


# Global perspectives

HAEI MAGAZINE · ISSUE 4/2019

 84 Member countries



  
**HAE  
GLOBAL  
CONFERENCE  
FRANKFURT  
14-17 MAY  
2020**

**GA<sup>2</sup>LEN/HAEI ACARE**  
Global network of specialized  
treatment centers becomes a reality

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**HAEI WEBSITE HOSTING**  
Ready to host your website  
– also in a light version

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Issue 4/2019  
December 2019

**Cover photo**

The Römer medieval buildings is one of the most important landmarks of Frankfurt am Main – the venue for the 2020 HAE Global Conference.

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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



**DEAR HAE INTERNATIONAL FRIENDS,**

On behalf of HAE International's Board of Directors, leadership, and staff, I wish you a happy and healthy holiday season!

We turn the page on 2019, with a growing organization that represents HAE member organizations in 84 countries situated in every continent on the globe. Every day, HAE International leadership and staff works to best meet the needs of our global patient community with an eye towards finding even more creative and effective ways to help all in our HAE family live a happy and healthy life. We strive to capture the energy and spirit that members bring to the table and are dedicated to the notion that patient organizations are a laboratory for innovation. To that end, 2019 has been an important year during which HAE International established several truly creative new initiatives.

Upgrading clinical care for patients throughout the globe by establishing certified HAE care centers has always been one of HAE International's fundamental aspirations. Our idea has been to build a uniformly effective and patient-centric clinical care network with skilled, compassionate physicians willing to complement our advocacy efforts and help us achieve the fundamental goal that unites our community – maximum access to modern HAE therapies. The path to fulfilling this longstanding objective is now a reality through a joint venture with GA<sup>2</sup>LEN – a nonprofit organization of leading clinical and research facilities in the field of allergy and asthma. We are now in the process of establishing GA<sup>2</sup>LEN/HAEi Angioedema Care Centers of Reference and Excellence (ACARE Centers). GA<sup>2</sup>LEN's experience

and success in creating a global network of 93 accredited urticaria care centers combined with HAE International's global footprint of member organizations creates synergies that we believe will result in the rapid growth of ACARE Centers.

HAE International's core principle is that patient organizations make the difference when it comes to winning access to and reimbursement for modern HAE medicines. Historically, the patient's role in the approval process has been to communicate our stories and illustrate the horrific burden placed on us and our families. While decision makers are usually sympathetic to our descriptions of HAE's devastating impact, their emotional response is often not enough to sway their decisions. Our experience teaches us that the best way to influence a positive outcome is to support our testimonials with real world data. To that end, HAE International has developed a turnkey customizable economic model and quality of life methodology for our member organizations that will quantify disease burden in terms that decision makers will best understand.

Finally, helping member organizations identify HAE patients has always been at the top of HAE International's list of services. While this effort has been successful in numerous countries, there are many countries where patient identification remains a big challenge. To solve this problem, HAE International is pilot testing a method designed to establish a "heat map" that can identify likely "pockets" of HAE patients. This will enable us to pinpoint areas where we can make the first step in the patient identification process – HAE education and awareness campaigns aimed at HAE diagnosis.

We can look back at 2019 as a productive year but are dedicated to using past accomplishments as a springboard for achieving even more in 2020.

With Warmest Holiday Regards,

Anthony J. Castaldo  
President & CEO, HAE International

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## A NEW GLOBAL NETWORK OF SPECIALIZED TREATMENT CENTERS BECOMES A REALITY

HAE International together with GA<sup>2</sup>LEN – a non-profit European based organization of leading clinical and research facilities in the field of allergy and asthma – has established GA<sup>2</sup>LEN/HAEi ACARE (Angioedema Centers of Reference and Excellence).

“The joint venture with GA<sup>2</sup>LEN fulfills HAE International’s longstanding goal of establishing a worldwide network of accredited angioedema care centers. GA<sup>2</sup>LEN’s experience and success in creating a global network of 93 accredited urticaria care centers can be readily duplicated in the angioedema space. Together with GA<sup>2</sup>LEN, we will work on developing ACARE ensuring that it will become an attractive partner for HAE treating physicians all over the world”, says HAE International President and Chief Executive Officer Anthony J. Castaldo.

HAE International has grown dramatically since the early days and is now represented in 84 countries worldwide. Anthony J. Castaldo says:

“The success of our Regional Patient Advocacy program has already shown the empowering value of a decentralized approach to advocacy, which, first and foremost enables fulfillment of the 2018 general assembly commitment to broaden participation in HAE International Governance by establishing Regional Advisory Groups that correspond to the areas covered by our Regional Patient Advocates. Going forward we look to achieve greater participation at the regional/local level to fulfill our emerging fundamental goals: To protect and work to broaden access in countries where modern medicines are available, and to make concerted and systematic efforts to bring modern medicines to countries where none are currently available.

The path to a successful global HAE movement is to continue nurturing local patient advocacy and member organization development by adding an important extra dimension: Connecting patient advocates with HAE physicians in the region, and upgrading clinical care in the region by creating a global accredited HAE physician network.”

“With ACARE we take a significant step to create empowered, effective, decentralized, patient-focused advocacy and clinical care to achieve our fundamental goal – that is maximum access to HAE therapies – and we have paved the way for accredited angioedema clinical care centers”, says HAE International Executive Vice President & Chief Operating Officer Henrik Balle Boysen:

“Establishing ACARE through cooperation with GA<sup>2</sup>LEN will give us the certified accreditation program that we’ve been looking for, instant access to 93 UCARE centers – some of them already HAE centers – and an inclusive solution where nobody will be left out as ACARE will be a worldwide network of specialized treatment centers.”

GA<sup>2</sup>LEN and HAE International have agreed that 32 requirements must be met for a hospital to become an accredited angioedema clinical care center. Among these requirements are multidisciplinary approach, structured and valid protocols of diagnosis and management, assessment of patient satisfaction and unmet needs, support of the ACARE network, “Never give up” attitude, knowledge and use of current nomenclature and classification of angioedema, family screening, scientific and educational activities, and interaction with and support of HAE International and national angioedema patient organizations.

For more information about GA<sup>2</sup>LEN, please visit: [www.ga2len.net](http://www.ga2len.net)

# NEWS FROM THE HAEi REGIONAL PATIENT ADVOCATES

The past few months have been incredibly busy for all Regional Patient Advocates (RPA). They have held patient meetings, regional workshops, attended conferences, and all attended the RPA Workshop in Copenhagen, Denmark.

The RPA Workshop is an opportunity for all of us to learn and grow as RPAs and to share information and support one another. The workshop was held over two days in September and was a great success with all RPAs giving positive feedback on the agenda and content.

As 2019 draws to a close, all RPAs have set themselves challenges and are working on their plans and budgets for 2020. More great work by the RPAs will continue around the globe over the next year and beyond. The RPAs will be working hard in their regions to establish new contacts and patient groups, educate, organize and facilitate meetings with physicians and patients, advocate, and continue to make a difference around the globe.

**Fiona Wardman**  
Chief Regional Patient Advocate



**MARIA FERRON**  
MEDITERRANEAN & MAGHREB COUNTRIES



I am glad to announce that the first Regional Meeting for the Maghreb countries will be held 6-8 March 2020 in Algiers, **Algeria**. More information about the meeting will be provided in the next issue of Global Perspectives.

**Tunisia** is now included as a member organization in HAE International.

You can stay updated on news from **Libya** on the national organization's new Facebook pages at [www.facebook.com/HAE-Libya-106027060798335](https://www.facebook.com/HAE-Libya-106027060798335) and [www.facebook.com/groups/504807226972545](https://www.facebook.com/groups/504807226972545).

The first physician in **Mauritania** has been added to the HAE International map. This physician is working on trying to locate HAE patients in the country.



**NATASA ANGJELESKA**  
SOUTHEASTERN EUROPE



After the HAE International South Eastern Europe workshop in Skopje, **North Macedonia** a survey was sent to the participants and almost all of them expressed their satisfaction regarding the entire event. They were extremely satisfied with the overall format of the meeting, especially pleased with the panel sessions for physicians and patients, as well as having the opportunity to hear and discuss with our guest presenters, Dr Marc Riedl and Dr Henriette Farkas.

Two new countries have been added to my region: **Greece** and **Cyprus**. I already have frequent and dynamic communication with patient representatives from Greece, as they were participating in the workshop in Skopje. I plan to communicate with the patient representatives from Cyprus in the coming period.

Registration for the 2020 HAE Global Conference in Frankfurt, Germany is high on the agenda in all of the countries, and I am very happy that they have all applied for and received confirmation about travel grants. I am in constant communication to assist them with registration and any logistical issues.

I have assisted a physician from **Kosovo** in finding a laboratory in North Macedonia and send patients for testing about HAE. This may help in diagnosing the first patients in this country. At the same time Dr. Shendever Hasani, a pediatrician from Kosovo, had a presentation about HAE at the First Euroasian Pediatric Congress and VII Kosovo Pediatric School.

I have worked with patient representatives from **Albania, Bosnia and Herzegovina, Montenegro** and **Slovenia** on templates for websites.



**MICHAL RUTKOWSKI**  
CENTRAL EASTERN EUROPE,  
MIDDLE EAST & GULF REGION



September and October were mostly dominated by preparations for the HAE International Central Eastern Europe Workshop which took place on 18-19 October 2019 in Warsaw, **Poland** and gathered HAE community from the region.

This period has, however, also been very abundant for other events and issues related to patient' advocacy activities. I am extremely proud that HAE International has grown by another four member countries – **Armenia, Estonia, Georgia** and **Lithuania** – and that we were able to initiate our collaboration smoothly and effectively. It is very exciting to widen the numbers of countries that will join the global family and see the need for affiliation under HAE International.

As if this was not enough, just recently we have started the arrangements for 2020 HAE International Middle East & Gulf Region Workshop that will take place 9-11 January in the city of Muscat, **Oman**. We expect attendees from more than ten countries from the region.

It is very exciting to see the work of Dr Mariam Movsisyan from Allergology and Clinical Immunology Department of Yerevan State Medical University in Armenia. With the help of the Armenian Relief Fellow Alumni Association and an EU grant, ten HAE seminars were organized in four regions of the country. To understand more how rare and difficult HAE is, a specific survey was done among physicians

of different majors, and it is just a matter of days that the informative Facebook page will be launched. Mariam Movsisyan also encouraged HAE patients to form the organization and to join HAE International, which eventually happened late October. We look forward to welcoming all of them in May next year at the HAE Global Conference in Frankfurt, Germany.

HAE **Belarus** organized the annual summit on 26 October 2019 in the Belarusian Research Center for Pediatric Oncology, Hematology and Immunology in Borovlyany, Minsk region. The meeting gathered approximately 40 participants: patients, caregivers, physicians and pharmaceuticals' representatives from Takeda Belarus. I had the pleasure of attending the meeting and to present the 'Achievements and Perspectives of the HAE International and its Value for Eastern European HAE Communities'. The conference was extremely informative and useful for the patients.

The Belarusian patients' organization has been working very hard to ensure access to HAE medicines, and just recently I have been informed that they successfully initiated the tender, which results in the reception of numerous doses of C1-INH for pediatric HAE patients. It is a phenomenal success that could not have happened without work and dedication of Viktor Lebedz and Dr Irina Guryanova.

**Georgia** is a recent addition to the HAE International family, becoming a member in late October. The driving HAE force is Professor Maia Gotua from the Allergy & Immunology Center in Tbilisi, who looks after many patients with HAE. Maia Goyua puts lots of effort to finally having HAE therapies approved in the country, and she raises awareness about the disease among the physicians' community. To diagnose more patients, her center participates in the clinical study with the potential effective diagnostic method called 'dry blood test'. Due to her engagement, the HAE patients' organization was established, and David Ramazashvili became head of the organization. Both patients and physicians from Georgia will attend the 2020 HAE Global Conference.

Together with Rashad Matraji, the HAE International Patient Advocacy Contractor in the region, I have been working on two very exciting projects that eventually will enable patients' groups from individual countries from the region to broaden the scope of activities and hopefully raise awareness on HAE. One of the projects is 'Website2go', an individualized website for HAE patients' group in each and every country that is part of the HAE International family. The second project is a regional website that will illustrate the current status of management of HAE in the **Middle East and Gulf Region**.

