JANUARY 2025 - ISSUE 105

Newsletter

HİTİD President Bilkay Basturk and Marco Andreani at the successful Balkan EPT Meeting 2024, Istanbul, Turkey

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Report of the EFI Executive Committee Autumn meeting 2024

This Newsletter contains the report of the Executive Committee autumn meeting

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Welcome to Prague for the 38th EFI annual conference

On behalf of the Local Organizing Committee, we are delighted to welcome you to Prague

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Report on the 2024 Balkan EPT Meeting, Istanbul, Turkey

Here you can read the report of the 2024 Balkan EPT meeting, held in Istanbul, Turkey

Dear EFI Members,

It is a great privilege for me to serve as President of EFI, particularly at a time when young colleagues are eager to engage more actively in the activities of our Scientific Society, not only to enhance their knowledge but also to better understand the mechanisms that govern EFI.
This enthusiasm is however similar to the one that characterizes the unwavering dedication of professionals of all ages, who contribute daily to the growth and relevance of our Scientific Society by advancing and spreading the culture of Histocompatibility and Immunogenetics through their work, in their institutions or within various EFI Committees. We must never forget that EFI's significant role today is built upon the vision and extraordinary contributions of remarkable scientists from the recent past, to whom we owe a great debt of gratitude.

I am pleased to provide you with this update on the initiatives and upcoming events involving our scientific community over the coming months. First, I would like to inform you that the Chairs of various committees attended the recent Autumn Meeting in Leiden, which included the EFI Executive Committee and Coordinators Meeting. This gathering provided an excellent opportunity to discuss the current state of affairs and plan future initiatives for our society. Additionally, the biannual meeting of the Accreditation Committee was held in Leiden, comprising Regional Commissioners from across Europe. Many of the commissioners served as speakers at the New Inspectors Workshop, where eight new colleagues from eight different countries were trained to contribute to future accreditation programs.

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ISSN 0962-9521

www.efi-web.org

From the editor's desk

I hope you all have had a Merry Christmas and a positive start of the new year with friends and family. On your screen is EFI Newsletter edition 105, with news from our Society. Included is the report of the of the autumn meeting of the Executive Committee, as well as reports of the EFI committees, who continuously work to the merit of EFI.
Probably you are already looking forward to the 38th EFI annual conference to be held in the beautiful city of Prague. The local organising committee led by Antonij Slavčev and Gottfried Fischer together with the PCO Guarant are making great progress to make this yet again a successful conference.

The Newsletter also includes a report on the 2024 Balkan EPT meeting held in Istanbul, Turkey, a report on the inaugural symposium of the Society for Immune Polymorphism (SIP), held in Sassenheim, the Netherlands, as well as a report on the 50th ASHI annual meeting held in Anaheim, USA.
Finally, I would very much like to thank Gurvinder Kaur for co-editing the Newsletter, and Ingrid Abelman who puts tremendous efforts in getting all the Newsletter content in a timely manner.
For now, I hope you enjoy reading the Newsletter, and look forward to your contributions to the next Newsletter.

Sebastiaan Heidt

Deadline for contributions to EFI Newsletter 106 is February 28, 2025.
Please send your contributions by e-mail to efioffice@lumc.nl

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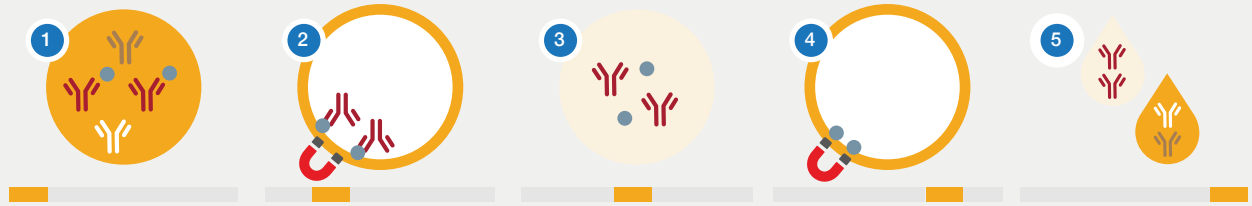

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from the EFI President (continued)

During the EFI Executive Committee and Coordinators Meeting, Blanka Vidan Jeras, Chair of the EFI Accreditation Committee, presented an update. As of October 31, 2024, 276 laboratories have been granted accreditation. She also announced a significant milestone: in 2025, the EFI Accreditation Program will celebrate its 30th anniversary. Discussions are underway to commemorate this achievement. Katy Latham, Chair of the EFI Standards Committee, reported progress on version 9 of the Standards, expected to be released next year. She also proposed a collaborative effort with ASHI on specific projects. One noteworthy topic was the EFI External Proficiency Testing Committee's efforts, led by Yvonne Zoet, to establish an EPT program for donor-derived cell-free DNA testing. Deborah Sage, Chair of the EFI Education Committee, shared several updates: during the EFI Conference in Geneva, eight candidates took the ESHI Diploma examination. Additionally, 43 students are on track to earn the ETHIQ Diploma, with the final assessment now available in English, French, German, Spanish, Dutch, and Portuguese. She also announced that the next Summer School will be hosted by ASHI in Mexico, with EFI planning to organize this even in 2026. After considerable collaboration, particularly with David Turner, the CPD/CME platform will soon be launched. Deborah also highlighted the need to relocate the extensive educational resources on the EFI website to make them more accessible to members. Luca Vago, Chair of the EFI Scientific Committee, presented the scientific program for the upcoming EFI meeting in Prague, developed in collaboration with Antonij Slavčev and Gottfried Fischer. He also announced plans for four webinars for EFI members in 2025, focusing on key topics in Histocompatibility and Immunogenetics.
Eric Spierings, Chair of the EFI Bioinformatics & IT Committee, revealed that the Prague meeting will include a Bioinformatics Educational Session. His team is also working on enhancing abstract submission and processing through EasyChair software. Timo Olieslagers, Chair of the EFI Young Professionals Working Party, presented a proposal outlining the new committee's structure. The primary objective is to enhance young professionals' engagement in EFI activities and provide them with opportunities to participate in the various EFI committees.
I would also like to bring to your attention that the EFI representatives on the WBMT board have recently changed. Esteban Arrieta-Bolanos and Neema Mayor have succeeded Steven Marsh and Mats Bengtsson, whom we sincerely thank for their dedicated service over the past years. EFI is committed to actively contributing our expertise to the educational and scientific initiatives that WBMT aims to develop in the field of HSCT.

Following the highly successful EFI Conference in Geneva, organized by Jean Villard and Sylvie Ferrari-Lacraz, the Balkan EPT Meeting took place on November 15–16, 2024, in Istanbul at the Marriott Hotel Şişli. Hosted by the HİTİD President Bilkay Basturk and by Fatma Savran Oguz, the meeting was a great success, thanks to excellent organization and the high-quality presentations. The event aims to strengthen regional collaboration in the Balkans and laid the foundation for new initiatives. Attendance was strong, including 235 participants, 89 of them from labs outside Turkey, and two EFI past Presidents, Elissaveta Naumova and Ilias Doxiadis. I also had the privilege of attending and listening to the contributing insights coming from both national and international speakers.

Among the upcoming events, I would like to remind everyone that the 17th East-West Immunogenetics Conference will be held in Warsaw from March 23 to 25, 2025, a valuable opportunity to share the latest research developments. The following week, the EBMT Meeting will take place in Florence, from March 30 to April 3, 2025, where EFI will host a dedicated session. We encourage all members to attend and actively contribute to this prestigious event. For the EFI members who might be interested, I would also like to point out that next April 6 to 9, 2025, in Mérida, Mexico, the 18th International Summer School (ISS) on Immunogenetics will take place, organized by ASHI, in collaboration with EFI and our Sister Societies. Finally, I am proud to invite you to the 38th European Immunogenetics and Histocompatibility Conference in Prague. Under the leadership of Antonij Slavčev and Gottfried Fischer, this event promises to be a tremendous success.
In closing, I would like to express my heartfelt thanks to the team in the EFI Office, Sonja, Ingrid, and Margriet, as well as to the EFI Secretary Dave Roelen and Deputy Secretary Kay Poulton, besides to the EFI Treasurer Jean Villard and the Deputy Treasurer Nicolas Vince for their continuous and invaluable support, besides, of course, to the whole group of Councilors working in the EFI Executive Committee.

Finally, I take the opportunity, through the present report, to wish you all the best for the upcoming holiday season and for a successful, productive 2025……!

