



NEWSLETTER

APRIL 2019 - ISSUE 88

.....FROM THE EFI PRESIDENT

DEAR COLLEAGUES AND FRIENDS,



HLA as well as the concept and range of its functionality have obviously always fascinated not only scientist working in the H&I field but also in other medical and life science areas. If one searches today in PubMed for "HLA" he will end up with 111.033 hits! "HLA typing" and "HLA antibodies" yield 38.859 and 26.448 data sets, respectively. "HLA function" seems to be particularly popular, yielding 96.524 entries. This shows that the work we are involved in is considered to be of substantial relevance to the scientific community and obviously attracts life scientists and medics worldwide to invest their time and brain energy for the good of the community and the patients we serve. We need to make sure on the long term that we will offer sufficient opportunities to the upcoming generation in order to enable them to continue working productively in this fascinating and highly relevant field of HLA research.

Time is running so quickly and soon we will all meet again in Lisbon. In this EFI Newsletters you will be able to read

the final program of our annual event. This year's EFI conference will be the 33rd in a row and it will be the first time where the meeting will be carried out in Portugal. Lisbon is a beautiful city and I hope that you will manage to find a couple of hours, during the conference and after, in order to visit its numerous historical and cultural sights. As every year, we will have several plenary and teaching sessions covering all aspects of immunogenetics and histocompatibility in transplantation, immunity, infection, regenerative medicine and population genetics. In addition, Teaching Sessions will offer the opportunity to refresh and improve our knowledge on "classical" H&I topics which are relevant in our day to day work. Finally, abstract sessions will give us an insight in the recent scientific and development work that is being carried out in the H&I laboratories throughout Europe and in the rest of the world. This year we will also have several Meet the Expert sessions where participants will have the opportunity to meet plenary session speakers and talk with them about their projects and perspectives in the field of their expertise. This will be an excellent opportunity for young people to enlarge their scientific horizon, receive new ideas, and decisively network themselves. One of the highlights of the Conference is the Ceppellini Lecture. This year's Ceppellini awardee will be Prof. Pamela Björkman, who first described the crystallographic structure of the HLA molecule, thus making us aware of how this so important molecule of the human immune system actually looks like. This was the basis for further studies that made us understand the functions and the functional implications of HLA. It will be a great pleasure to have Prof. Björkman with us. I am sure that her talk

and her scientific spirit will inspire us in the same manner as this happens with the numerous students she has been taking care of at the California Institute of Technology where she is currently still working. Once again, I would like to thank in the name of all our members the Local Organizing Committee and the EFI Scientific and Education Committees for the great efforts they made to put together such an excellent scientific and education program, and I wish you all a successful EFI conference.

One of the important elements of each scientific society is their statutes and their governing bodies. As I am sure you are all aware, the Executive Committee, EFI's governing body so to say, will welcome new members this year, since we had been looking for three new Councilors. I believe that EFI can only improve if its members actively participate in the processes which eventually lead to benefits for our members. Only through discussion and interaction with its members the EFI Executive Committee can understand and pursue measures which will help us improve the quality of our work and advance in science and medical service provision. This interaction comes through the Committees and through the representation of EFI members within the Executive Committee. Therefore, it is imperative that we have a wide participation in the elections. As the electronic polls had just closed while this report was conducted, I am proud to announce that we had a record in participation in the elections with more than 50% of our members having submitted their vote. I would like to thank all applicants and congratulate the three winners, i.e. Marco Andreani from Rome/Italy, Katarzyna Bogunia-Kubik from Wroclaw/Poland, and Katerina Tarassi from Athens/



HLA TYPING

typing@dkms-lab.de

OPTIMAL PROFILE @ MINIMUM COST

Recruitment Genotyping

HLA -A, -B, -C, -DRB1, -DQB1

- ✓ HLA-DPB1
- ✓ ABO, RhD
- ✓ CCR5Δ32
- ✓ Sample-Collection-Kits
incl. buccal swabs for
HLA typing and CMV analysis
- ✓ Swabbing Guide
in national language

Order HLA Recruitment
Typing and get
**CMV status
one year for free**
available for registries
at EFi Congress 2019

Optional Marker

- ✓ KIR presence/absence 2DL1, 2DL2, 2DL3, 2DL4, 2DL5, 2DP1, 2DS1, 2DS2, 2DS3, 2DS4, 2DS5, 3DL1, 3DL2, 3DL3, 3DP1, 3DS1
- ✓ KIR allelic level
- ✓ MICA, MICB
- ✓ HLA-E

Clinical Genotyping

HLA -A, -B, -C, -DRB1, -DQB1, -DPB1
whole gene / long range / high resolution

optional: HLA-DPA1, -DQA1, -DRB3,4,5



View PDF

**EFI website**

<http://www.efiweb.eu>

Editor-in-chief

Sebastiaan Heidt

Editorial address:

EFI Newsletter

LUMC, Dept. of Immunohematology
and Blood Transfusion, Bldg. 1, E3-Q

P.O. Box 9600

2300 RC Leiden, The Netherlands

EFI Executive Committee 2019**EFI President**

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Deputy Secretary

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Deputy Treasurer

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F. Garrido, D. Charron, S.G.E. Marsh,

I.I.N. Doxiadis, G. Fischer, E. Naumova

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ISSN 0962-9521

....FROM THE EDITOR'S DESK

Herewith you will find the latest edition of the EFI Newsletter, which includes the program of the upcoming EFI annual meeting in Lisbon, Portugal. This will be the first time that an EFI meeting is organised in Portugal. As always, the local organisers have been able to put together a very interesting program, with various sessions in which there should be something for everyone. This year for the first time a 'PhD students meet experts' session will be organised, which should be a great opportunity for young scientists to meet plenary speakers to discuss science.

The EFI community has voted for the three vacant Councillor positions through electronic voting. From this place, I would like to congratulate Katarzyna Bogunia-Kubik, Katerina Tarassi and Marco Andreani as new Councillors.

In this edition of the Newsletter, we have reports on two anniversaries; the 50th anniversary of the allocation organisation Scandiatransplant, and 20 years of HLA proficiency testing for Central and East Europe. Both reports give a historic perspective on the respective subjects. It is very good to see such long lasting initiatives in the transplant and H&I society.

Furthermore I would like to draw your attention on a special article that has recently been published in Transplant Immunology, called: 'Jon van Rood: The pioneer and his personal view on the early developments of HLA and immunogenetics'. This article describes the personal reflections that Jon van Rood wrote during his lifetime combined with background information on the person Jon van Rood. Richly illustrated, this article makes a great read to get a feel on the early days of our field and all the important players at the time. This open access publication can be found here:

<https://www.sciencedirect.com/science/article/pii/S0966327418301850>.

As always, I hope that you enjoy reading this newsletter and I am looking forward to your contribution to the next edition.

Sebastiaan Heidt

Deadline for contributions to EFI Newsletter 89 is September 6, 2019.

Please send your contributions by e-mail to s.heidt@lumc.nl



CONTENTS

| | |
|--|----|
| From the EFI President | 1 |
| From the editor's desk | 3 |
| Membership update | 5 |
| Invitation to the General Assembly 2019 | 7 |
| Results of the elections 2019 | 7 |
| News from the EFI Committee for External Proficiency Testing | 9 |
| Update from the EFI Education Committee March 2019 | 9 |
| Final program 33 rd European Immunogenetics and Histocompatibility Conference | 10 |
| 14 th International Summer School on Immunogenetics - Montreal | 16 |
| Highlights of the Annual EFI Region 8 & Balkan EPT Meeting | 17 |
| Scandiatransplant: Fifty Years of Successful Nordic Cooperation in Transplantation | 19 |
| 20 years of HLA Proficiency Testing For Central and East Europe | 25 |
| BSHI 2019 conference | 28 |
| Highlights from the HLA journal | 29 |



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.....FROM THE EFI PRESIDENT (CONTINUED)

Greece! I am sure that the new colleagues will bring novel energy into the Executive Committee, new ideas and a lot of good spirit. At the same time, I would like to thank the outgoing Counsellors, Teresa Kauke from Munich/Germany, Valeria Miotti from Udine/Italy and Fatma Oguz from Istanbul/Turkey for all the work they did within the EC in the last three years and for all their critical and encouraging words. We will definitely miss them. In addition, it should be mentioned that the term of our Officers' team, consisting of Mats Bengtsson, Dave Roelen and Gwendaline Guidicelli will be renewed for another three years, since there were no other applicants for the positions of Secretary, Deputy Secretary and Treasurer. Unfortunately, Katia Gagne, our Deputy Treasurer, decided to discontinue her term (for personal reasons), so we will have to find a new Deputy Treasurer as soon as possible. The vacancy will be announced at the General Assembly in Lisbon. I am looking forward to continue the great collaboration with the EC Officers' team and I am so thankful to them for the great work they are doing for EFI. I am sad that Katia decided to step down; however, I fully understand her reasons and also thank her from the depths of my heart for her always motivated and

efficient work as a Deputy Treasurer. Finally, I would also like to remind you that next year we will have elections again. This time, we will have to vote for the new President, who will be serving as a President Elect from spring 2020-2021 on and will take over the presidency in spring 2021 to serve until spring 2024. The call for nominations will be published in the fall issue of the EFI newsletters. So please start making your thoughts already now about who you would like to see as our next EFI President, and make sure to start collecting signatures once the announcement has been published.