We welcome the first HAE knowledgeable physician registered in **Iraq** and **Jordan**. Also, one more HAE knowledgeable physician has been added to the map in **Saudi Arabia**.



**PATRICIA KARANI**  
SUB-SAHARA AFRICA



I am currently working with new doctor contacts in **Zambia** to help in raising awareness in the country.

The doctor contacts in **Rwanda** are now using the new website hosted by HAE International to raise more awareness amongst other health care professionals in the country.



**FIONA WARDMAN**  
ASIA PACIFIC



I attended and presented at the 8th China Rare Disease Summit in Shenzhen, **China**. During the conference there was a separate meeting organized with HAE China and the HAE organization in **Hong Kong**, patients and doctors.

The first of its kind patient meeting was held in Seoul, **South Korea** on 9 November 2019 with presentations from Korean doctors and patients, and HAE International. Following the meeting a patient group was formed.

The group already has a website up and running at <https://haekorea.haei.org/>.

During a conference in Perth, **Australia** contact was made with a doctor from **Singapore**, and another from **Malaysia** who had recently diagnosed a patient with HAE.

Unfortunately, the HAE **Japan** patient meeting had to be postponed due to Super Typhoon Hagibis. The meeting will now take place at the end of March 2020.

Most recently **Pakistan** has joined as HAE International member no. 84.

I am in contact with physicians and patients in **Sri Lanka** and **Bangladesh**, as such, communication will continue to establish how to assist patients and educate physicians in these countries.



**JAVIER SANTANA**  
CARIBBEAN AND CENTRAL AMERICA



A success during the last few months includes contacting Dr. Patricia Latour, an Allergist and Epidemiologist from **the Dominican Republic**. Dr. Latour is president of the Latin American Society of Allergy, Asthma and Immunology. According to information provided by Dr. Latour, the Dominican Republic has identified 22 patients in clinics around the country. Dr. Latour indicates that the country has all the tests available to identify C1-INH deficiency, including C4 and C1-INH quantitative and qualitative lab tests. She explains that in the Dominican Republic there are no modern therapies for treating HAE.



The HAE patient group in **Panama** is now officially and legally registered in the country. The group, together with Dr. Olga M. Barrera,

has participated in several conferences in the interior of the country to educate professionals on HAE. Muhammad Rawat, the group leader, reports that the group of patients is quite active working along other rare diseases groups and are holding regular meetings with government representatives to resolve the crisis of access to effective treatments in the country.



**Costa Rica** had its 1st Costa Rican Allergy Congress where Dr. Mario Martínez, who helps the group of HAE patients in the country, offered a comprehensive presentation on HAE to all attending physicians.



## HAE GLOBAL CONFERENCE FRANKFURT 14-17 MAY 2020

## GETTING READY FOR THE 2020 HAE GLOBAL CONFERENCE

When you read these lines the 2020 HAE Global Conference in Frankfurt, Germany is only about five months away, and at HAE International everyone is doing their part to get the largest HAE gathering ever ready.

“At this point, all travel grants have been allocated to patients and caregivers from around the globe, and every day we are receiving new registrations for the conference. Momentarily we have over 750 participants – more than 80 percent of them signed up for the Patients’ Track while some 10 percent will be following the Youngsters’ Track and the rest the Scientific Track. The 750+ people represent almost 70 countries on six continents”, says HAE International Project Manager Jørn Schultz-Boysen.

As space is filling up quickly HAE International recommends that you register for the conference soon if you want to be sure to take part:

“We are still working on the details for the program, but we can reveal that there will be a high focus both on global and regional initiatives. As usual, we will have a Scientific Track, and again this time, we hope to have HAE physicians from all over the world participate in this quite unique HAE International event. Also, I would like to draw attention to our Youngsters’ Track aimed at HAE patients and caregivers between 12 and 26 years of age”, says Jørn Schultz-Boysen.

All participants in the Scientific Track are invited to submit abstracts that relate to one of these topics for presentation during the Scientific Program of the conference:

- **Determining better pathways to diagnosis and management of HAE.**

Welcoming abstracts on new/improved diagnostic approaches, prodromal symptoms, screening, markers of HAE, innovative treatment/management methods and patient registry data

- **Creating a path to normalization of HAE patients’ lives.**

Welcoming abstracts on the impact of HAE on patient quality of life (e.g. working/educational life, social life and relationships), the psychological impact of HAE, comprehensive HAE centers, multidisciplinary approach, research networks and solutions for normalization of patients’ lives.

The deadline for submission of abstracts is 27 February 2020 – and authors will be notified on acceptance by email by 26 March 2020.

### Submission of abstracts

Please see <https://haegc20.haei.org/abstract-submission-2>

### Registration for the conference

Please see <https://haegc20.haei.org/registration>





## EMERGENCY CARD NOW IN 29 LANGUAGES

The HAE International Regional Patient Advocates have developed a template Emergency Card with clear and simple information about HAE and treatment required during an attack. It also contains space for patients to add personal information such as emergency contact details and their specialist treatment center.

At this point, the Emergency Card has been translated into 29 languages and is being used by HAE advocacy organizations around the world.

“Each card is designed to be printed at home, cut out and folded in half to create a format that can fit within a wallet or purse. It is designed to be used by

HAE patients from all countries and can be adapted by any HAE International member organization. If you are a member organization and have designed your own emergency card that could be displayed on the HAE International website, or if you would like help from us in adapting a card, please contact me”, says Chief Specialist Projects and Research Deborah Corcoran:

“If you are not a patient or part of an HAE International member organization and would like to use one of the cards, please contact the Regional Patient Advocate for your area and inform him or her that you plan to use the card.”

**Deborah Corcoran:**  
d.corcoran@haei.org

**Regional Patient Advocates:**  
<https://haei.org/about-haei/meet-the-rpas>



## MICHAEL M. FRANK IN MEMORIAM

*Dr. Michael M. Frank – a pioneer in the HAE medical/scientific arena – passed away earlier this year.*

While at the National Institutes of Health (NIH) in the mid-1970s through 1990, Dr. Frank took a particular interest in helping HAE patients. He steered significant NIH resources into groundbreaking research to figure out what was then a true medical mystery. Many HAE patients traveled to Dr. Frank’s NIH laboratory to get a diagnosis and participate in clinical trials for emerging therapies. The good fortune of American patients of having seven modern medicines to treat HAE is the direct result of the trailblazing efforts and longstanding commitment put forth by this highly respected and extraordinarily kind human being.

The HAE community remained near and dear to Dr. Frank after he left NIH to accept the Chairmanship of Duke University’s Department of Pediatrics. He proudly served as a member of the US HAEA Medical Advisory Board, continued seeing HAE patients throughout his career, and graciously took countless calls from physicians seeking his expert advice on how to help patients.

Born in Brooklyn, New York in 1937 Dr. Frank studied at Harvard University School of Medicine and earned his medical degree in 1960. He completed his internship at the Boston City Hospital and was accepted as a pediatrics resident at the Johns Hopkins School of Medicine in Baltimore. During his second year of residency, Dr. Frank spent a year at the NIH and was bitten by the medical research bug. After a year at the Mill Hill Medical Research Laboratories in London, England Dr. Frank returning to the NIH in 1966 and gradually rose through the ranks as a senior investigator, then Head of the Laboratory of Clinical Immunology within the National Institute of Allergy and Infectious Diseases. In 1977, he was selected to

become the Clinical Director of the Institute, a post he held for thirteen years. A world leader in the field of complement, Dr. Frank mentored some of the most prominent allergists and immunologists in the world today and was immensely proud of the success enjoyed by his trainees.

After leaving the NIH in 1990, Dr. Frank began a second career in academic medicine as the Samuel L. Katz Professor and Chairman of Pediatrics at Duke University Medical School. In embracing his new role, he combined his love of clinical medicine and child health with his skills as a bench researcher. Dr. Frank was the author of over 450 peer-reviewed scientific papers, was an invited lecturer all over the world and co-authored the fifth edition of Samter’s Immunological Diseases, one of the preeminent textbooks in the field. Under his leadership, the department of Pediatrics grew, doubling the number of faculty. Events such as the Duke Children’s Classic Pro-am Golf Tournament and Teddy Bear Ball became annual fundraising successes. Feeling strongly that the department of pediatrics needed its own space, Dr. Frank was instrumental in the construction of the Duke Children’s Hospital and Health Care System in 2000.

In 2004 Dr. Frank stepped down as department chairman and returned to the laboratory. In 2009, he received a multiyear grant from the Bill and Melinda Gates Foundation to continue his research into the mechanisms of the immune response in patients with HIV-1. Earlier this year, the American Academy of Allergy, Asthma and Immunology (AAAAI) honored his lifetime of research contributions with the creation of the Michael M. Frank, MD Lectureship. He continued to do bench research, travel to conferences, consult for industry and write nearly until his death.



## 2019 HAEi REGIONAL WORKSHOP SOUTH EASTERN EUROPE

By Natasa Angjeleska, Regional Patient Advocate for South Eastern Europe

We successfully managed to realize the fourth regional HAE International South Eastern Europe workshop at the Marriott Hotel in Skopje, North Macedonia 27-29 September 2019. We had 85 participants representing 11 countries from the region, including one guest physician coming from Belarus that expressed interest to join us. The composition of the participants was 54 patients and caregivers; 26 physicians (including six residents - three from North Macedonia and three from Albania) and two representatives from the genetic laboratories in North Macedonia. Furthermore, five pharma representatives (two from Takeda, two from BioCryst and one from Alkaloid Cons, the Macedonian distributor for Ruconest.

Patients, caregivers and physicians represented 11 countries: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Greece, Kosovo, Montenegro, North Macedonia, Romania, Serbia, and Turkey. Unfortunately, although registered, representatives from Slovenia were unable to come due to problems with the air travel company ADRIA that cancelled all flights on the day of travel due to bankruptcy.

The agenda consisted of 10 sessions in total and was very captivating, as stated in the survey after the workshop. After the warm welcome address from Natasa Jovanovska Popovska, Board of Directors member of HAE International and President of HAE Macedonia and Fiona Wardman, Board of Directors member of HAE International, Chief Regional Patient Advocate and Regional Patient Advocate for Asia Pacific, I shortly presented about the achievements in the regions in the past year period and stated some goals for the future. Then Fiona Wardman talked about countries from Asia Pacific, and sharp-witted brought to attention the truly global perspective of the HAE International network. Many participants were exhilarated by the fact that the HAE family is huge and inclusive for all. Participants were also reminded of HAE International's resources available to use free of charge, something that was addressed in a later session as well to increase the motivation of the country representatives. After the workshop, we should have at least three more websites hosted by HAE International as discussed with the Albanian, Montenegrin and Croatian representatives.

Saturday started with a very interesting session presented by Dr Marc Riedl about 'Novel therapies, results from clinical studies and potential new approvals of medications', as well as about 'HAE and prophylaxis'. Dr Riedl was very charming and continued his presentations professionally although we experienced some technical difficulties with the translation and sound system being mixed with the voices from the other workshop in the neighboring room. After having been forced to take a break for almost an hour until the issue was resolved, Dr Riedl could continue with what he had planned to present. During the break, he was approached by a couple of patients that were able to discuss individual conditions and challenges, medications and options for treatment.

The presentation by Dr Henriette Farkas about 'Similarities and differences between male and female patients', and 'The importance of family testing' was something to the participants, some of them being truly happy and very excited that they were able to have information that was unknown to them since there are not many publications available on this theme.

The Q&A session was fascinating for the participants, as they were able to write their questions during the break so that Dr Riedl and Dr Farkas could answer many of them directly.

The afternoon sessions started with an introductory presentation about 'Forging a network for HAE patients' independence and the importance of good communication between patients and physicians' delivered by Dr Vesna Grivcheva Panovska. She also facilitated an interactive session with physicians from the region who addressed the challenges they face when there are no available medications for patients, and when patients do not use modern medications although they have become available in some countries, for example, Serbia and North Macedonia. Some physicians stated that it is beneficial when patients are proactive and advocating on their behalf, and very harmful for all when there is no initiative, and they are passive and nonmotivated. There were also interesting facts presented about the regulations and opportunities to have clinical trials, as well as unsatisfactory conditions in some countries to enable home therapy for patients.

