OCTOBER 2022

Global perspectives:

HAEi MAGAZINE · ISSUE 3/2022

95 Member countries

HAEi GLOBAL LEADERSHIP WORKSHOP FRANKFURT 6-9 OCT 2022

Global perspectives

Global Perspectives
Issue 3/2022
October 2022

Cover photo
Participants from 75+ countries came 'Together Again' for the 2022 HAEi Global Leadership Workshop in October – read more on page 14.

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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 HAEi FRIENDS,

This edition of *Global Perspectives* celebrates what can only be described as a triumphant gathering of HAEi Member Organization leaders along with key opinion leader physicians/scientists and representatives from the pharmaceutical industry. The 2022 HAEi Global Leadership Workshop (GLW) lived up to the theme of "Together Again" as about 500 people from the HAE community traveled to Frankfurt, Germany for the first in person global HAEi event in four long years. The pictures from the event shown in this magazine reveal the special sense of fellowship and belonging that magically appears when HAEi friends get together.

It is our hope that leaders who attended GLW are already in the process of implementing some of the many HAEi programs and services highlighted throughout the event. Just as important, those who were not at GLW are cordially invited to peruse pages 18-19 and learn all about HAEi's broad range of offerings.

I also cordially invite you to review highlights of GLW sessions that addressed

- new treatments on the horizon (page 21)
- highlights from the scientific session (pages 24-25)
- a new and exciting educational program for HAEi Youth called LEAP that empowers Learning, Experiencing, Advocating, and Paving the Way (pages 36-39),
- HAEi's Angioedema Centers of Reference and Excellence (ACARE) (page 22), and
- the Youth Advisory Group's activities and perspectives (pages 28-29).

Looking into the future, we will leverage off the great success of GLW by conducting in-person conferences that focus on unique needs of people with HAE and their caregivers in various regions throughout the world. Please mark your calendars for the HAEi Regional Conferences scheduled for your region:

2023 HAEi Regional Conference APAC
(covering Asia Pacific)
17 – 19 March 2023, Bangkok, Thailand

2023 HAEi Regional Conference EMEA
(covering Europe, the Middle East, and Africa)
1 – 3 September 2023, Munich, Germany

2024 HAEi Regional Conference Americas
(covering North, Central, and South America)
15 – 17 March 2024, Panama City, Panama

The GLW "experience" confirms that our community is ready to ramp up the fierceness of advocacy efforts to win access to modern HAE medicines. HAEi stands committed to providing the motivation, guidance, and tools that fuels the growing HAE global patient movement.

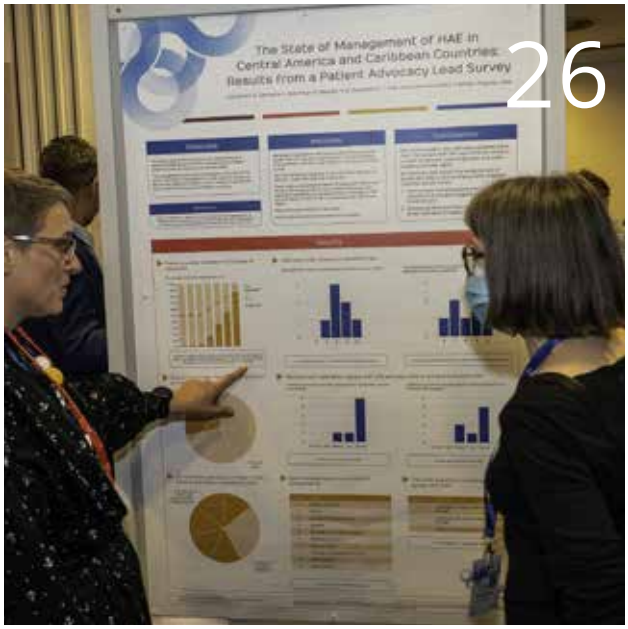
I wish you good health, happiness, and pleasant reading!

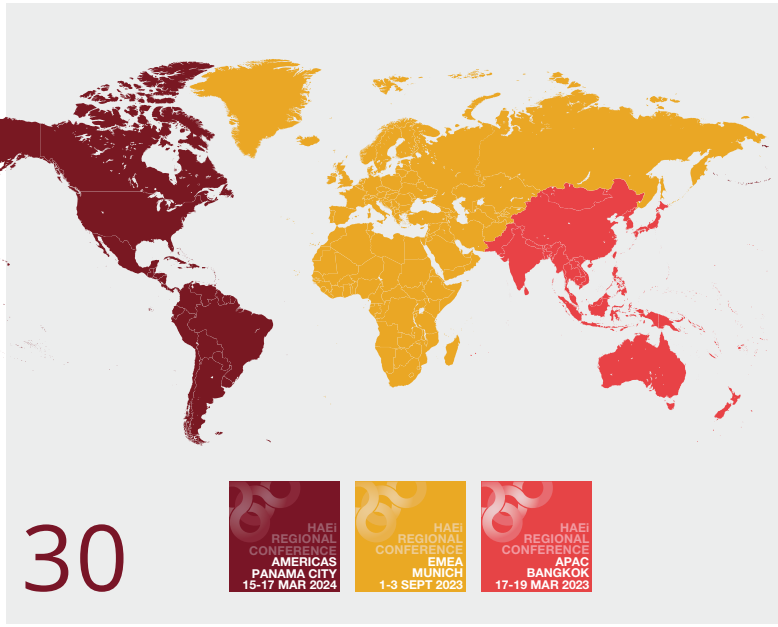
Warmest regards,

Tony

Anthony J. Castaldo
President and CEO, HAEi

IN THIS ISSUE OF GLOBAL PERSPECTIVES





NEWS FROM THE HAEi REGIONAL PATIENT ADVOCATES

In addition to preparing for the 2022 HAEi Global Leadership Workshop, our Regional Patient Advocates (RPAs) continued to work closely with our Member Organizations to help them achieve the ultimate goal of gaining or expanding access to modern therapies.

HAEi's portfolio of programs and services have been specifically designed to support the advocacy efforts of the Member Organizations. I have been delighted to see an increasing demand for our HAEi Advocacy Academy, HAE TrackR, HAE Companion, HAEi Connect, HAEi Web Hosting, and Emergency Room Posters, just to mention a few. Also, Member Organizations are taking advantage of opportunities to participate in clinical trials and other research projects.

Our Member Organizations continue to demonstrate that success results from sustained and targeted advocacy anchored by systematic use of what HAEi offers. It is very exciting to observe the growing momentum of the global HAE patient movement as an increasing number of countries gain access to new medicines.

Our RPA sense a renewed level of energy now that the community is once again meeting face-to-face. Let's keep the advocacy momentum going!

Fiona Wardman
Chief Regional Patient Advocate

MARIA FERRON
THE MEDITERRANEAN, NORTH AFRICA AND THE BRITISH ISLES

These last months have been hectic due to the organization that the 2022 HAEi Global Leadership Workshop entails, but we were all excited to meet face-to-face again after such a long period.

Firstly, I would like to say that I have delivered the posters developed by HAEi requested by Libya and Mauritania to be distributed in private and public hospitals, aiming to raise awareness and locate more patients.

I am also happy to announce that the Member Organizations and doctors lead in Algeria and Morocco have been working very hard to get the local authorizations to register HAE modern treatments – more news to come soon!

Furthermore, I want to highlight that many clinical trials from different pharmaceutical companies are taking place in Europe, so if you are interested in enrolling in one, don't hesitate to contact your national organization for more information.

Finally, I am happy to announce that fellow Regional Patient Advocate Michal Rutkowski and I were invited to participate with an article and a patient story made by National Contact Ahmed A. Aboudair from HAE Libya for the RARE Revolution Magazine. This is a quarterly digital magazine that raises awareness for rare and genetic diseases, and after partnering with CSL Behring, they are producing a spotlight series of the magazine. Have a look at https://bit.ly/CSL-HAE.

JØRN SCHULTZ-BOYSEN
NORDICS, GERMANY, AUSTRIA AND SWITZERLAND

In Denmark, three patient meetings were held in June. It was great to meet with patients and caregivers again, and good information about HAE was shared. Norway and Sweden are planning three patient meetings – two in Sweden and one in Norway – to be held before the end of the year.. The three countries are working on exciting projects for kids and youngsters – soon, a series of podcasts about being young with HAE will be recorded.

A new HAEi patient guide is now ready and was officially launched at the 2022 HAEi Global Leadership Workshop. It is available in English and can be translated by the Member Organizations to local languages.

We are still working on putting together the Regional Medical Advisory Panel. We have several participants confirmed, and they are already feeding in very valuable information and ideas. Other countries have not yet been able to appoint a member of the panel. We look forward to continuing the dialogue with the panel to benefit even more from the collaboration.

Similarly, feedback from the Regional Advisory Groups has come in from many of the countries in the region. This will enable us to benefit from the experience of the local organizations in the region and to use the ideas in the tools and services provided by HAEi.

HAE TrackR continues to be a great tool and is now available in 30 languages – several of which are spoken in my region (Danish, Finnish, French, German, Norwegian, Swedish). The HAE TrackR app is easy to use – and a safe way to store your data – and it will help the patient and physician in their dialogue on current and future treatment options. I can only urge everyone to check it out – and to start using it!

The HAE Companion app, available on both Apple App store and Google Play, is a great tool to use when traveling. This app will help you find local HAE treatment centers and directions hereto, as well as you will find the Emergency Cards available in 84 countries. You can download the Emergency Card in the local language of the country you are visiting to your smartphone, e.g., to Apple's Wallet and Android's Passbook. A great help when traveling is having the Emergency Cards ready in the local languages. Or to have the card in your own language available on your smartphone when at home.

JAVIER SANTANA
CENTRAL AMERICA AND THE CARIBBEAN

The patient group in Puerto Rico has held its annual conference where HAE specialist doctors had the opportunity to talk about topics like new treatments, research, and COVID-19 vs. HAE. As a representative of HAEi, I gave a presentation on advocacy and the process of getting HAE medicines to countries through governments and their departments. Dr. Marc Riedl from the US HAEA Angioedema Center in California was the main speaker and special guest. There were also presentations by Dr. Anardi Agosto, who is President of the Association of Allergists and Immunologists of Puerto Rico, as well as the Past President, Dr. Rafael Zaragoza. Furthermore, pharmaceutical representatives took part in the event.

During a visit to the Dominican Republic, I had several meetings with doctors and visited the Vice Minister of Health. I also had a chance to meet with the Medical Director and Sub Director of the Children's Hospital of Santo Domingo, as well as with a doctor of the Department of Allergies and Immunology of the Hospital in Santo Domingo, who is Vice President of the Dominican Society of Asthma, Allergies, and Immunology. As part of my visit, interviews were conducted with the media on HAE and how it is reflected in the Dominican Republic. A further visit is being planned to hold meetings with other medical specialists and prepare for the first medical conference on HAE at the University of Medicine of the Dominican Republic.

As the first modern HAE medication in Costa Rica, Berinert has been approved and purchased by the Ministry of Health and will be available in the country's hospitals. Quite understandably, patients and medical specialists have received this news with great joy and emotion.

I congratulate President Diana Madrigal from HAE Costa Rica, Dr. Adrian Yong, Lisa Layera, lawyers, the members of HAE Costa Rica, and especially Samantha "Sammy" Madrigal, who at 11 years old decided to stand up to government gigantism, expose her life story publicly, and fight for her right to health and life. The Supreme Court of Costa Rica has ruled in favor of Samantha Madrigal in a lawsuit demanding the right to receive treatment for her health condition and the right to have a better quality of life. At HAEi, we are very happy about your achievement and grateful for having been part of the process. News such as this from Costa Rica is what motivates us to continue working hard so that HAE treatments reach other countries.

FERNANDA DE OLIVEIRA MARTINS
SOUTH AMERICA AND MEXICO

We have all been excited looking forward to the Global Leadership Workshop in Frankfurt, Germany. The idea of bringing the leaders/board members of the HAE community together in a face-to-face meeting after so much time apart has added extra energy to our region. During the months leading up to the workshop, I have supported the Member Organizations with their questions related to the event. Furthermore, we collected and updated data from the countries in my region, so we had good information to work with during the workshop.

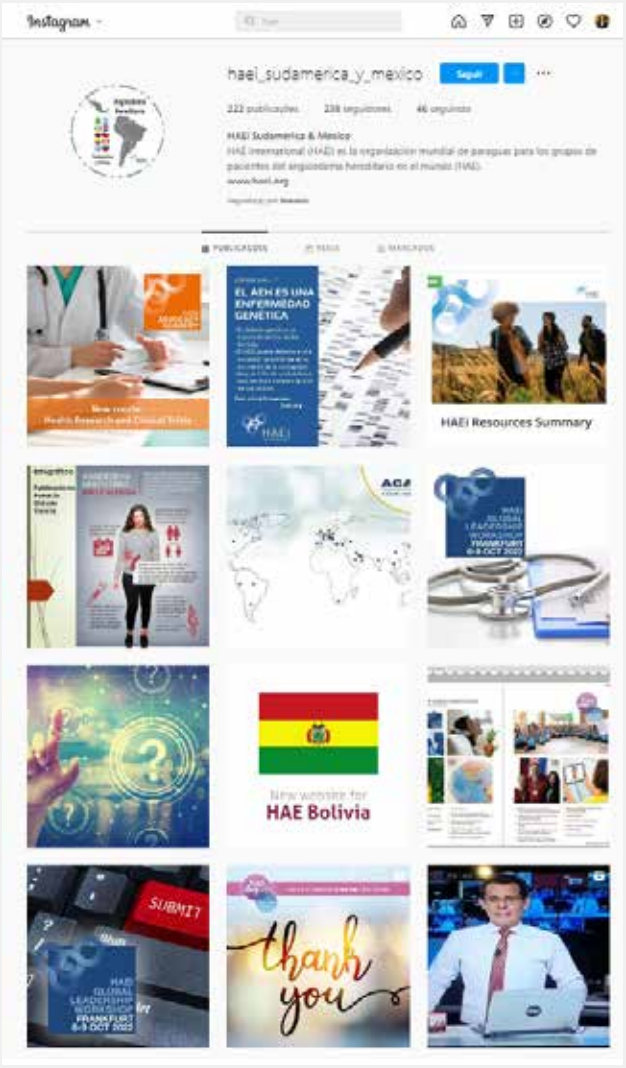
As a result of great teamwork, in September, we launched the Burden of Illness survey in Mexico, which is tailor-made for the country. If you are from Mexico and have received the invitation, please join the survey and help us understand how the disease impacts the lives of Mexicans with HAE.

We welcome the announcement that Pint Pharma has closed an agreement with BioCryst to make new therapeutic alternatives available to HAE patients in Latin American countries, particularly Berotralstat (ORLADEYO). We look forward to seeing more treatment options in our region.

I have been promoting the HAEi Advocacy Academy courses among the Member Organization leaders. We invite everyone to join the HAEi Advocacy Academy and do the open courses.

The US HAEA develops amazing activity books for the HAE children's community. Since they have also made it available in Spanish, our region can benefit from this great material. Most recently, I have sent the Member Organizations the 2022 fall edition of Brady Club, kindly shared with me by US HAEA so the children in our region can enjoy it.

We have been using the Instagram channel to amplify activities done by countries in the region and communicate about HAE.



NATASA ANGJELESKA
SOUTH EASTERN EUROPE

In the past couple of months, communication with patient representatives and physicians regarding the Global Leadership Workshop has been going on with high intensity.

The support to the patient and physician in Kosovo has continued. HAEi issued a support letter for access to treatment that was sent to the relevant decision-maker. I also met with pharma representatives to advocate for their interest in providing therapy for the patient. The physician has three more suspected cases, and hopefully, these patients will also agree to send blood samples to receive an accurate diagnosis.

Dr. Rushit Ismajli, Head of the Family Medicine Center in Pristina, Kosovo, has been added to the HAEi list of HAE knowledgeable physicians.

Access to preventive treatment is available to just one patient in Montenegro at the moment. The patient has shared with me only positive experiences after coming on preventive therapy, although he was previously struggling with multiple health conditions. He informed me that he has been attack-free for six months and hopes to continue receiving the medication as it was agreed with his physician, Dr. Katarina Mitrovic. Provided we plan to organize a patient meeting, this patient has offered to speak about his positive experience going from being sick, depressed, and in pain for a long time to now being a new person who almost forgets about having such a serious condition.

I received a translation of the HAE TrackR text in Slovenian, and hopefully, the app will soon be available for patients in Slovenia in their own language.

HAE Macedonia has translated the Emergency Room Poster into Macedonian, and after printing, it will be distributed to many departments throughout the country. On 30 September 2022, there was an educative session on HAE with teams of doctors and nurses from emergency rooms. This was a follow-up on the meeting about the challenges of HAE patients discussed with the First Lady of North Macedonia.

Speaking of the Emergency Room Poster, I have sent the documents for translation to HAE Albania and asked the organization to consider printing posters to support their activities. They are now working on the translation – and have planned a couple of activities for raising HAE awareness and reaching out to more patients.

Dr. Mensuda Hasanhodzic from Bosnia and Herzegovina has informed me that the first center for rare diseases will be established at a hospital in Tuzla, including all six patients with HAE that she cares for. This center will register patients according to their diagnosis and present this information to the Federal Government health authorities, thus giving a base for establishing treatment protocols.

On 10 September 2022, I was invited by the National Organization for Rare Diseases in Serbia (NORBS – Nacionalna organizacija za retke bolesti Srbije) to be part of a regional meeting in Belgrade. As a panelist in a "Patient Advocacy: Call to Action" session, I spoke about my experience as a mother of a child with HAE. However, I also had the opportunity to share information regarding my work as Regional Patient Advocate and the support HAEi provides to patients, families, and physicians.

MICHAL RUTKOWSKI
CENTRAL EASTERN EUROPE, BENELUX AND THE MIDDLE EAST

I am excited to share with you that after a long pandemic period, I had the pleasure of attending a patient meeting in person organized in Yerevan in June by HAE Armenia. It was so amazing to meet local patients, caregivers, and HAE expert physicians and to focus on what we can do together to bring access to HAE medicines to Armenia.

However, this was not the only personal meeting in which I had the opportunity to participate. Also, I had a fruitful meeting with our Member Organizations from Belgium and the Netherlands. Furthermore, I met with local HAE experts in Belgium, Prof. Dr. Cedric Hermans, and Prof. Dr. Didier Ebo, to discuss how HAEi can help in awareness, advocacy, and access to HAE therapies. In my activities, I focused on all Benelux countries, also identifying specialists in Luxembourg.