Best regards,

Ciao

Marco

Obituary
Dr Francesco Ingrassia

We are very sad to announce that Dr Francesco Ingrassia passed away last November 2024 after a short illness.

The Director and the H&I laboratory of Cervello Hospital in Palermo are very affected as well as all members of the AIBT, the Italian Association of Immunogenetics and Transplant Biology.

Often present at the EFI and AIBT Conferences, Francesco was an active member of our Scienific Societies and we would like to remember him for his kindness, shyness and especially for his smile.

The AIBT Board

Membership update

Since the last issue of the EFI Newsletter we received several application forms for new members. Hereby we would like to welcome the following new EFI members:

T. Saal – Ulm, Germany
M. Kyriakou – Larnaka, Cyprus
B. Verstegen – 's-Hertogenbosch, the Netherlands
G. Pisugina – Saint-Petersburg, Russia
A. Magradze – Tbilisi, Georgia
S. Bayraktar – Hannover, Germany
A. von Borstel – Leiden, the Netherlands
M. Toriello Suarez – Santander, Spain
P. Ruiz Escobar – Palma, Spain

Report of the EFI Executive Committee Autumn meeting 2024

The EFI Executive Committee (EC) had its second annual meeting in Leiden in October. In this meeting members of the EC had more time to discuss EFI business. The EFI EC, including the new councillors Katerina Tarassi, Sandra Tafulo, and the president Marco Andreani met with the chairs of the various EFI committees the day before the EC meeting. Timo Olieslagers representing EFI young professionals, was also present at that day when the EC met with the chairs.

EFI Office
Our office in Leiden is running smoothly since Ingrid Abelman has started to work for 32 hours a week and Margriet van Rijn joined the office on the 1st of August for 32 hours a week. Ingrid will keep on working on projects such as ETHIQ but she also has started with her training regarding accreditation matters by Sonja Geelhoed.

EFI elections
No nominations for EC deputy secretary, secretary, and treasurer positions have been received. All current officers on the positions approved to continue as they are. Nominations for the position as councillor were received from Lotte Wieten and Pernille Koefoed-Nielsen. As we need 2 councillors to start in May 2025 no elections have to be organised.

EFI Finances
Our treasurer, Jean Villard, reviewed the budget and forecast for 2024/2025. Great work by Guarant in attracting sponsorship was one of the reasons why we had an excellent result from the Geneva conference. The EFI general account has stabilised due to shift of payment of salaries of the EFI office, whereas the EFI Accreditation account has a well-balanced and stable asset.

EDI (Equity, Diversity and Inclusion) policy
The equality of opportunity for individuals from smaller countries regarding the EFI elections as well as to have bursary opportunities to individuals from countries with fewer opportunities and difficulty in accessing meetings was discussed. A proposal regarding bursary support from EFI will be made.

EFI Young Professionals Working Party
The representation of an individual from this group in the EFI committees has been discussed extensively. For certain committees like the education committee this seems obvious but no decision was made whether this should be compulsory for every committee. This opportunity will be discussed again in the near future.

EFI website
The EFI website contains already a lot of educational content but this is hard to find. It has been decided that he entire website has to be reviewed for content and structure.

EFI annual conferences
We look back on a very successful 2024 meeting which was held in Geneva. The upcoming meetings in Prague (2025) and Edinburgh (2026) have been discussed in the presence of representatives of the local organisers. EFI has an agreement with Guarant to act as the Professional Conference Organiser for our EFI annual meetings for the next 2 years, however EFI wants to extend this for another period: for this a meeting with Guarant will be scheduled. The options for the location of the conference in 2027 were discussed, and a final decision will be made soon.

EFI bursaries
EFI Personal Bursaries are available for the annual EFI Conference to be held in Prague, May 14-17 2025. Full details on how to apply for EFI personal bursaries are given on the EFI website on the Membership page in the document entitled “EFI Personal Bursaries”.

Overall, the EC had a very productive and interactive weekend. The members of the EC and all the committees would collectively like to thank Ingrid Abelman, Sonja Geelhoed and Margriet van Rijn for the excellent organization of the meeting.

Kay Poulton and Dave Roelen,
EFI Secretaries

EFI Elections

Nominations were sought for the positions of Treasurer, Secretary, Deputy Secretary as well as two Councillors. No nominations were received for the position of Treasurer, Secretary, Deputy Secretary. Since the current Treasurer, Jean Villard, the current Secretary, Dave Roelen, and the current Deputy Secretary, Kay Poulton, are willing to continue another term no voting for these positions was necessary. However, this is subject to approval by the EFI General Assembly in Prague.

We received two nominations for the position of two Councillors and the nominated candidates are presented below. The nominations are subject to approval by the EFI General Assembly in Prague. As a result, no elections will be organised in 2025.

Biography for Pernille Koefoed-Nielsen

I am a medical doctor specialised in clinical immunology and have been working in Histocompatibility and Immunogenetics (H&I) at Aarhus University Hospital in Denmark since 2006, with a particular focus on solid organ transplantation. Prior to my work in H&I, I was in nephrology, where I completed my PhD on renal transplant patients. In 2017, I obtained the ESHI diploma.

Currently, I work as senior consultant and EFI co-director in a H&I lab supporting the Western part of Denmark. I became a member of EFI in 2013 and have actively participated in the organization since then. I have been functioning as an EFI inspector since 2013 and joined the Standards Committee in 2018.

I am also a member of the Tissue Typers group within Scandiatransplant, the exchange organization for the Nordic countries, and since 2024, I hold a position on the Council of Representatives in Scandiatransplant. In May 2024 I was the president of Scandinavian Transplant Society congress, a congress focusing on solid organ transplantation.

In my present position I am also the chief of medical education in Clinical Immunology/H&I in the hospital, so I hope to bring knowledge about education, training and interdisciplinary collaboration to the executive committee.

Biography for Lotte Wieten

I am an Associate Professor and Head of the department Transplantation Immunology at Maastricht University Medical Center in the Netherlands. In 2009, I obtained a PhD from Utrecht University, on Hsp70-induced regulatory T cells in rheumatoid arthritis. In 2008, I joined the lab of Marcel Tilanus in Maastricht, shifting focus to immunogenetics and NK cells in transplantation and cancer immunotherapy. I got trained as visiting scientist with Marco Colonna (Washington University, St Louis) and Constantine Mitsiades (Dana-Farber Cancer Institute, Boston) to further expand my expertise on NK-receptors and the effect of the tumor microenvironment on NK cells and ILCs.

My current work, encompasses NK cell biology, immunogenetics and immunomonitoring to improve

transplantation outcomes and develop personalized therapies. I combine my translational research with H&I diagnostics and quality control duties. I am a member of the Dutch HLA working party and obtained my ESHI diploma in 2017. To further enhance my diagnostic skills, I am currently pursuing a 3 year training as 'medical Immunologist'.

I'm actively involved in EFI as a member of the Scientific Committee (end of term: 2024). Moreover, I helped getting Young EFI started at the Amsterdam EFI2022 meeting and served as faculty for the summerschool.

As an EFI councillor, I hope to bridge science and clinical practice by promoting interdisciplinary collaborations and knowledge transfer, as I anticipate that this can help to further expand EFI's reach in emerging medical fields like cancer immunotherapy and personalized medicine. Moreover, I would like to contribute and promote educational research and networking activities, especially those that connect research with clinical care, to ensure EFI continues to play it's meaningful role in immunogenetics education and to attract and support early career scientists and H&I specialists and encourage them to become actively involved in EFI.

EFI Bioinformatics & IT Committee: Driving Global Standards

The EFI Bioinformatics & IT Committee (BITcom) is a dynamic group dedicated to supporting EFI's initiatives in the field of bioinformatics and IT. Over the past years, the BITcom has matured into a full-sized committee with eight members, including one representative from the EFI Young Professionals working party. The committee is committed to fostering innovation and collaboration across EFI.

Our focus spans several key areas:

- Data Standards: Supporting the development of data standards and promoting the inclusion of standardization guidelines in the EFI Standards.
- Education: Promoting bioinformatics knowledge through accessible sessions, such as the upcoming program at the EFI meeting in Prague.
- Technological Development: Supporting EFI's digital infrastructure development, including the EFI website, educational platform, and other IT initiatives.