The following session was an interactive discussion with patient representatives from all participating countries. This session was cofacilitated by Verce Jovanovska Jankovska, Vice President of HAE Macedonia,

and me. We heard about the most challenging aspects of patient advocacy, when there is no satisfying access to modern therapy, like in Albania. Still, there was an initiative to go across the country and meet with patients and family members to build alliances with a bigger group of patients. We also heard a testimonial from a young patient from Montenegro who had a heart attack due to a long period of usage of Danazol and the challenges he is now facing with having only Firazyr for on-demand treatment, not for all attacks. This raised the question how can patients organize more to be able to get other therapies available in this country? Many of the countries' representatives proudly presented different awareness activities for the **hae day** :-)) as well as other initiatives, for example, organizing a successful self-injection course for patients in Bulgaria.



It was very interesting during the session about the 'Importance of the research' and 'Quality of life study' planned to be realized across the HAE International network, as there were countries that praised the initiative without hesitation. Still, we also had representatives who shared their doubts about safety for personal data protection or misuse of the data collected. We concluded that participation in the study is on a voluntary basis and that there will be time to consider the pros and cons before deciding.

The last session of the workshop was dedicated to an interactive discussion with a young blind girl from North Macedonia who graduated piano this year after many obstacles she and her family faced during her studies. Her positive thinking, courage and motivation, alongside the support from family and friends, were things that drew the attention of the audience. She also performed a short music selection during the final dinner on Saturday evening.



Fiona Wardman, Regional Patient Representative for the Mediterranean & Maghreb countries Maria Ferron and I were able to meet and discuss with Greek representatives at the workshop. We saw motivation from the side of the participants to get things moving better in Greece, and most of the initiatives and motivation comes from an active member of the Youngsters' community. We agreed that I would continue as Regional Patient Advocate and Greece will be mapped in the South Eastern Europe region. Still, more importantly, we decided on steps to be taken after the workshop.

This year we had included an optional excursion to the Ohrid Lake, and more than 75 percent of the participants in the workshop joined. Here they continued the

discussions, shared impressions from the workshop and initiated more talks about the possible cooperation and future initiatives both in their respective countries and in the region.

Overall, I'm very satisfied with the implementation of the workshop, and I believe that this kind of meetings is extremely important to continue enabling a better flow of information, initiate advocacy and strengthen the communication and cooperation between patients' representatives, physicians and pharma.



## STILL MORE COUNTRIES USING HAEi CONNECT



In 2018 HAE International presented HAEi Connect – a cloud-based member database for national organizations to manage their members. Due to popular demand, this free-of-charge offer was updated earlier this year with a number of highly useful features. Enterprise Technology Manager Ole Frölich explains:

“First and foremost, HAEi Connect includes an easy to use editor for creating emails to members as well as a template for saving and re-using emails. Another addition to the system is the possibility of contacting members via text message. Other updated features are four new sections in the HAEi Connect dashboard to initiate contact to members as well as right-to-left language support.”

To date, HAEi Connect has been implemented in Australia, Brazil, Bulgaria, Denmark, Hong Kong, India, Israel, Kenya, Mexico, New Zealand, North Macedonia, Norway, Peru, Poland, Slovenia, South Africa, Spain, Sweden, Turkey, and the United Kingdom.

“We are presently talking to more national organizations so it is my expectation that we will soon be able to add Canada, China, Croatia, Hungary, Lithuania, Puerto Rico and the United States of America”, says Ole Frölich.



Google Cloud Platform





## 2019 HAEi REGIONAL WORKSHOP CENTRAL EASTERN EUROPE

By Michal Rutkowski, Regional Patient Advocate for Central and Eastern Europe, Gulf Region & Middle East

The penultimate weekend of October 2019 saw the largest gathering of the year of the HAE International Central Eastern Europe community. As has become the tradition, the capital city of Poland hosted for the fourth consecutive time the annual regional advocacy event, dedicated to patients, caregivers and physicians, who constantly have been working in the areas of awareness, diagnosis, access and reimbursement to make HAE patients' lives better and easier. The workshop was also a great opportunity to meet and greet the newcomers to the HAE International world as well as current members of the global HAE family.

The meeting gathered patient' advocacy leaders from Poland, Armenia, Belarus, the Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Lithuania, Russia, Slovakia and Ukraine, accompanied by patients and caregivers from Belgium and the Netherlands. The theme of the 2019 Workshop was "Importance of patient advocacy: knowledge as the key to success".

The 2019 keynote speakers for the regional workshop were:

- Professor Henriette Farkas, MD, PhD, DSc, Director of the Hungarian HAE Center at Semmelweis University in Budapest,
- Professor Marc Riedl, MD, MS, Clinical Director of the US HAEA Hereditary Angioedema Center at UCSD in San Diego,
- Marcin Stobiecki, MD, PhD, Head of the Polish National HAE Center at the University Hospital in Krakow,
- Tricia Mullins, Forward thinking Patient Advocacy, Access, Engagement & MedEd Leader,
- Fiona Wardman, HAE International Board of Directors / Treasurer / Chief Regional Patient Advocate / Regional Patient Advocate Asia Pacific,
- Ole Frölich, HAE International Enterprise Technology Manager.

The Workshop topics were divided into four break-out sessions focusing on Advocacy, Scientific, Awareness and Clinical research.





**Break-out Session 1 (Advocacy)** was an introduction to the subject of patient advocacy:

- Fiona Wardman explained who HAE International is and what value the organization brings to the HAE community: patients, caregivers and physicians. Also, she informed attendees about the currently available projects and programs distributed by HAE International to its member organizations, and she made the participants more familiar with HAE International's structure,
- Ole Frölich focused on advanced technology that enables patient organizations to grow quickly and easily with the help of HAE International hosted websites and HAEi Connect. These two online platforms were detailed explained by Ole, who was also available during the time of the meeting to help setting up websites for the member organizations,
- Tricia Mullins had an inspirational and motivational presentation on what a patient advocate is, how to become a patient advocate, and how the patient advocacy organization can help other HAE stakeholders. A patient herself, Tricia shared her multiyear experience in the field of increasing awareness and helping patients with rare diseases.



**Break-out Session 2 (Scientific)** was a display of knowledge of two HAE experts, who in words understandable to patients explained important issues related to HAE:

- Henriette Farkas presented the specificity of the disease in children and women based on data from clinical studies and her own clinical practice. Henriette highlighted similarities and differences in symptoms, attacks frequency, and trigger factors. Also, she focused on pregnancy and the best available treatments for different types of patients,
- Marc Riedl gave a real-time travel to the past, present and future of HAE therapy, going through the pathophysiology of HAE and medicine availability over the years. Marc explained current management guidelines and acute treatment recommendations. He also discussed topics related to preventive treatment.



**Break-out Session 3 (Awareness)** belonged to the leaders of patient organizations who presented the current state of management of HAE in their countries. The CEE region is very diverse in terms of diagnostic options as well as access to and reimbursement for modern HAE therapies.

It should be emphasized that the presentations delivered by the speakers were preceded by detailed surveys completed by HAE patients respectively in their home countries. Nearly 360 patients from 13 countries took part in the survey to help collect the data used in the presentations. This allowed gathering extremely reliable information on the needs, expectations and fears that patients are struggling with in everyday life.

**Break-out Session 4 (Clinical researches)** was the last workshop session during which participants could listen to the importance and impact of clinical studies on HAE patients based on Polish experiences. The meeting ended with a 30-minute Questions & Answers panel in which attendees had the opportunity to get along with detailed expertise of physicians present and broaden their knowledge on HAE:

- Marcin Stobiecki presented the essence of clinical trials, using the story of one HAE patient who has been participating in clinical studies for nearly 40 years and who was the first Polish patient ever to receive C1-Inhibitor. Marcin's presentation was also a kind of story showing what patients and physicians from countries formerly behind the Iron Curtain have had to face,
- Professor Farkas, Professor Riedl and Dr Stobiecki were heavily exploited but patiently and in detail answering the attendees' questions. The range of questions was varied. From the basic ones related to the diagnosis to more complex regarding children treatment and potential consequences of overdosing the HAE medications.

All participants emphasized that the fourth edition of the HAE International Central Eastern Europe Workshop was the best meeting so far. Very good quality venue, world-class HAE experts, motivated patients, caregivers and physicians, ubiquitous kindness, friendship and passion influenced the quality and success of the event.

As always during the meetings run by HAE International, there were also representatives of the pharmaceutical industry from (in alphabetical order) BioCryst Pharmaceuticals, CSL Behring, KalVista Pharmaceuticals, Pharming Group NV, and Takeda, who search for a new treatment options for patients and who support patient advocacy activities organized under the leadership of HAE International.

I would like to thank all the attendees of this year's Workshop for their active participation in the meeting. Through a common goal, mutual respect and understanding, but above all unconditional friendship, we have been able to create over the years something truly unique that we should be absolutely proud of. Central and Eastern Europe is a very special region, which, despite many differences, also has plenty of common features. This is a region with a lot of room for improvement, just to say that about 75 to 80 percent of HAE patients are still undiagnosed. And that is where the patient advocates' role begins.



125 people attended the conference in Oslo

# HAE SCANDINAVIA CONFERENCE 2019

By President Henrik Balle Boysen, HAE Scandinavia

During the weekend 8-10 November 2019 HAE Scandinavia conducted its third Scandinavian conference – this time in Oslo, Norway. Around 125 participants from Denmark, Norway and Sweden as well as four patients from Finland attended this very interesting meeting. The conference focus was on changing the paradigm for treating HAE.

HAE Scandinavia presented the outcome of their most recent healthcare and socio-economic study that clearly outlines the benefits of and support the recent introduction of modern prophylactic therapies. The study was presented by Christian Jervelund from Copenhagen Economics, the economic firm who also assisted HAE Scandinavia in completing their research. A copy of the report will soon become available – initially in English – at [www.haescan.org](http://www.haescan.org).

Professor Markus Magerl from Berlin, Germany presented the effectiveness and the prospect of living a symptom-free life with the new prophylactic therapies – based on the clinical experience from

Charité in Berlin. Besides the aim to achieve access to the modern prophylactic therapies, the conference also focused on Quality of Life. Dr. Robert Brudevold from Ålesund, Norway presented his findings. Another focus point was the optimized treatment of HAE patients, where Dr. Olav Gramstad presented the experience from Oslo, Norway. Professor Anette Bygum from Odense University Hospital, Denmark spoke about the patient in the community, and how to treat children with HAE. Nanna Maria Boysen from Denmark spoke as a representative of the HAEi Youngsters community and informed the audience on the work being done by the youngsters and the benefits of being part of this organization. Furthermore, HAE Scandinavia had motivational speaker Mark Anthony from Denmark speaking about the importance of being motivated and giving the audience tools to work with their personal motivation during changes.

During its General Assembly, HAE Scandinavia could also welcome Cecile Grahn from Sweden as a new member of the board.