One of the educational highlights of the year for the H&I community worldwide is the International Summer School (ISS). This event was carried out for the first time in Seville/Spain, back in 2004 in the time where Eric Thorsby was EFI President, and since then it proved to be a great opportunity for young scientists to interact with experienced and well-known members of the international H&I community. This year's ISS is the 14th in a row and will be carried out in Montreal/Canada. The organisation is done by our ASHI colleagues and the program has been already finalized. EFI supports the participation of its young members to this

event with dedicated bursaries and therefore I would encourage all young scientists to send their abstracts and apply for participation. There will be only 50 students accepted in the ISS which is one of the success "secrets" for this event. The restricted participation enables and ensures that there is always plenty of time for interaction between the Faculty Members and all students during the three days of the event.

Advancement in science requires, among others, vision, pioneer spirit, interaction, communication, and open minds. Seclusion, discrimination, borders, walls and narrow minds are in contrast obstructive when it comes to continuity in scientific enhancement. EFI is proud to support and facilitate the cooperation and the exchange of knowledge and information between its members and members of sister scientific societies as well as those who work in neighbouring fields, and will continue to do so in order to advance science and improve the service in the area of Transplantation, Histocompatibility and Immunogenetics.

Joannis Mytilineos

EFI-President

MEMBERSHIP UPDATE

Since the last issue of the EFI Newsletter we received a lot of applications forms from new members. Hereby we would like to welcome the following new EFI members:

C.A. Rotarescu, Bucharest, Romania
R. Timoce, Cluj-Napoca, Romania
J. Langereis, Nijmegen, the Netherlands
N. Wenzel, Hannover, Germany
F. Fowles, London, United Kingdom
K. Starz, Martinsried, Germany
A. Martirosyan, Yerevan, Armenia
M. Alvaro-Benito, Berlin, Germany
M. Carvalho Oliveira, Hannover, Germany
N. Talvard Balland, Paris, France
H.I. Karahan, Izmir, Turkey
M. Benecchi, Parma, Italy
J. Kelly, Dublin, Ireland
R. Lemal, Clermont-Ferrand, France
P. Rouzaire, Clermont-Ferrand, France
A. Wortley, Durham, United Kingdom
K. Kichula, Aurora, USA
B. Adams, Gateshead, United Kingdom
F. Lorentino, Milan, Italy
Z. Valley-Omar, Cape Town, South Africa

F.R. Guerini, Milano, Italy
A. Zanetti, Bologna, Italy
F. Boix-Giner, Salamanca, Spain
M. Gerth, Jena, Germany
J. Strobel, Erlangen, Germany
S. Manfroi, Bologna, Italy
J.L. Caro, Barcelona, Spain
M. Lukens, Groningen, the Netherlands
K. Anderson, San Francisco, USA
I. Ortiz de Landazuri Pascal, Barcelona, Spain
S. Kuhn, Würzburg, Germany
M. Cherel, Rennes, France
A. Gomes de Aquiar, London, United Kingdom
G. Gatouillat, Reims, France
N. Beelen, Genk, Belgium
A. Fabry, Yvoir, Belgium
J. Ward, Observatory, South Africa
A. Venter, Cape Town, South Africa
D. Kaya, Istanbul, Turkey



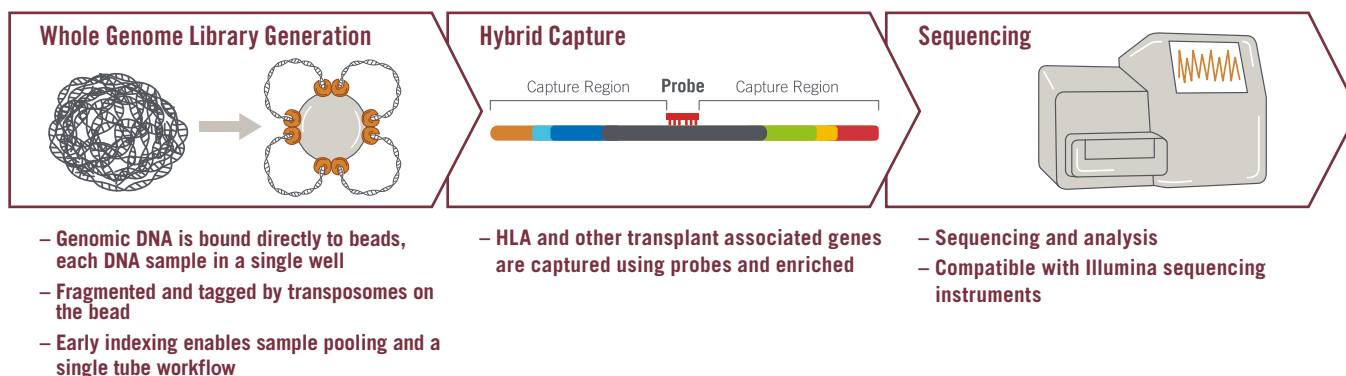
Joyann Ferrara, kidney transplant recipient

Product Highlights

AlloSeq Tx, the next-generation in genetic matching based on hybrid capture technology

WORKFLOW

- A single tube methodology

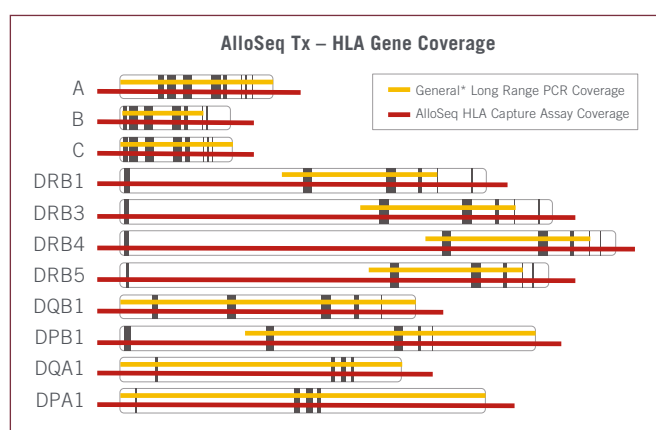


PERFORMANCE

- No amplification imbalance
- No chimeric reads

CONTENT

- Full gene content not limited by primer design
- Expandable content to include additional transplant associated genes without impacting the single tube workflow



*Based on TruSight HLA v2

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INVITATION TO THE GENERAL ASSEMBLY 2019

All EFI members are invited to attend the 2019 EFI General Assembly, which will be held during the 33rd European Immunogenetics and Histocompatibility Conference.

The General Assembly will be held on Friday 10th May 2018, 17:30 – 19:00 hrs in the Main Auditorium of Centro Cultural de Belém in Lisbon, Portugal.

The General Assembly is chaired by the EFI President and a draft agenda is given below.

*Mats Bengtsson, EFI Secretary
on behalf of the Executive Committee*

Agenda

1. Opening
2. Minutes of the General Assembly 11th May 2018 (EFI Newsletter October 2018 issue 86)
3. Report of the EFI President
4. Report of the EFI Secretary
5. Report of the EFI Treasurer
6. Report of the EFI Committees
 - a. Accreditation
 - b. Education
 - c. External Proficiency Testing
 - d. Scientific
 - e. Standards and Quality Assurance
 - f. IT & Bioinformatics
7. Next EFI conference - Glasgow, Scotland
8. EFI medal
9. Installation of new EFI Councillors



RESULTS OF THE ELECTIONS 2019

Elections were held for three Councillors in February/March this year.

Katarzyna Bogunia-Kubik, Katerina Tarassi and Marco Andreani have been elected as Councillors.

Our very best congratulations to the successful candidates but also to all candidates participating in the election. This year we had 413 votes so this is the highest number so far with the electronic election, representing 51,7% of

the membership. No votes were found to be invalid and no member requested a paper ballot form, an option that was announced in the last newsletter.

Mats Bengtsson, EFI Secretary



Katarzyna Bogunia-Kubik



Katerina Tarassi



Marco Andreani

A close-up, top-down view of the MR.SPOT® Processor, showing a grid of white, circular wells. Each well contains a small, dark, star-shaped pattern of dots, which are the results of the HLA antibody analysis.