The BITcom is actively engaging with the EFI Standards Committee to address critical issues surrounding HLA data standards. These discussions aim to ensure the proper use and communication of immunogenetics data, recognizing the vital role that standardized and interoperable data plays in both clinical and research settings. Through close collaboration with the Standards Committee, the BITcom is paving the way for integrating these discussions into the EFI Guidelines, marking a significant step forward in promoting consistency and reliability in the handling of HLA data across the field.
From that perspective, the BITcom is actively supporting the highly impactful Data Standards Hackathons (DaSH). These hackathons have become crucial in advancing data interoperability and standardization, directly benefiting the EFI community and beyond. The recent 15th DaSH meeting, hosted in Utrecht, the Netherlands, highlighted significant milestones in the evolution of the HLA Antibody Markup Language (HAML), an important data standard.

On the origin of HAML
HAML was first developed at the DaSH9 meeting in Denver by Gottfried Fischer, Loren Gragert, and Eric Spierings as the antibody data standard for the 18th International HLA and Immunogenetics Workshop (IHIW18). For IHIW18, it provided the framework for reporting and exchanging HLA antibody assay results. Its introduction addressed a critical need for consistent data representation and interoperability. Since its inception, HAML has continued to evolve through collaboration, extending and refining its structure to meet modern clinical and diagnostical requirements. These developments aim to ensure that HAML grows into a robust and versatile standard, capable of integrating seamlessly with emerging technologies and frameworks.

The 15th DaSH: The evolution of HAML
The 15th DaSH meeting in Utrecht placed a strong emphasis on HAML, with participants from around the world contributing to its development. A major focus was on expanding the standard to address diagnostical needs, including greater flexibility for representing complex antibody data. Another key goal was preparing HAML for future integration with HL7-FHIR, the leading global standard for electronic health information exchange. This alignment ensures that HAML is future-proof and can support seamless data sharing across healthcare systems, enhancing its utility in clinical and research settings alike.

A pivotal outcome of the Utrecht meeting was the establishment of the HAML Working Group, a dedicated team within DaSH, tasked with completing the standard and driving its adoption. The group convenes regularly to address technical challenges, incorporate community feedback, and ensure that HAML remains aligned with evolving clinical practices.

Future DaSH Meetings
DaSH is already looking ahead to 2025, with two key hackathons planned:

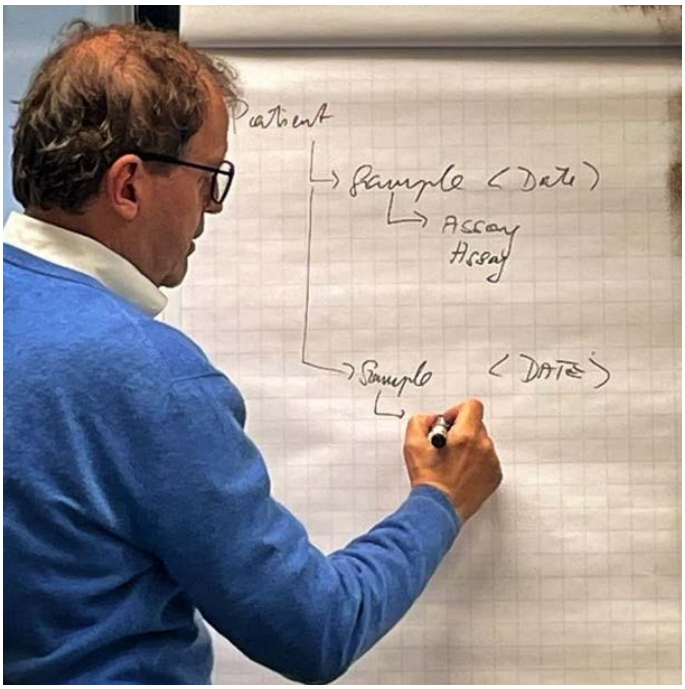

Photo: Gottfried Fischer at the DaSH16 meeting, explaining how to organize the HAML standard from a clinical-diagnostical perspective.

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ANALYZE
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REPORT
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*References for early rejection • Rashef et al BBMT 2014;20:1758–66 • Tang et al BBMT 2014;20:1139:1144
*HOT: Hand-on Time (based on 48 samples) *TAT: Turn around time

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MAR118 Revision 1 Effective 2022-08

- 16th DaSH at the Stanford Blood Center, Palo Alto, CA (January 22–24, 2025): This meeting will build on the advancements made in Utrecht, with continued focus on HAML and new areas of standardization. Other topics that will be covered include preparation for the additional WHO specificities and the 19th IHIW database.
- 17th DaSH in Prague (May 2025): Scheduled to take place just before the EFI Conference, this hackathon offers EFI members a unique opportunity to engage in collaborative problem-solving and contribute directly to global standardization efforts.

The BITcom encourages all EFI members to join the DaSH community and participate in these transformative meetings. Whether you're a bioinformatician, an HLA laboratory director, a clinician, a researcher or someone passionate about the future of data in immunogenetics, your expertise and enthusiasm are invaluable. For those unable to attend in person, you can still contribute by joining the DaSH Slack community, where members collaborate on projects, share insights, and tackle challenges in real time. This dynamic platform ensures that anyone, anywhere, can have a voice in shaping the future of immunogenetics in general and HLA data standards in particular.

How to Get Involved

For more information about upcoming DaSH meetings, HAML developments, or how to join the DaSH Slack community, please contact Michael Wright at mwright@nmdp.org or reach out to the BITcom members.

Update from the EFI Education Committee

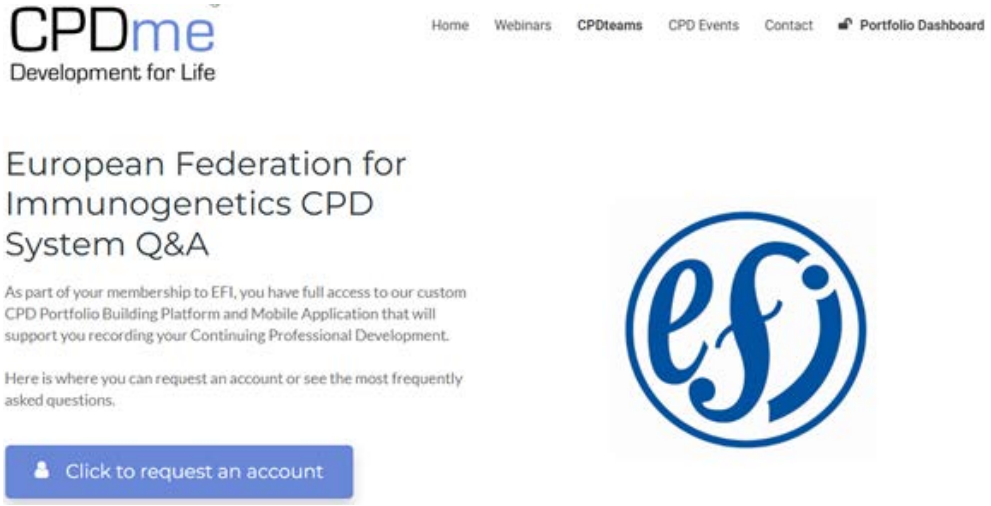
Launch of EFI Continued Medical Education (CME) / Continued Professional Development (CPD) in January 2025

We are planning to launch the CPDMe platform during January 2025. The CPDMe platform allows users to record their CME / CPD activities under 4 different categories (Educational, Clinical, Professional or Academic). Self-reflective notes can be added and other supporting documentation can be linked to each activity. A visual summary allows direct oversight of your CME/CPD activities, and an annual statement (suitable for EFI Accreditation applications) can be produced when required.

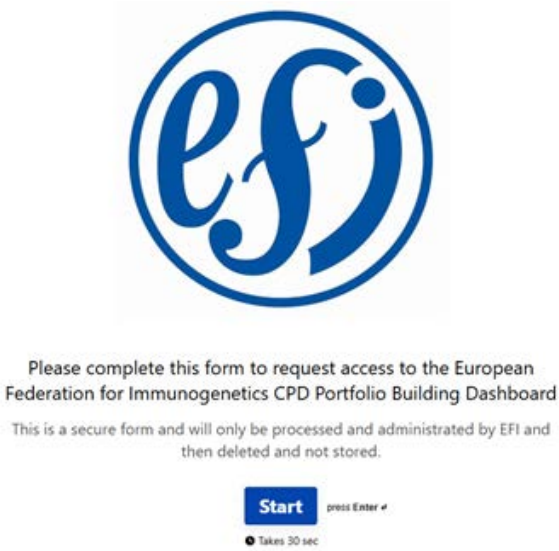
We want access to the CPDMe platform to be as easy as possible and have developed a simple process for EFI members to obtain their user account details via the EFI website, where we will put a CPDMe button next to the other buttons on the EFI Homepage.