Professor Markus Magerl, Germany



Dr. Robert Brudevold, Norway



Professor Anette Bygum, Denmark



Dr. Olav Gramstad, Norway



The newly elected board of HAE Scandinavia

(left to right top):  
Jørn Schultz-Boysen, Henrik Balle Boysen and Karina Langsager

(left to right below):  
Camilla Eriksson, Bente Egaa, Ann Helen Hellevik, Trine Dahl-Johansen, Cecilia Grahn and Poul-Erik Andreassen

## READY TO HOST YOUR WEBSITE – ALSO IN A LIGHT VERSION

Still more national HAE organizations across the globe are letting HAE International host their websites. The reasons for this are pretty obvious if you ask Enterprise Technology Manager Ole Frölich:

“We have established an advanced system under the HAE International website allowing us to host national websites as well as provide them with templates for an individualized website – naturally all in their native language. And not to forget: This service is for free for

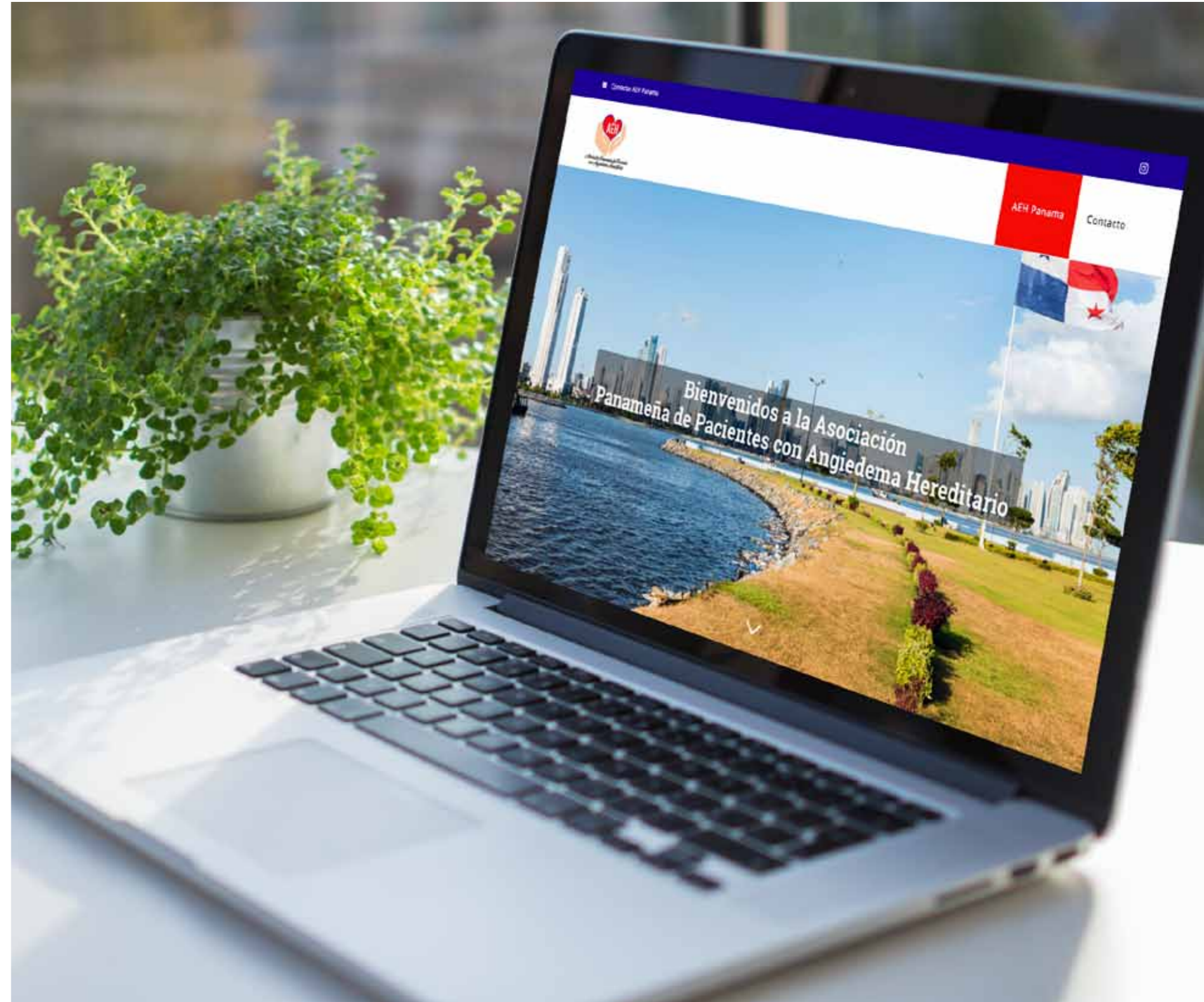
all our member organizations. At this point, there are four website templates to choose from – and in the backend, there are powerful editing tools for the website administrator. Furthermore, the HAE International solution supports the organization’s own domain name just as it supports https secure protocol.”

Most recently HAE International has introduced a light version of its website system, allowing national member organizations to come online within one or two working days.

To this date 32 countries have chosen to have HAE International host their website:

- **Albania:** <https://haealbania.haei.org>
- **Australia:** <https://haeaustralasia.org.au>
- **Belarus:** <https://by.haei.org>
- **Brazil:** <https://www.abranghe.org.br>
- **China:** <https://haechina.haei.org>
- **Costa Rica:** <https://costarica.haei.org>
- **Denmark:** <https://haescan.org>
- **Ecuador:** <https://aehecuador.haei.org>
- **El Salvador:** <https://elsalvador.haei.org>
- **Greece:** <https://greece.haei.org>
- **Hungary:** <https://hungary.haei.org>
- **Iceland:** <https://iceland.haei.org>
- **India:** <https://haeindia.haei.org>
- **Kenya:** <https://haekenya.haei.org>
- **Lithuania:** <https://paelietuva.haei.org>
- **New Zealand:** <https://haeaustralasia.org.au>
- **North Macedonia:** <https://haemacedonia.haei.org>
- **Norway:** <https://haescan.org>
- **Panama:** <https://aehpanama.haei.org>
- **Peru:** <https://peru.haei.org>
- **Poland:** <https://pl.haei.org>
- **Qatar:** <https://haeqatar.haei.org>
- **Romania:** <https://romania.haei.org>
- **Serbia:** <https://rs.haei.org>
- **South Africa:** <https://southafrica.haei.org>
- **Spain:** <https://angioedema-aedaf.haei.org>
- **Sweden:** <https://haescan.org>
- **Taiwan:** <https://haetaiwan.haei.org>
- **Turkey:** <https://turkey.haei.org>
- **Ukraine:** <https://ua.haei.org>
- **United Arab Emirates:** <https://haeuae.haei.org>
- **Uruguay:** <https://uruguay.haei.org>

According to Ole Frölich, around 10 national websites are in the pipeline.



# NEWS FROM MEMBER ORGANIZATIONS AROUND THE GLOBE



## ARMENIA

HAE International has added country no. 79 – Armenia – to the global map. The national contact in Armenia is Artashes Harutyunyan and more information on the new member can be found at



## ESTONIA

HAE International has been joined by country no. 80. A warm welcome to Estonia, represented by national contact Kristal Kaljula. See more about the new member country at <https://haei.org/hae-member-countries/estonia/>.



## LITHUANIA

HAE Lithuania has signed up as the 81st member organization of HAE International. You will find more information on the new member at <https://haei.org/hae-member-countries/lithuania> – and at HAE Lithuania's website at <https://paelietuva.haei.org/>.



## GEORGIA

HAE International welcomes member no. 82: Georgia. The HAE patients of Georgia are represented by David Ramazashvili – see more at <https://haei.org/hae-member-countries/georgia/>.



## SOUTH KOREA

The 83rd member of the HAE International family is South Korea. The patient organization HAE Korea has just been established – and there are three HAE knowledgeable physicians and two HAE knowledgeable hospitals on the HAE International map. Have a look at <https://haei.org/hae-member-countries/south-korea>.

Furthermore, South Korea now has a website under the HAE International wings - see <https://haekorea.haei.org/>.



## PAKISTAN

HAE International has been joined by country no. 84: Pakistan. The national contact for HAE Pakistan is Moazzam Farooq - see more at <https://haei.org/hae-member-countries/pakistan>.



## MEXICO

HAE patients in Mexico now have access to three types of modern treatment as Kalbitor (from Pint-Pharma) has been registered/licensed along with Berinert (from CSL Behring) and Firazyf (from Takeda).



## EGYPT

The HAE International map has been updated with the first HAE knowledgeable physician in Egypt – please see <https://haei.org/location/physician-cairo-egypt/>. Also, one more HAE knowledgeable physician has been added to the HAEi map – please see <https://haei.org/hae-member-countries/egypt/>.



## AUSTRALIA & NEW ZEALAND

*From CEO Fiona Wardman, HAE Australasia:*

HAE Australasia has submitted the ethics application to join the Global Registry in Australia. We hope to have a positive answer very soon so we can start rolling out the project around the country.

Once again this year, we attended the Australasian Society of Clinical Immunology & Allergy (ASCIA) Conference, where we had the opportunity to speak with doctors and nurses from around Australia and New Zealand, discuss our organisation and how we can help patients and their families.

Work is currently underway to update information and resources on [www.haeaustralasia.org](http://www.haeaustralasia.org).

I was one of two patients invited to attend and facilitate workshops for physicians from around the world during the recent Takeda HAE Global Forum in Berlin, Germany.

HAE Australasia has set a date in early January to hold its strategy meeting. This meeting will enable the Board to discuss and plan the projects and initiatives for patients and their families for 2020.

The 2020 Global Conference travel grants for Frankfurt, Germany have been finalised. We are so pleased to have seven members from New Zealand and nineteen members from Australia joining us at the conference, making this the largest group from Australasia ever!

The HAE International map has been updated with a couple of HAE knowledgeable hospitals in New Zealand - have a look at <https://haei.org/hae-member-countries/new-zealand/>.



## MALAYSIA

The first HAE knowledgeable physician in Malaysia has been added to the HAE International map - have a look at <https://haei.org/location/physician-kuala-lumpur-malaysia>.



## KUWAIT

Kuwait is yet another HAE International member country with the first HAE knowledgeable physician registered – please see <https://haei.org/location/physician-kuwait-city-kuwait/>. The HAEi map has also been updated with two more HAE knowledgeable physicians in Kuwait – please see <https://haei.org/hae-member-countries/kuwait/>.



## GREECE

HAE Greece has a new primary contact as Asimina Krotsida has taken over as President.





## HONG KONG

From Sandy Chan, HAE HK:

HAE HK was formed in August 2019 by patients in Hong Kong with HAE and incorporated as a limited company in Hong Kong on 7 November 2019. Tax exemption will be applied.

HAE HK aims to achieve optimal standards of care and treatment for all people affected by HAE living in Hong Kong so that HAE patients can live a fulfilled and higher quality of life by:

- raising awareness of HAE and educating doctors and the public
- providing support to HAE patients and families
- advocating for access to modern treatments

The organization is composed of patients, patients' families/friends/carers, doctors and interested individuals. At this stage, a person can join for no membership fee. HAE HK currently has about 25 members.

A committee consisting of four patient members (Ms. Mana Chan, Mr. Davy Wong, Ms. Rachel Kwan and myself) carry out the day-to-day operations. Of the four

known immunology specialists in Hong Kong, two (Dr. Philip Li and Dr. Jane Wong, Division of Rheumatology & Clinical Department of Medicine, Queen Mary Hospital) are our consultants and offer expert advice and help drive diagnosis and access to treatment aligned with our mission.

All committee members and consultants have their own full time jobs, and contribute their personal time to HAE HK on a voluntary non-remunerated basis.

HAE HK is a member of HAE International, meaning that we can draw on the robust resources available, e.g. website domain, online membership database, and patient self-help tools.

Some of HAE HK's committee members are members of the Hong Kong Rare Disease Alliance (HKARD). We can benefit from HKARD's existing public/medical channels and platforms to raise public awareness about HAE, and in turn, advocate for access to modern treatments for HAE patients.

## “Mix & Mingle”

Here are some of the things that HSE HK has done and will do in 2019:

- **August 2019:** Created and launched [www.facebook.com/haehongkong](http://www.facebook.com/haehongkong), maintained by committee members on a voluntary basis
- **September 2019:** Published our first leaflet providing information about HAE and HAE HK – written by committee members on a voluntary basis and designed and printed by CSL Behring at no costs to HAE HK – 2,000 copies were printed in the first run
- **September 2019:** Committee representatives of HAE HK presented our story to HAE patients of China at the 2019 China Rare Disease Summit in Shenzhen – committee members attended this event on a voluntary, self-funded basis
- **September 2019:** We shared the first video of “My personal experience with HAE” – created on a voluntary basis by a committee member
- **October 2019:** We attended a public talk organized by Allergy HK to distribute leaflets about HAE and HAE HK and answer questions
- **November 2019:** Dr. Li and a volunteer HAE patient were interviewed by RTHK – the interview will be aired on TVB in December 2019
- **November 2019:** We hosted our first “Mix & Mingle” event at Habitu Table which was free of charge for all attendees – Dr. Li updated patients on the latest developments about HAE in Hong Kong and Dr. Wong explained to patients about the importance of the family screening process – fully sponsored by CSL Behring (foto hører til denne event)
- **December 2019:** An article written by Dr. Li and Dr. Wong highlighting the differences between HAE and allergy will be published by Allergy HK in its Dec 2019 Newsletter – together with the HAE HK leaflet the newsletter will be distributed to all 2,000+ Allergy HK members in electronic and hardcopy forms
- **December 2019:** HAE HK will launch its own website created with the help of and hosted by HAE International

HAE HK has chosen to have HAE International host their website – have a look at <https://haehk.haei.org>.