I have put much effort into activating patient advocacy in Lithuania, Latvia, and Estonia. These activities resulted in an HAEi Patient Meeting in Vilnius, Lithuania, in September. It was the first-ever meeting of this kind to take place in the country, where patients, family members, and physicians gathered and shared experiences. I would like to thank Prof. Dr. Laura Malinauskiene and Dr. Edita Gasiuniene for their commitment and support to making this event possible. However, we are not done yet, as on 5 November 2022, another HAEi Patient Meeting is going to take place, this time in Riga, Latvia. And if that is not enough for you, currently, we are trying to allocate a date for a patient meeting in Tallinn, Estonia, in the first quarter of 2023.

In June, in Warsaw, Poland, I organized an HAE Workshop dedicated to patients and caregivers. It was the first in-person meeting of HAE Poland in 28 months. The organization will soon present the next meetings in Wroclaw and Krakow to be held before the end of this year.

After many weeks, I finally managed to hold a zoom meeting with HAE experts from Iran, Prof. Dr. Mohammad Reza Fazlollahi, and his team. I am happy to inform you that the Immunology, Asthma and Allergy Research Institute (IAARI) in Teheran is an applicant center for the ACARE network – and hopefully a member soon. Furthermore, C1-INH is currently available in Iran under relatively favorable conditions. I will keep working with IAARI and HAE Iran on different projects and resources.

Over the last quarter, I organized and attended numerous individual virtual meetings with patient organizations from Armenia, Belarus, Egypt, Estonia, Georgia, Hungary, Russia, Slovakia, and Ukraine, as well as exchanged emails with many more. Also, I participated in videoconferences with manufacturer representatives from BioCryst Pharmaceuticals, KalVista Pharmaceuticals, Pharvaris, and Takeda.

I would also like to mention our success with the HAEi resources, as the HAEi Emergency Room Poster was translated into Georgian and Slovak. HAEi also produced posters and sent them to Prof. Maia Gotua in Tbilisi so that she could distribute them among local emergency room departments and hospitals.

Furthermore, I strengthened the communication with Member Organizations and HAE expert physicians from the Middle East. With my colleagues from the HAEi office, I burned the midnight oil to bring the Member Organization's leadership teams from the region to Frankfurt, Germany, to attend the 2022 HAEi Global Leadership Workshop.

FIONA WARDMAN
ASIA PACIFIC & SOUTH AFRICA

Over the last few months, there has been an opportunity for face-to-face meetings with Member Organizations in the Asia Pacific region and South Africa. Also, there has been a lot of communication with countries in my region in the lead-up to the Global Leadership Workshop in Frankfurt, Germany.

During July, I met with doctors in Singapore to better understand HAE patient management from their perspective. We also discussed the plans to hold a patient meeting later in the year.

While in Singapore, I met Takeda's local and regional teams to discuss plans for access to treatments in the countries in my region. I presented my journey from patient to advocate to approximately 50 people in person and over 100 online in the Takeda office. Also, I took the opportunity to meet with the CSL Behring representative in Singapore to discuss the plans for accessing treatments and with Rainbows Across Borders to discuss support for HAE Singapore at a local level with the Ministry of Health.

It was also my pleasure to meet with patient Yong Hao Lim to discuss his HAE journey. I would like to welcome Yong Hao to our HAEi family and as the new National Contact for Singapore.

I met with HAE Korea in August to re-establish plans and collaboration with HAEi. We had a full-day meeting with four people from HAE Korea to discuss their plans. We talked about how HAEi can assist with tools and resources, increase awareness and education amongst patients, physicians, and the community, gain access to more treatment options, and interact with more pharmaceutical companies.

While in Seoul, I met with the local Takeda team to discuss plans regarding treatment reimbursement. I also had the pleasure of meeting with Dr. Kang to discuss possible ways of increasing awareness of HAE amongst medical professionals.

Online, I have met with a local pharmaceutical company in India and HAE India to discuss plans for C1-Inhibitor for patients in India.

In September, I traveled to South Africa to meet with the HAE team there. We held productive meetings planning their growth and projects – no doubt meeting face-to-face gave us the opportunity for in-depth discussions. The HAE South Africa team and I also met with Dr. Jonny Peter, Dr. Mike Levin, and other doctors with HAE patients. Furthermore, we met with the local Takeda team and BioCryst (online) to discuss the plans for their modern therapies.


Leaders from 75 Countries

Accelerating the Global HAE Movement

Following the success of the five Global Conferences, the HAEi Board of Directors was thrilled to welcome just short of 500 participants representing 75+ countries to the 2022 HAEi Global Leadership Workshop in Frankfurt, Germany.

In his opening address, HAEi President & CEO Anthony J. Castaldo talked with enthusiasm about 'The spirit of Budapest' when Prof. Henriette Farkas invited scientists to the first-ever meeting on HAE:

"But patients were also welcomed and embraced at the 1999 meeting in Hungary. Soon followed another crucial gathering hosted by Prof. Marco Cicardi in Italy, ultimately leading to the founding of HAEi in 2004. No doubt these events gave us the backbone to get to where we are today – having grown from the seven founding countries to now 95 Member Organizations across the globe."

As for the choice of title for the workshop – 'Together Again' – Anthony J. Castaldo said:

"The title celebrates that this is the first global in-person HAEi event in more than four years. We are very excited about bringing leaders of the Member Organizations together to, once again, experience the extraordinary sense of community felt by all when HAEi friends meet face to face. The workshop provides a unique opportunity for global HAEi leaders to not only share their approaches to advocacy but also generate new ideas that can be applied at home."

With HAEi Executive Vice President & COO Henrik Balle Boysen, Anthony J. Castaldo said, "This workshop is all about being together again", and strongly encouraged the participants to make new friends and contacts.

Throughout the workshop, it was evident that 'Together Again' was a very well-chosen title. Again and again, you could hear patients, caregivers, physicians, and pharma representatives tell each other how good it was to finally meet once more. However, after a little while of greeting old HAE friends, the participants also met with people they had never had a chance to see in person.

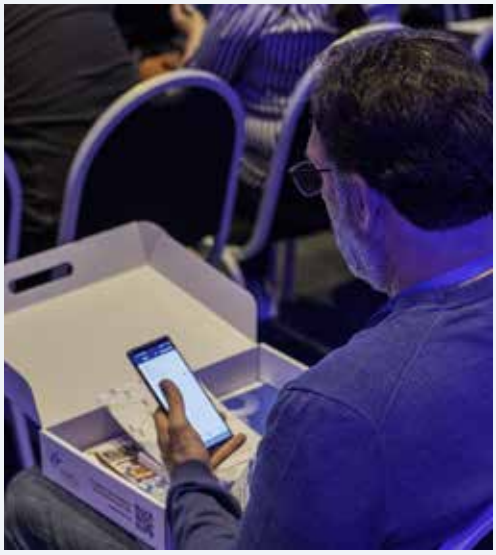
After a joint opening session Friday morning, the workshop continued in two separate tracks: One for Member Organization leadership and another for healthcare professionals and researchers.

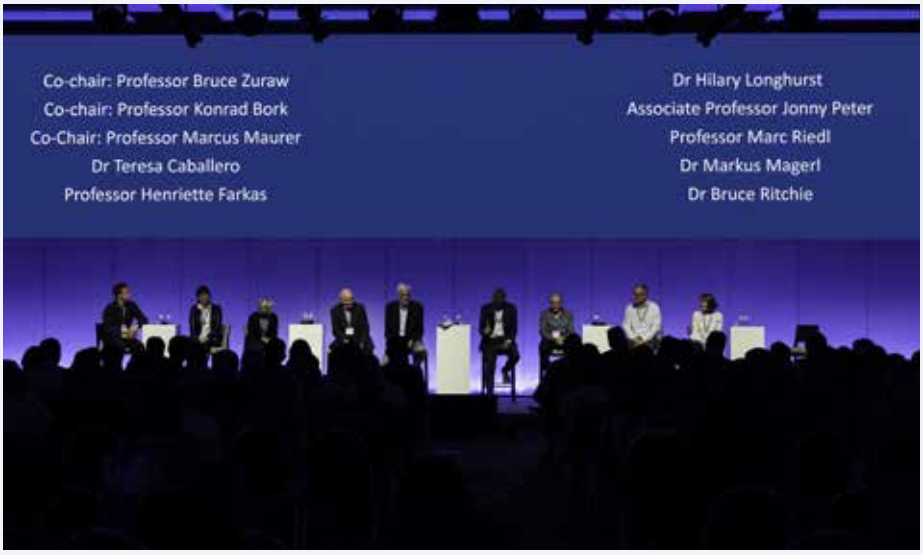
"As I just said to some of the other guys from the youngsters' group: We were KIDS when we last met in person! It has been too long."
– Marco Castiglioni Roffia, Italy

"It is wonderful to finally be able to meet people that you've only seen via Zoom."
– Daphne Dumbrille, Canada

"It is so nice with all the sessions, but it is also evident that people want time to interact after all these months and years apart. Finally, here we are!"
– Ersan Sevinç, Turkey

"All the hugs and kisses from friends old and new – that's really priceless."
– Missy Mallory, United States




Co-chair: Professor Bruce Zuraw
Co-chair: Professor Konrad Bork
Co-Chair: Professor Marcus Maurer
Dr Teresa Caballero
Professor Henriette Farkas
Dr Hilary Longhurst
Associate Professor Jonny Peter
Professor Marc Riedl
Dr Markus Magerl
Dr Bruce Ritchie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Together Again


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Member Organization Program

The workshop began with an overview of HAEi's history and introduction of its Board of Directors and Leadership.

The next session featured a comprehensive presentation of the Services and Programs – the following is an overview of the items presented at the workshop.

HAEi Hosted Websites

"As a new HAEi Member Organization, we didn't have any information online. HAEi helped us to create a simple website. It was so quick. People with HAE in our country can now find us, find information on HAE and join our organization. Our contact information is available for anyone to find." – *Moazzam Farooq, Pakistan*

"It was very easy and pretty fast. I sent the selected template to the team, and they launched the site in a few weeks. After two years, they migrated the site to the new multi-site platform. It was also pretty fast and smooth." – *Zoltán Maros, Hungary*

HAEi Connect

To this point, 32 Member Organizations are using HAEi Connect, seven more are in progress, and another seven have been reached out to.

"HAEi introduced us to the program so we could have one database with our patients in one place. Rather than Excel sheets managed by multiple members. It was also more secure for patient information." – *Tamsin van Vlaanderen, South Africa*

"I would like to say to other Member Organizations that I invite you to start to use HAEi Connect. It is easy to use, and it is a useful tool that can be used to achieve improvements for every organization." – *Sandra Nieto, Mexico*

Event Zoo

"Conference and meeting registration processes can be quite challenging and time-consuming if you don't have advanced tools to do it. Event Zoo gave us the possibility to make the process easy and time affordable. And most of all Event Zoo is fully compliant with GDPR, which is so important nowadays! With Event Zoo you don't have to deal with all the paper sheets or all the Excel files anymore. All entries arrive smoothly, and you can easily divide or select them, according to your accommodation or travel requirements. Having such a tool free of charge is priceless for Member Organizations." – *Michal Rutkowski, Poland*

HAEi Advocacy Academy

HAEi Advocacy Academy is being used by Member Organizations around the globe to help them in their advocacy efforts. Courses are developed and added based on feedback from our Member Organizations so we know we are responding to needs of our members.

Emergency Card

The Emergency Card has been translated into 44 languages and is now used in 84 member countries.

Emergency Room Poster

The Emergency Room Poster exists in 17 languages, comes in three sizes, and can be customized to the specific needs of a Member Organization.

Understanding HAE

The patient guide 'Understanding HAE' based on requests from Member Organizations is fresh from the printshop – please see page 40 for a more comprehensive presentation of the brochure.

HAEi Youngsters

More than 350 young people with HAE are now connected via HAEi Youngsters. The youngsters' website is currently being updated with expected launch of a Youngsters' Hangout at the end of the month.

HAE TrackR

The HAE TrackR app now has 30+ languages and will be available in an updated version before the end of the year. Among other things, it will contain a reminder for taking prophylactic treatment.

HAEi Virtual Centers

The first HAEi Virtual Center is up and running in Australia and the next one – in South Africa – is on its way.

Other Services and Programs

This part of the workshop also touched Services and Programs such as the ACARE Centers, the HAE Companion app, the Global Access Program, the *Global Perspectives* magazine, the annual **hae day :-)** as well as Patient Driven Research, Regional Advisory Groups, Regional Medical Advisory Panels, and social media.

Speaking about regional advocacy Chief Regional Patient Advocate Fiona Wardman shared her thoughts regarding a truly fantastic development:

"In 2004, we had seven Member Organizations and no Regional Patient Advocates. Ten years later, HAEi had grown to 27 members but still no RPAs. Then, in 2016 we introduced the first five RPAs, and the number of countries grew to 63 in just a couple of years. By now, we have 95 Member Organizations serviced by our eight RPAs."

Covering the important topic of clinical trials, Henrik Balle Boysen said: "Today, we have more clinical trials than any other rare disease. This year alone, HAEi is involved in eight market research activities covering 15 countries with almost 400 patients and caregivers."

At the end of this part of the program, Henrik Balle Boysen presented a further development of a decentralized approach to serving HAE patients and organizations across the globe: Three regional conferences in the first and second half of 2023 and the first half of 2024 – before the next Global Leadership Workshop in just two years' time. Please see page 30 for a presentation of the three regional conferences.

"There are so many useful services from HAEi. Now we just have to go home and start using them."
– Ana Freitas, Portugal

"This has been an excellent workshop – especially the information on the clinical trials. Unfortunately, we haven't had one single clinical trial in Pakistan, but I will work on that now."
– Moazzam Farooq, Pakistan

"There has been so much useful information. I have been making notes and also recording and sharing on our website so it can get to our members."
– Davorka Grbic, Croatia

Scientific Poster Session

The very successful Scientific Poster Session attracted a large crowd. For summaries of the posters, please see pages 26-27.

Regional Break-out Session

The remainder of Friday's program was dedicated to a break-out session where the Member Organizations could exchange ideas with their HAEi Regional Patient Advocate and each other.

Scientific Program

The session for the healthcare professionals focused on the topics,'Improving diagnosis and management of HAE' and 'Normalizing HAE patients' lives', with three world-class HAE physicians/researchers as Co-Chairs: Prof. Bruce Zuraw, Prof. Konrad Bork, and Prof. Marcus Maurer.

Please see pages 24-25 for the coverage of the Scientific Session.

General Program

Saturday morning, all participants were together again for the second day of the workshop, which offered a variety of highly relevant and informative topics.

HAE Primer: 12 Things You Should Know about HAE

The first item on the agenda was covered by the Scientific Program Co-Chairs: Prof. Zuraw, Prof. Bork, and Prof. Maurer. They talked about 'Why do I have HAE?', the goal of leading an entirely normal life with HAE, attack triggers, and the need to treat attacks early with effective medicines. The Co-Chairs also addressed questions such as the goal of long-term prophylactic treatment, finding the right doctor, the value of patient support groups, and medicines to be avoided.

In commenting on the long term future for HAE treatments, Prof. Maurer said: "Much of it is science fiction today, but we are moving fast – and our goal is that in the future, a parent cannot pass HAE on to her or his child."

HAE Treatments on the Horizon

In an engaging presentation, Prof. Marc Riedl and Prof. Markus Magerl took the audience on a journey into HAE treatments currently under development..

With more research currently being done than ever before, "the next years will be thrilling", but they also entail a number of fundamental questions: Which treatment strategy should be chosen? Which medication is the right one? How should the treatment be applied? When and how should you switch to another medication? What is the treatment goal – and how do we ensure we achieve it?

Quoting Mahatma Gandhi that 'The future depends on what we do in the present' Prof. Riedl and Prof. Magerl presented the main HAE treatments on the horizon:

- **PHA121 (Pharvaris)**: A highly potent, specific, and orally bioavailable competitive antagonist of the bradykinin B2 receptor – PHVS416 is a soft gel on demand treatment capsule formulation containing PHA121 while PHVS719 is a prophylactic treatment tablet formulation also containing PHA121
- **Sebetralstat/KVD900 (KalVista)**: A small molecule oral kallikrein inhibitor for on-demand treatment

KalVista is also developing an oral inhibitor of Factor XIIa.

- **STAR-0215 (Astria)**: An investigational monoclonal antibody for potent inhibition of kallikrein activity with the goal of less frequent subcutaneous dosing, perhaps every three months or less
- **Donidalorsen/IONIS-PKK-LRx (Ionis)**: An antisense oligonucleotide targeting plasma pre-kallikrein
- **NTLA-2002 (Intellia)**: CRISPR/Cas9 gene editing delivered via lipid nanoparticles
- **Garadacimab (CSL Behring)**: A humanized anti-factor XIIa monoclonal antibody with subcutaneous administration every four weeks
- **BMN 331 (Biomarin)**: AAV5-based gene therapy enabling individuals to produce their own functional C1-INH protein after a one-time treatment
- **OTL-105 (Pharming/Orchard Therapeutics):**: Ex-vivo autologous hematopoietic stem cell (HSC) gene therapy

Prof. Riedl and Prof. Magerl emphasized that clinical trials will ultimately determine the safety, effectiveness, and tolerability of HAE therapies on the horizon.

New and Exciting HAEi Initiatives

HAEi's Leadership announced an exciting new HAEi educational initiative targeting the youngsters' community.

Operations Manager and Youngsters' Community Coordinator Nevena Tsutsumanova and Chief Special Projects & Research Deborah Corcoran presented HAEi LEAP, which stands for Learning, Experiencing, Advocating, and Paving the Way.

For further information on HAEi LEAP, please see pages 36-39.

Perspectives and ACARE network updates

Prof. Marcus Maurer is HAEi's Chief Medical Advisor. He is a prominent HAE global key opinion leader, who among many other roles serves as the Executive Director for the Institute of Allergy at Charité - Universitätsmedizin Berlin, Germany.

Prof. Maurer delivered a memorable talk that mesmerized the audience. He addressed the importance of HAEi's role in leading the global HAE movement and establishing closer relationships between patients and physicians.

Prof. Maurer then cited HAEi's instrumental role in establishing the GA2LEN / HAEi Angioedema Centers of Reference and Excellence (ACARE). Regarding the ACARE centers, Prof. Maurer presented four primary goals:

1. Provide excellence in angioedema management
2. Increase the knowledge of angioedema by research studies and education
3. Promote the awareness of angioedema by advocacy activities
4. Serve as referral centers for the diagnosis and management of angioedema, and thereby compliment the current efforts and pathways of healthcare communities to provide adequate care for patients with angioedema

Currently, there are 74 certified ACARE centers in 34 countries and another 18 applicant centers, but in the words of Prof. Maurer, "It is our dream to have at least one ACARE center in every country in the world. Therefore, I urge you to work with us to fill the blank spots on the world map so we can make the dream come true together."

