Balle Boysen.

At www.haei.org/haei_countries you'll find an overview of all 56 countries registered with HAEi.

[Link to national website hosted by HAEi](#)

[Link to national website](#)

The national flags on the page link to the HAEi information on the specific country (national organization, care centers, hospitals, available medication etc.).



HAEi Connect getting closer

Over the last months HAEi has been working hard on completing HAEi Connect – a member database and much more that the organization will be offering free of charge to its member organizations.

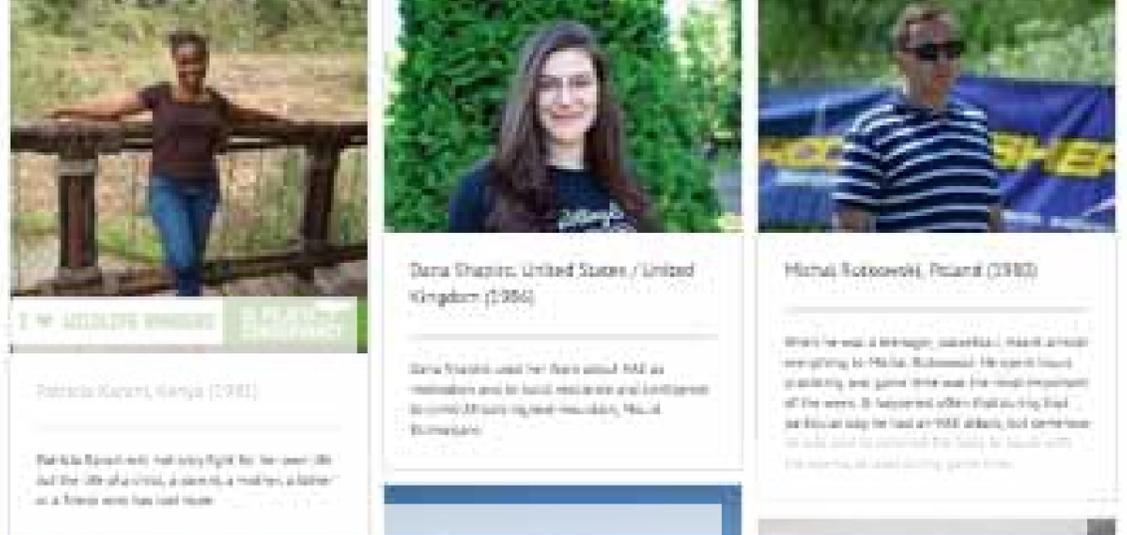
“HAEi Connect is soon ready for the member organizations worldwide. As we are finalizing the last corrections during the beta phase in Scandinavia, Australia, and New Zealand, we are also preparing HAEi Connect for global launch”, says HAEi Executive Director Henrik Balle Boysen:

“With HAEi Connect our member organizations will have an easy way to stay in touch with members in their countries. Having a solid and secure member database is vital for our member organizations – it

can and will help them grow their organization. HAEi Connect allows our member organizations to target the information that is sent out to the members, making sure it is relevant for the individual, especially when it's about clinical trials, market surveys, and other relevant events.”

HAEi Connect complies with the EU Personal Data Regulation, ensuring the protection of member information, and is build with the highest possible data security both on storage and login functionality.

Further information on HAEi Connect can be obtained via the HAEi Regional Patient Advocates or by reaching out to HAEi directly at info@haei.org.



Patient stories

At www.haei.org HAE patients from Australia, Belarus, Brazil, Denmark, Hungary, Kenya, Norway, Poland, Russia, the United Arab Emirates, the United Kingdom, and the United States tell their touching and motivating stories.

Here you can read about the HAE lives of a diverse group of patients that include a university lecturer, a truck driver, a retired nurse, an operations manager, an architect, and a cattle farmer.

Welcome to the Brady Club International

As part of the celebration of the Year of the HAEA Youth in 2016, the US Hereditary Angioedema Association (HAEA) provided the Brady Club International for the youngest patients.

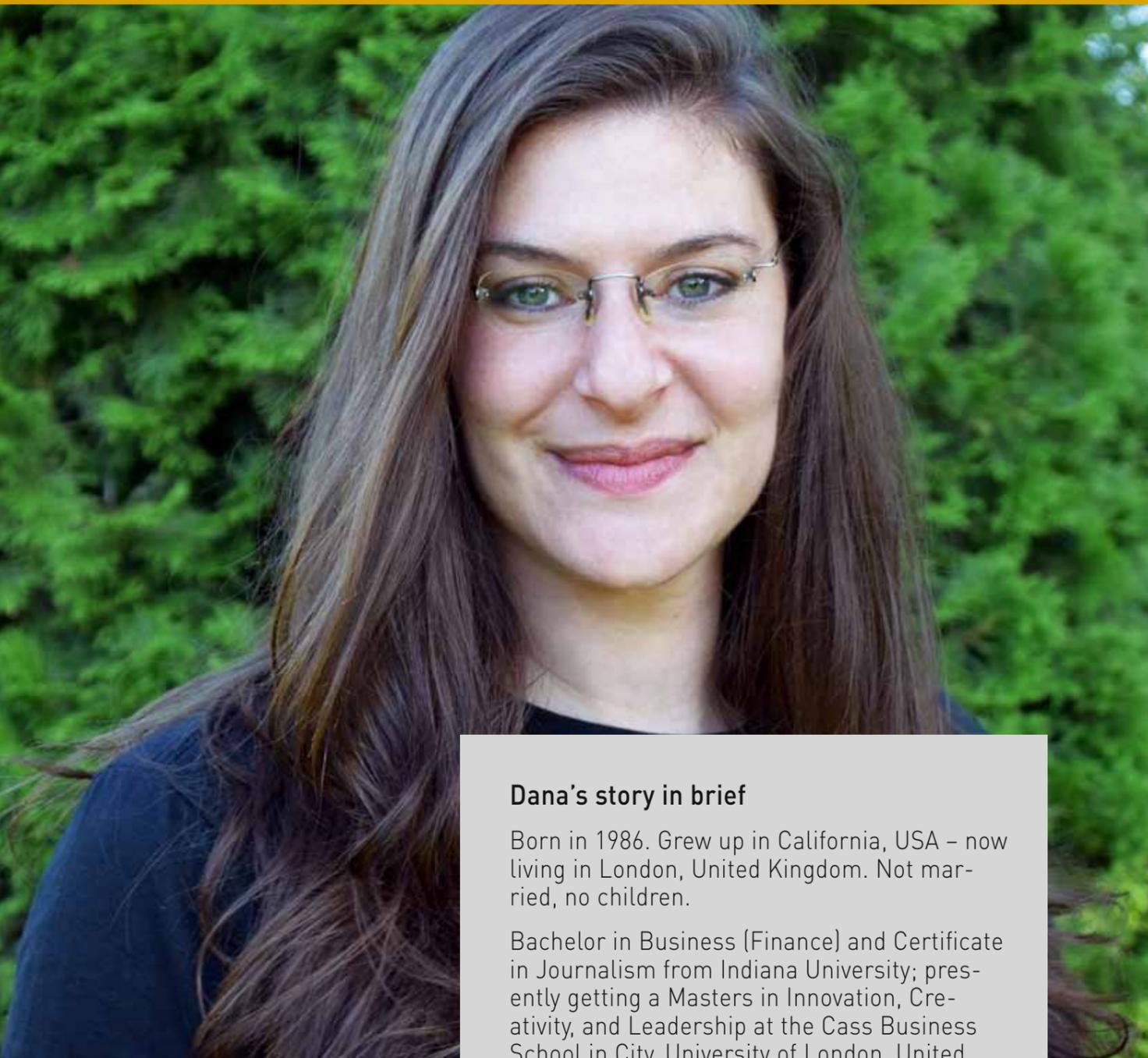
"We hope that the it will help the youngest HAE patients to better understand, manage, and cope with their disease while offering fun ways for them to feel inspired, empowered, and connected to other kids who share their questions, dreams and want to just have some fun, too", says Janet F. Long, Executive Vice President of HAEA.