## LEBANON

There is an additional HAE knowledgeable physician in Lebanon – please see <https://haei.org/location/physician-beirut-lebanon/>.

## ITALY

The HAE International map has been updated with information on HAE knowledgeable physicians in Italy – please see <https://haei.org/location/physicians-italy/>.

## PANAMA

The HAE International map now also contains information on a Care Center and an HAE knowledgeable hospital in Panama – and HAE Panama has its own website. Have a look at <https://haei.org/hae-member-countries/panama/>.

## QATAR

HAE International welcomes one more website under the organization's wings - this time Qatar. Please see <https://haeqatar.haei.org/>

The first HAE knowledgeable physician in Qatar has been added to the HAE International map – please see <https://haei.org/location/physician-doha-qatar/>



## VENEZUELA

Fundacion AEH de Venezuela (HAE Venezuela) has formed an alliance with the Venezuelan Society of Asthma, Allergies and immunology (SVAAI) and the Venezuelan Primary Immunodeficiency Network (RVIDP).



Alianza y promoción con la fundación de angiodema hereditario Venezuela



At this point 14 HAE knowledgeable physicians have been located in Venezuela – please see <https://haei.org/hae-member-countries/venezuela/>.



## UNITED ARAB EMIRATES

The United Arab Emirates have one more HAE knowledgeable physician – please see <https://haei.org/location/physician-abu-dhabi-united-arab-emirates/>

HAE International is ready with yet another hosted website - this time for the United Arab Emirates. Please have a look at <https://haeuae.haei.org>.



## TAIWAN

HAE International is ready with the next website hosted by the organization - this time Taiwan. Please see <https://haetaiwan.haei.org>.



## INDONESIA

Yet another country has decided to put its website under the wings of HAE International - this time Indonesia. Have a look at the website at <https://haeindonesia.haei.org>.



## SWITZERLAND

The 18th General Assembly of the Swiss HAE Association took place 8 November 2019. President Helene Saam welcomed 22 members. All agenda items were decided unanimously. The next year's meeting will take place in Zurich on 20 June 2020 - in addition to lectures, there will be a visit to the studios of SRF (Schweizer Radio und Fernsehen).



## INDIA

HAE International is happy to present one more website hosted by the organization - this time for HAE India. Please see <https://haeindia.haei.org>.



## ALBANIA

Yet another country has chosen to have its website hosted via HAE International - have a look at <https://haealbania.haei.org>.



## POLAND

The HAE map has been updated with the national HAE Care Center i Krakow - please see <https://haei.org/location/care-center-krakow-poland>.



## SOUTH AFRICA

*From President Adrienne de Jongh, HAE South Africa:*

The Global Access Program importing Ruconest is now running smoothly and proving to be very successful. There is a fair amount of administration involved though and we are grateful that the staff at the Lung Clinic at Groote Schuur Hospital have been so helpful.

We have been busy with the legal work for HAE South Africa to become an official non-profit company and this is almost complete.

There have been another three queries in the last couple of weeks requesting diagnoses which means that awareness must be improving and we have been assisting in the process.



## COLOMBIA

The HAE patient group in Colombia has now been legally constituted as Asociación Colombiana para Angioedema Hereditario. Jessika Torres Flórez is President of the organization while Carolina Torres Flórez is Vice President. See more at <https://haei.org/location/hae-in-colombia>.



## JAPAN

*From President Beverley Yamamoto, HAE Japan:*

HAEJ applied for the 3rd PASE Award from EFPIA (European Federation of Pharmaceutical Industries and Associations) – PASE is Patient Advocacy Support by EFPIA. HAEJ applied for a project on paediatric HAE to do a survey to identify patients and their treatment needs as well as to carry out focus groups with families and school representatives in order to identify the kinds of resources needed to support children in schools. HAEJ received one of two grand awards:

[http://www.efpia.jp/link/190902\\_PASE\\_ResultAnnouncement\\_ENG\\_Final.pdf](http://www.efpia.jp/link/190902_PASE_ResultAnnouncement_ENG_Final.pdf)

HAEJ received the grand award for the 2nd PASE awards in 2018, and on 13 November Makiko Matusyama and I gave a presentation of the results of the research on intravenous self-injection training to the EFPIA Board and guests to the event, which included a number of patient advocacy organizations. We produced a report in English on the project as well as a Japanese translation: "Stakeholder expectations and concerns regarding intravenous self-infusion training for injection of C1 Esterase Inhibitor (C1-inh) for patients with Hereditary Angioedema".

The national financial daily newspaper, The Nikkei Shinbun, ran a series of four articles in October and November 2019 focusing on HAE and the activities of HAEJ.

In a press release on 5 November 2019, Biocryst announced its plans to submit a Japanese New Drug application (JNDA) for BCX7353 to the Pharmaceuticals and Medical Devices Agency (PMDA) in the first quarter of 2020. Biocryst are partnering with Torrii Pharmaceuticals to commercialize BCX7353 in Japan. If all goes to plan, patients in Japan will have access to a long-term prophylactic treatment for HAE for the first time.

 **BRAZIL**

From Raquel Martins, President of Abranghe - Angioedema Hereditário Brasil, HAE International has received the very good news that Takhzyro (Lanadelumab) is now approved in Brazil for the treatment of HAE. The approval comes from the Brazilian Health Regulatory Agency (Anvisa), the coordinator of the Brazilian Health Regulatory System.

25-28 September 2019 Abranghe participated in and promoted HAE at the XLVI Brazilian Congress of Allergy and Immunology in Florianópolis.



18 October 2019 Abranghe took part in the III Ibero-American Congress of Rare Diseases

in Brasilia. Among the speakers were Dr. Teresa Caballero Molina from Madrid, Spain and Dr. Solange Valle from Rio de Janeiro, Brazil.



This fall has also brought the release of the book "Doutor, eu tenho Angioedema Hereditário" – or in English "Doctor, I have HAE".



 **USA**

*From Ianice Viel, Patient Advocate/Social Media Manager, US HAEA:*

It's with tremendous gratitude that we wrap up an exciting year at the US HAEA filled with activities that brought us closer as a HAE family while continuing to push the boundaries on HAE discoveries, treatment, and care. We are now more committed than ever to help every HAE patient lead a life that is unhindered by HAE. We have made great strides in the past 20 years, but vitally important work remains. Going forward we must protect access to HAE therapies, while pushing for research that brings even better medicines to our children and future generations.

It has been a very busy and productive year for our community. We are grateful for the many US HAEA members who participated in our events and helped us spread HAE awareness! We wrapped up 2019 with:

- Eleven HAEA Meet & Greets, seven HAE IN-MOTION® events, seven patient-driven fundraising programs, and two unique awareness events.
- A record-breaking over 1,000 participants at the 2019 HAEA National Patient Summit.

Together, we continue in the quest for better and more effective HAE treatments and supporting groundbreaking research that leads to answers to the remaining scientific mysteries of HAE. We are also happy to announce that the Pam King HAEA Scholarship Fund provided financial aid to help 74 college students achieve their lifelong educational goals and life aspirations.

As we approach 2020, we are preparing to participate in the 5th HAE Global Conference which promises to be the best yet. At the US HAEA, we also plan to expand our core services with a particular focus on adequate access to and reimbursement for HAE therapies. US HAEA friends will continue to enjoy our patient-centric programs and activities geared toward our longstanding goal – improving the quality of life for everyone in the HAEA community.

We look forward to being part of your happy and healthy 2020!





## CUBA

*From HAE patient Rosa María Pérez:*

Epinephrine, Hydrocortisone, Prednisone, Benadryl ... with every health crisis there is a bombardment of medicines with which nothing is resolved. The edema was quick – “in crescendo” – until it reached a limit when it stopped, and then slowly began to decrease.

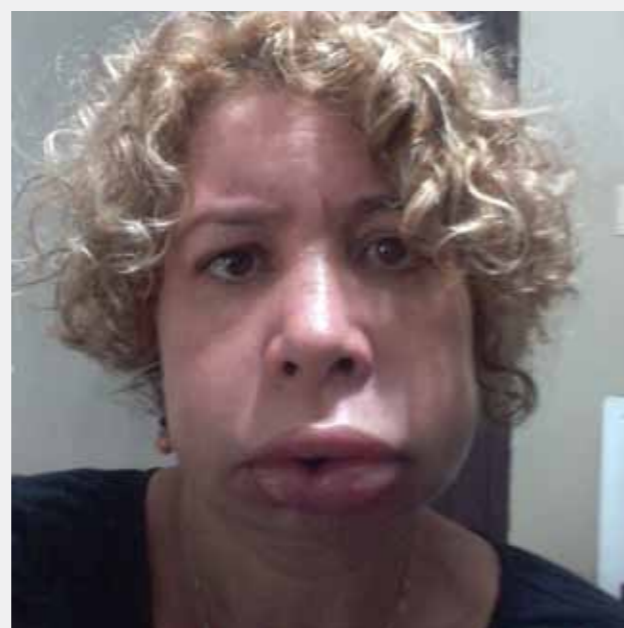
Pediatricians and allergists agreed that it was an allergic process – allergy tests were positive for shellfish, canned foods, and sausages. I continued to have multiple allergy tests, as I was supposedly a very allergic girl. Still, I would swell after an injury, an insect sting, or after wearing an uncomfortable shoe. Initially, these swells would begin on a hand, a foot, the forearm. Later, “gastric crises” led to abdominal pain and ended in persistent vomiting. Doctors prescribed treatments for the symptoms without knowing the cause.

Despite my father and a paternal aunt suffering similar symptoms throughout their lives, no one associated my condition with a hereditary disease. My father came close to experiencing a tracheotomy, and I remember seeing him with a swollen face, deformed and not looking at all like himself. In my innocence, I never imagined I would look like that someday.

My name is Rosa María Pérez González. I just turned 50 and I live in Cuba. I now know that I am an HAE patient Type 1.



My swelling began during early childhood, but it was at age 11 that I had the first face swell. I remember this vividly because our small hometown doctor treated my swell with endovenous epinephrine to avoid edema of the glottis. After that, I experienced swelling every three to four months in my hands or feet that were treated as “allergic”. Each time I was given steroids and antihistamines.



When my oldest son Luis turned one, he fell in the bathroom and split his lip slightly. Although this type of fall is something common in children his age, his minor accident developed into a serious inflammation

of his face. I decided at that moment to actively search for answers to these medical mysteries. Thanks to an immunologist from my hometown, I was referred to the Institute of Hematology and Immunology to see the Director, Dr. Consuelo Macías, with an “a priori” diagnosis of HAE.

After a series of blood tests conducted on different family members, including myself, the HAE diagnosis was confirmed. In 2013, a broad family testing was carried out that detected an additional five HAE patients in my family.

Since our arrival as patients at the Institute of Hematology and Immunology of Cuba (IHI), I have learned how to better manage my condition. During severe swelling attacks, I can be treated at the hospital with C1 inhibitor. At times, I have had intermittent treatments of Danazol and Tranexamic Acid, although these two therapies do not address my condition preventatively.

Today, as a diagnosed patient I am often concerned about my illness. I pray to God every day for good health and that the international scientific community develops accessible therapies not only for treatment, but for prevention.



## TUNISIA

HAE Tunisia now also has a members-only Facebook group – you can ask to join at <https://www.facebook.com/groups/1445187275620031>.



## CHINA

HAE International welcomes yet another hosted website: China. Please see <https://haechina.haei.org>.