When presenting the 32 requirements to be met to become an ACARE center in a peer-reviewed process Prof. Maurer said that his favorite criterion is 'a never-give-up attitude' as this indicates a "fight until we find a solution" approach.

Prof. Maurer also provided an overview of the scientific projects that ACARE is presently working on:

- **IMAGINE:** Identification of mutations in genes of patients with recurrent idiopathic and hereditary angioedema - in the recruiting phase (global rollout) until September 2023.
- **SHAERPA:** Stopping androgen treatment in patients with HAE – characterization of reasons and protocols and development of advice for patients and physicians – global rollout has just started.
- **DANCE:** A global consensus on the definition, acronyms, nomenclature, and classification of angioedema – global rollout (DELPHI process with expert panel).
- **PROMUSE:** Knowledge, perception, and limitations of Patient Reported Outcome Measures (PROMs) by physicians in allergic diseases – global rollout.
- **HAPY:** Hereditary Angioedema in Pregnancy – in the application phase.

Prof. Maurer also described ACARE's educational outreach through a series of three online seminars. Furthermore, he gave a glimpse into the future of ACARE with possible topics such as learning clubs, dissemination campaigns, clinical fellowships, junior network, interdisciplinary case conferences, academic career camps, pocket guides, and social media outreach programs.

Expert Panel Q&A

An Expert Physician Panel was the final session of the 2022 HAEi Global Leadership Workshop. Participants included Scientific Program Co-Chairs: Prof. Zuraw, Prof. Bork, and Prof. Maurer, along with the HAEi Scientific Program Committee: Dr. Teresa Caballero (Spain), Prof. Henriette Farkas (Hungary), Dr. Hilary Longhurst (New Zealand), Associate Prof. Jonny Peter (South Africa), Prof. Markus Magerl (Germany), and Dr. Bruce Ritchie (Canada).

HAEi friends provided the expert panel with a wide variety of compelling questions that covered HAE genetics, the science of why we swell, attack triggers, and the effectiveness and safety of available treatments.

Closing remarks

HAEi Board of Director members Beverley Yamamoto (Japan), Natasha Jovanovska Popovska (North Macedonia), Sarah Smith Foltz (Spain), and Michal Rutkowski (Poland) wrapped up the workshop by citing the magic of fellowship that further energizes the global HAE movement. They also shared compelling individual perspectives on how the learnings and comraderie from the GLW experience will renew and accelerate advocacy activities in HAEi's member organizations.

"In many ways, things are difficult in France at the moment – just as they are in many other countries. But I am glad to say that regarding HAE, that is not the case. So, really, if you have a rare disease, live in France!"
– Michel Raguet, France

"If you're looking for a miracle, don't look any further, as maybe you are the miracle yourself. If we can do it in North Macedonia, certainly, so can you."
– Natasa Angjeleska, North Macedonia

"The theme of the workshop is 'Together Again', but since COVID-19 has been creating a distance between us for a long period, many have been together for the first time. It has been one big sharing experience for all participants, and now we have many things we can take back home with us."
– Beverley Yamamoto, Japan

Supporters

The global HAEi family is grateful for the pharmaceutical companies that supported the 2022 HAEi Global Leadership Workshop:

Diamond
BioCryst Pharmaceuticals Inc.
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Pharming Group NV

Basic
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BioMarin Pharmaceutical Inc.
KalVista Pharmaceuticals, Inc.
Pharvaris

Scientific Session

Co-Chair Prof. Bruce Zuraw (US HAEA Angioedema Center at the University of California – San Diego, United States) welcomed delegates to the Scientific Session on behalf of the HAEi Scientific Program Committee. He then presented three hypothetical clinical cases, asking the audience to vote on what they would do based on the information provided. This promoted lively discussion and highlighted that there is often no single answer on what to do next.

In the first of two scientific abstract sessions, Co-Chair Prof. Konrad Bork (University Medical Center in Mainz, Germany) outlined that the morning would be dedicated to 'Improving Diagnosis and Management of HAE'. The data exchange was opened with a plenary presentation by Dr. Alberto López-Lera (Hospital Universitario La Paz, Madrid, Spain), which provided an overview of progress in HAE, new observations, and mechanisms since we were last able to meet four years ago.

The next session featured a series of oral abstracts.

The first oral presentation by Dr. Emel Aygören-Pürsün (University Hospital Frankfurt, Germany) was: 'Comorbid Cardiovascular Risk Factors During Danazol Long-Term Prophylaxis in Patients With HAE-C1-INH'. She concluded that HAE patients who had used danazol to manage their condition were more likely to have the conditions diabetes, hypertension, or abnormal levels of blood fats than those who had never used danazol. She felt this may indicate that danazol could increase the risk of developing conditions affecting the heart or blood vessels.

Following Dr. Aygören-Pürsün, Dr. Noémi Andrási (Semmelweis University, Budapest, Hungary) spoke to her research: 'Focusing on Children – Treating C1-Inhibitor Deficiency in Childhood'. She concluded that in childhood, early diagnosis is essential and acute treatment is usually enough to allow for a reasonable quality of life. However, in some cases, long or short-term preventative therapy may be needed. Regular follow-up is essential, she told delegates, as the course of the disease can change from year-to-year. Dr. Andrási was the recipient of the second Young Researcher/ Investigator Award.

Dr. Suprit Basu (Postgraduate Institute of Medical Education and Research, Chandigarh, India) presented via video on: 'Clinical Profile of Hereditary Angioedema: Our Experience over 26 Years in North India'. His research, in the largest groups of HAE patients in India, showed that, on average, there is an 11-year delay before patients receive a diagnosis of HAE. Further patient awareness efforts are vital, alongside increased testing facilities and availability of first-line medications for HAE in India.

Closing the session, Prof. Markus Magerl (Charité – Universitätsmedizin Berlin, Germany, and Fraunhofer Translational Medicine and Pharmacology ITMP, Germany) spoke to his abstract: 'Real-World Effectiveness and Disease Management in European Patients with HAE on Long-term Prophylaxis with Lanadelumab'. He informed delegates that an interim analysis had shown that in real-world practice, healthcare professionals could increase the time between when doses of lanadelumab were given to patients while maintaining attack-free rates. The full analysis is eagerly anticipated.

After the Scientific Poster Session (see next pages), the afternoon was dedicated to 'Normalizing HAE Patients' Lives'. The session was opened with a short welcome back by Co-Chair Prof. Marcus Maurer (Charité – Universitätsmedizin Berlin, Germany), introducing Dr. Paula Busse (Mount Sinai Hospital, New York, United States) to give the first oral presentation.

Dr. Busse presented her abstract via video: 'The Global and Regional Impact of Hereditary Angioedema (HAE) Attacks on Mental Health, Activities of Daily Living and Quality of Life'. The focus group and survey results reiterated HAE attacks' impact on people's daily lives, mental health, and overall quality of life; almost half the time, people with HAE felt 'less than their 100% self' because of their HAE.

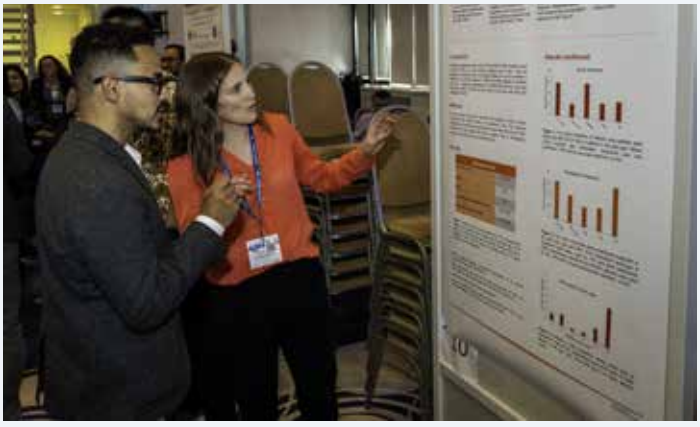
Speaking next was Dr. Ankur Kumar Jindal (Postgraduate Institute of Medical Education and Research, Chandigarh, India), on his research: 'Quality of Life in Patients with Hereditary Angioedema Correlates with Angioedema Control: Our Experience at Chandigarh, North India'. Presenting the first study to report on the quality of life for HAE patients in India, Dr. Kumar indicated that two-thirds of patients have a poor quality of life. The frequency of attacks (level of angioedema

control) isn't the only factor affecting patient quality of life. The authors call for appropriate psychosocial support for patients and access and availability of first-line treatment options.

Finally, Dr. Teresa Caballero (Hospital Universitario La Paz, Madrid, Spain) spoke to her abstract entitled: 'Surveys on Access to Modern Medicines for Hereditary Angioedema (HAE)'. The results from a survey of people with HAE and also a survey of healthcare professionals were presented. Dr. Caballero presented data indicating that most patients felt they could not lead a totally normal life due to HAE. Most hospitals in Spain lacked access to innovative drugs for long-term prophylaxis, and 40% of hospitals surveyed could not offer patients self-administration programs. The authors have used the results to prepare recommendations and actions to help improve healthcare provision for HAE patients.

The session was closed with a series of plenary presentations. Sadly, Prof. Vesna Grivcheva-Panovska (University of St. Cyril and Methodius, Skopje, North Macedonia) could not attend the meeting, and Prof. Maurer gave the talk entitled 'Individualizing Care for Optimal Outcomes'. Associate Prof. Jonny Peter (University of Cape Town, South Africa) provided a South African perspective on HAE management. HAEi Board of Directors member and HAE UK Executive Officer Rachel Annals presented ways to engage the hard-to-reach patient, which may help improve patient engagement in their care.

The day was brought to a close with a Question-and-Answer session for the HAEi Scientific Program Committee.



Scientific Poster Session

Patient Perspectives on an Optimal Outcome Measure to Assess Efficacy in the Acute Treatment of Hereditary Angioedema Attacks *– Marc A Riedl, University of California – San Diego, United States, et al.*

Patients were asked to give their feedback on a variety of scales used to measure the patient perspective in a recent clinical trial for sebetralstat, an investigational on-demand (acute) attack therapy. The scales included a visual analog scale (VAS), the patient global impressions of change (PGI-C), and severity (PGI-S). Patients felt all three captured outcomes that were meaningful to people with HAE. The PGI-C scale tracking patient-reported changes in clinical status was preferred over the others. A PGI-C rating of 'a little better' was most commonly used to describe the point at which on-demand medication improves an HAE attack.

An International Physician Real-World Practice Patterns Survey Evaluating the Burden Of Illness in Hereditary Angioedema Type I/II – *Henriette Farkas, Semmelweis University, Hungary, et al.*

In this international survey of physicians, only a third (36%) indicated that their patients/caregivers routinely recorded HAE attacks in a diary. Where diaries aren't used, at least one characteristic of the attack is recorded in the medical record. However, all physicians indicated that they had at least one adult patient with inadequately controlled HAE. Without better recording of attack data with diaries, it will be difficult to understand the burden of disease and the effectiveness of existing treatments.

Two Ladies with nC1-INH-HAE Suffering from Massive Abdominal Attacks: A Diagnostic and Therapeutic Challenge – *Tamar Kinaciyan, Medical University of Vienna, Austria*

HAE with normal C1 is very difficult to diagnose, and no medications are licensed to treat attacks for this type of HAE. The authors report that icatibant was used successfully to treat abdominal attacks in two women where HAE with normal C1 was suspected (as tests for other reasons for swelling were negative).

Investigating the Occurrence of Allergic Diseases in Hungarian Patients with Hereditary Angioedema Due to C1-Inhibitor-Deficiency *– Hanga Réka Horváth, ACARE Semmelweis University, Hungary, et al.*

In this survey, half (51.4%) of a group of Hungarian HAE patients reported living with allergies (e.g., to pollen, food, or other medications). This is more than twice the national prevalence of allergies (19.3%) in the general population, indicating a connection between allergies and HAE. However, the authors caution that more research is needed.

The Project of Free Diagnosis of Hereditary Angioedema in Ukraine – *Anastasiia Bondarenko, P.L. Shupyk National Healthcare University of Ukraine, Ukraine, et al.:*

A new project to increase the diagnosis of HAE in Ukraine led to 17 new patients being diagnosed, increasing the number of confirmed cases by a third (34%). The authors indicate that access to laboratory diagnostics is essential to detect HAE and that higher levels of awareness of HAE in doctors lead to improved diagnosis of patients.

Development of Two Novel Oral Formulations of a First-in-Class Bradykinin B2 Receptor Antagonist for On-Demand and Prophylactic Treatment of Hereditary Angioedema – *Marcus Maurer, Charité – Universitätsmedizin Berlin, Germany, et al.:*

Two different oral formulations of an investigational bradykinin-inhibiting HAE compound have shown promise in early laboratory studies. One formulation is to treat attacks, and the other is to prevent attacks. Both are being studied further in ongoing clinical trials for effectiveness and safety.

HAE with Normal C1 Esterase Inhibitor (HAEnC1INH): Diagnosis, Treatment and Attack Frequency from the 2020 Canadian Patient Survey – *Jacquie Badiou, HAE Canada, et al.:*

This survey of Canadian patients included some who self-reported having HAE with normal C1 levels. Analyzing the data from these patients, there is an average of 14 years between the start of symptoms and diagnosis. Despite diagnosis and access to treatment for HAE, attacks are frequent in these patients, with 47% reporting a throat attack. The authors call for more awareness and targeted treatment for HAE with normal C1.

Hereditary Angioedema with Normal C1 Inhibitor due to FXII Mutation: Report of the First Case Confirmed with Genetic Diagnostic in Chile – *Simone Carrère Boronig, Hospital Clínico Universidad de Chile, Chile, et al.:*

The authors report the first Chilean case of HAE with normal C1 due to FXII mutation to be confirmed genetically. The patient was tested for HAE, and when these were negative, a genetic study was performed, and the specific mutation was identified.

Registry of Members of The Association of Patients with Hereditary Angioedema of Perú *– Oscar Calderón Llosa, ACARE Clínica Sanna el Golf, San Isidro, Perú, and María Margarita Olivares, Clínica Medellín Poblado, Colombia.:*

The first Registry of patients with HAE in Perú has identified up to 80 potential individuals. Most (55) are members of HAE Perú (Asociación de Pacientes con Angioedema Hereditario del Perú). Fifteen HAE patients are not members, and ten further patients with HAE symptoms are awaiting the results of laboratory tests. Prevalence estimates indicate there may be up to 700 people with HAE living in Perú.

Quality of Life of Patients with Hereditary Angioedema in Serbia – *Markovic Dusanka, University Clinical Center Nis, Serbia, et al.:*

Using the Short Form Health Survey (SF-36), the quality of life of a group of HAE patients in Serbia is shown to be significantly affected by the condition, with physical health and pain being significantly worse than in an age and gender-matched group without HAE.

HAE Patients in Ukraine Under War Conditions *– Anastasiia Bondarenko, P.L. Shupyk National Healthcare University of Ukraine, Ukraine, et al.:*

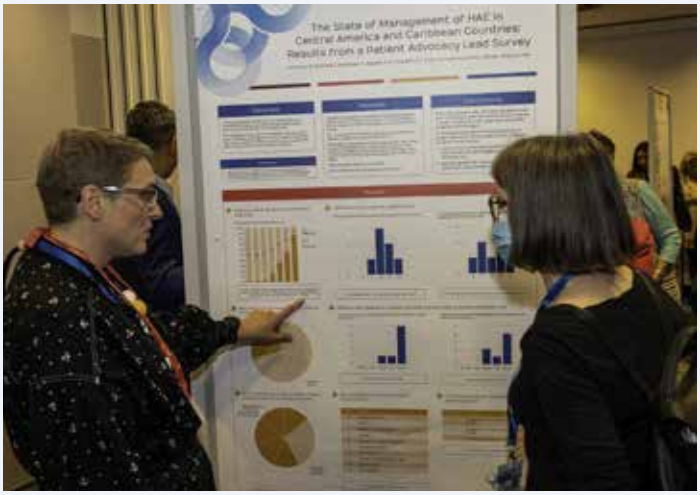
The migration of people due to the war in Ukraine has significantly impacted access to treatment for Ukrainian people with HAE. Almost a third (30%) of patients reported problems accessing medicine due to the war, and 23% were unable to receive any medicine. (Thankfully) 73% were able to continue to receive medicine from the Ukraine health authority.

Understanding the HAE Patient Journey in Brazil – *Raquel de Oliveira Martins, ANGHE, The Brazilian Association of Hereditary Angioedema, Brazil, et al.:*

A survey of Brazilian HAE patients and caregivers found that only a third (31%) of respondents indicated that they treated all attacks, despite the vast majority (78%) saying that the disease highly impacts quality of life.

The State of Management of HAE in Central America and Caribbean Countries: Results from a Patient Advocacy Lead Survey – *Deborah Corcoran, HAE International, et al.:*

HAE patient leads, who ultimately represent more than 1,900 people with HAE, report that the disease is under-recognized, under-diagnosed, and under-treated across Central America and the Caribbean. An important step toward improving the lives of people with HAE in Central America and Caribbean countries should involve; each country increasing awareness-raising activities that include engaging with health ministries; and developing data that characterizes the burden of illness and the value of modern HAE therapies.



Youngsters' Advisory Group at the 2022 Global Leadership Workshop

What a weekend – Together Again!

Excitement and joy filled the air as members of the HAEi Youngsters Advisory Group got together at the 2022 HAEi Global Leadership Workshop.

"It was amazing to interact with all the hard-working HAE advocates from all over the world!" says Nanna, an HAEi Youngsters' Advisory Group member. "It never ceases to amaze me what people from our global HAE family can achieve through strong will and advocacy."

"The Member Organization leads were pleasantly surprised to see all we have done over the years. I have to say, even for us as a group, seeing our work presented on the big screen meant a lot! It showed all member organizations that amazing things happen when young people come together! I get emotional seeing our community grow so much", says Eirini, a member of the HAEi Youngsters' Advisory Group.

According to Nevena Tsutsumanova, the Youngsters Community Coordinator: "Seeing how the HAEi Youngsters' Community has grown since we first met at the 2016 HAE Global Conference in Madrid is truly inspiring. HAEi Youngsters' Community members have participated in four international meetings, online workshops, campaigns, and meetups. We have had more than 350 young people connect and form friendships to last a lifetime."

"I had an incredible weekend of learning, fun, and exciting new announcements in Frankfurt! It was so inspiring to be together again as an HAE community and learn about new initiatives, events, and resources, especially the LEAP program for youngsters!" says Isabel, a member of the HAEi Youngsters' Advisory Group.

The HAEi Youngsters Advisory Group currently consists of six members: Nanna (Denmark), Hana (South Africa), Dominika (Poland), Jacob (Canada), Eirini (Greece), and Isabel (United States).

Still haven't joined the HAEi Youngsters' Community?

The HAEi Youngsters Advisory Group is always happy to talk to anyone interested in joining the HAEi Youngsters Community!