The Brady Club is an online safe space customized for children diagnosed with HAE and their siblings.

Visit the Brady Club International:
brady.haea.org



Dana Shapiro (United States / United Kingdom) used her fears about HAE as motivation and to build resilience and confidence to climb Africa's highest mountain, Mount Kilimanjaro.



Dana's story in brief

Born in 1986. Grew up in California, USA – now living in London, United Kingdom. Not married, no children.

Bachelor in Business (Finance) and Certificate in Journalism from Indiana University; presently getting a Masters in Innovation, Creativity, and Leadership at the Cass Business School in City, University of London, United Kingdom.

Diagnosed in April 2003 at age 16.

Other HAE patients in her family: Maternal grandmother and her siblings and a variety of cousins and more distant relatives on that side of the family. Neither of Dana's parents or her brother have been diagnosed.

Patient story: Dana Shapiro

Fears about HAE turned into motivation

I was diagnosed with HAE in April 2003 at the age of 16. Childhood ended abruptly and now I had HAE. I was confused. I was shocked. I was scared. I felt as if I was carrying the weight of mountains on my shoulders. What would the rest of my life be like?

At that time, I was still living in the US and there were no HAE-specific medications available. I was prescribed Danazol, an anabolic steroid, that plunged me into a painful depression as I confronted what it meant to be a person with a rare disease. I gained weight. My voice got deeper – and as I was a singer that was challenging. Every aspect of life felt more difficult to handle. I started to nap in the afternoons. I felt as though I had turned into a science experiment – a specimen on a petri dish for doctors to study.

The diagnosis was not easy for my parents either. My mother kept apologizing because the HAE came from her side of the family. She does not have HAE, but her mother did. My mother is one of the most optimistic people I know, but she found it challenging to accept the idea that I had a potentially fatal disease. She felt guilty that she passed the disease to me, so she went into protection mode in an attempt to keep me symptom-free. We thought that HAE was caused by stress, so she taught me a meditation technique to

calm my body as much as possible when I was in pain. My father struggled to accept that HAE symptoms can be severe and life-limiting. He liked to pretend that I wasn't ill when I was. Adjusting to the idea that I had HAE was challenging for my family and each of us felt helpless in our own way. I often suffered in silence. I started to feel as if I was broken.

But you tried to make sense of your new normal, I guess.

Yes, but I cannot say that I was succeeding. My family felt that I did not need to have mental health care, despite doctor's recommending therapy on several occasions, so I was left to my own devices to manage my depression. I decided to ramp-up the amount of philanthropic work I was doing with the homeless and terminally ill for the selfish reason of making myself realize that other people were worse off than I was and that I still had something useful to offer the world.

When I was 17, I realized I had a choice: I could continue to let HAE control my life or I could reclaim my ability to decide. It was a minor step in the right direction – nothing had changed except my mindset: Does HAE call the shots or do I?



At that point, what did you think about your HAE?

I had no idea that HAE would become both the worst and the best thing to ever happen to me. I had no idea that my fears about death and an unlived life would prove to be such intense motivators, but I knew that living the way I had been since my diagnosis was unsustainable. I knew that I could not continue on a path that was so negative. Making a conscious decision to improve how I felt about HAE was the first step up a steep mountain that allowed me to believe that I had some control over my life.

When I was 19, the steroids had caused my liver enzymes to be abnormally high, so I was taken off Danazol in mid-December 2005. I was encouraged to take time off from my university studies to allow my body to heal, but I resisted. I felt that if I paused my educational life, I might never return. To compound my distress, I went through withdrawal that was not

supposed to occur with Danazol, and I dropped nearly 50 pounds by March 2006. My change in weight caused significant worry for my parents. I lost the ability to eat tomatoes – they caused HAE in my throat – so I gave them up. My university friends who never knew I had an autoimmune disease were suddenly privy to my private agony, pain and fear.

Around that time you started discussing HAE with your great aunt who had a case of HAE more severe than yours. What impact did that have on you?

My great aunt became my role model and mentor. Throughout her life, she managed to maintain independence and a full-time job. She embodied the mantra, “You just have to keep going even when you feel terrible”. I decided to adopt her mantra. I tried my

best to keep my head up and my spirits high even when I felt poorly. On Christmas Eve 2006, HAE claimed her life. In addition to being devastated by the unexpected extinguishing of her voice, I was reminded of the fragility of my own life and I was frightened by it.

As my undergraduate years progressed, my symptoms became more frequent and more severe. I continued to read about HAE online, but medical understanding of what caused HAE symptoms did not seem to be evolving. I suffered from attacks when they came and took emergency steroids or trips to the hospital when I swelled in a potentially fatal region. After graduation, I started working full-time. It was then that I decided to learn more about my HAE with the hope that maybe I could better control it.

I ran 6-month tests on myself to see their impact on my HAE. I mentioned my experiments to my new doctor, and he laughed in my face. But, I persevered with the experiments anyway. I started by eliminating gluten from my diet. Gluten-free food was not as readily available as it is today, and the diet was difficult for my dessert-loving self, but my HAE symptoms were less severe and less frequent when I adhered to the regimen.

What were the other tests you did?

My second test was exercise. I had largely given up exercise after I stopped taking Danazol because most forms of physical activity resulted in swelling. Yoga caused my wrists and shoulders to swell, running made my feet swell, the elliptical made my hands swell, swimming made my shoulders and neck swell. Weight lifting or kickboxing were completely out of the question! I learned that any sort of physical activity resulted in my becoming ill.