HISTO SPOT® HLA Antibody Analysis

Automated screening and identification with single antigens:

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- Simplifies your workflows – allows a one-step process for screening and identification
- Flexible throughput and minimal sample volume requirements

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the experts for HLA and blood group diagnostics

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FROM
JANUARY
2018**

NEWS FROM THE EFI COMMITTEE FOR EXTERNAL PROFICIENCY TESTING

The EFI Committee for External Proficiency Testing (EPTC) invites H&I laboratories and EPT providers from all the EFI regions to attend our EPT Experts session during the next EFI conference in Lisbon.

Thursday, May 9 - 14:00 - 15:30 - Room Fernando Pessoa - Centro cultural de Belém.

This year, we will celebrate 25 years of EFI-EPT Committee! We are happy to announce a presentation given by Prof. Ilias Doxiadis, a pioneer in EPT in H&I.

Regional EFI EPT Coordinators will be present to answer questions on EPT related issues. Presentations will be given on

- EPT in H&I: The participant's view and the inspectors view
- Do they differ?
- ISO standards in EFI labs: opportunities and threats

We are looking forward to welcoming the interested audience to our session!

Yvonne Zoet and Falko Heinemann (session chairs)

UPDATE FROM THE EFI EDUCATION COMMITTEE MARCH 2019

European Specialisation in H&I (ESHI) Diploma

The application requirements for the ESHI Diploma oral examination are detailed in the 'Portfolio' document available on the UEMS website. Applicants must demonstrate a period of training (3 years for medics and 5 for scientists) within H&I, undertaken in an EFI accredited laboratory under supervision. Since June 2014 a total of 15 candidates have submitted portfolios for consideration to sit the ESHI Diploma exam; 13 candidates have been examined with 11 candidates passing. Four candidates have applied for the examination in Lisbon in May 2019.

The next oral examination will be held at the EFI meeting in Lisbon on 7th May 2019, but the deadline for applications for this round has now passed. Applications for the autumn examination should be made via the Section of Surgery/Transplantation/Transplant Immunology page of the UEMS website (<http://www.uemssurg.org/divisions/trans-plantation/-transplant-immunology2>). The deadline for applications for the Autumn examination, to be held in Leiden, Netherlands will be in July 2019. Please visit the website above for more information nearer the time. Note that payment for the exams can be performed via Paypal upon application.

EFI Continued Medical Education (CME) / Continued Professional Development (CPD)

As previously outlined in the Newslet-

ter, the EFI Education Committee established a pilot EFI CME-CPD scheme in 2018 to allow members to record professional activities. All participants in this pilot have been asked to return their summaries of activities to the EFI Office. The pilot EFI CME-CPD scheme will be reviewed by the Education Committee in 2019 with an aim to launch a scheme for all members in 2020. Further detail will be forthcoming.

The new EFI scheme will be available for members who have no other formal mechanism for recording CME/CPD events. **For those members who hold the ESHI Diploma (either Honorary or by examination) providing evidence of ongoing CME/CPD, either from a local recognised scheme or via this new EFI scheme, will be a mandatory requirement in the future to retain certification.** Also, the recording of training and development events in this EFI scheme will be accepted for EFI Accreditation purposes.

European Technical H&I Qualification (ETHIQ)

It is still hoped that a pilot scheme for a small number of participants can be launched in 2019. The in lab training scheme is aimed at technical staff working at the bench in EFI accredited laboratories who would be supervised during the training by senior staff in their own labs. Once the Training Manual is agreed as suitable by the EFI Executive Committee, details will be available on the EFI website.

EFI Education and Scientific Bursaries

Applications for Education and Scientific Bursaries 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 application form are available on the EFI website bursaries page <http://www.efi-web.org/bursaries.html>.

ASHI/APHIA/EFI/ARSHI Summer School

The joint International Summer School (ISS), sponsored by EFI, ASHI, APHIA and ARSHI, will be held at the Marriott Springhill Suites, Old Montreal in Montreal, Quebec from June 14th to 18th 2019. The ISS provides a focused course on all aspects of theoretical and applied H&I. The course is limited to a small group (30-40) and participants are invited to present their own research. It represents a great opportunity for those studying towards higher H&I specific qualifications as well as a chance to meet others working in the field in different parts of the world. The deadline for applications was 22nd March 2019. More details are available at: https://www.ashi-hla.org/page/Meetings_ISS. Bursaries are also available for EFI members.

The 2020 ISS will be held in Prague in the Czech Republic in Summer 2020. Further information will appear nearer the time.



33rd EUROPEAN IMMUNOGENETICS AND HISTOCOMPATIBILITY CONFERENCE

FUNCTIONAL IMMUNOGENETICS: THE HISTORICAL CHALLENGE

MAY 8-11, 2019

CENTRO CULTURAL DE BELÉM

LISBON PORTUGAL

Tuesday, May 7

08:15 - 09:15

ABTI General Assembly

Room Luís Freitas Branco

08:30 - 17:30

ESHI Diploma Examination

Room Cottinelli Telmo

ESHI Diploma Examination preparation room

Room Daciano Costa

09:30 - 17:00

Accreditation Inspectors Workshop

Room Luís Freitas Branco

19:00 - 23:00

Accreditation Inspectors Dinner (by invitation)

Wednesday, May 8

08:30 - 18:00

Welcome Desk

Luís de Freitas Branco Foyer

09:00 - 13:00

SPT – IPST meeting (Portuguese Society of Transplantation & Portuguese Institute for Blood and Transplantation)

Room Luís Freitas Branco

08:30 - 16:30

Executive Committee Meeting

Room Cottinelli Telmo

08:30 - 16:00

External Proficiency Testing Committee Meeting

Room Daciano da Costa

08:30 - 16:00

Standards Committee Meeting

Room Vianna da Mota

10:00 - 12:00

IT & Bioinformatics Committee Meeting

Room Amadeo de Souza Cardoso

09:00 - 16:30

Accreditation Committee Meeting

Room Maria Helena Vieira da Silva

13:30 - 17:00

Education Committee Meeting

Room Amadeo de Souza Cardoso

14:30 - 16:30

Scientific Committee Meeting

Room Glicinia Quartín

15:00 - 16:30

EFI Population Genetics Working Group (open meeting)

Room Luís Freitas Branco

17:00 - 19:30

Opening Ceremony

Main Auditorium



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FUNCTIONAL IMMUNOGENETICS: THE HISTORICAL CHALLENGE

MAY 8-11, 2019

CENTRO CULTURAL DE BELÉM

LISBON PORTUGAL

17:00 – 17:30

Welcome Addresses

A. Martinho, J. Mytilineos, S. Sampaio, J. P. A. Sousa.

17:30 – 17:45

Tribute to Portuguese Histocompatibility Founders

M. Rosário Sancho

17:45 – 18:15

Julia Bodmer Award

K. Fleischhauer

18:15 – 18:25

HLA Award

S. Marsh

18:25 – 18:55

Ceppellini Lecture

J. Mytilineos

19:00 – 19:30

Musical Moment: “Fado”

19:30 - 21:30

Welcome Reception

Room Vitorino Nemésio and garden (with students MagnaTuna)

Thursday, May 9

08:30 - 10:00

Plenary Session 1

Hematopoietic Stem Cell Transplantation | Present and future of HSCT

Main Auditorium

HSCT Activity in Europe.

Nicolaus Kröger (Germany)

Let's use strategies to prevent and treat relapse after allogeneic hematopoietic stem cell transplantation.

Robert Soiffer (United States of America)

Microbiota

Marcel van den Brink (Netherlands)

10:00 - 10:30 - Coffee break & ePoster viewing

10:30 - 12:00

Oral Session 1

Solid Organ Transplantation

Abstracts O9 – O16

Room Sophia Mello Breyner

Oral Session 2

Reproduction, Autoimmunity, Infection & Cancer

Abstracts O17 – O24

Room Luís Freitas Branco

10:30 - 12:00

Teaching Session 1

Population Genetics and MHC Polymorphism | Common well defined HLA alleles in Europe

Room Almada Negreiros

Chairs: *Alicia Sanchez-Mazas (Switzerland), J. M. Nunes (Switzerland)*

HLA sequence data: what do they bring to population genetics

Alicia Sanchez-Mazas (Switzerland)

Population genetics tools in the clinical lab

Ann-Margaret Little (United Kingdom)

Linkage Disequilibrium and Haplotypes in Families and Populations

J. M. Nunes (Switzerland)



33rd EUROPEAN IMMUNOGENETICS AND HISTOCOMPATIBILITY CONFERENCE

FUNCTIONAL IMMUNOGENETICS: THE HISTORICAL CHALLENGE

MAY 8-11, 2019

CENTRO CULTURAL DE BELÉM

LISBON PORTUGAL

10:30 - 12:00

Meet the Expert 1

Teaching H&I across Europe

Room Fernando Pessoa

Speakers: David Turner (United Kingdom)
Marco Andreani (Italy)
Monika Lindemann (Germany)
Deborah Sage (United Kingdom)