Membership is free and open to youngsters between 12 and 25 who are part of their local HAE organization!

Head over to our website youngsters.haei.org, and click the "Join us" button – it is green and right at the top :)

See you soon!
Your HAEi Youngsters' Advisory Group


Nanna Boysen
Hana Faulds
Isabel Brunken
Jacob Collins
Dominika Blacharska
Eirini Giannakidi

HAEI GOES REGIONAL

As many of the readers of *Global Perspectives* will know, HAEi has chosen to change from the well-known single Global Conference format every two years, to one Global Leadership Workshop and three Regional Conferences to take place over a two-year period.

The first HAEi Global Leadership Workshop occurred in Frankfurt am Main, Germany, from 6 to 9 October 2022 – and we are delighted to announce the next phase of our plan to organize, inform, and motivate the HAE community around the world.

Although the perspective of HAEi is global, we recognize and celebrate the diversity among the regions of the world that we serve. That is why we will organize three HAEi Regional Conferences over the next two years.

We look forward to welcoming representatives of our Member Organizations to one of the three HAEi Regional Conferences.

As always, we will do our very best to offer attendance at a very low price and will also work hard to secure travel grants for as many patients and caregivers as possible.

2023 HAEi Regional Conference APAC

(covering Asia Pacific)

17 – 19 March 2023, Bangkok, Thailand

(Registration will open soon)

2023 HAEi Regional Conference EMEA

(covering Europe, Middle East, and Africa)

1 – 3 September 2023, Munich, Germany

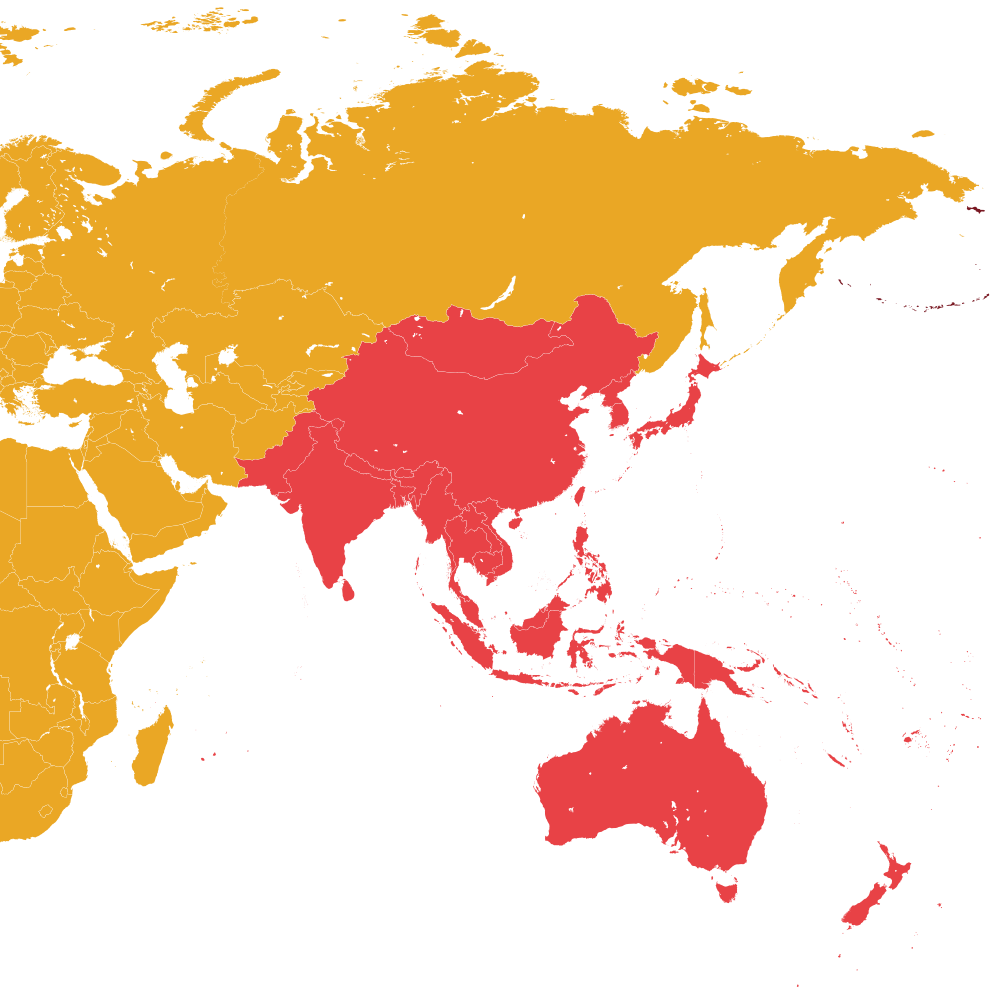
(Registration will open in April 2023)

2024 HAEi Regional Conference Americas

(covering North, Central, and South America)

15 – 17 March 2024, Panama City, Panama

(Registration will open in October 2023)



New version 2!

Get a full overview of your HAE.

Have you wondered how to get your HAE under control? HAE TrackR can help you!

Developed by fellow HAE patients at HAEi, HAE TrackR is an easy-to-use electronic diary designed to record your HAE treatments (preventative and on-demand), HAE attacks, and the impact HAE has on your life and the life of your loved ones.

HAE TrackR allows you to download a comprehensive report of your treatments and attacks which can be used as a tool for you and your physician to manage your HAE.

The app strictly protects your data and privacy and is fully EU-GDPR compliant – all data gathered is the sole property of the user.

Features of the app:

- ✔ Easy -to-use electronic diary
- ✔ Safe and secure – all data is the sole property of the user
- ✔ Store and share data about your HAE with your physician
- ✔ Product and company neutral with no commercial interests
- ✔ Endorsed by the ACARE network
- ✔ Accessible from anywhere at any time and in many languages

New features added in version 2:

- ✔ Smart reminder functionality for prophylactic treatments
- ✔ Improved reporting for easy sharing of data with physician
- ✔ Option to only list preferred/used treatment(s)
- ✔ Option to add clinical trial medication if needed
- ✔ Upload function for photo(s) of batch/LOT number for documentation

SCAN TO START USING HAE TRACKR

Start using **HAE TrackR** today

app.haetrackr.org

2018 → 2022

Introducing the NEW HAEi Youngsters' Community Logo

The HAEi Youngsters Community Advisory Group has worked with HAEi Staff to revamp the community's logo. We are very excited to share the results with you.

You might wonder why the logo change? Why now? What difference does it make for the members of the HAEi Youngsters Community? Keep reading to find the answers!

It is very important to start from the beginning. When the community was launched in 2018 at the HAE Global Conference in Vienna, Austria, we created our own website, logo, and magazine over the weekend. It was such an amazing activity to be a part of. We all worked together and let our creativity go wild.

It has been a joy to see our community developing, growing, and connecting more, especially now, and we felt the time was right to mature our logo as well.

The original logo was created by one of our members, Nath Galarraga. This was our inspiration. We knew we wanted to keep the essence of the original logo and build on its meaning. Working on the new logo allowed us, as a group, to reflect on our goals and plans for the future of the community. We weren't just creating a new image; we were making a story. And here it is:

There will be times when we have all felt lost, challenged, or a little unsure as we travel on our HAE journey. We have all had a fear of a new beginning, a new place, a new school, and new people. And let's admit it: nothing beats the comfort of something well-known or a friendly, welcoming hand ready to help.

We thought long and hard about what the HAEi Youngsters' Community means, what we want to achieve together and how we can help youngsters everywhere. We hope we have distilled that into our new logo.

We want to:

- be a place for young people around the world to find a connection
- be a hub for you to find the right information
- help you find friends around the world
- empower you on your HAE journey
- help you share your uniqueness with the world
- welcome everyone
- support each other
- show we are part of the HAEi family
- be a friendly, welcoming hand
- be the bridge between kids and youngsters
- share your stories
- take you traveling around the world
- never stop learning!

We hope you love our new logo as much as we do. And that you find its meaning as powerful as we do.

Your HAEi Youngsters' Advisory Group

HAEi Youngsters: Let's Hang Out!

Hello everyone,

It's the HAEi Youngsters' Advisory Group here, and we are very excited to welcome you to this next step for the HAEi Youngsters' Community.

We are launching a new online project – the HAEi Youngsters' Hangout. And yes, this is the place you would want to hang out. This page has been developed by HAEi, who are dedicated to supporting the HAEi Youngsters' Community, and has the goal to help equip young people with knowledge about HAE and give them the power to overcome their fears and challenges. We know that given the opportunity, youngsters can make a positive difference for themselves and others with HAE.

No matter where you are in your HAE journey, there is something for you here. The HAEi Youngsters' Hangout is a collection of short videos, blogs, and resources on HAE, motivation, and life in general. You can find presentations from international HAE experts, stories from youngsters, caregivers, and parents, and last but not least, tools developed by HAEi to help you manage HAE in your daily life.

Our goal is to create a hub of information for you all and add new content to this page regularly - expanding the topics and questions answered.

So, if you have a story you would like to share or a question you would like to have answered – let us know! This page is meant for you all.

Still haven't joined the HAEi Youngsters' Community?

The community is free and open to youngsters aged between 12-25 who are members of their local member organization!

Head over to our website: youngsters.haei.org, and click the "Join us" button – it is green and right at the top :)

See you at the Hangout!

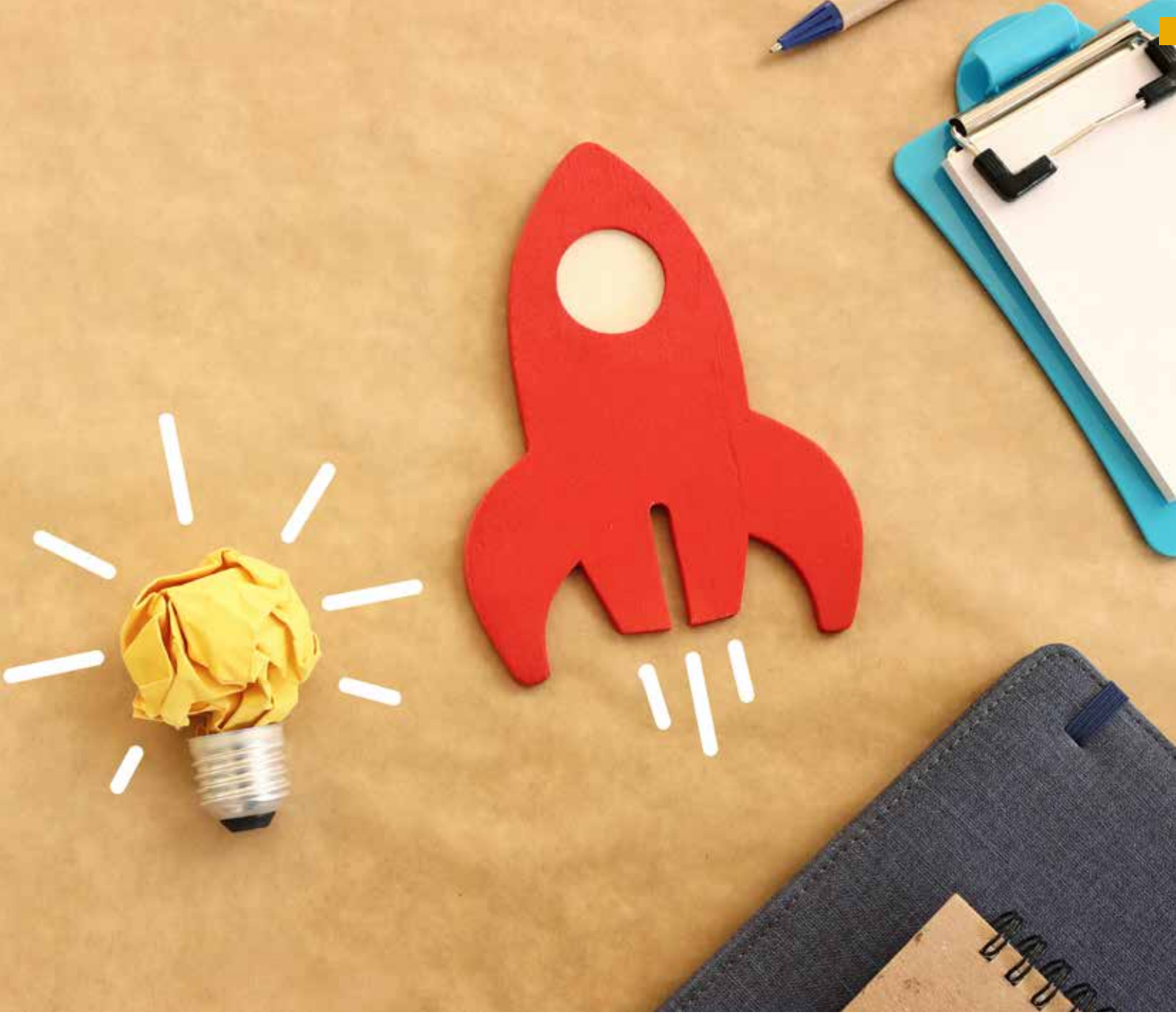
Your HAEi Youngsters' Advisory Group

New for youngsters!

HAEi LEAP

Learn,
Experience,
Advocate,
and Pave the way

– a program for youngsters



One Small Step … One Giant LEAP!

Young people are really important, and we are passionate about the young people in our global HAE family. HAEi LEAP is designed to meet the needs our Member Organizations highlight about engaging with young people in their organizations.

HAEi LEAP is an education program that allows youngsters to learn new skills and develop as individuals and advocates. They will also have the chance to gain experience working with their organizations to apply all those skills on a project to support advocacy, their organization, and their community. Paving the way for future leaders.

Nevena Tsutsumanova, HAEi Operations Manager and Youngsters' Community Coordinator, comments, "So many of our Member Organizations work on borrowed time and with limited resources. At HAEi, we are blown away by what you do and the world of good you achieve for your communities. You inspire us to find innovative ways to help Member Organizations and young people come together."

Let's take LEAP step-by-step

What does the Learn look like?

It is a 12-week online program kicking off with a 2-day in-person seminar in April 2023, organized and supported by HAEi. We know our students will live their own lives while participating in LEAP. The program is designed to fit around students' lives and will take an estimated 2-3 hours per week.

Through in-person and online education, youngsters will have the opportunity to learn professional skills, including:

- Content planning
- Online content management for websites and social media
- Presenting
- Strategy and more.

All skills that will help young people grow as advocates, can help their community and support them as individuals in a competitive work market.

What does the experience look like?

It is a program where young people get the chance to put what they have learned into practice, with work experience on a real-life project with their organization. We want the young person and their Member Organization to apply for the program together and to have an idea about a project that the young person could deliver.

We have mentioned a project, but what could that project be?

Students will learn about online content, writing for the web, and how to upload content to a website - so the project could be related to an organization's website. For example, getting online if you don't have a website or perhaps developing a new page or section.

Students will also learn about social media - what makes a good post in words and images and how you build followers. So perhaps it could be a project about social media for your organization.

We will have modules on working with the media and case studies. Maybe you would like to capture more inspirational stories from people with HAE and add them to your website or use them in a media campaign. The project could be about that.

We have an idea bank on the website that could help inspire you. And, to help you deliver the project, HAEi will provide a one-time monetary grant to HAEi LEAP graduates and their Member Organizations.

What does advocate look like?

The program covers skills fundamental to advocacy. Experienced HAE advocates will give some lectures and be part of the courses. The courses will not only teach the skills but provide the opportunity to put them into practice in group sessions and look at real-life examples of where these skills have made a difference to people advocating for change.

What does pave-the-way look like?

LEAP helps to pave the way for future leaders and advocates.

Our students will also be paving their own way to make great things happen for them as individuals. HAEi will support graduates with a certificate of achievement and a letter of recommendation that they can use to help with their CV or applications to schools and jobs, for example.

What do young people think about it?

Our youngsters advisory group has been integral to developing LEAP. If you want to hear more about what they think about HAEi LEAP, head to our website.

What is the next step?

You need to find your youngster. They could be someone with HAE, a caregiver, or a family member. But they need to be the one who will benefit from the program and the chance to work with you. They also need to be between 16 and 25, a member of your organization (of course!), and able to travel independently.

Where to find out more?

>> youngsters.haei.org/leap-home

All the information you need is on our website, including including inspiration for your project and the application process. The deadline to apply is 11pm CET 20 November and spaces are limited – so head over there now!

New HAE resource ...

UNDERSTANDING HAE

During the 2022 HAEi Global Leadership Workshop, HAEi Executive Project Manager Jørn Schultz-Boysen presented the patient guide 'Understanding HAE' fresh from the print shop.

"Our new patient guide is a good example of ideas often coming from the bottom up as it is based on requests from Member Organizations looking for a comprehensive brochure with a full description of HAEi and HAE matters", says Jørn Schultz-Boysen.

The patient guide contains a presentation of HAEi and, not least, the many resources offered by HAEi: HAE TrackR app, Emergency Cards, HAE Companion app, Global Access Program, website and social media, the **hae day :-)** global awareness day, the *Global Perspectives* magazine, HAE conferences and workshops, and the HAEi Youngsters' Community.

In addition to a presentation of the HAEi resources, this is the content of the patient guide:

- HAE types
- HAE symptoms
- Attack triggers
- Diagnosing HAE
- Treatment options
- HAE and children
- Women and pregnancy
- Traveling

Currently, the patient guide exists in English, but the plan is to introduce more languages.

HAEi thanks the US HAEA for their significant contribution to the content of the 'Understanding HAE' patient guide.

If you want to translate the 'Understanding HAE' patient guide to your own language, reach out to your Regional Patient Advocate, who can help you with a template for translation.

ACARE CENTER NETWORK SERVES MORE PEOPLE WITH HAE

Membership in the global network of Angioedema Centers of Reference and Excellence (ACARE) – a joint venture between the Global Allergy and Asthma European Network GA2LEN and HAEi – serves even more people with HAE.

"Since the summer break, we have been going full steam ahead with auditing our applicant centers, of which we have 18 at the moment. Unfortunately, due to the pandemic, many applicants did not have the capacity to prepare for an ACARE audit. Still, we hope that the situation is now improving worldwide, and the backlog can be minimized", says Julia Föll, ACARE Network Program Manager.

The ACARE team was pleased to join the HAEi Global Leadership Workshop in Frankfurt, Germany. They had a booth where the participants could come by and chat with the team, making many new connections.

The ACARE office has worked closely with HAEi to design a new ACARE website that enables patients to find their closest ACARE Center quickly. The aim has also been to streamline the ACARE application process for clinics specializing in angioedema diagnosis, care, and research. The website has just been launched.