I switched to more life-sustaining tests: hydration and sleep. I learned how my need for hydration changed when I got HAE. In the day or two before an attack, I would become less thirsty and seemed to retain more water. As my attacks subsided, I felt parched and drank more water than seemed necessary. When I was ill and in the hospital, I learned that I was always severely dehydrated. I realized that hydration was a key detail of HAE, even though I did not know why.

I tested the impact of changing my sleep schedule to understand how much sleep I needed. I typically became fatigued in the day or two leading up to an HAE attack, but sleep did not seem to alleviate the fatigue. What I learned from that experiment was that the amount of sleep I got mattered less than the consistency of sleeping time. If I was getting six hours of sleep each night, my HAE was not significantly impacted as long as I was consistently getting six hours of sleep every night. If I suddenly slept eight or four hours, then I would get HAE symptoms.

For the first time, I started to listen to my body. How it felt. How it hurt. How long symptoms lasted. How it felt as I recovered. The idea that balance mattered to my health started to become clear. I learned that variability in my lifestyle was one of the worst things I could do for my health. I never experienced a time when I was able to stop my HAE symptoms from occurring, but I was better able to anticipate HAE attacks and could judge the severity based on my lifestyle leading up to the attacks.

Then in 2009, you were invited to join a clinical trial for the first HAE drug in the United States.

Yes, I went to the emergency room with HAE attacks 18 times in six months for the clinical trial. While the clinical trial took lots of time, the medication worked well on me. It gave me hope that the future would be brighter. But when the medication was legalized in the US, the cost of the drug and the logistics around administration of the drug made it challenging to integrate into my lifestyle. I slowly reverted back to being sick all the time and visiting the hospital with potentially fatal attacks a few times a year.

What happened when you left the US in 2012?

When I moved to the United Kingdom for work, I had no idea that my relocation would impact my quality of life so dramatically. One year later, I was referred to a consultant who was an HAE specialist in the UK. When I arrived for my first appointment, I noticed there were HAE posters around the waiting area. I had never seen an HAE poster or information leaflet in my life.



*I have a choice: I can let HAE control my life
or I can reclaim my ability to decide.*



I sent my mother a text message with a picture of the poster and the message, “I think I am in the right place.” My first appointment was a long one: my new consultant and a panel of doctors on her team wanted to know my entire HAE story. They were interested in my Danazol experience, my difficulty with tomatoes, my experiments in my early twenties. My consultant arranged for me to have access to intravenous C1 and subcutaneous Icatibant. My family and I were curious and excited for what was yet to come.

I was fortunate to be able to use the National Health Service in the UK because the medication was delivered to my home and a nurse taught me how to self-administer. It was all free through the National Health Service – for an American, that felt like a miracle! My first few attempts at giving myself an intravenous injection were a challenge because I have a fear of needles. But after a few weeks, I was able to cannulate without having a panic attack.

How did self-administration change things for you?

While the absence of illness is not health, access to self-administered medication was a critical step to giving me more control in my life. I could decide if I wanted to be sick. I could make myself better if I was

unwell. The medication worked well on me; it relaxed my anxious mind about my HAE. I became involved with HAE UK in early 2014. I began attending the HAE UK annual conferences. For the first time in my life, I met other people who had HAE besides family members. It was amazing! Slowly, the stresses and concerns of life with a rare disease receded and other areas of my life started to flourish. I became empowered to take more risks and try new things. I started to be able to live my life, instead of just trying not to die.

I know that you particularly like the quote, “These mountains that you are carrying, you were only supposed to climb” by Najwa Zebian. What has been your experience with climbing mountains?

I first discussed the idea of climbing Mount Kilimanjaro, the highest mountain in Africa, with my consultant in January 2015. To my surprise, she was supportive and suggested a few preventative measures. She made me aware of the risks of the climb, most notably that altitude causes increased fluid leakage through the walls of the blood vessels, which means that HAE attacks are more likely at higher altitude. For the first time in my life, I wanted to put my body to the test

in a way that was dangerous for healthy people, and someone said, “Yes, you can. Let me help you!”

My consultant put me in touch with another HAE patient who had already climbed Kilimanjaro. He seemed to have fewer HAE attacks than I did, but got HAE at the summit. His voice was another vote of support, but also one of caution. Speaking with him gave me hope that I could climb to the top while instilling the appropriate amount of fear that I needed to be careful and vigilant.

In the months leading up to the climb, I trained my body for the exertion by walking and eventually running to work. My team and my boss were supportive of my efforts. While most people struggled to understand why I wanted to climb Kilimanjaro, they wanted me to succeed. My final endurance test before climbing was to run the 6k to work consecutively for 14 days straight. I had my doubts that running the flat lands of London might not be the best preparation for trekking a mountain for eight days, but was confident that my improved cardiovascular health and endurance would still help.

As part of my preparation for the trip, I began taking the steroid Stanozolol daily as an additional precaution with the hopes that I would not have any HAE attacks while climbing. I had terrible side effects from the pills for the first two weeks, but I persevered until my body could tolerate them. My family was concerned that I was taking steroids again and they were nervous about my climb. I shared my research about health and safety on the mountain and explained my medical plan to protect me against HAE attacks. Despite the precautionary measures I was taking, they were supportive, but concerned for my well-being and wondered if I really needed to climb Kilimanjaro...I did.

The morning I began the climb, I administered 2,000IU of C1 in my hotel room in Moshi, Tanzania. The first few days of the climb felt easy to me. I enjoyed the gorgeous and ever-changing scenery. I felt strong, capable and excited as the temperatures steadily fell. There were 10 other trekkers climbing with me, and I was one of the lucky few who got very limited altitude sickness symptoms. But my fears centered around the 6th day of my trek, when I would need to administer another





Dana raised 2,482.46 GBP for HAE UK in honor of her Mount Kilimanjaro climb. In April 2017 she was asked to join the Board of Trustees for HAE UK and is excited to continue to contribute to the organization.

C1 intravenously at 4,600 meters above sea level. This would be at near freezing temperatures having had no running water for six days.

I slept with my C1 and Icatibant in my sleeping bag at night to ensure they did not freeze as the temperatures dipped below freezing during our ascent. I could not sleep on the 5th night of the trek, and it is hard to know if it was from the altitude or because I was so petrified of giving myself an intravenous injection on the mountain the following day. In the afternoon of day 6, I sat in the dining tent and managed the intravenous injection with more ease than I could have imagined.

And then on to the summit.

Yes, at 11:30 pm, we prepared for our ascent to the summit. While I was still in my sleeping bag, I gave myself a subcutaneous Icatibant injection as another preventative measure and carried an additional Icatibant jab and C1 dose just in case I needed them at the summit. We started trekking up the last 1,000+ meters to the Kilimanjaro summit at midnight, under the cover of the most incredible stars I had ever seen.