## CANADA

*From Executive Director Peter Waite,  
Canadian Hereditary Angioedema Network*

The Canadian Hereditary Angioedema Network has updated its 2014 Canadian Hereditary Angioedema Guideline with an expanded scope to include the management of HAE patients worldwide. It is a collaboration of Canadian and international HAE experts and patient groups led by the Canadian Hereditary Angioedema Network. The objective of this guideline is to provide evidence-based recommendations, using the GRADE system, for the management of patients with HAE. This includes the treatment of attacks, short-term prophylaxis, long-term prophylaxis, and recommendations for self-administration, individualized therapy, quality of life, and comprehensive care. New to the 2019 version of this guideline are sections covering the diagnosis and recommended therapies for acute treatment in HAE patients with normal C1-INH, as well as sections on pregnant and paediatric patients, patient associations and an HAE registry.

The Guideline was published electronically in the *Allergy, Asthma & Clinical Immunology Journal* - please see

<https://aacijournal.biomedcentral.com/articles/10.1186/s13223-019-0376-8>.



## UKRAINE

Still more national HAE organizations across the globe are letting HAE International host their websites. One of the most recent country to do so is Ukraine – see the website at <https://ua.haei.org>.



## TURKEY

HAE Turkey has updated its list of knowledgeable physicians. For information please contact Ersan Sevinc, International Communications Manager, at [ersan.sevinc96@gmail.com](mailto:ersan.sevinc96@gmail.com).

## UNITED KINGDOM

From CEO Laura Szutowicz, HAE UK:

The last quarter of the year sees our National Patient Days which are always well supported and are a lot of fun as well as very educational.

In the UK we are very lucky to have a lot of expert clinicians to call on, and this year our Scottish Patient Day was held in Glasgow. So the Glasgow team were called on to help and, as always, they were magnificent!

Dr Moira Thomas led the meeting. In retrospect, we had made the mistake of holding the Scottish Day on the same day as the final of the Rugby World Cup (but we booked the day before they did!) so it was a bonus for us that Scotland missed going to the final. Dr Thomas is a keen rugby supporter and so she used the rugby team analogy in her presentation about how the C1-INH and bradykinin cascade works.... how one protein passes to another and then to another. I know I found it a very vivid and clever way to explain a complex process.

Lindsay Lockhart, one of the Public Involvement Advisors at the Scottish Medicines Consortium (SMC), gave an explanation of how the SMC make decisions on why and how to prescribe medications. This was particularly of interest because I have been working with them in order to have Lanadelumab accepted onto the formulary for use in Scotland. That decision will soon be made.

Hazel Miller, one of the immunology nurse specialists, presented on how to manage attacks, giving some helpful tips on how to make using medication easier and practical ways of alleviating swellings. Scott Weddle, who does not let his HAE stand in the way of him being a personal trainer, sports masseur and extreme sports specialist, gave an inspiring 'Patient Story' culminating with the information that he was about to do a 5,000-meter parachute jump. He also was very informative about how in his experience, his HAE attacks have decreased in line with him getting fitter. Other people have also found that being fitter helps reduce their attacks, which is one reason why we are supporting a clinical study being run in Wales to monitor HAE patients with a 'Fitbit' to see if this can be quantified.

Dr Thomas presented again on getting the most from your appointment and also the new products coming in the future, many of which are being researched at centers across the UK and Dr Patrick Yong travelled up from Surrey to give his popular presentation on the 'History of HAE'. Patrick is also the lead on the HAE

Consultant Network, which is now functioning as a division of the UKPIN which is the UK association of immunology doctors and nurses. The day ended with a lively Q&A session, with our speakers joined by Dr Charu Chopra from Edinburgh who also gave up her Saturday to come to the meeting.



Scottish Patient Day speakers; from left to right, Dr Patrick Yong, Dr Moira Thomas, Dr Charu Chopra and Immunology Specialist Nurse Hazel Millar.

Oh, and in case anyone didn't know, the Rugby World Cup was won by South Africa, beating England 32-12.

Royal London Hospital ran their own Immunology and HAE Patient day, which I was invited to attend. They have the largest number of HAE patients in the UK and also are very busy in research. It is always great to meet the team there and it was a great meeting.

On to our National Patient Day in Manchester. This also clashed with a local football match and several concerts so travelling up the day before by train was something of a challenge as the trains were totally rammed full! However, we all managed to arrive safely and had an evening drinks reception at the hotel. This has become a standard part of our procedure now and it is always great to meet old and new members at it.

So onto the day itself, we had a great opening speaker in Dr Dawn Harper. She is a GP in her day job with a particular interest in Women's Health, but she is also well known for her appearances on TV where she co-presents 'Embarrassing Bodies' and is one of the medical experts appearing on 'This Morning' and also on the radio on 'Women's Hour'. Dawn gave a very useful and insightful presentation on really speaking to your doctor and getting to the bottom of problems. She also has a wicked sense of humor and was very funny!

Next was one of our medical advisory panel and a favorite speaker, Dr Scott Hackett who is one of the very few specialist pediatric immunologists in the UK and as such looks after the younger generation of HAE patients. His presentations are always full of information and presented in an easy to understand way and again with humor.

We then had another star, Dr Shuayb Elkalifa from Salford Royal. He was one of the team that ran the 10km for us back in May and he just fizzes with energy. He was tasked with the job of explaining the science behind HAE and he tackled this by casting himself as the 'Superhero C1-INH' and using members of the audience to be Factor XII, kallikrein and Rachel Annals got cast as 'the bad guy' bradykinin! Dana Shapiro managed to film this and put it on our Facebook page, it is great fun and well worth scrolling through our Facebook page to find!

One of our greatest supporters is Michal Rutkowski who has been coming to our Patient Days for several years now. He is one of our most popular speakers as people love hearing about what is going on, the World-Wide Perspective on HAE around the globe and the various activities of HAE International.

Our Patient Story was our wonderful Alex Graham, one of our Patient Ambassadors, who told us her patient story and also updated on the Young Advocates group. In the afternoon, Patrick Yong gave a different presentation of the hows and whys of new treatments and the importance of being involved in clinical trials. Our presentations ended with June Cole giving us a look at the various activities she has done to raise awareness, but particularly her going into GP surgeries and A&E departments to tell them all about HAE. June is a very good ambassador for HAE UK, and she and her husband Peter deserve our heartfelt thanks.

The day finished with some patient breakout groups, mentored by Lisa Smith, John Dempster, Scott Hackett, Patrick Yong and Lorena Lorenzo, then a Q&A session to wind up.

Every year I find myself thinking 'how do we go better than that?' I truly think our two Patient Days this year have been amongst the best we have done. Rachel is amazing the way she manages all the logistics and controls my wilder flights of fantasy and we could not put on these fantastic days if not for the support of our friends in the pharmaceutical industry who help with the cost of outing on these events. Furkhanda and Judy who managed the registration desk, sold raffle tickets and are generally huge supports, the clinicians who give up their time and expertise so generously... we owe them all huge thanks and appreciation.



Rachel Annals and Michal Rutkowski



Dr Scott Hackett and Michal Rutkowski

But you just wait till next year... have we got plans!

We are very pleased to announce that the Scottish Medicines Consortium (SMC) have approved Lanadelumab for use in HAE patients in Scotland. HAE UK was consulted throughout the process and SMC and their teams are just lovely to deal with!

The HAE International map has been updated with information on HAE knowledgeable physicians in the United Kingdom. Please go to <https://www.immunology.org> - then scroll down to "FOR PATIENTS & THE PUBLIC", choose "Find a clinical immunologist", click and choose the relevant region on the UK map.

A Happy Christmas and prosperous New Year to all our HAE International friends!

## HUNGARY

From President Istvan Nagy, HAE Hungary:

Like every previous year since 1996, a good meeting was organized in November 2019 for the members of the Hungarian Association of Angioedema Patients. Besides the about 30 patients, who represent close to 50 percent of the diagnosed families in Hungary, the representatives of the pharma-manufacturers of modern HAE medication also attended the meeting. Like for the 23 previous events the venue was a classroom in the university hospital in the hilly, green part of Budapest. The same building complex is the home of the Angio-Edema Care Center, so the patients know the place well and have their routine to visit it for their yearly checkups. This time it was different though as the patients did not meet the doctors and nurses of the Center to take blood tests but to have a relaxed, club-like chat and conversation, exchange of experience between patients.



The meeting started with an overview of the medication supply of the last year. Professor Henriette Farkas described the situation as good as the previous years, and despite some tight periods in the Berinert C1 INH supply, thanks to the mutual effort of the Center and CSL Behring's local representatives, those patients, who's preferred or only effective/recommended medicine is Berinert, have got it in the required amount (pregnant women, children, etc.).

Our Association and the Center addressed our community to consider flexibility in using the modern medicines and on consulting with the Center to try using Ruconest and Firazyr in situations and at attacks, where Berinert is not the only option to treat an attack. Both Takeda and Sobi cooperated supportively with the Center to make up for the tight periods in the Berinert supply. Professor Farkas took the opportunity to thank for their empathic and supportive attitude towards the patients in our country.

The next subject was to explain ongoing or newly started trials regarding subcutaneous and oral use of modern medicines and this time, Professor Farkas thanked the patients for volunteering participation in the trials.

Dr. Kinga Köhalmi dealt with the administrative issues of the home use of the medicines, the importance of the disciplined reporting of attacks and their treatments. She also explained the advantage of the recently introduced smartphone application for these reports and encouraged the patients to use it for all attacks. Furthermore, she offered help from the Center to familiarize those patients with its use, who have not downloaded it yet or were more hesitant in using it. Indeed, everyone can download the application during the yearly checkups at the Center and will be trained for its use.

The patients and doctors present at the meeting shortly discussed technical aspects of the self-administration and best practices at home, such as safe use and disposal of injections, butterfly needles, etc.

After the short refreshment, a discussion was initiated regarding possible and potential triggering effects of attacks. Except for some obvious and proven triggers (sensitivity to some foods, physical trauma, visit at dentists, stress, etc.), the outcome was to restate the unpredictability of the disease and better be prepared, i.e. always carry the lifesaving medicine with you. (Si vis pacem, para bellum). Fortunately, the Hungarian situation makes it possible for the patients always to have two sets of life saving medicine with them. Rare or unused physical activities often trigger an attack, however the same activity, if it becomes a routine, do not cause problems as long as it is practiced ongoing. This experience was shared by a young member of our patient community, who despite his HAE, is a successful runner and watches his experience closely and professionally being an orthopedist doctor himself. Just like safety awareness in the workplace, we cannot remind enough about patients' compliance with proper behavior. Patients with low-frequency attacks tend to forget about the possible criticality of the next unexpected attack, and either does not carry the shots with them or neglect to replenish their stock in due time.



The following half an hour was devoted to international events in 2019 in the HAE world.

Miss Dorina Matyi delivered a vivid presentation about her experience, impressions and takeaways from the youngster advocacy training in Atlanta in the United States of America. Her passionate explanation about motivation and understanding what is at stake for patients was highly appreciated and received warm applause from the audience.

A summary of the 11th C1-INH Deficiency Workshop held in May in Budapest and the coverage of the topics of the 2019 HAEi Central Eastern Europe Workshop held in Warsaw, Poland was received with high interest and conveyed the message that high caliber international events are being organized for the benefit of the patients. In this respect, the importance and impact of the continuously growing HAE International was emphasized, and patients, doctors and pharma present acknowledged the impressive development of the global organization.

Before turning the meeting into a relaxed conversation and chat session, the General Assembly was held as a last official act of the day. After having accepted the report on the budgetary issues, on last year's activity and planned 2020 projects, the members voted on the membership fee for next year. As a final act, the financial director of the Clinics informed the Association about the planned changes of the status of the Clinics, about moving the departments and research groups either into new locations or another part of the old university complex. We were also informed about further changes concerning the final, new site of the Angioedema Care Center, the move planned to be implemented around next June.



On closing the meeting, Professor Farkas addressed the audience again, wishing a Merry Christmas and a Happy New Year to the participants and their families.

## NEWS FROM THE INDUSTRY

### 5 November 2019

**BioCryst Pharmaceuticals, Inc.** has licensed commercialization rights in Japan to Torii Pharmaceutical, Co. for BCX7353, an oral, once-daily treatment for the prevention of HAE attacks.