Of other activities, Julia Föll mentions the ACARE Angioedema School/Bradykinin Symposium that took place in Berlin on 14-16 September 2022:

"The 35 participants heard the speakers of the Angioedema School stress the importance of early treatment of HAE attacks, providing prophylactic treatment for the patients, and educating physicians."

At this point, there are 74 certified ACARE centers in 34 countries with Unidade Funcional de Angiooedema Hereditário, Serviço de Imunoalergologia at Centro Hospitalar Universitário de Lisboa Norte in Lisbon, Portugal, joining most recently.

We provide excellence in angioedema management

74 ACARE CENTERS:

Argentina (4), Australia, Austria (2), Brazil (10), Bulgaria (2), China (2), Denmark, France (4), Georgia, Germany (8), Greece, Hungary, India (3), Italy, Japan (2), Kuwait, the Netherlands, North Macedonia, Oman, Peru (2), Poland (5), Portugal (2), Qatar, Russia (2), Saudi Arabia, Slovenia, South Africa, Spain (2), Thailand, Turkey (4), United Arab Emirates, the United Kingdom (2), the United States (2).

If you would like to become an ACARE center, please use this link for further information:

>> haei.org/acare

NEWS FROM MEMBER ORGANIZATIONS AROUND THE GLOBE

UKRAINE

HAEi recognizes the horrific situation in Ukraine. HAEi members stand in support and solidarity with our fellow HAE brothers and sisters in Ukraine. HAEi understands that some Ukrainians are fleeing to neighboring countries for safety. HAEi advises those arriving in a country to reach out to the HAE Member Organization for advice on doctors and treatment centers for HAE assistance – please see https://haei.org/about-haei/globally.

People with HAE in Ukraine can also reach out to an HAEi Regional Patient Advocate for further assistance – you can find contact information on our website at https://haei.org/about-haei/meet-the-rpas.

COSTA RICA

In June 2022, the government of Costa Rica approved the purchase of Berinert, and it will now be available to patients with HAE in the country's hospitals. This is the first medication approved specifically for HAE in Costa Rica.

Sub Director Kenneth Cordoba is now the HAE Costa Rica contact, together with President Diana Madrigal. Please see the contact information at https://haei.org/hae-member-countries/costa-rica/.

SWITZERLAND

On 7 July 2022, Swissmedic approved BioCryst's drug ORLADEYO for Switzerland. It can be given to patients over the age of 12.

SINGAPORE

The new National Contact for HAE Singapore is Yong Hao Lim – please see the contact information at https://haei.org/hae-member-countries/singapore/.

HAE Singapore and HAEi are holding a patient meeting on 12 November 2022. Please contact f.wardman@haei.org or haesingapore@gmail.com for more information and to register.

HUNGARY

The dates of the 13th C1-inhibitor Deficiency & Angioedema Workshop in Budapest, Hungary, have been moved. It will now be held on 4-7 May 2023.

PANAMA

Michelle Coronado has been added as an additional National Contact for HAE Panama – please see the contact information at https://haei.org/hae-member-countries/panama/.

MONTENEGRO

Until earlier this year, the only modern medication available to HAE patients in Montenegro was Firazyr. However, recently they have also gained access to Takhzyro.

PUERTO RICO

HAE Puerto Rico has held its annual conference where HAE specialist doctors had the opportunity to talk about topics such as new treatments, research, and COVID-19 vs. HAE. The main speaker and special guest was Dr. Marc Riedl from the US HAEA Angioedema Center. Among the other speakers were Dr. Anardi Agosto, President of the Association of Allergists and Immunologists in Puerto Rico, and the Past President, Dr. Rafael Zaragoza. As the representative of HAEi, Regional Patient Advocate Javier Santana gave a presentation on advocacy and the process of getting HAE medicines to countries through governments and their departments. Pharmaceutical representatives also participated in the event.

GEORGIA

HAE Georgia has developed an HAEi Emergency Room Poster, presented here by Dr. Maia Gotua, MD, Ph.D., and Prof. Dr. George Shengelidze.

BANGLADESH

We welcome Ahtashamul Habib Ovi as the new National Contact for HAE Bangladesh. You will find contact information at https://haei.org/hae-member-countries/bangladesh/.

ESTONIA

We are happy to inform you that reimbursement is now available and that HAE patients in Estonia, at this point, have access to Berinert, Firazyr, and Cinryze. At the moment, there are 24 diagnosed patients in the country.

We welcome Oksana Jermolova as the new National Contact of HAE Estonia. As for updated contact information and other data on Estonia, please see https://haei.org/hae-member-countries/estonia/.

PERU

In addition to being present on Facebook, Twitter, and Instagram, you can now find HAE Peru on YouTube – have a look at www.youtube.com/channel/UC3hvXJmfsBpPtPBuwJEbKrA.

PORTUGAL

The HAEi database has been updated with a large number of HAE knowledgeable hospitals in Portugal. Please have a look at the map at https://haei.org/hae-member-countries/portugal/.

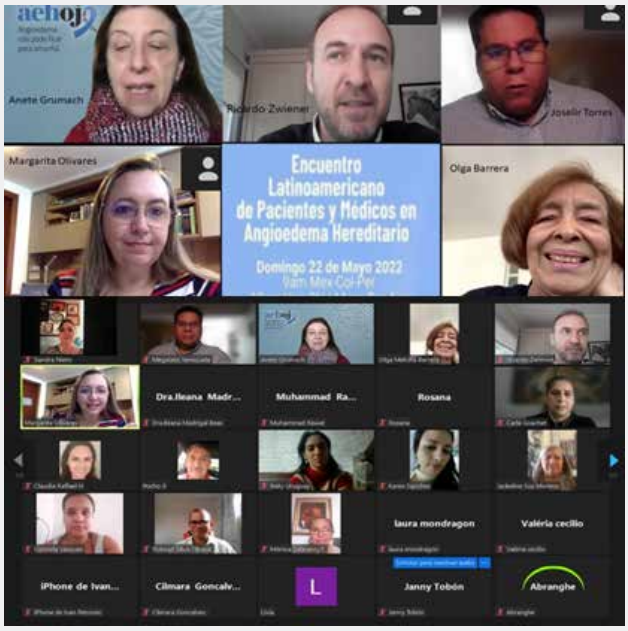
DENMARK, NORWAY, AND SWEDEN

From HAE Scandinavia

Nanna Maria Boysen and Victoria Schultz-Boysen from HAE Scandinavia are working on a podcast series for young Scandinavian people with HAE and their relatives. The intention is to open a dialogue about topics large and small: living a young life with HAE and various issues that may be associated with it, the concerns that may arise, one's own attitude, dreams, and thoughts about the future as well as the importance of being part of a young community in Scandinavia. All will be seen from a young person's perspective.

BRAZIL

From January to August 2022, the number of diagnosed patients in Brazil has grown from 1,796 to 1,815. The number of members of HAE Brazil (ABRANGHE) has also increased during the same period – from 2,327 to the round figure of 2,400. Until recently, HAE patients in Brazil had access to Berinert, Firazyr, Cinryze, and Takhzyro, but now HAEGARDA has been added to the modern medications available for treating HAE.



During the first half of the year, the Brazilian organization participated in several virtual events, such as a Latin American meeting of HAE patients and doctors, the release of updates to the Brazilian HAE guidelines, as well as the 4th Forum on Rare Diseases of the Federal Council of Medicine.

Most recently, ABRANGHE took part in the 7th Edition of the Rare Disease Scenario in Brazil, promoted by Casa Hunter. The event included four debate tables with patients, family members, associations, academics, the pharmaceutical industry, and regulatory bodies. The topics presented were of great importance to the knowledge of the participants.

CANADA

From Daphne Dumbrille (COO) and Jacquie Badiou (President), HAE Canada

At the 2022 HAEi Global Leadership Workshop in Frankfurt, Germany, HAE Canada proudly presented a poster titled "HAE with normal C1 esterase inhibitor (HAEnC1INH): Diagnosis, treatment and attack frequency from the 2020 Canadian patient survey". We are grateful to have been invited and appreciate the opportunity to share our poster with fellow participants. Thank you, HAEi Team, for organizing this incredible workshop. We are bursting with knowledge and excited to put it to practical use back in Canada.

Speaking of posters, our abstract titled "HAE with normal C1 esterase inhibitor (HAEnC1INH): Treatment and attack frequency changes from 2017 to 2020 based on data from the Canadian national patient surveys" was accepted by the Canadian Society of Allergy and Clinical Immunology (CSACI) and presented during the poster session at their 2022 Annual Scientific Meeting in September in Quebec City. Thank you to Dr. Suzanne Kelly of Red Maple Trials for producing these abstracts and posters, and thank you also to all authors for contributing both time and expertise.

In November 2022, we will host our first Hybrid Patient Information Update. From Hamilton, Ontario, we will welcome local patients and caregivers, and members from across Canada will join us virtually. We look forward to seeing members in person, and we are excited that our members will once again be able to connect in person with one another. After the Update, members will be encouraged to remain to attend the HAE Canada 2022 Annual General Meeting.

We look forward to a busy fall connecting with members in person.

BOSNIA AND HERZEGOVINA

The first center for rare diseases will be established at a hospital in Tuzla. The center will register patients according to their diagnosis and present this information to the Federal Government health authorities, thus giving a base for establishing treatment protocols.

UNITED STATES

From Ianice Viel, Communications & Digital Manager, US HAEA

Youth Advocacy Month (US HAEA & HAEi Youngsters): October was HAE Youth Advocacy Month, and we invited all HAEA Youth members and HAEi Youngsters to help raise awareness by wearing blue for #BeyondHAE! This year, we made it easier than ever to participate. We invited community members of all ages to post a photo or video of yourself wearing blue.

HAEA Community Blog: Providing HAEA friends with an opportunity to share experiences, reflections, and perspectives is an important part of our core values.

The HAEA Community Blog is a platform that allows people with HAE to share their unique stories on a wide variety of topics ranging from emotional health to treatment.

Featured Blog Articles

"There are going to be dark days. You may miss a holiday or an event you were looking forward to, but you will absolutely have more good days than bad. It's easy to remember the bad days. It's easy to use your illness as an excuse for not meeting your goals. But do your best to change that thinking."

– Derek J.

Read ***It Can't Rain All the Time: My Experience with HAE and Mental Health***: https://www.haea.org/pages/bp/186

"The HAEA Youth Leadership Council was instrumental in my experience of growing up with HAE. I never had to question if I had someone in my life that could understand what I was going through. Being a part of the HAEA allowed me to immediately bond over shared experiences with others who are living with HAE."

– Kobe W.

Read ***I Found My Voice Through My Community***: https://www.haea.org/pages/bp/197

HAEA Round Table: Because HAE is so rare, people can feel isolated when dealing with the everyday challenges of learning how to live with this chronic illness. When we come together as a community and talk about our struggles, however, we realize that we are not alone in our efforts to live a normal life. That is why we have developed the HAE Round Table. This platform connects members of our community with their peers on the issues that currently affect them, including:

- How do you explain your HAE diagnosis to others?
- How do you overcome a fear of needles?
- How did you go about obtaining medicare with your HAE diagnosis?
- How does HAE affect aging?

The HAEA Round Table will be posted every other month on our official Facebook page Live. Round Table recordings can be accessed at https://vimeo.com/user/115781635/folder/8930101.

AUSTRALIA & NEW ZEALAND

From CEO Fiona Wardman, HAE Australasia

HAE Australasia is proud of the collaboration with HAEi on the Elizabeth Macarthur Virtual Angioedema Centre (EMVAC). The idea of a virtual center came from Professor Connie Katelaris to overcome the challenge of patients being unable to access specialist HAE medical advice and support due to the vast distances in Australia. EMVAC offers a booking system for phone and video consultations and has access to appointments with clinical immunologists, nurses, and a clinical psychologist. Patients will soon have more specialists available as we add appointments with a gynecologist and a genetic counselor. EMVAC – servicing both Australia and New Zealand – is open to healthcare professionals to gain information on HAE. You can find more information at https://emvac.haei.org/about-emvac/

The Australasian Society of Clinical Immunology and Allergy (ASCIA) held its conference in Melbourne as a hybrid event this year. HAE Australasia took part by having a stand full of information for healthcare professionals attending the conference. After not having a face-to-face conference over the past two years due to the COVID-19 pandemic, it was great to reconnect with everyone, including pharmaceutical partners, and talk about our programs and initiatives.

HAE Australasia has received ethics approval for the HAEi Pharmaco and Socioeconomic Survey in Australia and New Zealand. This survey is open to patients and their family members, and we look forward to using the collated data to assist us in accessing more treatments for HAE patients.

SAUDI ARABIA

HAE patients in Saudi Arabia also have access to two modern medications now. Berinert has been available for some time, but now HAE can also be treated with ORLADEYO.

POLAND

In June, HAE Poland held an HAE Workshop in Warsaw, dedicated to patients and caregivers. It was the first in-person meeting of HAE Poland in 28 months. HAE Poland is working on another two meetings in Wroclaw and Krakow before the end of the year.

SLOVENIA

HAE TrackR has been translated to Slovenian, and hopefully, the app will soon be available for patients in Slovenia in their own language.

MEDICAL PAPERS

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

Abdominal and pelvic imaging in the diagnosis of acute abdominal attacks in patients with HAE due to C1-inhibitor deficiency – *by Piotr Obtułowicz, University Hospital Krakow, Poland, et al.:*
Ultrasound or CT imaging facilitates the diagnosis of the patient suspected of having an abdominal attack due to C1INH-HAE. They allow to identify transitional presence of an abundant fluid in the free abdominal cavity and intestinal swelling which spontaneously disappear with a symptoms attack. (Postepy Dermatol Alergol, August 2022)

Prevalence and impact of misdiagnosed drug allergy labels among patients with HAE – *by Jane Chi Yan Wong, University of Hong Kong, et al.:*

Drug allergy labels are prevalent among HAE patients but are frequently misdiagnosed and mislabelled. Misdiagnosed drug allergy are associated with delay in HAE diagnosis as well as adverse clinical outcomes. Immunologists/allergists should consider pre-emptively reviewing and investigate every suspicious drug allergy label, especially among HAE patients. (Front Allergy, August 2022)

Prospective Study on the Efficacy and Impact of Cascade Screening and Evaluation of HAE (CaSE-HAE) – *by Jane C Y Wong, University of Hong Kong, et al.:*

Recommendations regarding family screening for HAE remain variable and mostly based on expert opinion. Studies evaluating its implementation and efficacy are lacking. A novel HAE screening program was established to evaluate the efficacy and impact of cascade family screening for at-risk relatives. Potential HAE relatives were screened through the cascade family screening approach. Prospective data on clinical, psychological, and HAE-related outcomes were collected at baseline and 1-year follow-up. Longitudinal outcomes were analyzed and compared between index patients and those given a diagnosis through cascade family screening. Conclusion: Cascade family screening is an effective approach to family screening in HAE, improving clinical and psychological outcomes, and reducing disease-related costs. (J Allergy Clin Immunol Pract, August 2022)

Consider HAE in the Differential Diagnosis for Unexplained Recurring Abdominal Pain – *by Kyle Staller, Massachusetts General Hospital, the United States, et al.:*

Under-recognition of HAE in patients presenting with predominant gastrointestinal symptoms is a key factor contributing to the delay in diagnosis, increasing the likelihood of unnecessary or exploratory surgeries or procedures and the potential risk of related complications. HAE should be considered in the differential diagnosis for patients with unexplained abdominal pain, nausea, vomiting, and/or diarrhea who have complete resolution of symptoms between episodes. As highly effective targeted therapies for HAE exist, recognition and diagnosis of HAE in patients presenting with isolated abdominal pain may significantly improve morbidity and mortality for these individuals. (J Clin Gastroenterol, October 2022)

Using an extended treatment regimen of lanadelumab in the prophylaxis of HAE: a single-centre experience – *by Mohamed Abuzakouk, Cleveland Clinic Abu Dhabi, United Arab Emirates, et al.:*

Lanadelumab is a safe and effective agent for long-term prophylaxis of HAE. An extended dosing regimen was equally effective as prophylaxis compared to a standard regimen. Further studies are needed to compare the two regimens in a larger patient group. (World Allergy Organ J, July 2022)

Emerging drugs for the treatment of HAE due to C1-inhibitor deficiency – *by Andrea Zanichelli, Ospedale Luigi Sacco-Università degli Studi di Milano, Italy, et al.:*

In the coming years, more effective therapies with easier administration route options for on-demand treatment and long-term prophylaxis will be available to treat this disease and the variety of patients. Gene

therapy strategies may offer a definitive treatment. High costs of current and new drugs may be a limiting factor for their availability, especially in developing countries. (Expert Opin Emerg Drugs, July 2022)

Long-term prophylaxis in HAE management: Current practices in France and unmet needs *– by Laurence Bouillet, Grenoble Alpes University, France, et al.:*

Based on their experience with patients with HAE who had visited their center at least once in the past 3 years, physicians from 25 centers who are expert in the management of HAE were requested to fill in a questionnaire that encapsulated their active patient list, criteria for prescribing long-term prophylaxis, and medications used. Despite the recent enrichment of the therapeutic armamentarium for long-term prophylaxis, physicians still expressed unmet needs with currently available therapies. (Allergy Asthma Proc, September 2022)

Considerations in the management of HAE due to C1-INH deficiency in women of childbearing age *– by Florence Ida Hsu, Yale University School of Medicine, the United States, et al.:*

Disease management decisions for women of childbearing age may be more complex and require additional considerations since they could develop complications related to contraception, pregnancy, labor, delivery, and lactation. In addition, some HAE treatment options are contraindicated during pregnancy. Discussions about medications used to treat HAE should include a risk-benefit assessment of the woman's health status, her preferences, and other factors that are relevant to the choice of therapy. Treatment decisions made in a collaborative manner involving the patient, HAE specialist and obstetric/gynecologic specialist, is the best approach to ensure optimal HAE management and safety in this patient population. (Allergy Asthma Clin Immunol, July 2022)

Shared decision-making in the management of HAE: An analysis of patient and physician perspectives *– by Marc A Riedl, University of California San Diego, the United States, et al.:*

The adoption of validated HAE-specific treatment decision aids, as well as measures to change the mindsets of patients and physicians, may facilitate successful implementation of shared decision-making in HAE. (Allergy Asthma Proc, September 2022)

Characteristics of Patients Who Underwent a Diagnostic Test for HAE Admitted Due to Angioedema *– by Zeynep Şengül Emeksiz, Ankara City Hospital, Turkey, et al.:*

This topic should be included in the specialty training curriculum to raise the awareness of clinicians, especially pediatricians, about clinical HAE findings and the algorithmic approach to the differential diagnosis of angioedema. (J Trop Pediatr, June 2022)

Therapeutic monoclonal antibodies with a focus on HAE – *by Bruce L Zuraw, University of California San Diego, the United States, et al.:*