“Poli poli,” that means “slowly, slowly” in Swahili, our guides repeated through the night, and encouraged us to keep taking our tiny steps towards the top. I was

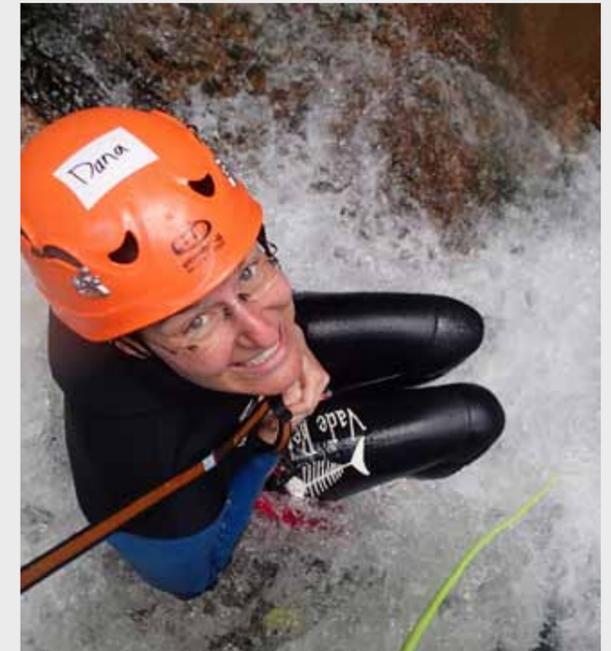
lucky: I didn't have any HAE attacks on the trip, and I made it to Uhuru Peak at 5,895 meters above sea level with eight members of my group.

The lack of air pressure at the top of the mountain makes you feel like every breath you take is a shallow, quarter gulp of air. But I felt giddy with accomplishment after making the heavy footsteps to the top. As I looked out over the vast planes of Tanzania, I reflected on all the times when people had told me that I couldn't do something because it might make me sick, or that something was not a good idea because I had HAE or the times when I had to sit on the sidelines because I was too sick to be in the game. Determination, willpower and the right type of support made my crazy goal a reality.

As the fatigue of the day intensified, and I trudged back down past the receding glaciers at the summit, I was overwhelmed by the enormity of what I had accomplished because I believed it was possible and because I was surrounded by people who said, “Yes, go do it!”

You have told me that as time progresses, you have become increasingly proud of your accomplishment. Why is that?

It changed how I think about the barriers and fears I often have. While Kilimanjaro may not be the mountain everyone climbs, we all have our own mountain. Maybe it is a tough challenge at work? Difficult people in your life? Your own inhibitors keeping you from your dreams? Or your HAE getting in the way of you living your life? With a can-do mental attitude to try and people around you who support you, you can climb your mountains and make your way to the top.



HAE in UK

- *Member organization*
HAE UK established in 2010.
www.haeuk.org.
- *Diagnosed patients*
Nearly 300 registered patients in the HAE UK database; the organization estimates between 1,000 and 1,500 patients.
- *Points of HAE interest*
There are a few specialist HAE centers, but this is a new process for the NHS (UK National Health Service) so not all centers are accredited yet; all cities and main towns in the UK have immunology departments/service in their hospitals.
- *Available medication*
Berinert, Cinryze, Firazyr, Ruconest.



Clinical Trials

According to the International Clinical Trials Registry Platform under World Health Organization (WHO) and clinicaltrials.gov under the U.S. National Institutes of Health the following trials should be recruiting at this moment:

Biomarker for HAE Disease Type 1 (BioHAE)

– will be recruiting in Germany.

<https://clinicaltrials.gov/ct2/show/NCT03029728?term=hereditary+angioedema&recr=Open&rank=1>

Safety of Ruconest in 2-13 Year Old Hereditary Angioedema (HAE) Patients

– recruiting in Czech Republic, Germany, Hungary, Israel, Italy, Macedonia, Poland, Romania, and Slovakia.

<https://clinicaltrials.gov/ct2/show/record/NCT01359969>

Study of BCX7353 as a Treatment for Attacks of Hereditary Angioedema

– recruiting in Austria, Hungary, and Romania.

<https://clinicaltrials.gov/ct2/show/record/NCT03240133>

Study to Assess the Tolerability and Safety of Ecallantide in Children and Adolescents With Hereditary Angioedema

– recruiting in United States.

<https://clinicaltrials.gov/ct2/show/record/NCT01832896>

Efficacy and Safety of BCX7353 to Prevent Angioedema Attacks in Subjects With Hereditary Angioedema (APeX-1)

– recruiting in Australia, Austria, Canada, Denmark, Germany, Hungary, Italy, Macedonia, Spain, Switzerland, and United Kingdom.

<https://clinicaltrials.gov/ct2/show/record/NCT02870972>

C1 Inhibitor Registry in the Treatment of Hereditary Angioedema (HAE) Attacks

– recruiting in Bulgaria, Czech Republic, France, Germany, Hungary, Italy, Norway, Poland, Slovakia, and Sweden.

<https://clinicaltrials.gov/ct2/show/NCT01397864>

Biomarker for Hereditary Angioedema Disease Type 1 (BioHAE)

– recruiting in Germany.

<https://clinicaltrials.gov/ct2/show/record/NCT03029728>

Firazyr® Patient Registry Protocol (Icatibant Outcome Survey - IOS)

– recruiting in Austria, Brazil, Czech Republic, Denmark, France, Germany, Greece, Israel, Italy, Spain, Sweden, and United Kingdom.

<https://clinicaltrials.gov/ct2/show/NCT01034969>

Determination of Specific Biomarkers of Acute Attack of Angioedema Within Pediatric Population (BRADYKID)

– recruiting in France.

<https://clinicaltrials.gov/ct2/show/NCT02854397>

The Role of the Coagulation Pathways in Recurrent Angioedema (Angiocoag)

– recruiting in France.

<https://clinicaltrials.gov/ct2/show/NCT02892682>

Study of Clinical, Biological Characteristics and Quality of Life of Patients With Hereditary or Acquired Non Drug-induced Bradykinin-mediated Angioedema, Monitored in Besançon's Partner Site Reference Center for Studies of Kinin-mediated Angioedema (CREAK) (QUALANGIO)

– recruiting in France.

<https://clinicaltrials.gov/ct2/show/record/NCT03240991>

Global Advocacy Work

Recent events

3 – 6 August: HAEi was in **Frankfurt, Germany** for the HAEi Youngster's Summer Camp as well as the Executive Committee meeting.

2 - 4 September: HAEi conducted a Regional Patient Advocate Workshop in **Malta**.

15 – 17 September: HAEi participated in the US HAEA Patient Summit in **Minneapolis, USA**

Upcoming events

29 - 30 September: HAEi will participate in and conduct the 2017 HAEi South Eastern Europe Workshop in **Skopje, Macedonia**.

7 - 8 October: HAEi will participate in and conduct the 2017 HAEi Central and Eastern Europe Workshop in **Warsaw, Poland**.

24 - 26 October: HAEi will meet with patient advocates and physicians in Cape Town, South Africa to pursue ways for a member organization.