"We are excited to partner with Torii to accelerate access for Japanese patients to BCX7353," said Jon Stonehouse, president and CEO of BioCryst. "Torii has a strong and recent history of significant commercial success as a Japanese partner, and the breadth of experience and infrastructure to build the prophylactic HAE market with BCX7353."

BioCryst received Orphan Drug and Sakigake designation for BCX7353 and plans to submit a Japanese New Drug application (JNDA) to the Pharmaceuticals and Medical Devices Agency (PMDA) in the first quarter of 2020.

"Given its clinical profile and the tremendous unmet need of HAE patients here in Japan, we are honored to add BCX7353 to our portfolio," said Goichi Matsuda, president of Torii. "We are well positioned to use our experience in building disease awareness, in driving patient identification, and our broad reach across the base of treaters, including dermatologists, allergists, and other specialists, to bring this important treatment to HAE patients."

"With no approved treatments in Japan for the prevention of HAE attacks, there is a significant unmet need today," said professor Beverley Yamamoto, president of the Japanese Hereditary Angioedema Patient Association. "A safe, effective oral prophylactic therapy would offer tremendous benefit to Japanese HAE patients and their families."

(Source: BioCryst)



## 7 November 2019

Announcing the financial results for the third quarter ended 30 September 2019 **BioCryst Pharmaceuticals, Inc.**, President and CEO Jon Stonehouse says:

“BioCryst is positioned for a transformational 2020, with the potential approval and launch of BCX7353 in the U.S. and regulatory filings for BCX7353 in Japan and Europ. We are also actively evaluating multiple approaches to add capital to the balance sheet by the end of 2019, as we did with the Japanese licensing agreement for BCX7353, which we announced earlier this week.”

### Upcoming Key Milestones

- Submit a new drug application (NDA) for oral, once-daily BCX7353 for the prevention of hereditary angioedema (HAE) attacks with the U.S. Food and Drug Administration (FDA) (Q4 2019)
- Submit a marketing authorization application for oral, once-daily BCX7353 for the prevention of HAE attacks with the Japanese Pharmaceuticals and Medical Devices Agency (PMDA) and the European Medicines Agency (EMA) (Q1 2020)
- Commence ZENITH-2, a Phase 3 clinical trial of oral BCX7353 (750 mg) for the treatment of acute HAE attacks, in 2020, pending the completion of interactions with regulators on the Phase 3 program and additional work on the acute oral formulation (2020)

(Source: BioCryst)



## 7 November 2019

**BioCryst Pharmaceuticals, Inc.** announces the 48-week results from its APeX-S and APeX-2 trials and comprehensive market research which support the significant commercial opportunity for oral, once daily BCX7353 in HAE.

“The 48-week clinical trial data we now have from APeX-S and APeX-2 highlight the control patients are having over their attacks with oral, once daily BCX7353, and consequently why 75 percent of patients stayed on-study through 48 weeks when they had other choices,” said Jon Stonehouse, President and CEO of BioCryst.

“Since receiving the 24-week data from APeX-2 in May, we have conducted detailed and comprehensive

market research to update our understanding of the commercial potential and value of BCX7353 with patients, treating physicians and payors. It is clear from this work that, regardless of their current treatment, HAE patients are eager to use, physicians are expecting to prescribe and payors are willing to reimburse oral once a day BCX7353,” Stonehouse added.

### Key Findings from 48-week APeX-S and APeX-2 Data:

- In APeX-2, patients experienced a rapid and sustained decrease in their attack frequency over 48 weeks. Thirty patients who were randomized to 150 mg of BCX7353 at the beginning of the study and completed 48 weeks of therapy had a baseline attack rate of 2.9 attacks per month, which declined to 1.4 attacks per month after one month and to 1.0 attacks per month at month 12.
- APeX-2 patients who switched from placebo to 150 mg of BCX7353 at the week 24 visit saw dramatic and sustained reductions in their HAE attack rate. Their mean attack rate dropped to 0.5 attacks per month at month seven and to 0.4 attacks per month at month 12.
- APeX-S patients taking 150 mg of BCX7353 had similar attack control as those in APeX-2. Patients completing 48 weeks of treatment on 150 mg of BCX7353 (n=73) had a median attack rate of zero attacks per month in six of the 12 months, including month 12 (week 48).
- 75 percent of HAE patients who were on 150 mg of oral BCX7353 in the APeX-2 trial completed 48 weeks of treatment.
- The integrated 48-week analysis across both APeX-2 and APeX-S showed no new safety findings. BCX7353 was safe and generally well tolerated in a total of 342 patients with a total of 232 patient-years of daily oral dosing. The most common adverse event was the common cold, which occurred with similar frequency in BCX7353 and placebo patients. Gastrointestinal events led to discontinuation of BCX7353 in three percent of patients. Drug-related serious adverse events occurred in three of 342 subjects (0.9%) and resolved after stopping or interrupting BCX7353 dosing.
- In APeX-S, alanine aminotransferase levels >3xULN were seen in 14 of 49 patients who discontinued androgens within 28 days prior to study entry, compared to one of 104 patients who discontinued androgens more than 28 days prior to study entry and zero of 74 patients who had never used androgens. These observations support a proposed four-week washout period for current androgen patients before beginning therapy with BCX7353.

### Key Findings from Market Research:

- The prevalence of HAE in the U.S. is higher than previously estimated. A comprehensive study of U.S. administrative claims data from 274 million covered lives establishes a prevalence of approximately 10,000 total HAE patients and 7,500 diagnosed and treated HAE patients in U.S.
- More than 80 percent of the 100 HAE patients in the market research self-reported being on prophylactic therapy.
- The 175 physicians in the market research, who in total treat more than 1,300 HAE patients, report they currently treat 58 percent of HAE patients with prophylactic therapy and anticipate they will treat 80 percent of HAE patients with prophylactic therapy in the future.
- Patient demand for BCX7353 is strong, regardless of their current therapy. When 100 patients were shown the APeX-2 24-week product profile, 60 percent of HAE patients said they would be very willing to use BCX7353.
- HAE-treating physicians expect to prescribe BCX7353 to 41 percent of their HAE patients.
- Payors expressed a broad willingness to reimburse oral BCX7353 in pricing research with insurance plans and pharmacy benefit managers representing more than 100 million covered lives.

(Source: BioCryst)



## 11 November 2019

**Takeda Pharmaceutical Company Limited** announces new data that further investigate the long-term safety and efficacy of TAKHZYRO® (lanadelumab-flyo) injection in patients with HAE 12 years of age and older studied in the ongoing Phase 3 HELP (Hereditary Angioedema Long-term Prophylaxis) Study™ Open-label Extension (OLE). The analyses, being presented at the 2019 American College of Allergy, Asthma and Immunology (ACAAI) Annual Meeting in Houston, Texas 7-11 November 2019, show that TAKHZYRO continues to prevent HAE attacks at a rate similar to that observed in the pivotal HELP Study, in patients who received treatment for a mean duration of 19.7 (0-26.1) months. The analyses will also be published in the November issue of ACAAI's journal *Annals of Allergy, Asthma & Immunology*.

The original Phase 3 HELP Study was conducted in 125 patients over 26 weeks making it the largest randomised, controlled prevention study in HAE, with the longest active treatment duration, to date. The ongoing HELP Study OLE is designed to evaluate the long-term safety (primary endpoint) and efficacy of TAKHZYRO and is expected to be completed in November 2019. These analyses included 109 rollover patients, who were originally evaluated in the HELP Study, and 103 eligible non-rollover patients who did not participate in the initial study but had experienced at least one attack in 12 weeks.

Results from the HELP Study OLE showed that the safety profile of TAKHZYRO was consistent with the original findings from the HELP Study, with treatment-related treatment emergent adverse events (TEAEs) occurring in 50% of patients (n=106). In addition, TAKHZYRO 300 mg every 2 weeks reduced the rate of attacks, attacks requiring acute treatment, and moderate to severe attacks (secondary efficacy endpoints). The mean attack rate was reduced by 87% overall compared with baseline (N=212). Similarly, there was an overall reduction of 92.6% in the rate of attacks requiring acute treatment (N=212) and 83.6% in the rate of moderate/severe attacks versus baseline (N=212). [1] An exploratory analysis showed that the overall maximum attack-free period lasted ≥12 months in 58% of patients (n=209) and ≥6 months in 78% of patients (n=209) following the first regular treatment dose.

“While the original HELP Study data has given us a strong understanding of how TAKHZYRO can prevent HAE attacks, the results of these analyses provide encouraging insight into its potential safety and efficacy over a longer duration,” said Marc A. Riedl, M.D., investigator in the HELP Study OLE and Professor of Medicine and Clinical Director, U.S. Hereditary Angioedema Association Center at the University of California, San Diego. “As HAE is a lifelong condition, the long-term efficacy and safety of prophylactic medications are important factors in developing individualized HAE management plans. The HELP Study OLE analyses are a positive step forward in understanding the long-term effects of TAKHZYRO, and we look forward to gathering and sharing additional data as the study progresses.”

In the study, TEAEs occurred in ~95% of patients (N=212) and were mostly mild or moderate in severity. The TEAEs related to treatment that were reported in more than 5% of patients are injection site pain (33.9% of rollover patients [n=37] and 42.7% of non-rollover

patients [n=44]), injection site erythema (11.9% of rollover patients [n=13] and 15.5% of non-rollover patients [n=16]) and injection site bruising (4.6% of rollover patients [n=5] and 9.7% of non-rollover patients [n=10]).

TEAEs of special interest were reported in eight (3.8%) patients; none were serious. Six (2.8%) patients discontinued from the study due to TEAEs, one of which was treatment-related (injection site papules). No treatment-related, serious TEAEs or deaths occurred. Anti-lanadelumab antibodies were detected in 21 (9.9%) patients, including six (2.8%) positive for neutralizing antibodies with no discernible clinical impact.

“Recurrent and unpredictable attacks of swelling can be debilitating and impact those living with HAE in a number of ways,” said Donatello Crocetta, M.D., Global Medical Head, Rare Immunology Franchise, Chief Medical Office, Takeda. “Over the last 10 years, we have been committed to continuous innovation in HAE to help address patients’ unmet treatment needs. These findings build on our knowledge about HAE and are valuable in better understanding the benefits that preventive treatment with TAKHZYRO could bring to patients in the longer term.”

(Source: Takeda)



### 14 November 2019

**KalVista Pharmaceuticals, Inc.** expects to complete enrollment for the KVD900 Phase 2 clinical trial before year-end 2019 and to provide data in 2020.

“We are pleased with the rate of enrollment of our Phase 2 clinical trial of KVD900 in HAE patients,” said Andrew Crockett, CEO of KalVista. “Our plan to recruit patients primarily in European HAE centers is serving us well, with good recruitment at our clinical sites. Regulatory and ethical approvals have been timely, although start-up at several sites has taken longer than anticipated. We have identified a robust pipeline of patients eager to try a potentially efficacious oral on-demand treatment, and we anticipate that we will complete recruitment before year-end 2019 and provide data in 2020.”

(Source: KalVista)



### 23 November 2019

The Canadian Agency for Drugs and Technologies in Health (CADTH) Canadian Drug Expert Committee (CDEC) has issued a positive recommendation that TAKHZYRO® (lanadelumab injection) be reimbursed by public drug plans for routine prevention of HAE attacks in adolescents and adults (12 years of age and older).

“As a physician who treats patients with HAE, I am pleased to have access to a treatment like TAKHZYRO to help prevent HAE attacks,” said Stephen D Betschel, HBSc, MD, FRCPC, and Chair of The Canadian Hereditary Angioedema Network (CHAEN). “This is an exciting development for Canadian patients living with HAE, and with CADTH’s positive recommendation, we are one step closer to getting to access to this novel and important treatment option.”

Following a priority review, Health Canada authorized TAKHZYRO for routine prevention of attacks of HAE in adolescents and adults (12 years of age and older) in September 2018. Health Canada’s authorization was based on findings from the Phase 3 HELP (Hereditary Angioedema Long-term Prophylaxis) Study™. This data is now further supported by the Phase 3 HELP Study™ Open-label Extension (OLE), that investigates the long-term safety and efficacy of TAKHZYRO.