Results from clinical trials, including a pivotal Phase 3 study and its ensuing open-label extension study, demonstrated that lanadelumab is associated with few treatment-related adverse events and reduced the rate of HAE attacks. This novel treatment option has the potential to significantly improve the lives of patients with HAE. (Allergol Int, July 2022)

Diagnosing Pediatric Patients with Hereditary C1-Inhibitor Deficiency-Experience from the Hungarian Angioedema Center of Reference and Excellence *– by Noémi Andrási, Semmelweis University, Hungary, et al.:*

Early diagnosis allows supplying the patients with special acute treatment for HAE attacks, which may occur at any time. Our results highlight the importance of DNA analysis in pediatric patients in case of a known mutation in the family, and an ambiguous result of complement testing. (Front Allergy, May 2022)

HAE in children and adolescents *– by Eli Mansour, University of Campinas, Brazil, et al.:*

Children are often excluded from advances in therapy for HAE since most of the new medicines are tested in adults and thus excluded by the Food and Drug Administration and other agencies for approval to be used in children. Treatment of attacks is available for the pediatric patient; however, barriers still exist for the use of long-term prophylaxis in young children. (Allergol Immunopathol (Madr), April 2022)

CLINICAL TRIALS

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

A Gene Therapy Study of BMN 331 in Subjects with HAE

– recruiting in the United States

An extension phase 2/3 study to test the safety of long-term administration of oral PHA-022121 for acute treatment of angioedema attacks in patients with HAE

– recruiting in Bulgaria, Canada, Czech Republic, France, Germany, Hungary, Israel, Italy, Poland, Spain, the United Kingdom, the United States

An Open-label Extension Trial to Evaluate the Long-term Safety of KVD900 for On-Demand Treatment of Angioedema Attacks in Adolescent and Adult Patients with HAE

– will be recruiting

A Phase III, Crossover Trial Evaluating the Efficacy and Safety of KVD900 for On-Demand Treatment of Angioedema Attacks in Adolescent and Adult Patients with HAE

– recruiting in Australia, Canada, the Netherlands, North Macedonia, Puerto Rico, Spain, the United States

A Phase 3, Multicenter, Randomized, Single-Blind, Dose-Ranging, Crossover Study to Evaluate the Safety and Efficacy of Intravenous Administration of CINRYZE® (C1 Esterase Inhibitor [Human]) for the Prevention of Angioedema Attacks in Children 6 to 11 Years of Age with HAE

– recruiting in Argentina, Germany, Italy, Mexico, Romania, the United Kingdom, the United States

A randomized, placebo-controlled, double-blind Phase III study of the efficacy and safety of recombinant human C1 inhibitor for the treatment of acute attacks in patients with HAE

– recruiting in Italy

Assessment of the State of Health, Quality of Life and Expectations of Patients with HAE

– recruiting in France

A Study in Adults with HAE Who Currently Receive Icatibant at Home

– be recruiting in the United Kingdom

A Study of Lanadelumab in Persons with HAE Type I or II

– recruiting in Austria, Germany, Israel, Italy, Kuwait, Portugal, Spain, Switzerland

A Study of Lanadelumab in Teenagers and Adults with HAE

– will be recruiting in the United Kingdom

A Study of Lanadelumab in Teenagers and Adults with HAE in Argentina

– recruiting in Argentina

A Study of Lanadelumab (SHP643) in Chinese Participants with HAE

– recruiting in China

A Study of STAR-0215 in Healthy Adult Participants

– recruiting in the United States

A Study of the Burden of Illness and Treatment Patterns in Teenagers and Adults with HAE

– recruiting in Canada, Croatia, Czech Republic, Estonia, Germany, Greece, Hungary, Ireland, Latvia, North Macedonia, Poland, Portugal, Romania, Serbia, Slovakia, Spain

A Study to Assess the Long-Term Safety and Efficacy of Donidalorsen in the Prophylactic Treatment of HAE

– recruiting in the United States

A study to assess whether different doses of KVD824 are effective in preventing attacks of Hereditary HAE

– recruiting in Australia, Bulgaria, Canada, Czech Republic, France, Germany, Hungary, Italy, New Zealand, North Macedonia, Romania, the United Kingdom, the United States

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, the United Kingdom, the United States

A study to evaluate if different doses of KVD900 are safe and effective in treating attacks in patients with HAE

– recruiting in Australia, Bulgaria, Canada, France, Germany, Greece, Hungary, Israel, Italy, the Netherlands, New Zealand, North Macedonia, Poland, Romania, Spain, the United Kingdom, the United States

A Study to Evaluate NTLA-2002 in adults with HAE

– recruiting in Australia, France, Germany, the Netherlands, New Zealand, the United Kingdom, the United States

A Study with Lanadelumab in Persons with HAE in Poland

– recruiting in Poland

A Survey of Icatibant in Pediatric Participants with HAE

– recruiting in Japan

A Survey of Lanadelumab in Participants v HAE

– recruiting in Japan

A Trial to Evaluate the Efficacy and Safety of Different Doses of KVD824 for Prophylactic Treatment of HAE Type I or II

– recruiting in Australia, Bulgaria, Canada, Czech Republic, France, Germany, Hungary, Italy, New Zealand, North Macedonia, Puerto Rico, the United Kingdom, the United States

Berotralstat Treatment in Children with HAE

– will be recruiting in Austria, Canada, France, Germany, Israel, Italy, North Macedonia, Poland, Romania, Spain, the United Kingdom

Characterization of Rhythmicity Profiles of Bradykinin-mediated Angioedema Attacks Using a Tracking Smartphone Application

– will be recruiting

CLOUD-R HAE REGISTRY

– recruiting in France

C1 Inhibitor Registry in the Treatment of HAE Attacks

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

Contrast-Enhanced Ultrasound for the Evaluation of Changes in Tumor Blood Flow Surrounding HAE

– recruiting in the United States

CSL312 (garadacimab) in the prevention of HAE attacks

– recruiting in Canada, Germany, Hungary, Israel, Italy, the Netherlands, Spain, the United States

Dose-ranging Study of Oral PHA-022121 for Prophylaxis Against Angioedema Attacks in Patients with HAE Type I or Type II

– recruiting in Bulgaria, Canada, Germany, Israel, Poland, the United Kingdom, the United States

Efficacy and Safety of Lanadelumab (SHP643) in Japanese Subjects with HAE

– recruiting in Japan

FIRAZYR General Drug Use-Results Survey (Japan)

– recruiting in Japan

Firazyr® Patient Registry (Icatibant Outcome Survey - IOS)

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

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

– recruiting in Italy

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

– recruiting in France

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

– recruiting in Germany

Long term access to berotralstat for HAE subjects from previous clinical trials

– recruiting in Czech Republic, France, North Macedonia, Slovakia, South Africa, South Korea

Long-term safety and efficacy of CSL312 (garadacimab) in the prophylactic treatment of HAE attacks

– recruiting in Australia, Canada, Czech Republic, Germany, Hong Kong, Hungary, Israel, Italy, Japan, the Netherlands, New Zealand, Russia, Spain, Taiwan, the United Kingdom, the United States

NTLA-2002 in Adults with HAE

– recruiting in the Netherlands, New Zealand, the United Kingdom

OASIS-HAE: A Study to Evaluate the Safety and Efficacy of Donidalorsen (ISIS 721744 or IONIS-PKK-LRx) in Participants with HAE

– recruiting in Belgium, Bulgaria, Canada, France, Germany, Italy, Spain, the United Kingdom, the United States

Pathophysiological study for autoimmune dysregulation of HAE

– recruiting in Japan

Patient Registry to Evaluate the Real-world Safety of Ruconest®

– recruiting in the United States

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

– recruiting in Italy

PK Subtrial in Adolescent Patients with HAE Type I or II Participating in the KVD900-302 Trial

– will be recruiting

Study to Assess the Tolerability and Safety of Ecallantide in Children and Adolescents with HAE

– recruiting in the United States

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

– recruiting in Austria, Germany, Israel, Switzerland, the United Kingdom

The influence of stress and lifestyle in HAE

– recruiting in New Zealand

The Role of the Coagulation Pathways in Recurrent Angioedema

– recruiting in France

Read more about these and other clinical trials at:

- clinicaltrials.gov
- clinicaltrialsregister.eu
- trialsearch.who.int

1 July 2022

BioCryst Pharmaceuticals, Inc. announces new long-term efficacy and safety data from the APeX-2 and APeX-S clinical trials evaluating oral, once-daily ORLADEYO® (berotralstat) for the prophylactic treatment of HAE showing sustained reductions in attack rates and improvement in quality of life (QoL) among patients living with HAE, and improved management of symptoms after switching to ORLADEYO from an injectable long-term prophylactic treatment (LTP).

The data are being presented in Flash Talks at the European Academy of Allergy and Clinical Immunology (EAACI) Hybrid Congress 2022.

"From each additional analysis of our long-term data from APeX-2 and APeX-S, we continue to see more examples of the positive long-term impact our oral, once-daily prophylactic therapy is having on patients with HAE. Since first reporting our 96-week data at last year's EAACI congress, we have seen increased evidence of sustained improvement in quality of life, reductions in attack rates and decreased need for use of injectable on-demand therapy. These data, coupled with the real-world evidence and feedback we are gathering from patients and physicians, confirm our confidence in ORLADEYO as a meaningful treatment option for patients with HAE," says Dr. William Sheridan, Chief Medical Officer of BioCryst.

"The analysis of the attack-free status of patients with HAE who switched from injectable LTP therapy to ORLADEYO in APeX-S builds on previous data that have shown consistently low attack rates in ORLADEYO patients. These findings suggest there are excellent reasons for patients to speak with their physicians to determine if switching to an oral prophylactic therapy could be an option to help them reduce their burden of disease while maintaining strong efficacy. Additionally, the analysis from APeX-2 of long-term efficacy and quality of life data following initiation of the 150 mg dose demonstrates ORLADEYO is having a positive impact on patients as they focus on their daily activities," says Teresa Caballero, M.D., Ph.D., Allergy Department, Hospital Universitario La Paz, Madrid, Spain.

BioCryst EAACI 2022 Presentation Highlights

APeX-S was an open-label, international study that evaluated safety and tolerability of ORLADEYO 110 mg and 150 mg in HAE patients. In APeX-S, the switch from LTP (lanadelumab) to ORLADEYO was generally well-tolerated among patients, with no patients in this analysis discontinuing ORLADEYO due to an adverse event.

Attack-free Status in Patients who Switched from Subcutaneous Lanadelumab to Oral Berotralstat:

- This analysis assessed the attack-free status in all patients who switched from lanadelumab to ORLADEYO 150 mg at U.S. sites (n=21).
- Consistently low attack rates were observed in these patients, with median attack rates following the switch to ORLADEYO monotherapy of 0.0 throughout 12 months of treatment with ORLADEYO. The mean (SEM) monthly attack rate after Month 1 was 0.1 (0.08), which was sustained through Month 6 (0.5 [0.24]) and Month 12 (0.2 [0.15]).
- Patients remained attack free an average of 98 percent of days during treatment with ORLADEYO, with a mean (SEM) of 144 (23.7) days and a maximum duration of 411 days between attacks.
- These data demonstrate that ORLADEYO is effective at maintaining good control of HAE symptoms in patients who switch from subcutaneous LTP treatments such as lanadelumab. APeX-2 included 121 HAE patients who were randomized 1:1:1 to ORLADEYO 110 mg or 150 mg, or placebo, once daily for 24 weeks (part 1 of the study). At Week 24, patients on ORLADEYO continued on the same dose and placebo patients were re-randomized to ORLADEYO 110 mg or 150 mg for another 24 weeks (part 2 of the study). At Week 48 and thereafter, all patients continued on ORLADEYO 150 mg (open-label phase). In APeX-2, ORLADEYO was safe and generally well tolerated, with no drug-related serious adverse events reported.

Improvement in Quality of Life and HAE Attack Rates Observed in Patients Treated with Long-term Berotralstat in the APeX-2 Study:

- This analysis stratified patients who remained on study through at least Week 96 into three groups according to their duration of treatment with ORLADEYO 150 mg: patients who received ORLADEYO 150 mg for 96 weeks (n=21), patients who received ORLADEYO 110 mg or placebo for part 1, ORLADEYO 110 mg for part 2 and 150 mg

for part 3 (n=37), and patients who received placebo for part 1 and ORLADEYO 150 mg for parts 2 and 3 (n=12). Quality of life (QoL) was assessed using the Angioedema Quality of Life Questionnaire (AE-QoL), a validated tool to measure QoL impairment in patients with recurrent angioedema. The minimal clinically important difference (MCID) was defined as a change of six points in total score.

- A sustained reduction in HAE attack rates was observed across all three groups, as patients treated with ORLADEYO 150 mg had median attack rates of 0.0 in 21 of 24 months of treatment following initiation of the 150 mg dose. Patients also reported an overall improvement in their QoL, with the largest improvement observed in the functioning domain. For total AE-QoL score, a mean improvement (SEM) of 16.4 (2.79) points from baseline to Week 96 was observed, suggesting ORLADEYO had a positive impact on day-to-day activities.
- These data further demonstrate that ORLADEYO is generally well tolerated and an effective prophylactic therapy that reduces attack rates and improves QoL in patients with HAE.

96 Weeks of Treatment with Berotralstat Consistently Decreases the Use of Injectable On-Demand Medication to Treat HAE Attacks:

- This analysis assessed injectable on-demand medication use in patients who were originally randomized to ORLADEYO 150 mg and completed 96 weeks of therapy (n=21).
- Overall, 96 weeks of treatment with ORLADEYO 150 mg resulted in 2.4 fewer doses per month of injectable on-demand therapy at Week 96 as compared to baseline. The median number of attacks per month requiring treatment with injectable on-demand medication was 0.0 attacks at all post-baseline timepoints throughout the 96 weeks of treatment, and a similar trend was observed with mean attack rates.
- These data suggest that use of ORLADEYO leads to an increase in needle-free days for patients with HAE due to the reduced need for use of injectable on-demand medication. ORLADEYO was safe and well tolerated in clinical trials. The most frequently reported adverse reactions in patients receiving ORLADEYO compared with placebo were back pain and gastrointestinal reactions. The gastrointestinal reactions generally occurred early after initiation of treatment with ORLADEYO, became less frequent with time and typically self-resolved.

(Source: BioCryst)

2 July 2022

Takeda announces late-breaking data from the Phase 3 SPRING study (NCT04070326) at the European Academy of Allergy and Clinical Immunology (EAACI) Hybrid Congress 2022, demonstrating positive results of TAKHZYRO®(lanadelumab) for preventing HAE attacks in patients 2 to <12 years of age, which were consistent with earlier studies in adult and adolescent patients. There are currently no long-term prophylactic (LTP) treatments approved for HAE patients younger than 6 years.

The primary objective of the open-label, multicenter, Phase 3 SPRING study was to evaluate the safety and pharmacokinetics (PK) of TAKHZYRO in patients aged 2 to <12 years with HAE. Clinical outcomes (prevention of HAE attacks) were measured as a secondary objective.

"HAE is a rare condition where unpredictable symptoms like severely debilitating swelling can take a toll on children both physically and emotionally," says Dr. Marcus Maurer, Professor of Dermatology and Allergy Charité – Universitätsmedizin Berlin, Germany and principal investigator of the SPRING study. "In the SPRING study, we saw a majority of children who had been suffering nearly two HAE attacks per month on average at baseline, who were then attack-free throughout the 52-week trial of treatment with TAKHZYRO."

In this study, HAE patients received a dose of 150 milligrams (mg) every 4 weeks in patients 2 to <6 years and every 2 weeks in patients aged 6 to <12 years. TAKHZYRO reduced the rate of HAE attacks in children by a mean of 94.8% compared to baseline, from 1.84 attacks per month to 0.08 attacks during treatment. The majority of patients (76.2%) were attack-free during the 52-week treatment period with an average of 99.5% attack-free days.1 No deaths or serious treatment-emergent adverse events (TEAEs) were reported during the study, and no patients withdrew from the study due to TEAEs. The most commonly reported TEAE was injection site pain, and most TEAEs were mild or moderate in severity.6 These results are consistent with the favorable efficacy and safety profile of TAKHYZRO observed in earlier studies with adult and adolescent patients.

HAE attacks, which can involve serious and severely debilitating swelling in the abdomen, face, feet, genitals, hands and throat, may occur very early in childhood. Potentially fatal upper airway angioedema has been reported in patients as young as 3 years old. HAE diagnosis can take an average of 8.4 years after symptom onset. Among adults living with HAE,

50% of patients experience anxiety, 34% experience difficulty with social activity and 58% report symptoms negatively affect career advancements.

"The SPRING study data reinforce the safety and efficacy of TAKHZYRO across a broad range of patients living with HAE," says Ming Yu, Global Clinical Lead, Takeda. "We are encouraged by these findings as they demonstrate the potential of long-term prophylaxis treatments to reduce recurrent HAE attacks in children as young as two who currently have no approved long-term preventative treatment option."

Results From the Open-label, Multicenter Phase 3 SPRING study include:

Overall, the attack rate during lanadelumab treatment was reduced by ~95% versus baseline.The extent of reduction was similar between patients who received 150 mg lanadelumab q4w or q2w.

- Systemic exposure to lanadelumab was demonstrated.
- Compared with adults and older adolescents who received 300 mg q2w:
- Steady-state exposure with 150 mg q2w in patients aged 6 to <12 years was similar.
- Minimum steady-state concentrations with 150 mg q4w were 50–60% lower in patients aged 2 to <6 years but were sufficient to produce a clinically meaningful treatment response.
- 16 (76.2%) patients were attack-free during the full treatment period.
- A mean (range) of 99.5% (96.4–100) of days were attack-free.
- Overall, 17 (81.0%) patients reported any TEAEs.
- 7 (33.3%) patients reported any TEAE related to treatment; all were related to the injection site.
- The profile of related TEAEs was similar between the two treatment groups.
- There were no deaths, serious TEAEs, hospitalisations or discontinuations due to TEAEs.
- There were no adverse events of special interest (hypersensitivity reactions, hypercoagulability and bleeding events).
- No clinically meaningful safety findings were identified with respect to clinical laboratory tests or vital signs.
- These data will be submitted to global regulatory authorities to evaluate a potential label expansion for TAKHZYRO to include the younger patient population.

(Source: Takeda)

5 July 2022

KalVista Pharmaceuticals, Inc. presents data for its oral on-demand plasma kallikrein (PKa) inhibitor and Factor XIIa (FXIIa) programs at the EAACI2022 conference in Prague, Czech Republic.