10 - 12 November: HAEi will participate in the 2017 Scandinavian Conference by HAE Scandinavia in **Stockholm, Sweden**.

18 November: HAEi will participate in the German patient organization's 20th anniversary in **Berlin, Germany**.

22 - 23 November: HAEi will participate in the DGA meeting in **Mainz, Germany** - arranged by Prof. Bork.

29 - 30 November: HAEi will meet with patients and physicians in **Bangkok, Thailand** to escalate the medicines access and pursue the options of a patient meeting.

8 - 9 December: HAEi will be in **Dubai, United Arab Emirates** working on a strategic plan for the Gulf Region with the HAEi Regional Patient Advocate Rashad Matraji.



Medical Papers

Here are summaries of some of the recently published HAE related scientific papers:

Treatment of HAE due to C1 inhibitor deficiency in Argentina – by E. Malbran, Unidad de Alergia, Asma e Inmunología Clínica, Buenos Aires, Argentina, et al.:

Argentina's C1-INH-HAE patients had a sustained improvement in their access to medication. Efforts should continue to further improve accessibility and optimal management of HAE acute attacks to all patients in the country. *Medicina (B Aires)*. 2017

Angioedema – by J. Hahn et al., Ulm University Hospital, Germany:

Angioedema of the upper airways requires a well-coordinated diagnostic and therapeutic approach. Steroids and antihistamines are very effective against mast-cell-mediated angioedema, but nearly useless against bradykinin-mediated angioedema. For angioedema induced by ACE inhibitors, no causally directed treatment has yet been approved. *Dtsch Arztebl Int.*, July 2017

HAE with a mutation in the plasminogen gene – by K. Bork, Johannes Gutenberg University, Mainz, Germany, et al.:

HAE with a mutation in the plasminogen gene is a novel type of HAE. It is associated with a high risk of tongue swellings. *Allergy*, August 2017

The Complex Interaction Between Polycystic Ovary Syndrome and HAE: Case Reports and Review of the Literature – by M. Iahn-Aun et al., Faculdade de Medicina da Universidade de São Paulo, São Paulo, Brazil:

HAEnC1-INH is an estrogen-dependent form of HAE. It is well established that exogenous estrogen triggers attacks of all types of HAE. However, this is the first description of the association between polycystic ovary syndromes and HAE, in which polycystic ovary

syndromes could be masking HAE symptoms. We propose that polycystic ovary syndromes might have a protective role regarding HAE attacks, because of its particular hormonal features, that is, hyperandrogenism and relative stable levels of estradiol. The use of combined estrogen-progestin compounds in women with polycystic ovary syndromes and HAE must be avoided, and treatment must be individualized. *Obstet Gynecol Surv.*, July 2017

Breakthrough attacks in patients with HAE receiving long-term prophylaxis are responsive to icatibant: findings from the Icatibant Outcome Survey – by W. Aberer, Medical University of Graz, Austria, et al.:

Patients who use long-term prophylaxis should be aware that breakthrough attacks can occur, and such attacks can be severe. Thus, patients with C1-INH-HAE using long-term prophylaxis should have emergency treatment readily available. Data from the Icatibant Outcome Survey show that icatibant is effective for the treatment of breakthrough attacks. *Allergy Asthma Clin Immunol.*, July 2017

HAE with Normal C1 Inhibitor: Update on Evaluation and Treatment – by M. Magerl, Charité - Universitätsmedizin Berlin, Germany, et al.:

A new form of hereditary angioedema (HAE) was identified in the year 2000. Its clinical appearance resembles HAE types I and II, which are caused by mutations that result in a deficiency of C1 inhibitor (C1-INH). In patients with the new form of HAE, C1-INH plasma levels and function values are normal, so it's termed HAE with normal C1-INH (HAE-nC1). HAE-nC1, in a subgroup of patients, is thought to be caused by mutations that affect the F12 gene. The diagnosis of HAE-nC1 is based on history and clinical criteria. There are no licensed drugs with proven treatment effects for HAE-nC1. *Immunol Allergy Clin North Am.*, August 2017

Patient satisfaction and experience with intravenously administered C1-inhibitor concentrates in the United States – by MA Riedl, University of California-San Diego, USA, et al.:

Most respondents who used a peripheral vein to administer treatment reported having difficulty finding a usable vein or getting the infusion to work properly at least some of the time. Issues accessing veins, exhausted veins, and frequency of attacks were the main reasons physicians recommended ports to respondents. Although ports allow easier administration of therapy, respondents with ports experienced problems such as occlusion, thrombosis, and infection. *Ann Allergy Asthma Immunol.*, July 2017

Preventing HAE Attacks in Children Using Cinryze®: Interim Efficacy and Safety Phase 3 Findings – by E. Aygören-Pürsün, et al., University Hospital Frankfurt, Germany:

Interim findings from this study indicate that routine prevention with intravenous administration of C1-INH is efficacious, safe, and well tolerated in children ≥ 6 years of age. *Int Arch Allergy Immunol.*, 2017

Efficacy and safety of an intravenous C1-inhibitor concentrate for long-term prophylaxis in HAE – by T. Craig, Penn State University, USA, et al.:

Intravenous plasma-derived, pasteurized, nanofiltered C1-inhibitor concentrate given as long-term prophylaxis for HAE was safe and efficacious, with a low rate of attacks that required plasma-derived, pasteurized, nanofiltered C1-inhibitor concentrate treatment, particularly within the first several days after long-term prophylaxis administration. *Allergy Rhinol (Providence)*, March 2017

Prevention of HAE Attacks with a Subcutaneous C1 Inhibitor – by H. Longhurst, Barts Health NHS Trust, United Kingdom, et al.:

In patients with HAE, the prophylactic use of a subcutaneous C1 inhibitor twice weekly significantly reduced the frequency of acute attacks. *N Engl J Med.*, March 2017

Clinical characteristics and real-life diagnostic approaches in all Danish children with HAE – by A. Aabom, Odense University Hospital, Denmark, et al.:

The rate of home therapy was high and androgens had been avoided. Complement values were often equivocal, especially in cord blood samples. Consequently, we have changed diagnostic practice to early genetic testing in children where the family mutation is known. *Orphanet J Rare Dis.*, March 2017

Anabolic androgen use in the management of HAE: Not so cheap after all – by KY Tse, Kaiser Permanente Medical Center, San Diego, USA, et al.:

Long-term anabolic androgen use enhances the risk of developing comorbid health conditions, thus amplifying the cost of care. *Ann Allergy Asthma Immunol.*, April 2017

News from the Industry

22 July 2017

The U.S. Food and Drug Administration (FDA) has granted **CSL Behring** seven years of orphan-drug exclusivity for HAEGARDA (C1 Esterase Inhibitor Subcutaneous [Human]), the first and only subcutaneous treatment option for prevention of HAE attacks. The FDA approved HAEGARDA on 22 June 2017 for routine prophylaxis to prevent HAE attacks in adolescent and adult patients, and marketing exclusivity will continue through 22 June 2024.

