



37TH EUROPEAN IMMUNOGENETICS & HISTOCOMPATIBILITY CONFERENCE

20–23 MAY, 2024
GENEVA, SWITZERLAND



ABSTRACT SESSIONS

TUESDAY 21 MAY 2024

Hall A

10:30 – 12:00 Abstract session 1: Immunotherapy, Gene Therapy & NK cells

Chairpersons Britta Eiz-Vesper, Roberto Crocchiolo

- O49 HLA-DQ2 Chimeric HLA Antibody Receptor (CHAR) T cells to target HLA-DQ2-specific B cells to desensitize patients in solid organ transplantation
Ilse Gille
- O50 Identification of immune-modulating ligands and cytokine expression patterns in organoids exposed to inflammatory cytokines
Anika Schumacher
- O51 Unprecedented survival improvement in patients with progressive multifocal leukoencephalopathy by partially HLA-matched polyomavirus-specific T-cell therapy
Agnes Bonifacius
- O52 In vitro profiling of post-transplant immunosuppressants reveals distinct impact on antiviral T-cell immunity
Agnes Bonifacius
- O53 Humoral response in lung cancer patients treated with a plasmacytoid dendritic allogeneic cell line-based cancer vaccine
Severine Planel
- O54 Reducing the immunogenicity of the heart by genetic engineering during normothermic ex-vivo heart perfusion
Constanca Figueiredo
- O55 The KIR system in a West African chimpanzee population shows limited genetic variation and skewing of the inhibitory lineage III KIR towards C2 specificity
Natasja de Groot
- O56 Disparities between inhibitory KIR receptors and their HLA ligands influence the clinical outcome of haploidentical hematopoietic stem-cell transplantation with post-transplant cyclophosphamide
Jairo Eduardo Niño-Ramírez

Hall C

10:30 – 12:00 Abstract session 2: Bioinformatics, data analysis in Immunogenetics

Chairpersons Martin Maiers, James Robinson

- O17 Assessment of HLA-DQ Genetic Variation with an HLA-DQ Heterodimers Tool and Implications in Clinical Transplantation Across Diverse Populations
Ray Sajulga
- O18 Kidney Graft Survival is Predicted by Allele-specific Solvent-accessible Surface-protruding Amino Acid Mismatches and Indirect T-Cell Epitopes
Matthias Niemann
- O19 HLA amino acid residues determining epitope defining HLA serotypes under the spotlight
Kazutoyo Osoegawa
- O20 Imputing HLA class II alleles in admixed populations with high accuracy
Nayane S. B. Silva
- O21 IPD-IMGT/HLA Sequence Feature Annotation Tool
Dominic J Barker



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- 022 When human leukocyte antigen individual data is no longer personal health information: developing digital genetic twins under the balance of utility and privacy
Igor Faddeenkov
- 023 AlloPipe provides new insights in alloreactivity and related immune processes.
Adèle Dhuyser
- 024 GnomiC Typer: Uncovering Homopolymer and Repeat Region Sequencing Errors via k-mer based HLA typing
Richard H.L. Natarajan

Hall A

14:00 – 15:30 Abstract session 3: New technologies in Immunogenetics

Chairpersons

Eric Spierings, Jakob Nilsson

- 065 Differential expression of HLA-DM and HLA-DO genes in normal cells, tissues and leukemia: a review of public data
Pietro Crivello
- 066 Comparative performance assessment and validation of a decentralized donor-derived cell-free DNA assay for kidney allograft rejection monitoring
Alexandre Loupy
- 067 Comparing HLA loss detection by NGS versus qPCR.
Sake van Wageningen
- 068 Identification and characterization of the novel fusion gene LILRB3-LILRB5 by long-read sequencing
Katsushi Tokunaga
- 069 Different strategies to resolve complete KIR haplotypes using long-read ONT sequencing
Marit van der Wiel
- 070 Genotyping of MICA and MICB using a full-length gene sequencing strategy for a large panel of International Histocompatibility Workshop cell lines
Jonathan A.M. Lucas
- 071 Sensitive NGS-based chimerism monitoring using ONT sequencing
Maaïke Rijkers
- 072 Enhancing PCR Stability for HLA Genotyping from Buccal Swab Samples through the incorporation of Bovine Serum Albumin
Julia Phieler