Data shows that sebetralstat was an effective treatment for both peripheral and abdominal attacks with 80% of attacks achieving symptom relief within 12 hours, regardless of attack location. Population pharmacokinetic (PK) data showed that the PK of sebetralstat did not appear to be affected by consumption of a normal meal prior to dosing compared with taking the dose after fasting. Furthermore, PK modeling supports the use of sebetralstat in adolescents 12 years and older without dose adjustment.

Animal model data with oral FXIIa inhibitor KV998086 showed the compound protected mice from kallikrein-kinin system (KKS) mediated edema. KV998086 blocked the generation of FXIIa & PKa and prevented HK cleavage in a dose-responsive manner. Pharmacokinetic studies showed that oral KV998086 displayed high bioavailability. Inhibition of the KKS with KV998086 may provide an opportunity for once-daily HAE prophylaxis as well as having the potential to treat other KKS-mediated diseases.

"The population PK study is important for our sebetralstat program," says Andrew Crockett, CEO of KalVista. "It expands the population we can target for treatment in our Phase 3 KONFIDENT trial without having to use multiple-dose regimens. Additionally, the preclinical data with our oral FXIIa inhibitor once again shows the promise of this novel class of compounds, which will be important to our company's future even beyond HAE."

(Source: KalVista)

7 July 2022

KalVista Pharmaceuticals, Inc. provides an operational update and released financial results for the fiscal year ended April 30, 2022.

"We are pleased with the progress we have made over the last fiscal year in the development of the

candidates in our oral HAE franchise," says Andrew Crockett, CEO of KalVista. "We are meeting our enrollment targets for both our current clinical trials, the sebetralstat KONFIDENT Phase 3 and KVD824 KOMPLETE Phase 2. In addition, we are making great strides in developing our next wave of investigational compounds with promising preclinical data for our oral Factor XIIa inhibitor program. The Company is also well-capitalized, with funding until at least early 2024, which we expect takes us beyond data from both of our ongoing clinical trials."

Recent highlights:

- In June 2022, the Company received formal notice that the European Commission has designated sebetralstat as an orphan medicinal product for the treatment of HAE. The orphan designation allows KalVista guaranteed access to the centralized procedure for marketing authorization, among other benefits, and would provide 10 years of market exclusivity.
- Enrollment is proceeding as expected for the Phase 3 KONFIDENT trial for sebetralstat, with data expected in the second half of 2023. The Phase 2 KOMPLETE clinical trial for KVD824, an oral plasma kallikrein inhibitor KalVista is developing for the prevention of HAE attacks, also remains on track with its enrollment targets. Data from the KOMPLETE trial is expected in mid-2023.
- Reported promising preclinical data for our oral factor XIIa inhibitor program at the KININ2022 conference. Presentations showed that our oral FXIIa inhibitors block the initiation and amplification of the kallikrein kinin system (KKS) in preclinical models as well as suppressing FXII zymogen enzyme activity.
- Announced that the name "sebetralstat" was approved by the World Health Organization's International Nonproprietary Names (WHO-INN) Expert Committee and the American Medical Association's United States Adopted Names (AMA-USAN) Council for the drug candidate formerly known as KVD900.
- Published new data for sebetralstat in the journal Clinical & Experimental Allergy. In the publication, orally administered sebetralstat was shown to be quickly absorbed and provided rapid and near-complete inhibition of plasma kallikrein and strong suppression of kallikrein-kinin system activation in patients with HAE.
- Announced the initiation of the Phase 3 KONFIDENT clinical trial evaluating the efficacy and safety of sebetralstat as the first potential oral, on-demand therapy for hereditary angioedema (HAE) attacks. The worldwide, double-blind, placebo-controlled crossover trial will evaluate the efficacy of two dose levels of sebetralstat compared to placebo in adolescents and adults experiencing acute HAE attacks.
- Provided new data from the Phase 2 trial of sebetralstat at the American Academy of Allergy, Asthma & Immunology (AAAAI) Annual Scientific Meeting. Data presentations highlighted the rapid suppression of plasma kallikrein activity after sebetralstat administration and its relationship with symptomatic relief from HAE attacks.

(Source: KalVista)

KalVista Pharmaceuticals

22 July 2022

CSL Behring has received the first Patient Access Award for HAE, which recognizes companies that go above and beyond to ensure that much-needed therapies get into the hands of the patients who need them.

Awarded by Managed Markets Insight & Technology (MMIT), the honor is determined by a survey of payer and physician stakeholders who participate in MMIT's quarterly Oncology Index and Biologics and Injectables Index. In this research, payer and physician stakeholders assess and rank the performance of pharmaceutical manufacturers in categories including commitment to a disease; account representative support, patient and family support programs and resources, patient copay assistance, physician education and coordinated support services, also known as HUB services.

"As a company, we are committed to delivering on our promise to patients and we've recognized that this goes beyond just providing innovative treatments but also helping patients access their therapies," says Robert Rouse, Head of US Market Access. "I'm particularly proud of this accomplishment as patient focus is always top of mind and this award highlights the great work we are doing on behalf of the patients we serve."

(Source: CSL Behring)

CSL Behring

29 July 2022

The U.S. Food and Drug Administration (FDA) gives clearance of **Astria Therapeutics, Inc**'s Investigational New Drug (IND) application for STAR-0215, which the company is developing for the treatment of HAE. A Phase 1a trial of STAR-0215 in healthy volunteers is expected to initiate in the coming weeks, with preliminary results anticipated by year-end.

"The acceptance of our IND by the FDA is an important next step in bringing STAR-0215 to the clinic for our planned first-in-human trial," says Chris Morabito, M.D., Chief Medical Officer at Astria Therapeutics. "We are optimistic that STAR-0215's differentiated profile, including dosing once every three months or longer, has the potential to change the way that people with HAE live with their disease."

STAR-0215 is an investigational monoclonal antibody inhibitor of plasma kallikrein designed to provide long-acting, effective attack prevention for HAE with dosing once every three months or longer. The company's goal is to provide the most patient-friendly preventative treatment option for people living with HAE. The Phase 1a trial is planned to be a randomized, double-blind, placebo-controlled trial evaluating STAR-0215 in healthy volunteers. The goals for the trial include assessing safety and tolerability, establishing the prolonged half-life of STAR-0215, and inhibition of plasma kallikrein activity, which, if favorable, would provide proof of mechanism in HAE.

(Source: Astria)

4 August 2022

Strategic highlights from the presentation of **Pharming Group N.V**'s preliminary (unaudited) financial report for the first six months of 2022 ended 30 June 2022:

- During the first half of 2022, we continued to execute on our strategic objectives of building a sustainable business by focusing on RUCONEST® sales, the approval, launch and commercialization of leniolisib, and the ongoing development and management of our pipeline.
- The development of our pipeline will be through a combination of internal development projects – including the development of additional indications for leniolisib and OTL-105 as a gene therapy for HAE – and the potential acquisition of new, late-stage assets through in-licensing and M&A opportunities.

In July 2021, Pharming announced a strategic collaboration with Orchard Therapeutics to research, develop, manufacture and commercialize OTL-105, a newly disclosed investigational ex vivo autologous hematopoietic stem cell (HSC) gene therapy for the treatment of HAE. The program has made significant progress developing the lentiviral vector to enhance C1-inhibitor expression and is now testing in preclinical HAE disease models. We anticipate providing further updates as we move towards preparing an Investigational New Drug (IND) filing.

(Source: Pharming)

4 August 2022

At the presentation of the **BioCryst Pharmaceuticals, Inc**. financial results for the second quarter ended 30 June 2022, Jon Stonehouse, President and CEO of BioCryst, says:

"With ORLADEYO firmly established in the marketplace as it steadily grows each quarter and our pipeline of other oral drugs for rare diseases, BioCryst is uniquely positioned to bring multiple oral medicines for rare diseases to patients."

Program Updates and Key Milestones

U.S. Launch

- The majority of patients continue to be well controlled on ORLADEYO. Even as the patient base has continued to grow steadily, discontinuations in the second quarter declined to their smallest number since the third quarter of 2021.
- Patients continue to have broad and rapid access to ORLADEYO with the median time for a patient to receive reimbursed product following a prescription now under three weeks.

"More than a year and a half into the launch of ORLADEYO, we see steady growth and strong momentum, which we expect to continue. The majority

of HAE patients are very satisfied with their experience using oral, once-daily ORLADEYO and physicians continue to consistently express their strong intent for future prescribing, which we see translating directly to our growing patient numbers quarter after quarter," says Charlie Gayer, CCO of BioCryst.

Global Updates

- In the second quarter, ORLADEYO was approved in Canada and Switzerland. The company expects approvals and launches in additional countries throughout the year.
- Also in the second quarter, pricing was finalized in Germany, France and Switzerland.
- On 9 June 2022, the company announced it had selected Pint Pharma as its commercial partner for ORLADEYO in Latin America.

(Source: BioCryst)

4 August 2022

Intellia Therapeutics, Inc. reports operational highlights and financial results for the second quarter ended 30 June 2022. In vivo program update regarding HAE:

NTLA-2002 leverages Intellia's proprietary in vivo LNP delivery technology to knock out the KLKB1gene in the liver with the potential to permanently reduce total plasma kallikrein protein and activity, a key mediator of HAE. This investigational approach aims to prevent attacks for people living with HAE by providing continuous reduction of plasma kallikrein activity, following a single dose, and to eliminate the significant treatment burden associated with currently available HAE therapies. NTLA-2002 is being evaluated in a Phase 1/2 study in adults with Type I or Type II HAE.

Intellia is progressing the single-ascending dose portion of its first-in-human study. The Company anticipates presenting interim data in the second half of 2022, including safety, kallikrein reduction and HAE attack rate data. These initial results are expected to characterize the emerging safety and activity profile of NTLA-2002 and potentially demonstrate the modularity of Intellia's proprietary CRISPR-based, LNP platform.

(Source: Intellia)

4 August 2022

Astria Therapeutics, Inc. initiates the Phase 1a clinical trial of STAR-0215 in healthy subjects. STAR-0215 is a monoclonal antibody inhibitor of plasma kallikrein designed to provide long-acting, effective attack prevention for HAE, with dosing once every three months or longer. Astria anticipates preliminary results from the Phase 1a trial by year-end. The Phase 1a trial is intended to establish clinical proof of concept for the differentiated profile anticipated for STAR-0215.

"The initiation of the Phase 1a trial of STAR-0215 in healthy subjects is an important milestone for us, as it marks our progression to a clinical-stage company and is a critical next step towards our goal of improving the disease burden for people living with HAE," says Chris Morabito, M.D., Chief Medical Officer at Astria Therapeutics. "We are proud of our progress so far, and the initiation of our first clinical trial in HAE is a representation of our commitment to bringing hope with life-changing therapies to patients affected by rare diseases."

The Phase 1a randomized, double-blind, placebo-controlled single ascending dose trial is evaluating the safety, pharmacokinetics, and pharmacodynamics of STAR-0215 at a single U.S. center. Approximately 24 subjects will receive a single dose of STAR-0215 or placebo in at least three cohorts of 100mg, 300mg, and 600mg administered subcutaneously. The trial will assess safety and tolerability and aims to establish prolonged half-life and demonstrate inhibition of plasma kallikrein activity, which, if favorable, would provide proof of mechanism for STAR-0215 as a potential best-in-class treatment for HAE.

Preclinically, STAR-0215 has been shown to be a long-acting, potent, and selective inhibitor of plasma kallikrein. In a study conducted in cynomolgus monkeys, STAR-0215 showed rapid inhibition of plasma kallikrein after subcutaneous administration, and inhibition of high molecular weight kininogen cleavage was rapid and sustained throughout the entire 84-day dose-free period in the extended portion of the study. These preclinical data support the potential for once every three-month dosing.

(Source: Astria)

9 August 2022

Astria Therapeutics, Inc. reports financial results for the second quarter ended 30 June 2022 and provides a corporate update.

"We are thrilled to announce that we have initiated dosing in our Phase 1a trial of STAR-0215 which will provide data that we believe will validate STAR-0215's differentiated best-in-class profile, including prolonged half-life," says Jill C. Milne, Ph.D., CEO of Astria. "This is an important milestone as we evaluate STAR-0215 in humans for the first time, and it advances us one step closer to achieving our goal of bringing patients with HAE a therapy that could reduce their disease and treatment burden. We expect preliminary results from the Phase 1a trial by the end of this year."

Phase 1a Clinical Trial of STAR-0215

- The Food and Drug Administration cleared Astria's Investigational New Drug application for STAR-0215 and the company initiated a Phase 1a clinical trial with preliminary results anticipated by year-end 2022.
- The Phase 1a randomized, double-blind, placebo-controlled single ascending dose trial is evaluating the safety, pharmacokinetics, and pharmacodynamics of STAR-0215 at a single U.S. center. Approximately 24 healthy subjects are expected to receive a single dose of STAR-0215 or placebo in at least three cohorts of 100 mg, 300 mg, and 600 mg administered subcutaneously.
- The trial will assess safety and tolerability and aims to establish the prolonged half-life and demonstrate inhibition of plasma kallikrein activity, which, if favorable, would provide proof of mechanism for STAR-0215 as a potential best-in-class treatment for HAE.
- The company plans to initiate a multi-center, global Phase 1b/2 trial in participants with HAE in 2023.

STAR-0215 Highlights

- At the Fc Receptor and IgG Targeted Therapies Conference in April, Astria presented pharmacokinetic modeling data supporting the potential that STAR-0215 could effectively inhibit plasma kallikrein and prevent HAE attacks with subcutaneous dosing volumes appropriate for a self-injectable device dosed once every three months or longer.
- Astria presented new preclinical data at the European Academy of Allergy and Clinical Immunology 2022 Hybrid Congress that demonstrate STAR-0215's rapid and durable inhibition of plasma kallikrein in cynomolgus monkeys, supporting the potential for once every three month or longer dosing in humans. The study demonstrated rapid inhibition of plasma kallikrein after subcutaneous administration. Inhibition of high molecular weight kininogen cleavage was rapid and sustained throughout the entire 84-day dose-free period in the extended portion of the study. These data confirm the long half-life of STAR-0215 and demonstrate prolonged pharmacological activity of STAR-0215 in circulation in cynomolgus monkeys.

(Source: Astria)

20 August 2022

The Saudi Food and Drug Authority (SFDA) approves **BioCryst Pharmaceuticals, Inc.**'s oral, once-daily ORLADEYO® (berotralstat) to prevent attacks of HAE in adults and pediatric patients 12 years of age and older in Saudi Arabia.

"There is a significant need for new treatment options for HAE in Saudi Arabia. With this approval, we continue to deliver on our commitment to bringing our oral, once-daily prophylactic therapy to as many HAE patients around the world as possible," says Charlie Gayer, CCO of BioCryst.

In September 2021, BioCryst entered into a supply and distribution agreement with NewBridge Pharmaceuticals, which also covers the Gulf Cooperation Council (GCC) and Iraq. NewBridge Pharmaceuticals, headquartered in Dubai, United Arab Emirates (UAE), is a regional specialty company with a comprehensive pharmaceutical platform of services and expertise, established to bridge the access gap and partner with global pharma and biotech companies to in-license and commercialize U.S. Food and Drug Administration or European Medicines Agency approved innovative therapeutics that address unmet medical needs into the Middle East and North Africa (MENA) regions.

"This marks the second market in the MENA region in which ORLADEYO has been approved for patients living with HAE, building on the approval in the UAE last year. We are pleased with the decision from the Saudi FDA and we are committed to continuing our work with BioCryst to bring this important therapy to patients in

the GCC who are in search of a more optimal treatment option to help manage their HAE," says Joe Henein, President and CEO of NewBridge Pharmaceuticals.

ORLADEYO was safe and well tolerated in clinical trials. The most frequently reported adverse reactions in patients receiving ORLADEYO compared with placebo were back pain and gastrointestinal reactions. The gastrointestinal reactions generally occurred early after initiation of treatment with ORLADEYO, became less frequent with time and typically self-resolved.

(Source: BioCryst)

20 August 2022

CSL Behring announces positive top-line Phase 3 results for garadacimab (CSL312), the company's investigational first-in-class monoclonal antibody inhibiting Factor XIIa being developed as a long-term preventive treatment for patients with HAE. The study met its primary and secondary efficacy objectives and also demonstrated favorable safety and tolerability. CSL aims to begin filing with global health authorities next year for full approval.

The multicenter, double-blind, randomized, placebo-controlled, parallel-arm study (also known as VANGUARD) evaluated the efficacy and safety of monthly subcutaneous garadacimab administration in the prevention of HAE attacks compared to the placebo for six months. Full results from the study will be presented at an upcoming scientific congress and published in a peer-reviewed journal.

"These results underscore our belief that garadacimab has the potential to become a transformative first-in-class therapy for people living with HAE, a patient group that CSL has been serving for many years," says Dr. Bill Mezzanotte, Executive Vice President, Head of R&D, Chief Medical Officer for CSL. "CSL's promise to patients guides us to meet their unmet needs by pursuing the type of disruptive innovation we believe garadacimab represents. We look forward to sharing the full results of our phase 3 study in the coming months."

(Source: CSL Behring)

23 August 2022

KalVista Pharmaceuticals, Inc. initiates the KONFIDENT-S open label extension (OLE) study for its ongoing Phase 3 KONFIDENT study of sebetralstat for the on-demand treatment of HAE attacks.

"Initiating this treatment extension represents another significant step in advancing sebetralstat towards an intended FDA filing following completion of the ongoing KONFIDENT Phase 3 trial in the second half of 2023," says Andrew Crockett, CEO of KalVista. "We can now provide participating patients with up to two additional years of therapy with what we expect will be the first oral, on-demand treatment for HAE attacks. The data we collect in this trial will help us better understand the long-term safety profile of sebetralstat and may also inform future trials in younger patients."

The KONFIDENT-S trial is evaluating sebetralstat, an oral plasma kallikrein inhibitor designed for the on-demand treatment of HAE attacks in adults living with HAE, and a subtrial will allow participation by adolescents 12-17 years of age. The trial will also evaluate sebetralstat for use as a short-term prophylaxis treatment prior to medical procedures.

Data from the KONFIDENT-S trial will be available in the second half of 2023 to support the Company's planned NDA filing for sebetralstat in 2024. Initiation of this OLE study follows submission to the FDA of pivotal toxicology studies intended to support the eventual NDA filing.

(Source: KalVista)

23 August 2022

The U.S. Food and Drug Administration (FDA) verbally informs **Pharvaris** that, based on its review of nonclinical data, the agency is placing a clinical hold on the clinical trials of PHA121 in the U.S. under two Pharvaris Investigational New Drug (IND) applications for the treatment of HAE. The FDA indicated it will provide a formal clinical hold letter to Pharvaris in approximately 30 days. The company plans to provide additional updates following interactions with the FDA.

"We are fully committed to working closely with the FDA to address the agency's concerns," says Berndt

Modig, CEO of Pharvaris. "Pharvaris remains dedicated to providing new therapeutic choices for the treatment of HAE and is working diligently to bring PHA121 to people living with HAE."