“HAEGARDA represents an important advance in the care of HAE, having been shown to reduce the number of HAE attacks by a median of 95 percent relative to placebo with subcutaneous delivery,” said Bill Campbell, Senior Vice President and General Manager, North America, CSL Behring. “CSL Behring is dedicated to delivering innovative products for rare diseases, including HAE, and we are pleased the FDA has recognized our commitment to helping positively impact the lives of patients with this debilitating and potentially life-threatening condition.”

HAEGARDA is a plasma-derived concentrate of C1-INH that is self-administered twice weekly subcutaneously. Subcutaneous administration of C1-INH builds and maintains a steady-state level of functional C1-INH activity and offers patients ease of use by eliminating the need for venous access, including ports. In addition, HAEGARDA had a reduction in the use of rescue medication by a median of greater than 99 percent relative to placebo.

To support access to HAEGARDA, CSL Behring offers HAEGARDA ConnectSM, a comprehensive support program providing a range of resources and programs to assist with HAE and HAEGARDA education and information, financial assistance programs, nursing services, and reimbursement support.

(Source: CSL Behring)

CSL Behring

26 July 2017

The weekly peer-reviewed general medical journal The Lancet has published data from a Phase II, double-blind, placebo-controlled, randomized clinical trial (NCT02247739) evaluating the efficacy and safety of RUCONEST (C1 esterase inhibitor [recombinant]) for the prevention of HAE attacks.

As previously reported, in a study with 32 patients RUCONEST® 50 IU/kg (max 4200 IU) demonstrated a statistically significant and clinically relevant reduction in attack frequency for both the twice-weekly and once-weekly treatment regimens when compared to placebo and was generally safe and well-tolerated in the study.

Lead-author and co-principal investigator, Marc Riedl, MD, Professor of Medicine and Clinical Director at the US HAEA Angioedema Center at The University of California San Diego, commented: “Patients with frequent HAE attacks, such as those enrolled in this study, are severely affected and have limited safe and effective choices to control their disease. The findings from this positive study emphasize the unique attributes of recombinant C1INH, and support the potential prophylactic benefits of the medication.”

Dr. Bruno Giannetti, MD, Chief Operations Officer of **Pharming Group N.V.**, added: “We are pleased to see these important results published in a leading peer-reviewed journal. We wish to thank the patients and researchers involved in this study, and we look forward to continuing our work with the HAE community to improve treatment options.”

RUCONEST® is a recombinant C1 esterase inhibitor (C1-INH) indicated for the treatment of acute attacks in adult and adolescent patients with HAE. The product was granted Food and Drug Administration approval in this indication on 17 July 2014. RUCONEST® addresses the cause of HAE attacks by increasing C1-INH in the plasma to normal levels and by stopping the production of kallikrein, an enzyme that activates bradykinin and causes blood vessels to leak.

The complete publication can be found at: [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(17\)31963-3/fulltext?elsca1=tlxpr](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(17)31963-3/fulltext?elsca1=tlxpr)

(Source: Pharming)

 **Pharming**

27 July 2017

Pharming Group N.V. presents its (unaudited) financial report for the six months ended 30 June 2017. CEO Sijmen de Vries comments:

“Our strategic decision to reacquire the commercial rights to sell RUCONEST in North America has significantly increased revenue and profit generation for the first half of the year compared to the first half of 2016.

Combined with ongoing growth in the number of US patients entering our full patient care plan, RUCONEST SOLUTIONS, and new European patients starting RUCONEST therapy with our recently introduced EU home use kit, we expect sales to increase in H2.

Our strategy of increasing market access in the US with our sales, market access, nursing and patient management teams, and in the EU with continued expansion of our direct commercialization efforts, is driving the growth in new patients using RUCONEST.

In March, the European Commission adopted the Commission Implementing Decision to amend the marketing authorisation for RUCONEST to include self-administration using the RUCONEST Administration Kit. This decision allows for self-administration of RUCONEST for acute HAE attacks by adolescents and adults with a new custom-designed RUCONEST Administration Kit in the comfort and privacy of their own homes or at any other place they choose, without the necessity of a health care professional being present. The Administration Kit is now available for use in various EU markets, following approval of the Educational Materials by the local authorities in those markets.

Based on the increased momentum in sales volumes, underlying improving trends in identifying and diagnosing patients, combined with better patient care and management practices, and a focus on specialty pharmacy customers, we expect to further increase sales. We will continue to control costs and investments to improve profitability and drive sustainable long-term growth. We continue to expect additional positive operating results for the remainder of the year.”

(Source: Pharming)



28 July 2017

KalVista Pharmaceuticals, Inc. provides an operational update and released financial results for the fiscal fourth quarter and full year ended 30 April 2017. From CEO Andrew Crockett's remarks:

“KalVista has been making substantial advances with our portfolio of oral small molecule plasma kallikrein inhibitors for treatment of HAE. The first HAE program in the portfolio, KVD818, is nearing the end of its first-in-human study and we continue to progress the next candidate, KVD900, to the clinic. Our scientific team plans to bring at least one additional HAE program to the clinic in 2018 as we continue to evaluate all of these molecules with the goal of providing a best-in-class oral therapy for patients.

Early data for KVD818 indicate good exposure and a good tolerability profile. We intend to evaluate final data and determine future development plans while the other molecules in the portfolio advance. As for KVD900 it is anticipated to be the next program to enter clinical testing, with regulatory filing before end of the calendar year. KVD900 represents the continual evolution of the portfolio, with a differentiated set of properties compared to KVD818 that may support development in multiple regimens of HAE therapy.”

(Source: KalVista)



3 August 2017

BioCryst Pharmaceuticals, Inc. has announced the dosing of the first subject into ZENITH-1, a clinical trial studying up to three dosage strengths of a liquid formulation of BCX7353 given as a single oral dose for the acute treatment of angioedema attacks in patients with HAE.

“We are excited to launch the ZENITH-1 exploratory Phase 2 trial. Based upon pharmacokinetic and pharmacodynamic properties of BCX7353, we believe it could be an efficacious and convenient oral alternative to parenteral treatments of acute angioedema attacks in patients with HAE. A liquid formulation of BCX7353 would be a strong complement to our prophylactic treatment program,” said Jon Stonehouse, CEO. “We believe this new formulation can fill an unmet need for patients who are looking for better and easier ways to manage their illness.”