12:00 - 12:15 - Break

12:15 - 13:00

Satellite Symposium 1

With kind support of CareDx

Room Sophia Mello Breyner

Satellite Symposium 2

With kind support of GenDx

Room Luís Freitas

Satellite Symposium 3

With kind support of One Lambda

Room Almada Negreiros

Satellite Symposium 4

With kind support of Omixon

Room Fernando Pessoa

12:15 - 13:00

PhD Students and Research Postdocs Meet Experts - Session 1 (Free registration requested)

(closed session for students and Research Postdocs only)

Room Amadeu de Souza Cardoso

Speaker: Marcel van den Brink (United States of America)

12:15 - 14:30

Executive Committee and Coordinators meeting

Room Maria Helena Vieira da Silva (closed meeting)

13:00 - 14:00 - Lunch

14:00 - 15:30

Oral Session 3

MHC Evolution, Anthropology & Population genetics

Abstracts O25 - O32

Room Sophia Mello Breyner

Oral Session 4

Immunotherapy, Gene Therapy & Cellular Therapy

Abstracts O33 - O40

Room Luís Freitas Branco

14:00 - 15:30

Teaching Session 2

Hematopoietic Stem Cell Graft Function and Immune Reconstitution

Room Almada Negreiros

Chairs: Dario Ligeiro (Portugal) J. Forjaz-Lacerda (Portugal)

Restoration of Structural and Functional Diversity of Lymphocyte Compartments after Lymphodepletion.

Dario Ligeiro (Portugal)

Immunological Conditioning in GVHD.

Maria Soares (Portugal)

Challenges in Chimerism Analysis for Graft Function Monitoring

Benedetta Mazi (Italy)

14:00 - 15:30

Meet the Expert 2

EFI External Proficiency Testing

Room Fernando Pessoa

Chairs: Yvonne Zoet (the Netherlands), Falko Heinemann (Germany)



33rd EUROPEAN IMMUNOGENETICS AND HISTOCOMPATIBILITY CONFERENCE

FUNCTIONAL IMMUNOGENETICS: THE HISTORICAL CHALLENGE

MAY 8-11, 2019

CENTRO CULTURAL DE BELÉM

LISBON PORTUGAL

15:30 - 16:00 - Coffee break & ePoster viewing

16:00 - 17:30

Plenary Session 2

Cancer Immunogenetics | Cellular and Molecular Mechanism of Immune Evasion in Cancer

Main Auditorium

NK-DC Crosstalk

Caetano Reis-e-Sousa (United Kingdom)

Evolution of resistance to immunotherapy

Annette Paschen (Germany)

HLA immune escape

Soldano Ferrone (United States of America)

17:30 - 18:30

Scientific e-Poster Discussion (wine & cheese)

Poster Session - Solid Organ Transplantation (P1 – P8 & P17 – P42)

Poster Session - Reproduction, Autoimmunity, Infection & Cancer (P68 – P99)

Poster Session – MHC Evolution, Anthropology & Population Genetics (P100 – P150)

Poster Session Haematopoietic Stem Cell Transplantation (P151 – P179)

Poster Session - New Technologies and Bioinformatics (P180 – P187 & P196 – P210)

Poster Session - NK & Miscellaneous (P225 – P247)

Poster Session - Solid Organ Transplantation (P9 – P16 & P43 – P67)

Poster Session - New Technologies and Bioinformatics (P188 – P195 & P211 – P224)

20:30 - 23:00 - Ceppellini & Speakers Dinner (by invitation)

Friday, May 10

08:30 - 10:00

Plenary Session 3

Solid Organ Transplantation | Advances in Monitoring and Maintenance of Solid Organ Grafts

Main Auditorium

One Study: Mregs, Tregs, DCregs in kidney transplantation.

Birgit Sawitzki (Germany)

DSA in kidney transplantation: where to look?

Olivier Thaumat (France)

IgG cleavage for desensitization.

Gunnar Tufveson (Sweden)

10:00 - 10:30 - Coffee break & ePoster viewing

10:30 - 12:00

Oral Session 5

Haematopoietic Stem Cell Transplantation

Abstracts O41-O48

Room Sophia Mello Breyner

Oral Session 6

New Technologies

Abstracts O49-O56

Room Luís Freitas Branco

10:30 - 12:00

Teaching Session 3

HLA HPA HNA in Transfusion Medicine and Transplantation

Room Almada Negreiros

Chairs: Tim Key (United Kingdom) Anthony Poles (United Kingdom)

Overview of HPA and clinically associated conditions

Anthony Poles (United Kingdom)



33rd EUROPEAN IMMUNOGENETICS AND HISTOCOMPATIBILITY CONFERENCE

FUNCTIONAL IMMUNOGENETICS: THE HISTORICAL CHALLENGE

MAY 8-11, 2019

CENTRO CULTURAL DE BELÉM

LISBON PORTUGAL

Molecular basis of HNA

Brigitte Flesch (Germany)

Human neutrophil antibodies associated with antibody mediated rejection in kidney transplant recipients

Tim Key (United Kingdom)

12:00 - 12:15 - Break

12:15 - 13:00

PhD students and Research Postdocs meet Experts Session 2 (Free registration requested)

(closed session for students and Research Postdocs only)

Room Amadeu de Souza Cardoso

Speaker: Soldano Ferrone (United States of America)

12:15 - 13:00

Satellite Symposia 5 (tbc)

Room Sophia Mello Breyner

Satellite Symposia 6

With kind support of Immucor

Room Luís Freitas Branco

Satellite Symposia 7

With kind support of One Lambda

Room Almada Negreiros

Satellite Symposia 8

With kind support of BAG Health Care GmbH

Room Fernando Pessoa

13:00 - 14:00 - Lunch

14:00 - 15:30

Oral Session 7

NK and Miscellaneous

Abstracts O57 - O64 Room Sophia Mello Breyner

Oral Session 8

Bioinformatics

Abstracts O65 - O72

Room Luís Freitas Branco

14:00 - 15:30

Teaching Session 4

Epitope matching and prediction of alloantibody production after transplant

Room Almada Negreiros

Chairs: Sebastiaan Heide (the Netherlands), Nils Lachmann (Germany)

General introduction on B cell epitopes

Sebastiaan Heide (Netherlands)

General introduction on T cell epitopes

Eric Spierings (the Netherlands)

Identifying highly immunogenic epitope mismatches

Jennifer McCaughan (United Kingdom)

Correlation of B and T cell epitope mismatches with de novo DSA formation

Nils Lachmann (Germany)

14:00 - 15:30

Special Session: EFIS - EFI

T and B cell memory!

Room Fernando Pessoa

Chairs: René van Lier (Netherlands), Elissaveta Naumova (Bulgaria)

Properties of human tissue-resident T cells

René van Lier (Netherlands)

Maintenance and mobilization of bone marrow resident immune memory cells

Andreas Radbruch (Germany)



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LISBON PORTUGAL

Human memory T cells in immunity and autoimmunity
Federica Sallusto (Switzerland)

15:30 - 16:00 - Coffee break & ePoster viewing

16:00 - 17:30

PLENARY SESSION 4

Infection and Immunogenetic Variation | Host Immunogenetic Variation in Infection Disease

Main Auditorium

Damage control and disease tolerance

Miguel P. Soares (Portugal)

Evolution, diversity and infection

Gunilla Hedestam Karlsson (Sweden)

HLA, KIR and viral infection

Mary Carrington (United States)

17:30 - 19:00

EFI General Assembly

20:30 - 23:00

Conference Gala Dinner with live music

Saturday, May 11

08:30 - 09:30

Best Abstract Session

Abstracts O1 – O8

Main Auditorium

09:30 - 10:00

18th International Histocompatibility Workshop Report

Main Auditorium

10:00 - 10:30 - Coffee break

10:30 - 12:00

Plenary Session 5

Regenerative Medicine: a challenge for H&I?

Main Auditorium

Inducing antigen-presenting dendritic cells by direct reprogramming

Cristiana Pires (Portugal)

In vitro biomimetic engineering of a human hematopoietic niche

Paul Bourguin (Sweden)

Tissue Engineering and regenerative medicine

Manuela Gomes (Portugal)

12:00 - 12:30

Closing Lecture

Main Auditorium

António Coutinho (Portugal)

12:30 - 13:00

Closing Ceremony

Main Auditorium



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HIGHLIGHTS OF THE ANNUAL EFI REGION 8 & BALKAN EPT MEETING

Ana Moise, Alexandra Constantinescu and Ileana Constantinescu

The Annual EFI Region 8 & Balkan EPT Meeting was organised on January 25-27th in Bucharest. The meeting was held under both EFI and „Carol Davila” University of Medicine and Pharmacy. This was a great opportunity to acquire new knowledge regarding MHC genes and their products (HLA antigens with their specific epitopes), to understand the relevance of novel H&I technologies in the organ/cell transplantation outcome, to exchange experience related to protocols for monitoring transplanted patients, EFI standards, EFI accreditation and education.