Presented at the 2019 American College of Allergy, Asthma and Immunology (ACAAI) Annual Meeting on November 7-11, the HELP Study OLE showed that the safety profile of TAKHZYRO was consistent with the original findings from the HELP Study, with treatment-related treatment emergent adverse events (TEAEs) occurring in 50% of patients (n=212). In addition, TAKHZYRO 300 mg every 2 weeks reduced the rate of attacks, attacks requiring acute treatment and moderate to severe attacks (secondary efficacy endpoints). The mean attack rate was reduced by 87% overall compared with baseline (n=212). Similarly there was an overall reduction of 92.6% in the rate of attacks requiring acute treatment (n=212) and 83.6% in the rate of moderate/severe attacks versus baseline (n=212). An exploratory analysis showed that the overall maximum attack-free period lasted ≥12 months in 58% of patients (n=209) and ≥6 months in 78% of patients (n=209) following the first regular treatment dose.

In the study, TEAEs occurred in ~95% of patients (n=212) and were mostly mild or moderate in severity. The TEAEs related to treatment that were reported

in more than 5% of patients were injection site pain, injection site erythema and injection site bruising.

“We are hopeful that CADTH’s positive recommendation will provide Canadians living with HAE access to a new and useful therapy to help bridge the gap in care,” said Jacquie Badiou, President, Hereditary Angioedema (HAE) Canada. “HAE not only affects patients physically but can have detrimental impacts on one’s quality of life due to the debilitating and unpredictable nature of the disease which is why new options are important.”

The Phase 3 HELP Study found that patients achieved an improvement in quality of life as measured by angioedema quality of life (AE-QoL) questionnaire. Findings showed that patients reported a quality of life improvement of 80.8% for TAKHZYRO dosed at 300 mg every 2 weeks and 63.0% for TAKHZYRO dosed at 300 mg every 4 weeks, compared to 36.8% for the placebo arm.

“At **Takeda**, we are committed to providing new and innovative options for patients and their families and we are delighted with CADTH’s positive recommendation for TAKHZYRO,” said Gamze Yüceland, General Manager, Takeda Canada Inc. “We look forward to working with our partners to bring this important therapy to Canadians living with HAE as soon as possible.”

(Source: Takeda)



### 4 December 2019

“We recently received Fast Track designation for KVD900, illustrating the high level of unmet need in the HAE community for efficacious and safe, orally-delivered therapies,” said Andrew Crockett, CEO of **KalVista Pharmaceuticals, Inc.** says in an operational update and financial results for the fiscal second quarter ended 31 October 2019. “Our Phase 2 clinical trial for KVD900 continues, and we expect to have data from that trial in 2020. The Phase 2 clinical trial of KVD001 in DME will provide data this month.”

Second Quarter and Recent Business Highlights:

Presented at The International Symposium on Ocular Pharmacology and Therapeutics (ISOPT). KalVista’s Chief Scientific Officer, Edward P. Feener, PhD, spoke

on “Kallikrein-Kinin System in Diabetic Retinopathy – Novel Target.”

Announced that the Phase 2 trial of KVD900 as an on-demand therapy for HAE is anticipated to complete enrollment in 2019 with data expected in 2020. The trial is being conducted in approximately 20 sites in Europe and the U.S.

Received Fast Track designation for KVD900 from the U.S. FDA, supporting the Company’s belief in the high level of unmet need in HAE and providing a potentially expedited path to drug approval.

(Source: KalVista)



### 11 December 2019

**BioCryst Pharmaceuticals, Inc.** has submitted a new drug application (NDA) to the U.S. Food and Drug Administration (FDA) for approval of oral, once daily berotralstat (BCX7353) for the prevention of HAE attacks.

“HAE patients are waiting for a safe, effective oral therapy to manage their disease and this NDA submission brings berotralstat an important step closer to meeting this need for patients and their physicians,” said Jon Stonehouse, CEO of BioCryst.

“Thank you to all of the HAE patients who have participated in our clinical trials, to the clinical investigators and their teams around the world who conducted our clinical trials, and to the BioCryst team for always remembering that patients are waiting for our oral, once daily medicine. Our commercial team is hard at work preparing to commercialize berotralstat in 2020,” Stonehouse added.

(Source: BioCryst)





# MEDICAL PAPERS

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

**The International/Canadian Hereditary Angioedema Guideline** – by S. Betschel, University of Toronto, Canada, et al.:

The care of patients with HAE in Canada is neither optimal nor uniform as it lags behind some countries with more organized models for HAE management, and greater availability of licensed therapeutic options. This guideline should optimize the management of HAE and promote the importance of individualized care to caregivers, policy makers, patients, and advocates.

Allergy Asthma Clin Immunol., November 2019

**Lanadelumab for the prevention of attacks in HAE** – by A. Valeriewa, Medical University of Sofia, Bulgaria, et al.:

The positive results of the phase III HELP Study of lanadelumab are being further confirmed in the open-label extension study. This agent addresses some of the limitations of existing prophylactic options as tolerability issues, the need for intravenous administration and frequent dosing. Therefore, lanadelumab can profoundly improve the quality of life of patients with C1-INH-HAE.

Expert Rev Clin Immunol., December 2019

**HAE in children: a review and update** – by N. Pancholy and T. Craig, Penn State University, Pennsylvania, the United States of America:

Over the past decade, therapy in the USA has emerged from fresh-frozen plasma and androgens to more than seven medications. Treatment has evolved from intravenous to subcutaneous and the future will be a focus on oral therapy. Much optimism exists that HAE patients will live a life with minimal disease and impact on their quality of life making it even more important to diagnose children at an early age.

Curr Opin Pediatr., December 2019

**Efficacy, pharmacokinetics, and safety of icatibant for the treatment of Japanese patients with an acute attack of HAE: A phase 3 open-label study** – by M. Hide, Hiroshima University, Japan, et al.:

The efficacy and tolerability of icatibant for acute attacks is demonstrated in Japanese patients with HAE, regardless of self-administration or administration by healthcare professional.

Allergol Int., October 2019

**Lanadelumab for the treatment of HAE** – by M.A. Wu, University of Milan, Italy:

Lanadelumab is able to inhibit plasma kallikrein with high selectivity and affinity. The subsequent phases of drug development and the ongoing open-label trial have proven its safety and efficacy. It overcomes some of the limitations of other drugs available for long-term prophylaxis, given the easy route of administration, the simple administration schedule and the possibility to tailor the treatment to each patient.

Expert Opin Biol Ther., December 2019

**C1 Inhibitor Activity and Angioedema Attacks in Patients with HAE** – by A.P. Kaplan, Medical University of South Carolina, the United States of America:

Measurement of functional C1-INH activity may be useful as a biomarker of the risk of an attack in patients with HAE who are receiving long-term prophylaxis with plasma-derived C1-INH.

J Allergy Clin Immunol Pract., October 2019

**HAE: a prospective study of a Brazilian single-center cohort** – by M.L.O. Alonso, Federal University of Rio de Janeiro, Brazil, et al.:

There is a considerable delay in diagnosis, even with familial history. The severity of HAE attacks, especially in females, highlights the need for an awareness of HAE by gynecologists and obstetricians. Screening of familial members, including asymptomatic individuals, is critical for earlier diagnosis. Regional evaluation of patient profiles can be helpful to draw more attention about HAE and to improve quality of life.

Int J Dermatol., October 2019

**HAE: Looking for bradykinin production and triggers of vascular permeability** – by M. Margaglione et al., University of Foggia, Italy:

It is conceivable that there exist one or more localized factors that stimulate the production of bradykinin, which does not become a systemically event. Uncovering of these factors may shed lights on the missing part of the pathogenesis of HAE.

Clin Exp Allergy., November 2019



# 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:

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#### **A clinical trial to assess 2 different doses of BCX7353 compared to placebo as an oral treatment for the prevention of attacks in people with HAE**

– recruiting in Austria, Belgium, Bulgaria, Canada, Czech Republic, Denmark, France, Germany, Hungary, Ireland, the Netherlands, North Macedonia, Spain, the United Kingdom and the United States of America

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#### **A Long Term Safety Study of BCX7353 in HAE**

– recruiting in Australia, Austria, Denmark, France, Germany, Hong Kong, Hungary, Israel, Italy, New Zealand, North Macedonia, Poland, Serbia, Slovakia, South Africa, South Korea, Spain, Switzerland, the United Kingdom and the United States of America

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#### **A Phase 3, randomized, double-blind, placebo-controlled, parallel-group study to evaluate the efficacy and safety of two dose levels of BCX7353 as an oral treatment for the prevention of attacks in subjects with HAE**

– recruiting in Japan

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#### **A Safety, Pharmacokinetics (PK), and Pharmacodynamics (PD) Study of Lanadelumab to Prevent HAE Attacks in Pediatric Participants of 2 Years to Less Than (<) 12 Years of Age**

– recruiting in Canada, Germany, Hungary, Spain and the United States of America

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#### **A study to a) evaluate the tolerability and blood levels of KVD900 when given as a single dose to patients and b) to assess whether KVD900 is effective in treating attacks of swelling in patients with the genetic disease HAE**

– recruiting in Austria, Germany, Hungary, the Netherlands, North Macedonia and the United Kingdom

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#### **A Study to Assess the Clinical Efficacy of IONIS-PKK-LRx in Participants with HAE**

– recruiting in the United States of America

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#### **A Study to Investigate CSL312 in Subjects with HAE**

– recruiting in Australia, Canada, Germany, Israel, and the United States of America

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#### **Biomarker for HAE Disease Type 1 (BioHAE)**

– recruiting in Egypt, Georgia, Germany and India

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#### **Cloud-R HAE Registry**

– recruiting in France

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#### **C1 Inhibitor Registry in the Treatment of HAE Attacks**

– recruiting in Bulgaria, Croatia, Czech Republic, France, Germany, Hungary, Italy, North Macedonia, Norway, Poland, Slovakia, Slovenia and Sweden

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#### **Determination of Specific Biomarkers of Acute Attack of Angioedema Within Pediatric Population**

– recruiting in France

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#### **Efficacy and Safety of Lanadelumab (SHP643) in Japanese Participants with HAE**

– recruiting in Japan

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#### **Epidemiological Analysis for HAE Disease**

– recruiting in Germany, Italy, Poland, Turkey and the United Kingdom

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#### **Firazyr General Drug Use-Results Survey (Japan)**

– recruiting in Japan

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#### **Firazyr Patient Registry (Icatibant Outcome Survey - IOS)**

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

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#### **Global Registry to Gather Data on Natural History of Patients with HAE Type I and II**

– recruiting in Italy

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#### **HAE Kininogen Assay**

– recruiting in Germany

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#### **Involvement of Monocytic B1 and B2 Receptors in Inflammation and Chronic Vascular Disease in Patients with Hereditary Bradykinetic Angioedema**

– recruiting in France

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#### **Lanadelumab tested in patients suffering from HAE with normal C1-Inhibitor**

– recruiting in Germany

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#### **Pathophysiological study for autoimmune dysregulation of HAE**

– recruiting in Japan

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#### **Pharmacokinetics and Safety of Human Pasteurised C1-Inhibitor Concentrate (Berinert/CE1145) in Subjects with Congenital C1-INH Deficiency**

– recruiting in Italy

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#### **Patient Registry to Evaluate the Real-world Safety of Ruconest**

– recruiting in the United States of America

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#### **Study to Evaluate the Real-world Effectiveness of Lanadelumab in Participants with HAE**

– recruiting in Canada, Puerto Rico and the United States of America

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#### **The Role of the Coagulation Pathways in Recurrent Angioedema**

– recruiting in France

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#### **Study to Evaluate the Real-World Long-Term Effectiveness of Lanadelumab in Participants with HAE**

– will be recruiting Austria, Germany and Switzerland

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Read more about these and other clinical trials at <https://clinicaltrials.gov> and <http://apps.who.int/trialsearch>

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# HAE INTERNATIONAL AROUND THE WORLD

Currently there are HAE member organizations in 84 countries. You will find a great deal of vital information on the HAE representations around the globe at [haei.org](http://haei.org) – and the world map will provide you with contact information for the member organizations as well as care centers, hospitals, physicians, and available medication. The information on [haei.org](http://haei.org) is being updated as soon as HAE International receives fresh data from the national member organizations.