How to Obtain your CPDMe User Account Details
EFI Members will follow a 4-step process to obtain their CPDMe user account details:

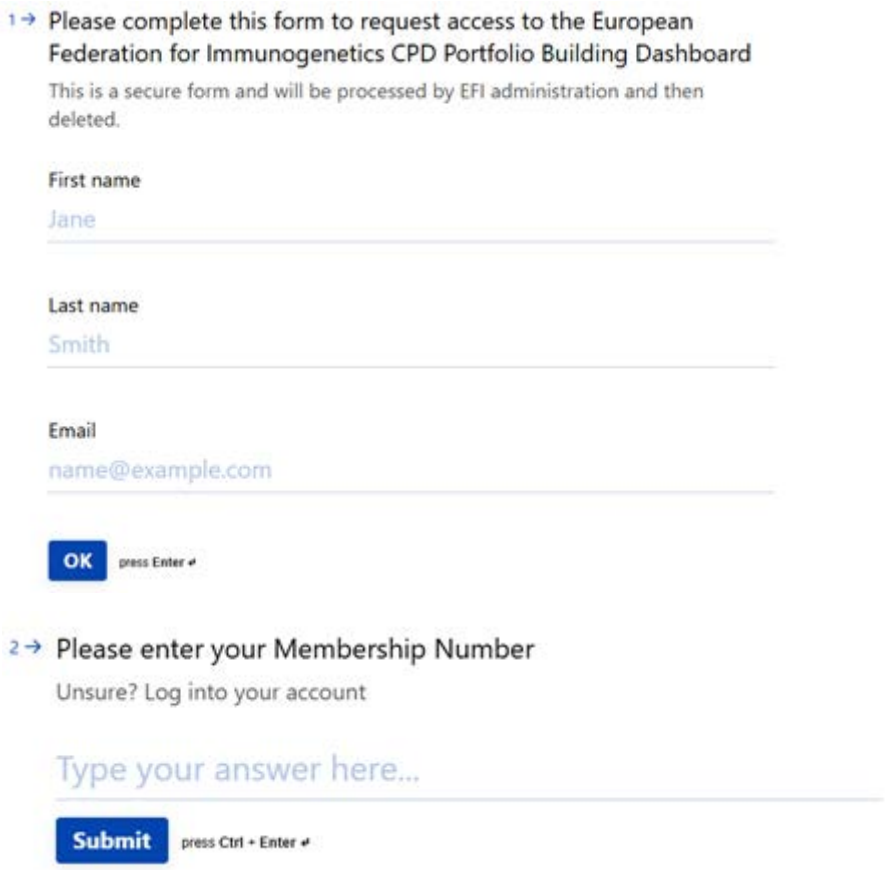
1. Click on the new button for CPDMe on EFI homepage to go to the CPDMe request an account form:



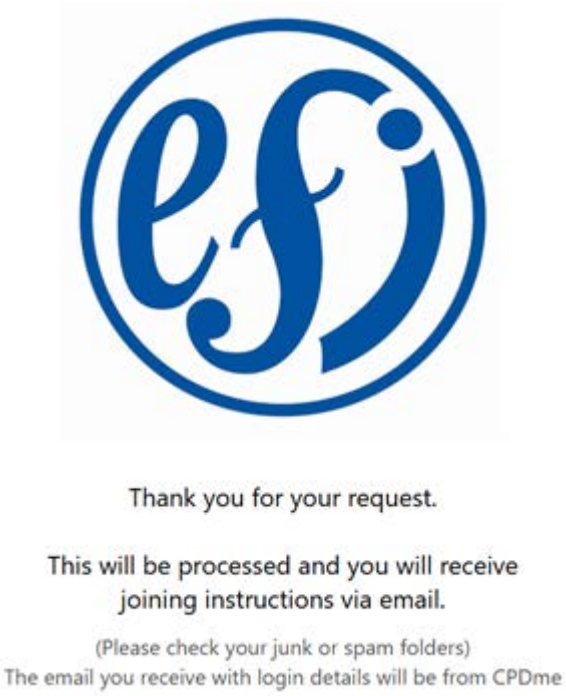
2. Click the “Request an account” button and complete the simple form with your name and email.



3. Click “OK” and then enter your EFI membership number:



4. Submit your form which will be emailed to the EFI Office. The office will then complete your account details and email confirmation to you.



You can start recording your CME/CPD activities using the new platform by accessing the CPDMe website directly and entering your user account details.

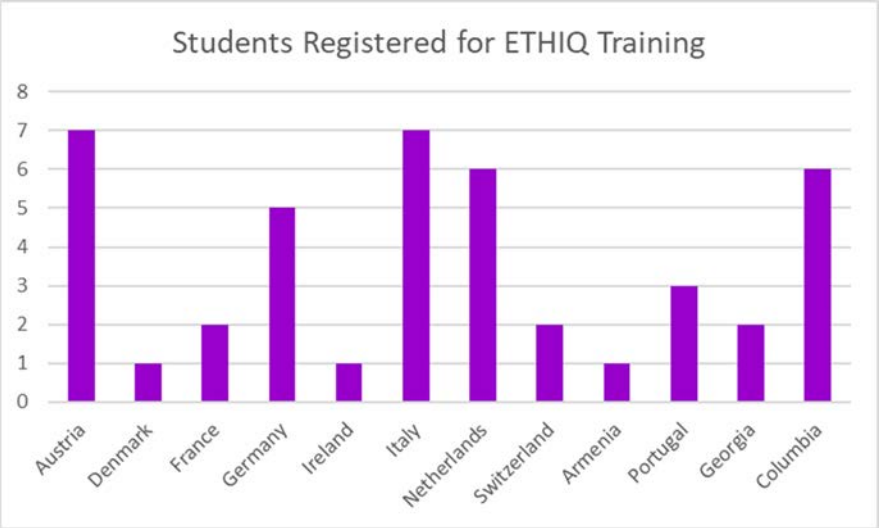
Look out for an email from the EFI Office in the New Year with information on how to join the scheme.

EFI Educational Webinars
We are planning to start a series of 4 Educational Webinars in 2025 to be available to all EFI members, with the first one in February 2025.

The aim of the program will be to cover not only the basics of HLA and the H&I services we provide, but also to introduce some more advanced subjects. The hope is across the course of the year, the programme of webinars will appeal to all EFI members regardless of experience or time in the field of H&I. We will advertise the webinar with a blast email and members interested in attending will be required to register and submit their EFI number before they are sent a link to join the meeting. The recorded webinar will then be available in the Members area of the website afterwards.

European Technical H&I Qualification (ETHIQ) – Final Assessment now available in French, German and Spanish in addition to English.
This training programme provides a qualification that gives a measure of both knowledge and technical competence in H&I. The scheme is for technical staff working in EFI accredited laboratories, with supervision given by senior staff in their own lab. Information about the training programme, registration process and deadlines can be accessed on the EFI website: https://efi-web.org/e-learning/ethiq-for-technical-staff. There are 2 intakes each year and the registration deadlines are **1st January and 1st July.** The portfolio is completed on-line, and the content of the logbook is in English, although trainees can complete evidence in their own language. The final multiple-choice assessment was originally only available in English, however we have been working hard to translate the assessment into other languages and can now offer the final assessment in French, German and Spanish, with Dutch, Portuguese and Italian available in 2025. Please don't let the thought of having to complete the final assessment in English stop you from registering for the training programme.

There are currently 43 students registered on the programme from 12 different countries.



European Specialisation in H&I (ESHI) Diploma
The ESHI Diploma exams, aimed at EFI Directors/Co-Directors and those working towards this level, are offered at two time points each year; in Spring as an in person oral exam at the EFI annual conference, and in Autumn as an online oral exam. Information regarding of the expected level of training and experience, the application process and details of the next round of exams can be found at the UEMS website:
Transplant Immunology – UEMS Section of Surgery (uemssurg.org)
The next examinations will be face to face in May 2025 prior to the EFI conference in Prague.

EFI/ASHI/APHIA/ARSHI International Summer School
The next International Summer School hosted by ASHI will take place 6-9th April 2025 in Fiesta Americana Merida Hotel, Merida, Mexico. Registration is currently open with a closing date of 1st December 2024. The ISS due to be hosted by EFI will take place in 2026 and further details will be available soon.