(Source: Pharvaris)

4 September 2022

The U.S. Food and Drug Administration (FDA) grants orphan drug designation for **Intellia Therapeutics, Inc**.'s in vivo CRISPR/Cas9 genome editing candidate, NTLA-2002, for the treatment of HAE.

NTLA-2002 is a systemically administered investigational therapy designed to knockout the target gene kallikrein B1 (KLKB1) to reduce plasma kallikrein activity and thus prevent HAE attacks. NTLA-2002 is currently being evaluated in a Phase 1/2 study in adults with Type I or Type II HAE.

"Orphan drug designation represents an important milestone in the development of NTLA-2002 and underscores the importance of developing innovative, new treatment options for people living with HAE," says Intellia President and CEO John Leonard, M.D. "We hope to demonstrate in our ongoing clinical trial that NTLA-2002 can result in deep and sustained kallikrein activity reduction following a single dose, and potentially prevent the unpredictable swelling attacks caused by this genetic disease. We look forward to presenting interim data on 16 September at the 2022 Bradykinin Symposium, including safety, kallikrein reduction and HAE attack rate data."

The FDA's Orphan Drug Designation Program provides orphan status to drugs intended for the treatment, diagnosis or prevention of rare diseases that affect fewer than 200,000 people in the United States. Orphan drug designation qualifies the sponsor of the drug for certain development incentives, including tax credits for qualified clinical testing, prescription drug user-fee exemptions and seven-year marketing exclusivity upon FDA approval.

(Source: Intellia)

9 September 2022

KalVista Pharmaceuticals, Inc. provides an operational update and released financial results for the first fiscal quarter ended 31 July 2022:

"We are pleased to announce we have surpassed the 50% enrollment mark for our KVD824 KOMPLETE Phase 2 clinical trial, a major milestone in its development as a potential oral prophylactic treatment for HAE," says Andrew Crockett, CEO of KalVista. "Enrollment for our Phase 3 KONFIDENT trial for the first potential oral on-demand HAE treatment is also progressing as anticipated. We look forward to continuing to advance both programs as we continue with our strategy of bringing a full spectrum of oral treatment options to HAE patients."

First Fiscal Quarter and Recent Business Highlights:

- Announced the initiation of the KONFIDENT-S open label extension study for sebetralstat in the on-demand treatment of HAE. The study will provide up to two years of additional safety and tolerability data, assess sebetralstat's pharmacokinetic profile in adolescents aged 12-17, and evaluate the compound for use as a short-term prophylactic treatment prior to medical procedures.
- Reported new data from the Phase 2 clinical trial of sebetralstat at the Australasian Society of Clinical Immunology and Allergy (ASCIA) 2022 conference. The data showed that sebetralstat treatment provided relief of mild and moderate HAE attacks, showing meaningful treatment effect regardless of baseline attack severity, as shown by measurements of Patient Global Impression of Change, Patient Global Impression of Severity, and Visual Analog Scale.
- Enrollment is proceeding as expected for the Phase 3 KONFIDENT trial for sebetralstat, with data expected in the second half of 2023. The Phase 2 KOMPLETE clinical trial for KVD824 also remains on track with enrollment targets. Data from the KOMPLETE trial is expected in mid-2023.

(Source: KalVista)

16 September 2022

Intellia Therapeutics, Inc. announces positive interim results from an ongoing Phase 1/2 clinical study of NTLA-2002, its second in vivo genome editing candidate. NTLA-2002 is a systemically administered CRISPR candidate being developed for HAE and is designed to knock out the KLKB1 gene in liver cells, thereby reducing the production of kallikrein protein. Uncontrolled activity of kallikrein is responsible for the overproduction of bradykinin, which leads to the recurring, debilitating and potentially fatal swelling attacks that occur in people living with HAE.

The data presented are from the initial six adult patients with HAE in the ongoing dose-escalation study with a data cut-off date of July 27, 2022. Single doses of 25 mg (n=3) and 75 mg (n=3) of NTLA-2002 were administered via intravenous infusion, and changes from baseline values of plasma kallikrein protein were measured for each patient. Administration of NTLA-2002 led to dose-dependent reductions in plasma kallikrein and achieved maximal reductions by week eight, with mean reductions of 65% and 92% in the 25 mg and 75 mg dose cohorts, respectively. Furthermore, these reductions were sustained through at least 16 weeks in the 25 mg cohort and eight weeks in the 75 mg cohort for which complete cohort biomarker data were available.

In addition to plasma kallikrein levels, HAE attack rates are also being measured in the study, with the first analysis occurring at the end of the pre-specified 16-week primary observation period. To date, all three patients in the 25 mg dose cohort have reached the end of this initial observation period. Patients in this group had a baseline HAE attack rate ranging from 1.1 to 7.2 attacks per month, as confirmed by the investigator. Treatment with a single dose of 25 mg of NTLA-2002 resulted in a mean reduction in HAE attacks of 91% throughout the 16-week observation period. Additionally, two of the three patients have not had a single HAE attack since treatment, and all three patients have been attack free since week 10 (follow-up through weeks 24 - 32). Patients in the 75 mg cohort have not completed the primary 16-week observation period. Attack-rate data for this cohort will be presented at the American College of Allergy, Asthma & Immunology (ACAAI) Annual Scientific Meeting, November 10 – 14 in Louisville, Kentucky.

Prophylaxis medications are permitted in the Phase 1 part of the study. Two of the three patients in the 25 mg cohort were actively receiving prophylaxis therapy prior to administration of NTLA-2002. For these two patients, the study protocol permitted investigators to withdraw the patient's prophylaxis therapy after completion of the 16-week primary observation period. This treatment approach was implemented for the two applicable patients in this cohort, and neither patient has had an HAE attack since discontinuing their prophylaxis therapy through the latest follow-up.

"These initial data represent a significant milestone for both Intellia and people around the world suffering from genetic diseases, such as HAE," says Intellia President and CEO John Leonard, M.D. "We are strongly encouraged by the greater than 90% reduction in HAE attacks observed in the 25 mg dose cohort, as these interim results support our belief that a single dose of NTLA-2002 has the potential to permanently prevent the debilitating swelling attacks associated with HAE. Additionally, today's announcement continues to validate our genome editing approach and the modular platform we have built. This is now the second time in history clinical data have been generated suggesting we can precisely edit target cells within the human body to potentially treat genetic diseases with a single, systemic administration of a CRISPR-based therapy. We plan to move as quickly and judiciously as possible on behalf of people living with HAE and a number of additional genetic diseases in the months and years ahead."

At both dose levels, NTLA-2002 was generally well-tolerated, and the majority of adverse events were mild in severity. The most frequent adverse events were infusion-related reactions, which were mostly Grade 1 and resolved within one day. There have been no dose-limiting toxicities, no serious adverse events and no adverse events of Grade 3 or higher observed to date. No clinically significant laboratory abnormalities were observed, including any significant elevation in liver enzymes.

"Many people living with HAE continue to experience breakthrough attacks despite currently available treatments and often find the burden of untreated attacks, frequent infusions or injections to be tremendously disruptive to their lives," says Hilary Longhurst, M.D., Ph.D., Faculty of Medical and Health Sciences, University of Auckland, New Zealand, and the trial's principal investigator in New Zealand. "These early data support NTLA-2002 as a potential one-time treatment capable of producing profound reductions in HAE attacks. While the clinical data are still emerging, I am highly optimistic that NTLA-2002 could become a new treatment option for the HAE community."

Based on the interim data presented today, Intellia selected a third dose of 50 mg to be evaluated in the ongoing dose-escalation portion of the Phase 1/2 study. Dosing at this level has recently completed, and Intellia expects to select up to two doses to further evaluate in the Phase 2, placebo-controlled, dose-expansion portion of the study, which is expected to begin in the first half of 2023. Intellia anticipates expanding country and site participation, including U.S. clinical sites, as part of the Phase 2 study.

(Source: Intellia)

26 September 2022

CSL Behring K.K. receives manufacturing and marketing approval from the Ministry of Health, Labour and Welfare for Berinert® S.C. Injection 2000, a lyophilized human C1-esterase inhibitor concentrate for subcutaneous (SC) injection in plasma derivative, for the prevention of acute HAE attacks. Berinert® S.C. Injection 2000 is a twice-weekly subcutaneous injection formulation of Berinert 60 IU/kg that can be self-administered at home.

"This regulatory milestone underscores CSL's ongoing promise and investment in the health and well-being of the people in Japan – and the value of these innovative treatments," says Haruo Kitado, Head of R&D Japan.

The approval of Berinert® S.C. Injection 2000 is based on the evaluation of the efficacy and safety from the global Phase III COMPACT (Clinical Study for Optimal Management of Preventing Angioedema with low-volume subcutaneous C1-inhibitor replacement Therapy) Study, the COMPACT long-term administration study (Open-label Extension), and a Japanese Phase III clinical study. In the COMPACT study, acute HAE attacks were significantly lower in the Berinert 60 IU/kg group at 0.52 per month compared to 4.03 per month in the placebo group ($p<0.001$, mixed model). In the domestic Phase III clinical study, the efficacy and safety of Berinert 60 IU/kg were confirmed to be similar in Japanese HAE patients as in the global Phase III study population.

"These data reflect the potential of Berinert to help patients with HAE in Japan and underscore the value of Berinert as a prophylactic treatment for this population," says Catherine Milch, Vice President R&D Immunology. Jean-Marc Morange, President and Representative Director of CSL Behring K.K. states, "The human C1-esterase inhibitor preparation replaces lacking C1-INH in HAE patients. We believe that the approval of Berinert® S.C. Injection 2000, a human C1-inhibitor preparation, for long term prophylaxis indication that can be self-administered at home, is a new and promising treatment option for patients. As a pioneer in HAE treatment and prevention with more than 40 years of presence, CSL Behring is committed to making a difference in the lives of such patients by providing Berinert® S.C. Injection 2000, and to significantly advancing diagnosis and appropriate long term prophylaxis treatment to HAE patients in Japan."

(Source: CSL Behring)

4 october 2022

KalVista Pharmaceuticals, Inc. announces the termination of its KOMPLETE phase 2 clinical trial for KVD824 for the prevention of attacks in people with HAE. This decision was based on the observation of liver enzyme (ALT/AST) elevations in multiple patients in all treatment groups of the trial. No patients had concomitant elevation of bilirubin levels and all were asymptomatic.

"The health and safety of participants in our clinical trials is of utmost importance to us," says Andrew Crockett, CEO of KalVista. "We made the difficult decision to terminate KOMPLETE because we concluded that the emerging safety profile of the current formulation will not meet our requirements for a best-in-class oral prophylactic therapy. This termination conserves our financial resources and allows us to focus on continuing to advance sebetralstat through the ongoing phase 3 program and towards a planned 2024 NDA filing, as well as on our emerging oral Factor XIIa inhibitor program as a potential once daily prophylactic therapy for people with HAE."

The KOMPLETE trial is a phase 2 clinical trial evaluating KVD824, an investigational oral plasma kallikrein inhibitor designed for the prevention of attacks in adults living with HAE. Patients in the trial were randomized to one of three treatment groups, each placebo controlled: 300 mg, 600 mg, 900 mg

KVD824 (or placebo), all dosed twice daily. A total of 33 patients were enrolled in the trial, of which 7 patients experienced either Grade 3 or Grade 4 elevations of liver enzymes at timeframes ranging from two to twelve weeks. The elevations were noted in all treatment groups. One additional Grade 4 elevation was recorded in a patient at the baseline visit, prior to receiving study drug. KalVista will proceed to finalize the database of the trial and assess the unblinded data for efficacy and safety to determine the potential for any further development.

KalVista continues to recruit the phase 3 KONFIDENT trial assessing sebetralstat (formerly KVD900) as a potential oral, on-demand therapy for HAE attacks, with data anticipated in the second half of 2023. Sebetralstat is a distinct compound from KVD824, and no treatment related liver enzyme elevations in patients have been observed in any sebetralstat clinical studies, including in the ongoing Phase 3 KONFIDENT trial.

(Source: KalVista)

6 October 2022

The U.S. Food & Drug Administration (FDA) accepts a supplemental Biologics License Application (sBLA) for the potential expanded use of **Takeda**'s TAKHZYRO® (lanadelumab-flyo) for prophylaxis to prevent attacks of HAE in pediatric patients 2 to <12 years of age. Currently, children with HAE under the age of 6 have no approved prophylaxis treatment. If approved, TAKHZYRO could potentially become the first treatment of its kind for this population. The FDA has granted priority review of the application and indicated a decision is expected in the first half of 2023.

"Unpredictable, debilitating and potentially life-threatening HAE swelling attacks can cause a physical and emotional toll on those living with this rare disorder; this is burdensome for young children and their caregivers," says Cheryl Schwartz, Senior Vice President, U.S. Rare Disease Business Unit at Takeda. "If TAKHZYRO is approved for this expanded use, children as young as 2 years old would have a treatment option which has shown proven effective prevention of HAE attacks in those over 12 years of age."

The sBLA is based on data from the SPRING study, the first and only open-label Phase 3 trial for HAE patients under the age of 12. If approved, children in the U.S. would have access to treatment for the prevention of HAE attacks, which can involve serious and severely debilitating swelling in the abdomen, face, feet, genitals, hands, and throat. Potentially fatal upper airway angioedema has been reported in patients as young as 3 years old.

Currently, TAKHZYRO is approved and available in more than 30 countries around the world and is supported by a robust clinical development program, which includes one of the largest prevention studies in HAE with the longest active treatment duration.

(Source: Takeda)

7 October 2022

KalVista Pharmaceuticals, Inc. presents new data on patient-preferred on-demand treatment measures in HAE, and on the effects that the disease has on quality of life for people living with HAE, at the 2022 HAEi Global Leadership Workshop in Frankfurt, Germany.

KalVista presents supportive data for the use of the Patient Global Impression of Change (PGI-C) scale as a clinical endpoint to assess the efficacy of on-demand treatments for HAE attacks. Qualitative interviews with people with HAE demonstrated clear preference for the PGI-C (>70%,) over other scales as a measurement tool for patient outcomes. These findings are consistent with post hoc analyses of the KalVista phase 2 clinical trial for sebetralstat, which found PGI-C to be a clinically meaningful measure of efficacy for on-demand treatment of HAE attacks. The combination of clinical meaningfulness and patient preference led KalVista to choose PGI-C as the primary outcome measure for the ongoing phase 3 KONFIDENT clinical trial.

A second KalVista presentation highlights the significant impact that HAE attacks have on the mental health, daily activities, and quality of life of people living with HAE. This research found that a majority of people with HAE missed out on important events in their lives due to anxiety associated with unpredictability of HAE attacks and that almost half the time, patients feel "less than their 100% self" because of HAE.

"Despite many years of research in HAE, we are still gaining new insights on the impact of HAE attacks

on the lives of people with the disease," says Andrew Crockett, CEO of KalVista. "The goal of this and other research we conduct is to better understand the consequences of HAE and to learn how improve the treatment experience for these patients with our pipeline of oral therapies."

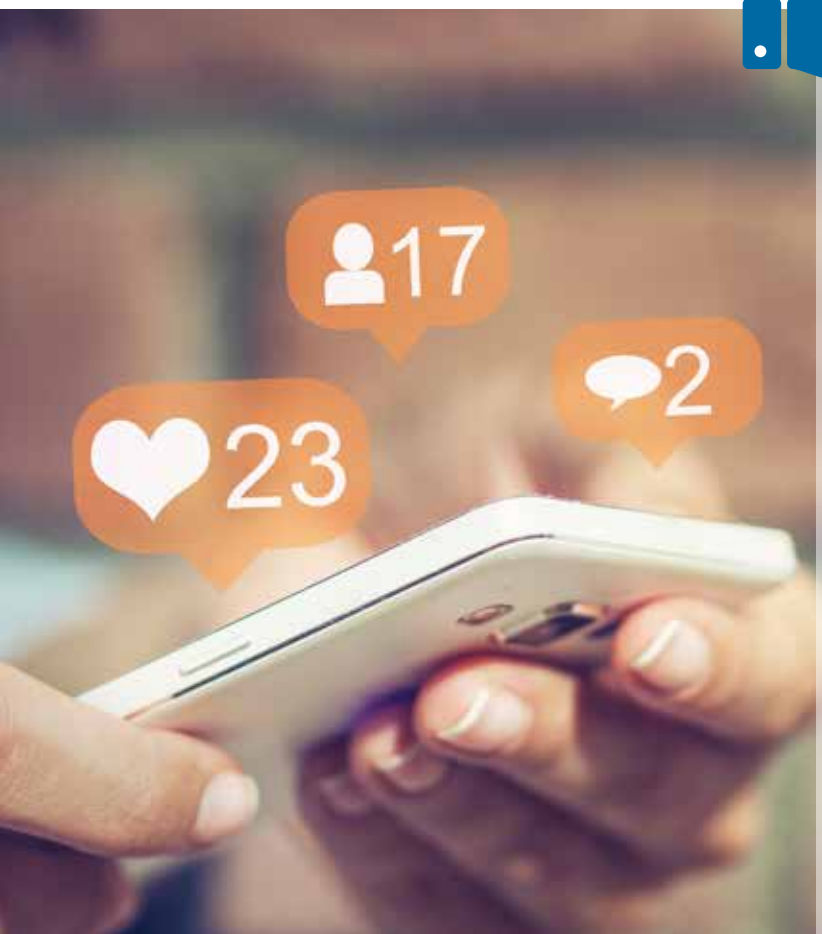
(Source: KalVista)

19 October 2022

KalVista Pharmaceuticals, Inc. announces the publication of new sebetralstat data in both the Journal of Medicinal Chemistry and Xenobiotica. The Journal of Medicinal Chemistry article focuses on the medicinal chemistry KalVista conducted that led to the discovery of sebetralstat, with properties optimized for the on-demand treatment of HAE. Data with sebetralstat showed high selectivity against related human serine proteases. This feature, together with the rapid and high plasma exposure and near-complete inhibition of plasma kallikrein (PKa) in preclinical studies, supported its progression into toxicology and ultimately clinical assessment. Sebetralstat has since advanced to phase 3 trials. In Xenobiotica, sebetralstat was shown to be rapidly absorbed into the systemic circulation (median Tmax of 0.5 hours) and demonstrated absorption, metabolism, and excretion properties that would be beneficial for on-demand treatment of HAE attacks.

"These foundational papers further demonstrate the promise of sebetralstat for the on-demand treatment of HAE attacks," says Andrew Crockett, CEO of KalVista. "We are excited to continue the development of sebetralstat in our phase 3 KONFIDENT trial and look forward to delivering an oral option for on-demand treatment for people living with HAE."

(Source: KalVista)



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