ZENITH-1 is a randomized, double-blind, placebo-controlled, adaptive dose-ranging trial of the efficacy, safety and tolerability of BCX7353 for treatment of acute angioedema attacks, and will enroll up to 60 subjects with HAE. Blinded study drug will be dosed as an oral liquid after onset of symptoms, for up to 3

attacks in each subject, with each subject receiving both BCX7353 (for 2 attacks) and placebo (for one attack) in a randomized sequence. The trial is structured with up to 3 consecutive cohorts testing single doses of 750 mg (from 12 to 36 subjects), 500 mg (up to 12 subjects) and 250 mg (up to 12 subjects), starting with 750 mg. Efficacy assessments include patient-reported composite visual analogue scale (VAS) scores, patient global assessment, change in symptoms, and use of rescue medication.

Treatment effect will be assessed on accumulating results, beginning after 12 subjects have completed study in the first cohort (750 mg), by comparing the proportion of BCX7353-treated and placebo-treated attacks which have a stable or improved composite VAS at 4 hours post dose. Once a treatment effect is demonstrated, enrollment at the 500 mg dose level will commence. If treatment effect at the 500 mg dose level is similar to 750 mg dose level, the 250 mg dose cohort will be enrolled.

(Source: BioCryst)



9 August 2017

BioCryst Pharmaceuticals, Inc. has announced financial results for the second quarter ended 30 June 2017. Jon P. Stonehouse, President & CEO, comments:

“We are excited by the positive results previously reported in Parts 1 and 2 of the APeX-1 clinical trial that indicate we have an active oral drug, and look forward to completing the trial and reporting complete trial results in the third quarter of this year. These trial results should give us additional information to determine what doses we propose to regulatory authorities later this year for the Phase 3 program, with the goal of starting a pivotal trial early next year.”

(Source: BioCryst)



10 August 2017

Adverum Biotechnologies, Inc. has reported financial results for the second quarter ended 30 June 2017 and provided a corporate update.

“We are making important progress with our development and regulatory initiatives to transform Adverum into a clinical-stage company by the end of this year,” said Amber Salzman, Ph.D., president and CEO of Adverum Biotechnologies. “Since the beginning of this year, we have held meetings with the FDA, paving the way to advancing our three lead gene therapy programs toward the clinic.”

For ADVM-053, Adverum’s gene therapy product candidate for treating HAE, the Company held a pre-investigational new drug (IND) meeting in the first quarter of 2017 and is planning to file an IND application with the FDA.

(Source: Adverum)



ADVERUM
BIOTECHNOLOGIES

11 August 2017

Heath Canada – responsible for helping Canadians maintain and improve their health – has approved Berinert (C1 Esterase Inhibitor, Human) from **CSL Behring** for pediatric HAE.

“HAE is an unpredictable and life threatening disease with few treatment options approved for children,” said Paul Keith, M.D., Associate Professor, Division of Clinical Immunology and Allergy, Department of Medicine, McMaster University. “Berinert’s new indication for use in the pediatric population provides a much needed treatment option for this vulnerable patient group.”

“The HAE Canada Team is so excited that CSL Behring listened to patients, caregivers, family members. This approval for Berinert in pediatric patients is a very important achievement for our children and parents living with HAE in Canada”, said Jacquie Badiou, President of HAE Canada.

Berinert is indicated for the treatment of acute abdominal, facial, or laryngeal attacks of HAE of moderate to severe intensity in pediatric and adult patients. The safety and efficacy of Berinert for prophylactic therapy has not been established.

(Source: CSL Behring)



CSL Behring

6 September 2017

BioCryst Pharmaceuticals, Inc. has announced final results from its Phase 2 APeX-1 clinical trial in HAE. APeX-1 was a 3-part dose ranging trial designed to evaluate the efficacy, safety, tolerability, pharmacokinetics (PK) and pharmacodynamics of orally administered once-daily (QD) BCX7353 for 28 days, as a preventative treatment to reduce the frequency of attacks in HAE patients. This final analysis evaluated data from all patients in Parts 1, 2 and 3 of the trial.

“We are delighted to see a robust treatment effect after completing the largest ever Phase 2 trial in HAE patients. We now have the information necessary to select doses for Phase 3,” said Jon Stonehouse, CEO & President. “The 125 mg once-daily oral dose of BCX7353 provided a high level of efficacy and excellent tolerability. This product profile will be an extremely attractive treatment option for physicians and patients.”

“An effective and tolerable prophylaxis of hereditary angioedema attacks is of paramount importance for many HAE patients and the benefit of an oral administration route for these chronically ill patients cannot be overestimated. In that respect, the results of this trial are extremely encouraging for the HAE patient community,” said Dr. Emel Ayyören-Pürsün, MD,

principal investigator for the APeX-1 trial and Head of Interdisciplinary Competence Center for Hereditary Angioedema, and Specialist in Internal Medicine and Hemostaseology Department of Child and Adolescent Medicine, Goethe University Hospital Frankfurt.

“With an active IND in the U.S. and the completion of APeX-1, we are now preparing for meetings in the fourth quarter of this year with the FDA and EMA to finalize the Phase 3 program,” said William Sheridan, Chief Medical Officer. “Our goal is to start the Phase 3 efficacy and long-term safety trials in the first quarter of 2018.”

Seventy-five subjects were randomized and included in the final analysis of pooled data from Parts 1, 2 and 3: 7 at 62.5 mg, 14 at 125 mg, 14 at 250 mg and 18 at 350 mg of BCX7353 QD; and 22 placebo. The qualifying attack rate was approximately 1/week. Baseline characteristics were generally well balanced across the treatment groups. Compliance with daily study drug dosing for 28 days was excellent ($\geq 98\%$ across all treatment groups).

(Source: BioCryst)



BIOCRYST
PHARMACEUTICALS, INC.

11 September 2017

Pharming Group N.V. has concluded its End-of-Phase 2 interactions with the U.S. Food and Drug Administration (FDA). As part of these interactions, Pharming provided the FDA with the results of two completed Phase 2 trials of Ruconest for the prophylaxis of HAE attacks; a randomized, double-blind, placebo-controlled trial and an open-label study. The two studies enrolled a total of 56 patients and showed consistent efficacy and safety results.

Based on the feedback from the FDA, Pharming will submit a BLA supplement (sBLA) to the FDA for review in Q4 of this year, which will include routine prophylaxis against angioedema attacks in adolescent and adult patients with HAE as an expanded indication for Ruconest.

Dr. Bruno Giannetti, MD, Chief Operations Officer of Pharming, commented: “We look forward to continuing to work with the FDA to expand treatment options with Ruconest for HAE patients.”

(Source: Pharming)



Pharming

11 September 2017

Shire plc announces positive topline Phase 3 results for the Sahara study, a global, multi-center, randomized, double-blind, placebo-controlled, partial crossover trial that evaluated the efficacy and safety of subcutaneously administered C1 esterase inhibitor [human] Liquid for Injection, also referred to as SHP616 Liquid, versus placebo over two 14-week treatment periods in patients 12 years of age or older with symptomatic HAE. SHP616 is an investigational treatment administered subcutaneously, being evaluated for the prevention of angioedema attacks in patients with HAE.