Chryssa Papasteriades, our former Region 8 EFI Commissioner, had a very interesting presentation about what immunogenetics means and what its role is in modern medicine. Chryssa pointed out that more than 500 diseases are associated with HLA and the challenges for current medicine are to be more scientific, more effective, safer and less harmful. From a socioeconomic standpoint, the ageing population is becoming an important issue in the Western world. The results of the study conducted by the team led by Prof. Naumova and presented by Milena Ivanova, suggest that survival and longevity might be associated

with selection of HLA alleles and haplotypes conferring disease resistance or susceptibility. Therefore, HLA alleles and haplotypes could be an informative immunogenetic marker for successful ageing. Discovery of potential new markers that influence the longevity and susceptibility to age related diseases will contribute to development of strategies for rejuvenating the immune system and preventing replicative senescence.

Usually, non-classical HLA genes are not genotyped, therefore, their role in haematopoietic stem cell transplantation is uncertain, because there are a limited number of studies which are heterogeneous in terms of design. HLA-E is a class I HLA molecule that is involved in NK and CTL function. It has limited polymorphism but is aberrantly expressed under stress conditions and donor-recipient mismatching may potentiate NK-mediated alloreactivity, especially in bone marrow transplantation. Joannis Mytilineos, our EFI President presented the results of a study that investigated the role of HLA-E in acute leukaemia 10/10 HLA matched unrelated HSCT. The study was conducted on 1840 transplanted patients and the results revealed that HLA-E mis-

match does not appear to affect HSCT outcome in early/intermediate AML/ALL patients. The HLA-E*01:03/01:03 genotype in both, patients and donors is associated with lower leukaemia free survival.

Optimal donor selection is critical to improve the engraftment rate. Donors are selected based on multiple factors, of which HLA matching between patient and donor has the highest priority. Antonij Slavcev, had a lecture about his experience using Predicted Indirectly ReCognizable HLA Epitopes (PIRCHE) as a novel method to evaluate the indirect pathway of allorecognition and to predict the risk for production of de novo donor-specific antibodies after transplantation. His final conclusion was that the evaluation of the clinical relevance of epitope matching needs prospective multicenter trials.

In our field, technologies change rapidly and new methodologies for HLA typing, alloantibody detection or crossmatching are now available. In her presentation, Elissaveta Naumova highlighted the importance of NGS method in HLA typing and the role of single antigen bead assay in alloantibody testing. Detection of complement-binding HLA





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¹ Zhang X and Reinsmoen NL, Front Immunol, 2017

² Cardinal, JASN, 2016

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antibodies and detection of IgG1, IgG3 subclasses were considered as well. Another topic of great interest was the diversity of HLA genes and antigens. Katerina Tarassi and Amal Bishara presented the HLA high resolution haplotypes frequencies in their countries with very interesting results. In the same context, Derek Middleton had a presentation about Allele Frequencies Database (<http://www.allelefrequencies.net>) which can help us in many ways: to find the frequencies and distributions of specific alleles or haplotypes around the world, to identify alleles that have been identified as „rare“, and their distribution in specific populations, to visualize the amino-acid spectra distributions of individual populations, to search adverse drug reactions information. Marco Andreani emphasized once again that NGS technology will increase the number of HLA alleles and probably, in the future, the matching between donor and recipient will be done based on eplets or on predicted indirectly recognizable human leucocyte antigen epitopes. During the meeting all participants had the chance to discuss potential future collaboration and exchanges as well as future common research projects in the field of H&I.

One session was dedicated to EFI Region 8 Accreditation and Balkan

EPT reports. Milena Ivanova and Amal Bishara made an overview about EFI accredited laboratories from Region 8. Fatma Oguz and Anastasiya Mihaylova who are in charge for Balkan EPT schemes presented a complete report about Region 8 laboratories' results for HLA typing, anti-HLA antibodies assessment, crossmatching and HLA-B27 testing. Kay Poulton highlighted that working to meet Standards has certainly improved the quality of laboratory testing, and has standardised our testing between laboratories worldwide. However, the way in which we apply our tests to different clinical situations is still open to interpretation and is often dependent upon the experience of the laboratory team and Directors. One way of helping to ensure that interpretation of laboratory tests is standardised is to have written clinical guidelines issued by people with a high degree of expertise, and a good understanding of the clinical requirements of their users. From this point of view, David Turner reminded us that the EFI Education Committee exists to “promote education and training for technical, scientific, and medically qualified staff in the field of transplantation immunology, histocompatibility and immunogenetics throughout Europe and beyond”. The current and future work of the EFI Education Committee provides EFI

members with sufficient tools to promote their individual development and also to help their laboratories retain EFI Accreditation by ensuring the adequate knowledge and experience.

Our colleague from Bulgaria Tsvetelin Lukanov showed us his experience in the assessment of haematopoietic chimerism and engraftment monitoring. Last but not least, Ileana Constantinescu presented an example of successful EU educational project in molecular genetics comprising epigenetics and immunogenetics. The message of her presentation was that we should apply for EU funding within EFI, for more educational and research projects for the benefit of our society. At the last day of the meeting, a session was dedicated to Romanian Registry of Hematopoietic Stem Cells Voluntary Donors. Dr. Aurora Dragomiristeanu, the Director of Registry, shared her experience with the participants at the meeting. She mentioned what are the difficulties and challenges and how they can be overcome.

In conclusion, the entire meeting was a very useful, stimulating and joyful experience, where so many colleagues from different countries shared their findings and ideas, and future perspectives of their activity.

SCANDIATRANSPLANT: FIFTY YEARS OF SUCCESSFUL NORDIC COOPERATION IN TRANSPLANTATION

On May 9th, 2019 ScandiTRANSPLANT will celebrate its 50 year jubilee in the City Hall of Aarhus, Denmark. Since the beginning in 1969 more than 50,000 patients have been transplanted within this cooperation and presently about 2000 patients are transplanted every year. It is organized as an association of the member hospitals, which are the hospitals performing organ transplantation in Iceland, Norway, Sweden, Finland, Denmark and Estonia. It is a decentralized organization with much work and responsibility placed at the local member hospitals. The Office of the organization has through all these years been situated in Aarhus, Denmark.

History

Although the first renal transplantation

was performed as early as 1956 in Oslo by Leiv Efskind using whole body X-ray irradiation, it was not until azathioprine became available that clinical relevant transplantations were started in Denmark, Norway, Sweden and Finland around 1964. The people involved were of course very interested in immunology and the discovery of the HLA complex described in 1958 in three papers by Jean Dausset, Jon van Rood and Rose Payne. One of the pioneers of the first renal transplantation in Denmark, Flemming Kissmeyer (fig. 1), was the leader of the Blood Bank at Aarhus Kommunehospital.

He was a very charismatic person doing research in HLA types and got himself involved in the International Histocompatibility Workshops from 1964. The



Fig. 1: Flemming Kissmeyer from Aarhus (1921-91)



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creation of Eurotransplant in 1967 by van Rood also inspired the people in the Nordic countries to look for a cooperation in this field to take advantage of the beneficial influence of HLA matching of donor and recipient on the results of transplantation. Flemming Kissmeyer discussed this matter with a young surgeon in Oslo Norway, Erik Thorsby (fig. 2), who was also doing HLA research.



Fig. 2: Erik Thorsby from Oslo

In the autumn of 1968 they asked for a meeting with the Director General of Health in Norway, Karl Evang, who was hosting the meeting of the other Nordic Generals of Health in Oslo later the same year. Kissmeyer and Thorsby proposed an exchange organization of HLA well-matched kidneys from recently deceased donors in the Nordic countries. At their following meeting, the Nordic Generals of Health supported this proposal and a “Nordic Expert Committee on Transplantation” with 3 experts from every country was appointed by their respective health authorities, financed by the Nordic Council. The first meeting of the committee was held in June and in the minutes the name Scandiatransplant is mentioned the first time. It was also decided that Flemming Kissmeyer’s laboratory in Aarhus should be the reference laboratory for tissue typing. From then until today the Office of Scandiatransplant has been situated at Aarhus University Hospital although the laboratory functions have been decentralized.

As time went on the transplantation hospitals were asked to take over the funding of the work. In 1992 the arti-

cles of an association were approved by the Expert Committee and the competent authorities. The name of the association became “foreningen Scandiatransplant”, as it legally was a Danish association with municipality in Aarhus. It was an association of the hospitals performing organ transplantation in these countries. At the same time a computerized database of all donation and transplantation at the member hospitals was constructed and it was taken into use from late 1994. Today the database also contains follow-up registries of recipients and living donors. The association is governed by a Council of Representatives appointed by the hospitals and budget is covered by the member hospitals according to the number of transplantations done the previous year.