EFI Education and Scientific Bursaries
Applications for Education and Training Bursaries up to a maximum of €1500 to promote training in the field of H&I by enabling visits to other laboratories, are now being received four times each year. Details of the closing dates, the process and the online application form are available on the EFI website bursaries page http://www.efi-web.org/bursaries.html.

e-Learning

Please take time to explore the EFI website and the learning resources available to you. There is a wealth of e-learning resources that exist on the EFI website including:

- 10 ESHI Diploma talks (first recorded in 2020)
- 10 recorded lectures from the EFI Summer School in 2021
- 26 presentations from teaching sessions held at the EFI conferences in 2022, 2023 & 2024.

Navigating to the right pages on the website was described in the previous Newsletter, but as a reminder here are some simple instructions:

1. When you log in as an EFI member and use the e-learning button in the menu bar at the top of the screen:

It takes you to the following resources where lectures and information about training can be found.

2. Navigating to the bottom of the page will take you to “Useful links”

3. And by selecting resources, you can access the EFI Newsletter, presentations from Teaching sessions at the EFI conference, The HLA Journal and other useful educational resources.

Deborah Sage, Chair of the EFI Education Committee

Update from the EFI Accreditation Committee

As every autumn, the Accreditation Committee met in Leiden, this year on November 8. I would like to remind you that the members of the committee are commissioners suggested by national or regional H&I societies where they serve as experienced inspectors. They have to be approved by Accreditation and subsequently Executive Committees. Every new commissioner is trained and supported by a past commissioner in a period of one year. The main task of the commissioner is to review applications of the laboratories asking for yearly renewal of the EFI accreditation. She/he also supports and works with laboratories seeking for accreditation for the first time. Every six months the committee members together go through deficiencies found during the accreditation processes of each laboratory trying to find common solutions for resolving complicated cases. Eventually, the commissioner grants or rejects accreditation.

Apart from that, all committee members evaluate the required documents sent to us by new candidates who believe to meet EFI standards B that define the EFI Director as the person who is responsible for the H&I laboratory activities which accreditation is applied for. Moreover, the committee reviews all applications from new candidates for EFI inspectors and organizes training workshops for those that are approved. The last workshop took place in Leiden on November 9 and was attended by two candidates from France and one from each of the following countries: Estonia, Finland, Germany, Austria and Italy. From the beginning of the year till December 13 , 2024 the commissioners organized 80 inspections, two of them being hybrid, which means that two inspectors worked remotely, since travelling on site was not possible. In addition, the commissioners reviewed and closed approximately 190 applications B1 and B2 that didn't need inspections. Since we are continuously aiming at progress three working groups have been composed.

Working group "Transfusion": Commissioners Colin Brown and Andrea Dick, together with Anthony Poles from the Standards Committee and with support from Sonja Geelhoed and Ingrid Abelman from the EFI office, prepared a survey for the laboratories in order to determine what the state of the art in the category Transfusion is. In total 91 laboratories responded. The main focus is on HPA and HNA typing and antibody testing since not many inspectors declare to be able and willing to assess this topics. While 32 laboratories have been accredited for HPA typing, only 4 were granted accreditation for HNA typing. Similar situation is in antibody testing where 29 laboratories have accreditation for HPA antibodies and only 4 for HNA. The final decision from the Executive Committee was to keep these categories and work on improvement of standards and education in this area.

Working group "EFI Inspectors": Agnes Basire, Andreas Heinold and Taina Jaatinen provided a draft form "Application for new EFI Inspectors" where they defined requirements for qualifications of EFI inspectors. The form was approved with minor changes and has already been implemented, working very well. Working group "Human resources": Junior Lardy, Sylvie Ferrari-Lacraz and Zorana Grubic are trying to define criteria for evaluation of human resources according to the standard B4.3 (The resources of the laboratory must be sufficient to accommodate the workload). The task seems to be much more demanding than anticipated in the beginning, it will take some more time to be completed. However, as usual we don't take "not possible" for an answer.

Best wishes
Blanka Vidan Jeras, Chair EFI Accreditation Committee

Update from the EFI Young Professionals Working Party

We're pleased to share the latest updates from the EFI Young Professionals Working Party. Our group has grown to include nine members representing various regions of the EFI community, and we meet online approximately every two months to collaborate on our initiatives.
Recently, we've been focusing on developing a proposal to formalize our working party and further integrate it within EFI's structure. We had the opportunity to present this proposal during the Executive and Committee Chairs meeting at the EFI Autumn Meeting in Leiden on November 9th. Based on the valuable feedback received, we are now finalizing the proposal.

In addition, our working party is now represented in several EFI committees, including the Scientific, Education, and Bioinformatics & IT Committee. This enables us to provide input to these committees while also learning from their expertise and initiatives.

Looking ahead, we are thrilled to once again organize an EFI Young Professionals session during the upcoming EFI Conference in Prague. Planning is well underway, and we'll soon announce the session's topic and speakers as part of the conference program.

Stay tuned for more updates, and thank you for supporting the efforts of the EFI Young Professionals Working Party!

Update from the EFI External Proficiency Testing Committee

The EPT committee welcomes three new members. For region 1 (Scandinavia): Mats Alheim who is Hospital Chemist for the Clinical Immunology and Transfusion Medicine at Karolinska University Hospital in Stockholm. For region 4 (UK): Amy De'ath who is the Manager of UKNEQAS for H&I. For region 6+11 (France and Switzerland): Valerie Dubois who is lab director of the histocompatibility lab of EFS in Lyon. The EPT Committee looks forward to working with these 3 new members and will welcome their input.
Next meeting of the EPT Committee will be in the first half of February 2025. We also welcome input from the EFI community. Please send this to the EFI office: EFIoffice@lumc.nl.

On behalf of the EFI EPT Committee, Yvonne Zoet, interim chairperson of the EPT Committee

The Julia Bodmer Award

Applications are invited for the prestigious Julia Bodmer Award, to be awarded during the Opening Session at the 38th EFI conference in Prague, Czech Republic.

The Julia Bodmer Award is given to a young scientist in recognition of their outstanding work within the Immunogenetics field. The Award also acknowledges the laboratory in which the scientist has performed their research. Any member of EFI can propose a candidate for the Julia Bodmer Award.

The application must include the candidate's CV with a list of publications and a letter of support from the head of the candidate's laboratory. Candidates must be an EFI member (or become a member at the time of application) and be no more than 10 years past completion of their doctoral thesis if applicable; candidates who have not undertaken or completed a doctoral thesis are also eligible. All applications will be reviewed by the Scientific Committee who will make the final decision on who will receive the Award.

In addition to the presentation at the Opening Ceremony of the EFI Conference, the Award winner will also be invited to contribute a dedicated "Julia Bodmer Review" to HLA, the official journal of EFI. They will receive €1000 in addition to the expenses for registration, travel and lodging for attending the EFI Conference.

Applications must be sent in writing to the EFI Secretary via the EFI Central Office, (efioffice@lumc.nl) before February 14, 2025.

38th European Immunogenetics & Histocompatibility Conference

Immunogenetics → Science and Clinical Applications → ***The Way Ahead***

14–17 May 2025, Prague, Czech Republic
Prague Congress Centre

Important Dates

Abstract Submission Deadline	24 January 2025
Early Registration Fee Deadline	31 March 2025
Regular Registration Fee Deadline	5 May 2025

www.efi-conference.org

EFI 2025 PRAGUE

EFI Annual Conference Bursaries

It is our pleasure to announce the application procedure for EFI Personal Bursaries to join the annual EFI Conference to be held in Prague, Czech Republic to be held 14-17 May 2025 is now open.
In addition to the deadlines given for personal bursary applications, a **deadline of February 21st, 2025** has been set for applications for bursaries specifically to support attendance at the annual EFI conference in Prague. Preference for these applications will be given to members who have been selected to present an abstract at the EFI conference (either oral or poster presentation). Only one bursary per laboratory will be awarded. All bursaries are awarded on the strict condition that the recipient submits a report of ~1 page on any scientific session(s) of the conference, which will be published in the EFI newsletter, following the conference.

Application procedure
EFI members are invited to apply for the Personal Bursary via their personal Dashboard on the EFI website. When successfully logged in, please navigate to EFI Personal Bursary on your personal Dashboard and choose Apply. The application form will now appear partially completed with your personal details. In order to complete your bursary application, please check and complete the information requested. Next to this, you are requested to upload the following documents:

- Current Curriculum Vitae
- Submitted abstract
- Support letter form applicant's Laboratory Director
- Motivation letter to attend the meeting

Please click the submit button to send your application form to the EFI Office. The deadline for submission of the Personal Bursary application is **21st February 2025**. We strive to inform successful Personal Bursary applicants prior to the deadline for early registration.