“Patients want and deserve options when it comes to their treatment for HAE,” said Dr. William Lumry, Clinical professor of Internal Medicine at Southwestern Medical School, Dallas, Texas. “These results are clinically significant, meaningful and relevant to HAE patients whose needs are currently not met today.”

This study met its primary endpoint and all key secondary endpoints. The fixed 2000 IU dose, administered every three to four days as a single 4mL subcutaneous injection, led to a statistically significant and clinically meaningful reduction of 2.32 (95% CI: 1.74 – 2.89, $p < 0.0001$) attacks/month in the mean HAE attack rate (primary endpoint) compared to placebo. In a commonly reported measure of effectiveness, SHP616 Liquid yielded a median HAE attack rate reduction of 79% from Day 0 (entire treatment period) or 85% from Day 14 (after reaching steady state) compared to placebo. A total of 78% of patients experienced 50% or greater reduction in HAE attack rate (key secondary) compared to placebo, and 38% of patients were attack free during their SHP616 Liquid treatment period, compared to 9% during the placebo period. The 75 patients randomized in this study were required to have at least two HAE attacks per month in the three consecutive months prior to screening, and were representative of the full HAE disease spectrum (88% Type 1 HAE; 12% Type 2 HAE; mean of 11.9 attacks three months prior to screening; 51% had a history of prior use of long term prophylaxis). The study was completed by 77% of patients in the crossover sequences and 87% in the active-only sequence.

No treatment-related serious adverse events or deaths were reported. In the crossover sequences, the most common adverse events were viral upper respiratory tract infection (5.3% placebo vs. 12.5% SHP616 Liquid), upper respiratory tract infection (7.0% placebo vs. 12.5% SHP616 Liquid) and headache (10.5% placebo vs. 10.7% SHP616 Liquid). There were no venous thromboembolic events and no anti-C1 INH antibodies were detected.

“In developing medicines for HAE patients over the last decade, we know that treating physicians and patients suffering from HAE look for efficacious, safe and convenient treatment and prevention options, and we continue to strive to meet as many of these needs as possible through continued innovation,” said Howard Mayer, M.D., ad interim Head of Research and Development, Shire. “We are very pleased with the strong results of this study, which demonstrated efficacy with a low volume dosing regimen, and what it potentially could mean for the global HAE community, if approved.”

(Source: Shire)



15 September 2017

From the **KalVista Pharmaceuticals, Inc.** operational and financial results for the fiscal first quarter ended July 31, 2017:

“We continue to make progress with our portfolio of oral plasma kallikrein inhibitors in pursuit of our goal of a best-in-class oral therapy for HAE,” said CEO Andrew Crockett. “We are completing the first-in-human trial of KVD818 and plan to evaluate final data and determine future development plans as we continue to advance our additional molecules. KVD900 remains on track to be our next candidate to enter clinical testing, with a regulatory filing before the end of 2017, and there will be at least one additional candidate entering the clinic in 2018.”

(Source: KalVista)



16 September 2017

Diplomat Pharmacy, Inc. has completed its acquisition of Focus Rx Pharmacy Services Inc., a customer-focused healthcare partner that provides home infusion and specialty prescription management services. This acquisition bolsters Diplomat’s offering of extensive solutions to meet growing demand for infusion therapies.

Diplomat’s specialty infusion services are built on the combined experience of experts in a range of areas and fully dedicated to meeting the specialized needs of individuals living with chronic conditions including HAE.

“As a specialty infusion provider in today’s rapidly evolving healthcare environment, we are excited to partner with Diplomat to enhance the delivery of comprehensive and personalized services to our patients,” said Lou Puleo, CEO of Focus Rx. “Our efforts improve patient results, as well as the clinical, operational, and financial well-being of our partners,” Puleo said. “Diplomat will further our commitment, enabling us to deliver integrated health care services to new and existing consumers and advancing our strong clinical expertise.”

Diplomat is the largest independent provider of specialty pharmacy services in the USA helping patients and providers in all 50 states. The company offers medication management programs for people with complex chronic diseases and delivers unique solutions for manufacturers, hospitals, payors, providers, and more.

(Source: Diplomat)



17 september 2017

The Food and Drug Administration (FDA) has recently received reports from patients, physicians, and specialty pharmacies that they have been unable to obtain C1-Esterase Inhibitor (Human) Cinryze. Healthcare providers and patients may wish to consider alternate treatment options, including:

For Prophylaxis: Haegarda was recently licensed for prophylaxis of HAE attacks. Haegarda is administered subcutaneously, twice a week. Information about Haegarda, including the prescribing information, is posted on FDA's web site.

For Treatment: It is important for patients, even those on prophylaxis, to make sure they have rapid access to treat any acute HAE attacks. Four products are licensed for treatment of HAE attacks:

- Berinert (CSL Behring)
- Ruconest (Pharming)
- Firazyr (Shire)
- Kalbitor (Dyax Corporation)

FDA recommends that patients with HAE work closely with their health care professionals. Your doctor is in the best position to assess your medical situation and determine your best course of treatment.

If you have additional questions, please feel free to contact FDA's Center for Biologics Evaluation and Research by phone at (800) 835-4709, (240) 402-8010, or by email at ocod@fda.hhs.gov.

(Source: FDA)



HAEi Global Access Program Update

In 2015, HAEi launched the first medicines access program, led by a patient advocacy organisation. The HAEi Global Access Program (GAP) brought patient advocacy, pharmaceutical medication provider and logistics expertise together via a novel three-way collaboration with one aim; to help patients and physicians in countries where limited or no modern HAE medications are available, have the opportunity to access modern HAE medication for their patients.

HAEi GAP provides access to RUCONEST to patients in all countries where it is not yet commercially available, via a "Named Patient Program" mechanism. A named patient program is where a doctor orders the medication and the cost of the medication is paid for by the government, hospital or the patient's medical insurance.

At this time, in association with Pharming Group N.V, HAEi has appointed a new distribution partner, Inceptua Medicines Access, to deliver the expert logistics support for the HAEi GAP program.

If you think HAEi GAP could help you, please talk to your doctor about the program. More information about the HAEi GAP and RUCONEST can be found on the HAEi website, including flyers that you can share with your doctor to explain how to request access to treatment. Physicians wishing to request RUCONEST for their patients through the HAEi GAP program should contact HAEiGAP@inceptua.com.

Unfortunately, direct patient inquiries cannot be handled by Inceptua. HAEi is here to help you and your physician in any way possible, so if you do have any questions please contact Project Manager Deborah Corcoran at d.corcoran@haei.org.



HAEi around the world

Currently there are HAE member organizations in 56 countries. You will find much more information on the HAE representations around the globe at www.haei.org as the world map will provide you with contact information for the member organizations as well as care centers, hospitals, physicians, available medication, and clinical trials.

The information on www.haei.org is being updated as soon as HAEi receives fresh data from the national member organizations.