Organ allocation

The medical work in Scandiatransplant is done in groups of specialists. There are organ groups (NKG: Nordic Kidney Group, SHLG: Scandiatransplant Heart and Lung Group, NLTG: Nordic Liver Transplant Group, and NPITG: Nordic Pancreas and Islet Transplant Group) and other groups like the tissue typers group and the transplant coordinators group. The organ groups consist of at least one doctor from every department that performs transplantation of the particular organ, and they meet one to two times every year. These organ groups decide allocation rules, have governance of the data, discuss

protocols and science. When an organ group decides on a change in allocation rules, these are built into the IT-System. The rules as well as the minutes of all meetings are on the Scandiatransplant home page (www.scandiatransplant.org), open for everybody to see. All patients listed for transplantation at the member hospitals are entered on the waiting list in the IT-system. When there is a donation, the donor center uses the functionalities in the IT-system to check for exchange obligations. If there is exchange obligation, the organ is exported to the indicated hospital, if not the organ can be used locally. The Scandiatransplant Office monitors that the exchange rules are followed and the result of this monitoring is presented at the group meeting. The responsibility for correct allocation is not at the Scandiatransplant Office, but it is placed on the responsible donor center, which does the allocation.

In the early days a relative high number of kidneys were exchanged between the hospitals due to the strong belief in HLA matching. This has declined and among the many reasons for this was introduction of more effective immunosuppression regimes making the effect of HLA matching difficult to demonstrate at least in patients receiving their first graft (fig. 3).

Currently about 20% to 25% of organs are exchanged between the hospitals depending on the type of organ.

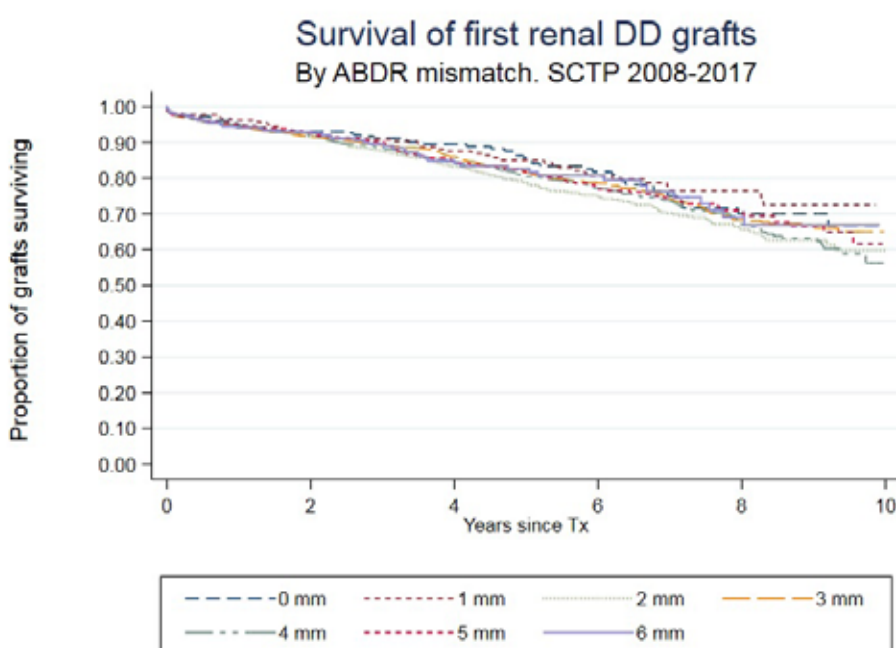


Fig. 3: Uncensored graft survival of first deceased donor kidney allografts by ABDR matching

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As an example, the current allocation rules for kidneys are shown in the box.

Rules for exchange of kidneys from deceased donor within the Scandiatransplant cooperation

By existing HLA compatibility at least one kidney per deceased kidney donor must be applied for transplantation of a recipient on the Scandiatransplant waiting list according to the below-mentioned rules in order of priority: (However, this applies only if both kidneys from a deceased donor are applicable for transplantations)

1. Patient with STAMP-status that are ABO compatible with donor and where all donor HLA-A, -B, -C -DRB1, -DQB1, -DPB1 antigens are either shared with the recipient or are among those defined as acceptable.
2. Highly immunized (PRA \geq 80%) patients who are HLA-A, -B, -DRB1 compatible with donor.
3. Immunized patients (PRA \geq 10% but below 80%) who are HLA-A, -B, -DRB1 compatible with donor.
4. If organ donor is <50 years of age, at least one kidney is offered to recipient <16 years of age (counted from time of registration), if there is HLA-DRB1 compatibility and in addition not more than 2 HLA-A, B mismatches.
5. Patients who are HLA-A, -B, -DRB1 compatible with donor unless the proposed recipient is > 30 years older than the donor.

Return obligation:

Kidneys, which are exchanged on basis of above-mentioned criterions must be “paid back”, and the return is aimed at being effected within six months, and if possible by a kidney of the same blood group as the one received. The organ offered in this way must be of a quality acceptable to the recipient centre, regarding for instance technical quality, donor age and time of ischemia.

Return obligation does not comprise kidneys which are exchanged for other reasons than the above-mentioned obligatory exchange rules.

PRA:

Panel Reactive Antibodies

HLA compatibility: HLA compatibility means 0 (zero) HLA mismatches between donor and recipient as regards to broad HLA-A, -B, DRB1 and furthermore HLA-Bw4/Bw6

ABO blood groups, exchange obligation 2-5:

Kidneys of blood group O shall only be offered to patients with blood group O. Kidneys of blood group B shall only be offered to patients with blood group B.

ing HLA types makes it a challenge to define HLA antibodies and particularly to find out if they are clinically relevant.

The Scandiatransplant Acceptable Mismatch Program (STAMP) was introduced 10 years ago to give highly HLA sensitized patients a better chance of getting a successful transplant. This is done by defining the HLA specificities of the recipient antibodies to detect which antigens are acceptable mismatches. Donors are then sought which have the same HLA antigens as the recipient and/or defined acceptable mismatches. This has successfully resulted in almost 200 transplantations (fig. 5) with graft survival comparable with patients with HLA antibodies, who have been transplanted with exchanged kidneys having HLA-A, -B, -DR broad antigen match.

New approaches are continuously being discussed and gradually introduced. Very soon the kidney group will launch the STEP (ScandiaTransplant living donor kidney Exchange Program). Sweden has already started such a program and soon it will be an international program in Scandiatransplant. In this program incompatible antigens are directly defined by the proven 2nd field resolution antibodies and this information is directly imported, from the software used to analyze for HLA antibodies, into the Scandiatransplant IT-system. It is clear that even though improvements have been made with new methods and knowledge, new challenges have arisen with the complexity of information and different techniques.

Newer protocols have resulted in incompatible ABO renal transplantations having similar results as compatible (fig. 4)

Tissue typing and antibodies

HLA played a central role in the establishment of Scandiatransplant and even though much has happened since then, HLA still plays a central role in kidney allocation between the transplant centers within Scandiatransplant. Over time, matching has gone from including only a few recognized serological HLA-A, B and DR antigens to include both serological and genomic defined HLA types on HLA-A, B, C, DRB1, DQB1 and DPB1. And first steps have been made also to include HLA-DQA1, DPA1, DRB3, DRB4 and DRB5 in matching. The extensive possibilities of defin-