Bursary deadlines 2025

It is our pleasure inform you about the upcoming deadlines for application for the EFI Personal Bursary, the EFI Education and Scientific Bursary and the support for EFI 'International Affairs'. The bursary deadlines for 2025 are set as per below:

In addition to the above, please note an Annual Conference Bursary is made available to attend the 38th European Immunogenetics and Histocompatibility Conference in Prague and more information is to be found elsewhere in this Newsletter.
Reminders of upcoming Bursary deadlines and information about the application procedure will be provided to you by the EFI Office by email. Normally, applications for EFI Personal bursaries must be submitted at least two months prior to the planned meeting. For EFI Educational and Scientific bursaries, applications must be submitted at least three months prior to the planned education or training visit. Finally, applications to support EFI 'International Affairs' must be submitted at least three months prior to the planned meeting.

More information on the respective Bursaries can be found on our website www.efi-web.org.

	Deadline 1	Deadline 2	Deadline 3	Deadline 4
EFI Personal Bursary	1 February 2025	1 May 2025	1 August 2025	1 November 2025
EFI Education and Scientific Bursary	1 February 2025	1 May 2025	1 August 2025	1 November 2025
Support for EFI 'International Affairs'	1 February 2025	1 May 2025	1 August 2025	1 November 2025

Welcome to Prague for the 38th EFI annual conference

Dear colleagues and friends,
On behalf of the Local Organizing Committee, we are delighted to welcome you to Prague for the 38th European Immunogenetics and Histocompatibility Conference. Since 2011, when the last EFI Conference was held here, our field has changed immensely, not only in diagnostic procedures, but also in the interpretation of complex laboratory data. For this reason, the motto of the congress "Immunogenetics: Science and Clinical Applications – The Way Ahead" emphasizes the perspectives and new developments in immunogenetics as a science. We are pleased that leading experts have accepted our invitation to give presentations at the meeting. They will present in their lectures the future advances not only in our specific area, but also in related fields which have long-term consequences for patient welfare, and for the development of basic research as well.

As far as the host city of Prague, we would like to draw your attention to the fact that for centuries Prague has attracted many famous scientists who worked here, just to mention that by the end of the 16th century Danish astronomer Tycho Brahe and German mathematician and astronomer Johannes Kepler laid here the foundations of modern scientific research, as we know it today. Many years later, in 1953, prof. Milan Hašek, independently of the studies of Sir Peter Medawar, observed for the first-time immunological tolerance in chicken. The Prague Immunogenetics school at the Institute of Experimental Biology and Genetics which he founded, included enthusiastic young scientists, who greatly contributed to the advances of immunogenetics for many years to come. We would wholeheartedly recommend you to spend some free time in the city and absorb its magical, but also joyful and friendly atmosphere.

Hereby we would like to express our gratitude to all the members of the EFI Executive Committee, EFI Scientific Committee and the EFI Education Committee. These committees helped and supported us with the preparation of the Scientific Program, the Teaching Sessions and the evaluation of the abstracts. Last, but not least, this conference would not have been possible to realize without the generous support from our sponsors, who have also contributed to the Scientific Program by organizing intriguing and stimulating industry symposia. We are happy to host you again in our beautiful city and we hope that you will find the conference to be fruitful and inspiring.

On behalf of the Local Organizing committee, Antonij Slavčev and Gottfried Fischer

Report on the 2024 Balkan EPT Meeting, Istanbul, Turkey

The first Balkan EPT Meeting was organized in 2008 at Evangelismus Hospital in Athens by Dr. Chryssa Papasteriades, even though The Balkan EPT HLA Typing Program was already initiated in 2004 by Prof. Dr. Mahmut Çarin, who at that time was in charge of the Tissue Typing Laboratory of Istanbul Medical Faculty. Since then, the Balkan EPT meetings have become an annual scientific, educational and information sharing meeting where participants from EFI Region 8 give presentations on the latest scientific topics and case discussions, and where young researchers have the opportunity to share and discuss their scientific work.
The aim of the BEPT meetings is to promote the field of histocompatibility and immunogenetics through an intensive and comprehensive scientific programme covering a wide range of topics related to immunology, histocompatibility and transplantation. Also, its goal is to inspire all those working in this field by providing young researchers the opportunity to present their research or expand their understanding of histocompatibility and immunogenetics. The country where the meetings is held is selected each year from the candidate Balkan countries by the Steering Committee, which includes the Balkan EPT Providers.

This year,"Annual EFI Region 8 and 18th Balkan EPT" meeting organised by the HLA Immunogenetics and Transplantation Immunology Society (HITID) was held on 15-16 November 2024 at the Istanbul Marriott Hotel. The meeting brought together 235 participants (89 were international participants) from 24 different countries including Turkiye, Armenia, Bosnia and Herzegovina, Bulgaria, Burkina Faso, China, Cyprus, Czech Republic, France, Georgia, Germany, Greece, Italy, Montenegro, the Netherlands, North Macedonia, Poland, Romania, Serbia, Slovenia, United Arab Emirates, United Kingdom, Ukraine and United States of America, including expert colleagues in the field of transplantation immunology and genetics and young

researchers trying to develop themselves in this field. There were 12 speakers in 5 sessions focusing on various aspects of H&I including solid organ transplantation, haematopoietic stem cell transplantation including KIR, the current status of regional accreditations and the outcomes of the 2024 Balkan EPT in meeting

The first session of the meeting started with the opening speeches of HITID President Bilkay Baştürk and HITID Honorary Member Mahmut ÇARİN, chaired by Dr. Elisaveta Naumova, Dr. Mahmut Çarin and Dr. Fatma Savran Oğuz. EFI President Dr. Marco Andreani started the meeting with a lecturen on the role of HLA Evolutionary Divergence (HED) after Allogeneic Hematopoietic Stem Cell Transplantation, Dr. Elissaveta Naumova reviewed Immunological Risk Assesments in transplant recipients and Dr. Ilias Doxiadis presented "Epitopes in Transplantation: Hype or Help". The first day of the meeting ended with a welcome reception where the participants had the opportunity to meet and socialize accompanied by the sound of a wonderful music trio.

The first session of the second day of the meeting was chaired by Dr. Ileana Contantinescu, Dr. Bilkay Baştürk and Dr. Gülderen Yanıkkaya Demirel and started with Prof. Dr. Fatma Savran Oğuz's presentation titled "Transplantation immunology in Turkey". Afterwards, Dr. Antonij Slavcev presented the current situation regarding kidney allocation in the Czech Republic and Dr. Ileana Contantinescu presented the selection of hematopoietic stem cell donors for allogeneic HSCT in the NGS era. The first session of the meeting ended with presentations on HSCT activities in Turkey by Dr. Şahika Zeynep Akı and the clinical application of donor derived cell-free DNA monitoring in transplantation by Dr. Katerina Tarassi. The second session was chaired by Dr. Katerina Tarassi and Dr. Ali Şengül and started with the presentation of Dr. Blanka Vidan Jiras on update of the EFI accreditation programme. In this session, non-KIR NK cell receptors and their ligands in HSCT were addressed by Dr. Katarzyna Bogunia Kubik and the immunopathological spectrum of antibody-mediated rejection by Dr. Handan Özdemir with effective scientific presentations and the situation in Romania in terms of organ and tissue transplantation was shared by Dr. Irina Monica Dutescu. It was a scientifically rich session that included industry symposia organized by Gen Plus - Thermo Fisher Scientific and ATC companies.
In the next session, the current accreditation status of regions 8a and 8b was shared by Dr. Irina Monica Dutescu and Dr. Katerina Tarassi, and the results of the Balkan EPT were shared by Dr. Çiğdem Kekik Çınar and Dr. Anastasia Mihaylova, and important points were mentioned in terms of consensus on EPT results.

The last session of the meeting included oral presentations where young researchers had the chance to present their scientific work on an academic and scientific platform. The program was completed with a total of 23 oral and poster presentations. As a result of the votes of the Scientific Committee, Dr. Miray Kavuzlu was awarded with her study titled "Effect Of Golgi Stress on CXCR5 and HLA-G Expression In T Follicular Helper Cells".
The gala dinner was organized and the participants had the opportunity for social interaction and good entertainment on the evening of the last day of the meeting.

Dr. Fatma Savran Oguz
EFI Region 8 EPT, Istanbul – EPT Provider

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Event Report: Symposium of the Society for Immune Polymorphism

The inaugural symposium of the Society for Immune Polymorphism (SIP), co-hosted by the Dutch Biomedical Primate Research Centre (BPRC), was held from October 7–10 in Sassenheim, the Netherlands. Centered on the theme "Evolution and Characterization of the Immune System", the event featured a three-day scientific program that opened with a keynote lecture honoring Prof. Dr. Jon van Rood, delivered by Prof. Dr. Ronald Bontrop, director of the BPRC. The Jon van Rood Lecture offered a comprehensive overview of MHC and KIR evolution in primate species, with Prof. Bontrop detailing how the organization of these gene systems have diverged among macaques, chimpanzees, and humans. This inspiring session set the tone for a productive, interactive and collaborative meeting.

With approximately 50 international attendees, the conference offered an intimate setting that encouraged in-depth discussions following each talk and fostered an engaging environment during breaks and dinners.

This event allowed every participant, from early-career researchers to seasoned experts, to present their work and exchange insights, making it accessible for young scientists to connect with more experienced colleagues. Topics covered a range of species and gene systems, from humans to fish and songbirds, and from the regions encoding the T and B cell receptors to the LILR gene cluster. Some presentations highlighted the latest approaches for characterizing complex immune regions, while others focused on the biological and evolutionary implications of immune diversity. This broad array of topics enriched the experience for all attendees and fostered cross-disciplinary engagement, encouraging collaboration between research groups.

Given the success of this first SIP symposium, the next meeting is already scheduled for November 3–6, 2025, once again in Sassenheim, and will be organized by Dr. Paul Norman.

Report on the 50th ASHI Annual Meeting, Annaheim, US

I was privileged to attend the 50th Annual American Society of Histocompatibility and Immunogenetics (ASHI) Conference from 21st -25th October held at Hotel Mariott in the home of Disneyland Resort. The organisers frequently interacted with the delegates before the conference through emails by providing templates for poster presentations, poster printing offers, virtual pre- antibody workshop material for evaluation and an excellent meeting application for both android and i-phones . My poster entitled **"Flowcytometry or Luminex Crossmatch – Comparison and Limitations"** was among the first 100 posters submitted to ASHI which were offered free poster printing and shipment to the meeting. The educational content of the conference was excellent and covered many interesting topics in the plenaries and educational sessions. The quality of the posters in the conference was excellent and included many thought-provoking subjects. Industry was well represented and presented the recent developments with a lot of focus on Nanopore technology. Adequate fora were available for social interaction and networking with receptions for first time attendees on the opening day and one for international delegates on the 3rd day of the conference and grand celebration on the penultimate day. Celebrations were in the air throughout the meeting with the organizers offering many different souvenirs on all the days. Very senior eminent ASHI members attended the meeting. In this write up I shall be discussing three main subjects.

I**mmunogenetics & Disease** was the first topic of the conference which involved 8 speakers and was a marathon four and a half hours session. It included historical perspective of HLA & Disease, Type I Diabetes Mellitus (TIDM), Immunogenetics of Covid 19, studies pertaining to genetic variation and evolutionary dynamics of MHC Class II and III genes, two lectures on NK cells, NKp44/HLA -DP dependent regulation of CD8 effector T Cells by NK cells, Immunogenetics and pathogenesis of severe T -cell mediated Adverse drug reactions and TCR recognition of Lipids and metabolites CD1a -CD1d. There is a requirement to address Linkage Disequilibrium, analyse potential combinations of HLA molecules in the patients, assess the role of individual amino acids and impact of Next Generation Sequencing for comprehensive understanding of HLA- disease association and Pharmacogenomics.

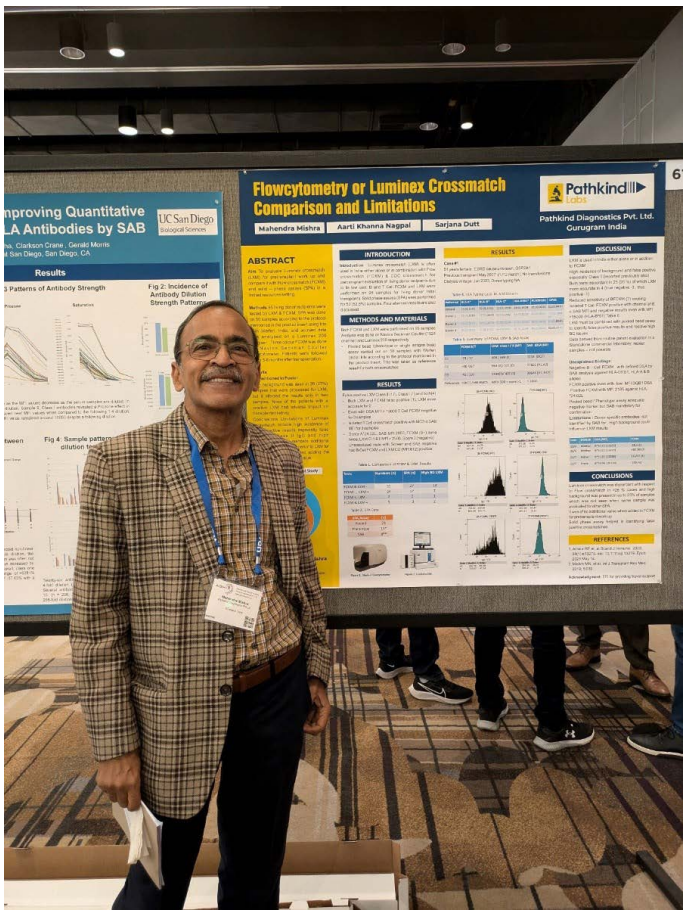
The role of specific combinations of DRB1 and DQB1 alleles along with individual amino acids at DQB1 codon position 57 in conferring differential susceptibility to TIDM was discussed . The presence of three DRB1*04 alleles in combination with DQA1*03:01 and DQB1*03:02 with Alanine at codon 57 is associated with increased risk for T1D, while Aspartate is associated with low risk. The speaker also showed that the association of HLA- C with TIDM could be spurious or due to innate immune mechanisms because none of the alleles have shown a consistent association. Other HLA alleles in IDDM (besides strong effects of DR & DQ encoding loci) include HLA DP: DPB1:03:01 predisposing , DPB1:04:02 usually protective; while HLA-*24:02 and HLA-B*39:06 consistently associated with the disease among many populations. One recent advance in the field is the discovery of Teplizumab on 17 November 2022 for treatment of TIDM.

Similarly in HLA-B*57:01 mediated Abacavir hypersensitivity, the CD8 response to APC expressing single site mutations of B*57:01 indicate a critical role for residue 116 (serine) but is different in other B*57 alleles. A proposed mechanism for the Abacavir hypersensitivity with HLA -B*57:01 is that the drug forms a conjugate with an endogenous peptide presented by the allele triggering CD8 cells. The importance of Pharmacogenomics is because severe adverse drug reactions (ADR) can have varied manifestations like Subcutaneous Adverse reactions (SCAR), drug induced liver injury (DILI) and Drug reactions with Eosinophilia and Systemic Symptoms (DRESS) can be potentially life threatening,

Jill Hollenbach delivered a very interesting talk on Immunogenetics of Covid 19 in which she discussed the association of HLA-B*15:01 with asymptomatic SARS Cov-2 infection which is attributed to a spike epitope of the corona virus cross-reactive with seasonal common cold virus, so much so that B*15:01 homozygous individuals have an Odds Ratio of 8 ($p < 0.001$) for asymptomatic Covid 19 infection. A unique TCR -pMHC binding conformation allows similar binding to both the SARS Cov-2 and seasonal corona virus peptides. Steve Mack suggested using BIGDAWG – Bridging Immunogenic Genomic Data Analysis Workflow Gaps (search) and BIDCAAT: BIGDAWG Integrated Genotype Converted Amino Acid Testing and to not rely on existing allele nomenclature.

The Keynote address on **ABO Histocompatibility** which covered the subject extensively started with history, discussed the systemic inconsistency in approach to HLA vs ABO in Organ Transplantation, use of A2 and A2B (A2Lite) kidneys for recipients with O and AB blood groups and the concept of ABO adjusted with cPRA – A unified metric for immunologic metric in renal transplant. Anti -A antibody titres are driven by irrelevant AIII/AIV titres, hence high titres need not correspond to high antibody

levels. Shortcomings of ABO as applied to organ transplant include its lack of specificity in organ transplantation because of which ABO incompatible (ABOi) transplantation risks are extrapolated from transfusion risk. HLA antibody testing has evolved, but ABO antibody testing methods are still in a state of evolution. For safe ABOi organ transplant, we need to know the antigen expression in the donor organs and not only presence or absence of the relevant antibodies, but also their isotype, specificity, IgG subclasses and characteristics. This level of sophistication in transplantation requires new glycomics – tools and an ABOi framework beyond transfusion (ABO -histocompatibility).