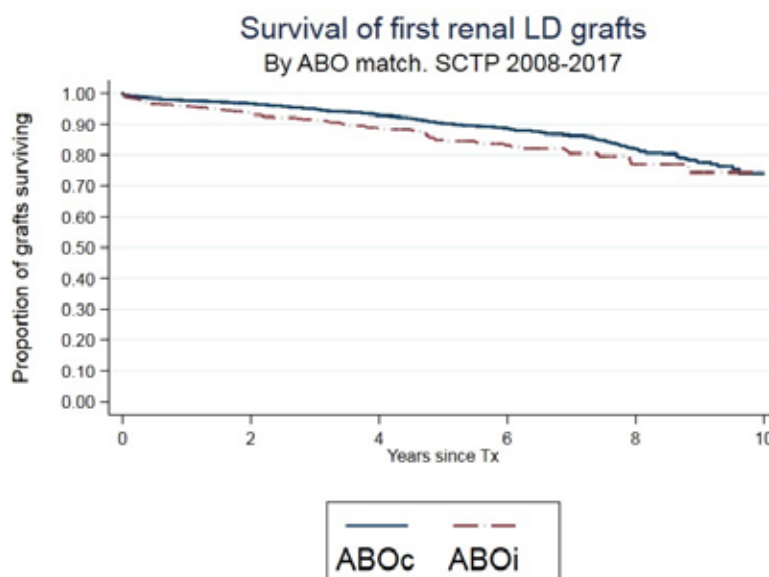


Fig. 4: Uncensored graft survival according to ABO compatibility



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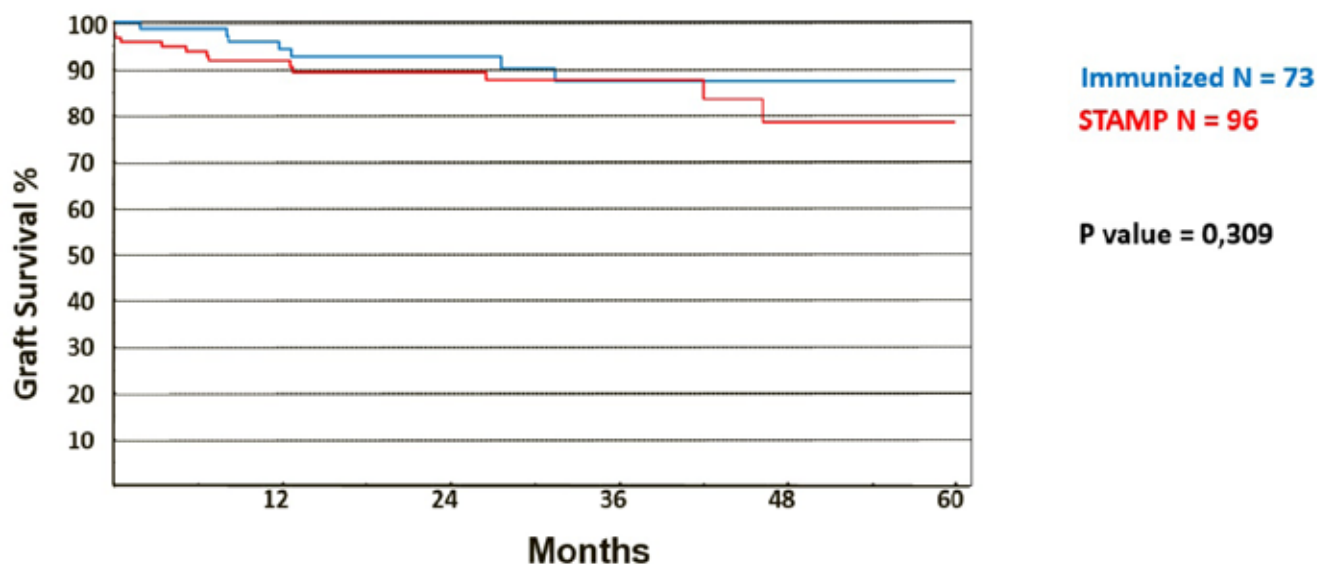


Fig. 5: Survival of grafts transplanted according to the Scandiatransplant Acceptable Mismatch Program compared to immunized patients (PRA>10%) transplanted according to HLA-A, -B, -DR broad antigen match. Both groups transplanted according to exchange obligation criteria and therefore comparable on some other variables.

More than an organ allocation resource

Today Scandiatransplant is much more than just an organ allocation resource for the member hospitals. It is a collaborative forum for the transplant community, where current results, problems, scientific studies and best practice are discussed. It supplies the public and relevant authorities with updated statistical information. Scandiatransplant

supports its member hospitals and the competent authorities in the countries to live up to regulations, EU initiatives, and EU directives.

Every second year the Scandinavian Transplantation Society rises from among its members and hosts a scientific congress with participation of between 200 and 300 people. Scandiatransplant has therefore become very

important for the transplantation environment in these countries

Ilse Duus Weinreich
Office Manager
Scandiatransplant

Kaj Anker Jørgensen
Medical Director
Scandiatransplant

20 YEARS OF HLA PROFICIENCY TESTING FOR CENTRAL AND EAST EUROPE

The HLA Proficiency Testing for Central and East Europe (formerly Proficiency Testing of HLA class I Typing for Central and East Europe) was initiated in 1999 in Wrocław by Professor Andrzej Lange^[1]. At the beginning, it had been organized for the Polish laboratories involved in HLA typing, and was extended a year later to the Central-Eastern European area. Currently there are also participants from the outside of Central and Eastern Europe.

It is of note that all five HLA typing laboratories that took part in the first trial (in 1999) still participate in our workshop, namely laboratories of the University Clinical Centre in Gdansk, University Children's Hospital in Krakow, Medical University of Lodz, Pomeranian Medical University in Szczecin, and National Bone Marrow Donor Registry in Wro-

claw. To date, 67 laboratories from 15 countries (Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Kazakhstan, Lithuania, Latvia, Poland, Russia, Romania, Serbia, Slovakia, Turkey) have participated in the testing.

Currently, more than half of participants come from outside of Poland. Among them there are also five institutions that joined the first international trial (in 2000) and still participate in the Wrocław External Proficiency Testing (EPT), these are laboratories of: National Blood Transfusion Service in Budapest, University Hospital Olomouc, Czech National Marrow Donors Registry – University Hospital Pilsen, Russian Institute of Hematology and Transfusiology – Russian Center of Tissue Typing in St. Petersburg, and

Tissue Typing Centre, Clinical Hospital Centre Zagreb.

This year, the event is being organized for the 25th time. Our work has been appreciated by the European Federation for Immunogenetics and received an award during the 18th European Histocompatibility Conference (8-11.05.2004 Sofia, Bulgaria)^[2]. The HLA Proficiency Testing for Central and East Europe is organized under the auspices of the Polish Society for Immunogenetics. At the beginning only samples for HLA class I typing were provided. Currently our EPT covers serological typing of HLA class I as well as DNA typing of HLA class I (A, B, C) and class II (DRB1, DQB1, DPB1) loci, both at the low and high resolution level. Last year (24th trial), DQA1 typing was also included [Figure 1].

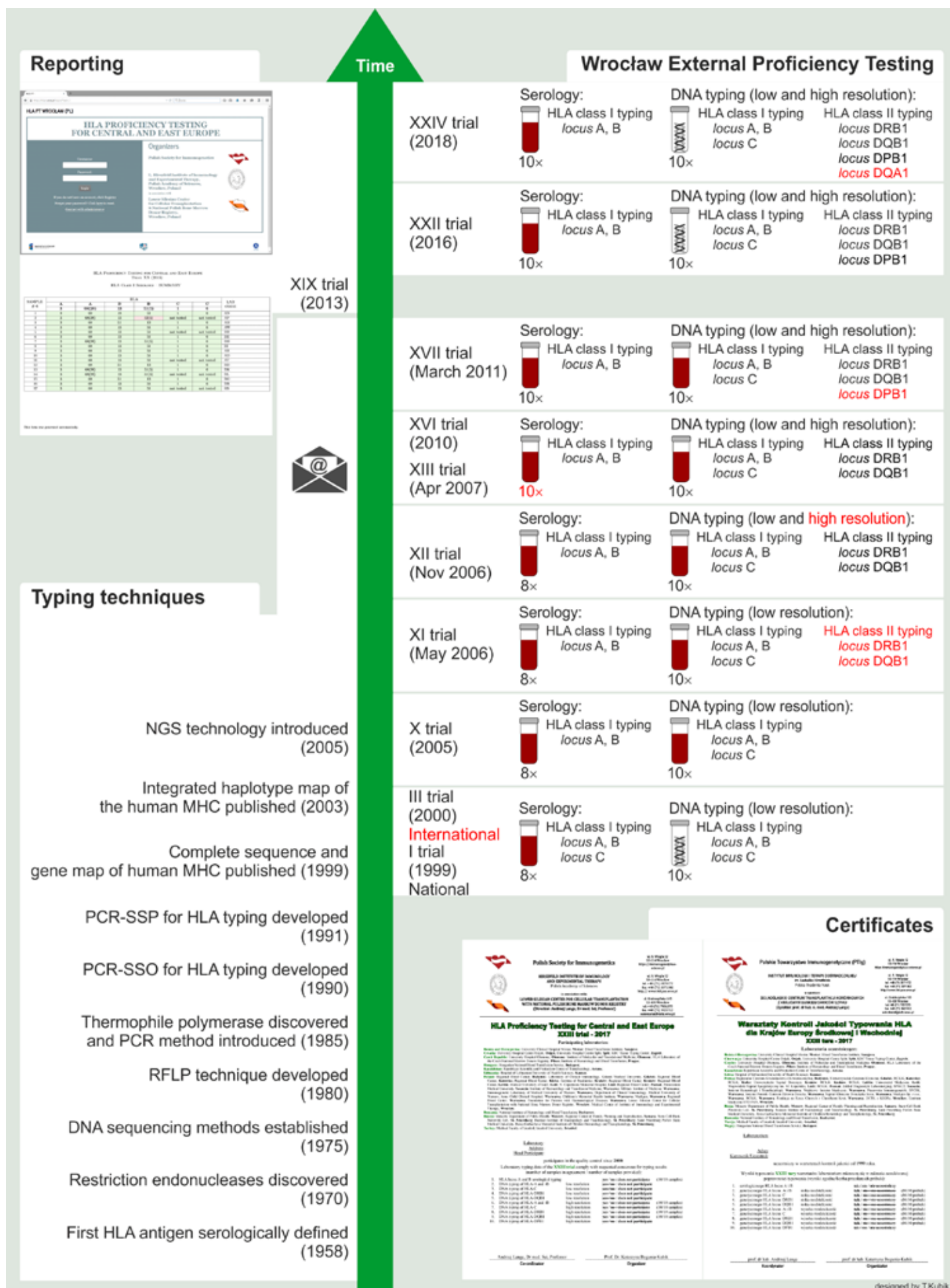


Figure 1. Milestones in the development of the HLA Proficiency Testing For Central and East Europe.

Using the gathered HLA typing data, participants are able to compare their results with those coming from all the other participating institutions. This allows to expose difficult to type specificities, describe classes of errors made (e.g. typing of additional antigen/allele, omission of specific typing, faulty typing, omission of subtype/allele typings). This allows for elimination of HLA typing errors and decrease of methodical error occurrence, as well as improvement of overall quality, credibility and repetitiveness of studies [3-5] .

Running the HLA Proficiency Testing for Central and East Europe would not be possible without the previous help of colleagues from the Cytoapheresis Unit of the Lower Silesian Center for Cellular Transplantation and more recent collaboration with the Regional Centre of Transfusion Medicine and Blood Bank in Wrocław with respect to collection and provision of blood samples of voluntary donors. Data submission is easier due to the most appreciated help of Mari-

usz Uchroński and colleagues from the Wrocław Centre of Networking and Supercomputing, Wrocław University of Science and Technology who developed our online submission system. I would like to express my gratitude to Katarzyna Kościńska from the Lower Silesian Center for Cellular Transplantation and Monika Chaszczewska-Markowska from the Hirszfeld Institute of Immunology and Experimental Therapy, for their the most appreciated help and assistance. I am also very grateful to the

members of our Steering Committee – Professors Gottfried Fischer, Martin Petrek, and Renata Žunec.

And finally, I would especially like to thank all participants for such a long-lasting and fruitful collaboration.

*Katarzyna Bogunia-Kubik
Hirszfeld Institute of Immunology and
Experimental Therapy, Polish Academy
of Sciences, Wrocław, Poland*

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By Luca Vago, section editor HLA journal

Diversity and characterisation of polymorphic 3' untranslated region haplotypes of MICA and MICB genes

Cox ST, Hernandez D, Danby R, Turner TR, Madrigal JA.

HLA. 2018 Dec;92(6):392-402. doi: 10.1111/tan.13434.

The MHC class I-related chain A and B (MICA and MICB) genes are gaining increasing interest as relevant regulators of Natural Killer cell- and T cell-mediated immune responses. In particular, recent studies have highlighted extensive polymorphism in these genes, impacting on the outcome of transplantation of hematopoietic stem cell and solid organs. In the present study, the authors focus on the characterization of the 3' untranslated region of MICA and MICB in European IHW cell lines. By integrating their results with data on polymorphisms in the coding sequence and in the 5' proximal promoter region, the authors significantly extend the list of known MICA haplotypes. This knowledge paves the way for future study aimed at understanding the functional relevance of polymorphisms in the 3' UTR of these genes, in particular addressing whether they impact on the binding of microRNAs and affect the levels of MICA and MICB expression.

A novel antibody combination to identify KIR2DS2^{high} natural killer cells in KIR2DL3/L2/S2 heterozygous donors

Blunt MD, Rettman P, Bastidas-Legarda LY, Fulton R, Capizzuto V, Naiyer MM, Traherne JA, Khakoo SI.

HLA. 2019 Jan;93(1):32-35. doi: 10.1111/tan.13413.

Natural Killer (NK) cells integrate multiple inhibitory and activating signals to select the appropriate responses against the cells they come into contact with. One of the main hurdles in understanding the fine determinants of NK cell behavior is the high homology between the receptors governing such interactions, and in particular between the different members of the Killer Cell Immunoglobulin-like Receptors (KIR) family. In this study, the authors focus on KIR2DS2, an activating KIR known to carry high sequence homology with the inhibitory receptors KIR2DL2 and

KIR2DL3. Starting from the observation of different patterns of reactivity of two commonly-used antibody clones, the authors develop a simple immunophenotypic strategy to identify NK cells expressing only KIR2DS2, a finding that will expectedly facilitate future functional studies to further characterize the role of this activating receptor in responses against cancer and virus-infected cells.

Image Cytometry as an Alternative to Flow Cytometry for the Transplant Histocompatibility Crossmatch Assay

Ramon DS, Franks T, Jaramillo A, Paradis BD, Chan LL.

HLA. 2019 Mar 5. doi: 10.1111/tan.13515.

Flow cytometry crossmatch (FCXM) allows the sensitive and specific detection of donor specific antibodies (DSAs), facilitating organ distribution, donor selection and post-transplant risk assessment. However, the costs and expertise required to maintain a flow cytometer are often difficult to afford for small immunogenetics laboratories. To overcome this issue, the authors of the present study tested whether crossmatch analysis could be downscaled to an image cytometer. They tested in parallel 39 samples with both technologies, verified the linearity of detection through serial dilutions of the tested samples and overall achieved a concordance sensitivity of 94.1% and 100% and specificity of 100% and 88.9% for T cells and B cells, respectively. They conclude that FCXM can be easily adapted to simpler and less expensive image cytometers without compromising assay specificity and sensitivity.

Finally we would like to point the attention of the EFI newsletter readership to two excellent reviews published in the latest issues of *HLA*, focused respectively on flow cytometry crossmatching for kidney transplantation (December issue) and on how structural and functional variations of the MHC influence the development of human disease (January issue), and on a special issue of *HLA* published in December and collecting abstracts and brief overview articles from the 12th East-West Immunogenetics Conference.





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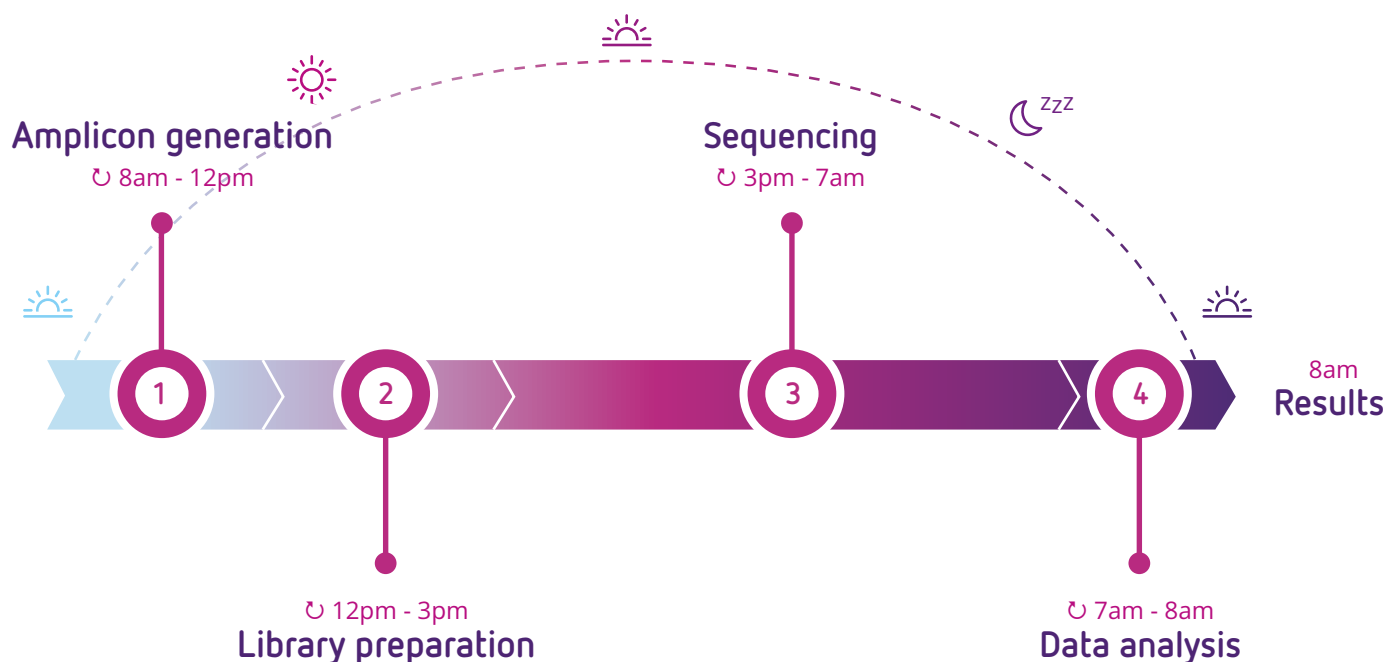


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