The first plenary session "**New Horizons in Cardiothoracic Transplantation**" included three eminent speakers who spoke on Breaking down cPRA barriers in Lung Transplantation, Monitoring Heart Allografts – New Tools of the trade and Innovations in Paediatric Heart Transplantation. The first speaker emphasised the need for identifying what is safe pre-transplant DSA, whether the timing of therapeutic plasma exchange matters and the need to identify the best antibody depleting method. This is required because sensitization is associated with much longer waiting time for transplantation, antibody mediated rejection (AMR), higher likelihood of developing chronic Lung allograft dysfunction and higher post-transplant mortality. The second speaker discussed the shortcomings of endomyocardial biopsy which include poor reliability: intergrader agreement ~65%, Kappa 0.39, modest accuracy: limited correlation with severity of clinical symptoms and lack of prognostic information on future rejection risk. This has led to quest for non-invasive markers plasma donor derived cell free DNA (%ddcfDNA). Mean levels of plasma %ddcfDNA in the months following lung transplantation also serve as a predictor of long-term outcomes, including CLAD. Similarly, levels of plasma %ddcfDNA may provide further insight into the degree of early allograft injury in patients with primary graft dysfunction (PGD) and may provide an adjunctive tool for quantitatively assessing the severity of PGD and for identifying patients at risk for development of long-term complications. The speaker also discussed the use of heart Molecular Microscope Diagnostic System by analysis of rejection based mRNA transcripts for both cellular and antibody mediated rejections. The third speaker showed a video of Living double root replacement of " partial heart transplant (aortic and pulmonary roots) which left the audience spellbound. Animal models have shown that simultaneous heart and thymus transplant reduce immune response and thus patients may be kept on low or without any immunosuppression. Infants can survive up to 22 years following heart transplant. Further in neonates ABOi heart transplant is possible because there are no ABO antibodies at birth and the levels remain very low until 6 months age. Overall, I found the conference very helpful, and it was a great learning experience. The lunchtime teaching sessions conducted by sponsors were very useful. I would like to acknowledge EFI for approving a travel bursary to attend the meeting.

Mahendra Mishra

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Office talk

While I'm typing these words it is almost the end of the year 2024 and is it time to welcome 2025. This year has flown by so fast and it is good to realize what great memories we have made during this year. One of the most important changes is the addition of Margriet van Rijn to the EFI office team. Margriet will introduce herself in this Newsletter.

When you think about the holiday season you of course think about the holly tree. This is really a symbol for this season. During this time of the year this tree has nice green leaves and red berries. We had a lovely big holly tree in front of our window however during construction work this tree had to be removed. However fortunately a couple of months ago a new holly tree was planted. Now we are praying and hoping that the holly tree will grow fast so we can enjoy the tree again when we look out of the window.

From the office we wish you all joyful holidays and the best wishes for 2025!

Ingrid Abelman

Fresh blood at the EFI office

I would like to introduce myself as the new Management Assistant for the European Federation for Immunogenetics. My name is Margriet van Rijn, and I am 50 years old. I joined Ingrid and Sonja on August 1st. We work in a great historic building of the Leiden University Medical Center. I have had the pleasure of meeting many of you during the autumn meeting in Leiden, and I am looking forward to our upcoming annual meeting in the beautiful city of Prague, where I hope to meet even more of you.

Highlights from the HLA journal

By Luca Vago, section editor HLA journal

NKG2C Sequence Polymorphism Modulates the Expansion of Adaptive NK Cells in Response to Human CMV.
Judit Asenjo, Manuela Moraru, Karima Al-Akioui-Sanz, Mireia Altadill, Aura Muntasell, Miguel López-Botet, Carlos Vilches.

This research focuses on the genetic underpinnings of natural killer (NK) cell responses to human cytomegalovirus (HCMV), with particular attention to how variations in the NKG2C receptor influence the expansion of adaptive NK cells in response to infection. The study systematically examined polymorphisms within the NKG2C gene, including both sequence variations and copy-number differences, to understand how these genetic factors modulate NK cell functional and immune outcomes. Among the findings, the NKG2C*02 allele emerged as a significant determinant of enhanced adaptive NK cell expansion in response to HCMV, distinguishing it from other alleles with less pronounced effects. Furthermore, individuals heterozygous for the NKG2C*02 allele demonstrated higher baseline expression levels of NKG2C mRNA, even in the absence of HCMV infection, suggesting a genetic predisposition that primes their immune systems for a stronger response to the virus. These findings offer important insights into the genetic basis of variability in immune responses, particularly in the context of HCMV, which is a key concern for immunocompromised

individuals and transplant recipients. This research not only enhances our understanding of how genetic diversity shapes immune system functionality but also pave the way for leveraging these insights to optimize therapeutic strategies in transplantation and other settings where immune responses to HCMV play a pivotal role.

Foetal Microchimerism Correlates With Foetal-Maternal Histocompatibility Both During Pregnancy and Postpartum.
Anne Cathrine Staff, Heidi E. Fjeldstad, Maria B. Olsen, Jonas Øgaard, Marte K. Viken, Cynthia S. M. Kramer, Michael Eikmans, Thomas Kroneis, Katja Sallinger, Sami B. Kanaan, Meryam Sugulle, Daniel P. Jacobsen.

This study provides a deep characterization of the complex relationship between foetal microchimerism (FMc) and foetomaternal histocompatibility, offering new insights into how genetic mismatches shape immune tolerance mechanisms during pregnancy and in the postpartum period. By analyzing data from 76 pregnancies and 59 postpartum cases, the authors investigated how FMc levels were influenced by various metrics of histocompatibility, including eplet mismatch loads and Predicted Indirectly Recognizable HLA Epitopes (PIRCHE) scores, which quantify immunogenic disparities at the molecular level. The findings demonstrated that during pregnancy, higher degrees of mismatch in HLA class II molecules were associated with significantly lower levels of FMc, while postpartum, mismatches across both HLA class I and II molecules contributed to a reduction in FMc levels. Notably, mismatches in HLA-DQ molecules emerged as particularly predictive of reduced FMc, underscoring their critical role in determining the persistence of these cells. These results highlight the maternal immune system's capacity to recognize and potentially clear FMc based on genetic incompatibilities, suggesting that FMc dynamics are profoundly shaped by the immune environment influenced by histocompatibility.

Quantifying HLA Mismatches at Epitope Level in Haplo-HSCT: Impact in the Outcome in Strategies Using PTCy.
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Authors investigated the critical role of HLA mismatches at the epitope level in influencing outcomes following haploidentical hematopoietic stem cell transplantation (haplo-HSCT) using post-transplant cyclophosphamide (PTCy) as a graft-versus-host disease (GvHD) prophylaxis strategy, validating a previous work published by Rimando and colleagues (*Rimando et al. Biol Blood Marrow Transplant. 2020*) By analyzing data from 145 patients, the authors employed the Predicted Indirectly Recognizable HLA Epitopes (PIRCHE) score to quantify molecular HLA disparities, focusing on how these mismatches in both graft-versus-host (GvH) and host-versus-graft (HvG) directions impact key clinical outcomes, including the incidence of acute and chronic GvHD, relapse, relapse-free survival (RFS), and graft-versus-host disease/relapse-free survival (GRFS). The study revealed that higher PIRCHE scores in the GvH direction were strongly associated with an increased risk of both acute and chronic GvHD. Similarly, higher scores in the HvG direction were linked to a substantially increased risk of relapse. These findings emphasize the pivotal role of indirect T-cell allorecognition in driving immune responses that contribute to adverse transplant outcomes. The study underscores the importance of incorporating epitope-level analyses into donor selection protocols. By demonstrating the predictive value of molecular mismatch quantification, this research paves the way for optimizing donor selection strategies, reducing the incidence of complications such as relapse and GvHD, and ultimately improving long-term outcomes for transplant recipients.

Finally, in the issue of December, we highlight the commentary "Identification of Repeat Region Ambiguities in HLA Typing and the Implications for Immunogenetics Research", written by Thomas R. Turner and colleagues (https://doi.org/10.1111/tan.15768). This works focuses on the very timely issue of sequencing repetitive regions when using new sequencing technologies, and on current options to resolve ambiguities.