Hall C

14:00 – 15:30 Abstract session 4: Immunogenetics in Organ Transplantation 1

Chairpersons

Caroline Wehmeier, Claudia Lehman

- 033 Single-cell transcriptomics reveals CD8⁺ T cell clonotypes with effector functions are associated with lung allograft rejection
Nicole Mifsud
- 034 PD-L1 overexpression on porcine kidneys decreases xenogeneic human T-cell immune responses
Sevval Besli
- 035 HLA DQ β 0601, a diverse HLA class II beta-chain that forms interisotypic-heterodimers with DR α and DP α
Remi Shih
- 036 Prefomed cytokine autoantibodies are predictive for histological features of kidney graft damage
Florian Emmerich
- 037 Pre-transplant donor specific antibodies in ABO incompatible kidney transplantation – Data from the Swiss Transplant Cohort Study
Lukas Frischknecht



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- O38 Homozygosity of any HLA is associated with dedicated HLA antibody patterns: the taboo concept 2.0.
Nils Lachmann
- O39 Donor HLA class 1 evolutionary divergence predicts late allograft rejection after pediatric liver transplantation: a long-term retrospective study
Margot Lepage
- O40 Confirmation of the multi-parametric cfDNA algorithm for early allograft injury events in lung transplantation
Pascal Pedini

WEDNESDAY 22 MAY 2024

Hall A

10:30 – 12:00 Abstract session 5: Immunogenetics in Organ Transplantation 2

Chairpersons

Valérie Olivier, Jean-Luc Taupin

- O41 HLA-specific memory B cell detection in kidney transplantation: Results from a prospective explorative study
Caroline Wehmeier
- O42 MICA and NKG2D gene polymorphisms influence chronic rejection, graft function, and response to therapy in kidney transplantation
Stefano Mocci
- O43 Inactivating GSK3 phosphorylation by intracellular HLA-signaling
Florian Emmerich
- O44 DRB1*01:02 allele is associated with anti AT1R antibodies production
Gabriele Maria Togliatto
- O45 Molecular mismatch tools to predict events within the first year after renal transplantation
Stefan Schaub
- O46 The Mayo Clinic in Arizona Virtual Crossmatch Algorithm: An Accurate and Safe Alternative for Assessing HLA Compatibility
Katrin Hacke
- O47 Imlifidase in highly sensitized kidney transplant recipients with a positive crossmatch against a deceased donor : preliminary results of the French cohort
Gwendaline Guidicelli
- O48 Assessing the Diagnostic Utility of Donor-Derived Cell-Free DNA for Evaluating Kidney Allograft Rejection: Results from the EvAcADE Study
Francisco Boix

Hall C

10:30 – 12:00 Abstract session 6: MHC Evolution, Population Genetics

Chairpersons

Natasja de Groot, Steven Mack

- O57 Characterising Functional Complementarity and the Impact of Natural Selection on HLA Class I Haplotypes
Da Di
- O58 Unravelling the architecture of MHC class II haplotypes in rhesus macaques: towards understanding the biological relevance of a pseudogene
Nanine de Groot
- O59 Unraveling the evolutionary history of human and great ape Mhc-DQA1 lineages through full-length third-generation sequencing
Corrine Heijmans



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- O60 Evolution trajectories of the Major Histocompatibility Complex (MHC) class I genes in humans, chimpanzees and bonobos
Pascale Gerbault
- O61 Maternal-fetal HLA compatibility and pregnancy outcome in a genetically isolated population
Liseanne J. van T Hof
- O62 Prognostic role of HLA alleles and Cytokines Single-nucleotide polymorphisms in Chronic Myeloid Leukemia patients treated with Tyrosine kinase inhibitor drugs
Samuel Kinde Birru
- O63 Major Histocompatibility Complex (MHC)-I molecules and intron 2 of a wild songbirds around World show striking differences with other vertebrates
Antonio Arnaiz-Villena
- O64 High-resolution HLA haplotype frequencies of four population groups in South Africa
Jürgen Sauter

Hall A

14:00 – 15:30 Abstract session 7: Hematopoietic stem-cell transplantation (HSCT)

Chairpersons

Nina Svetlitky, Katatzyna Bogunia-Kubik

- O25 Barcoded peptide-MHC multimers to measure T cell frequencies against a large repertoire of HLA class I-restricted minor histocompatibility antigens after allogeneic stem cell transplantation
Marieke Griffioen
- O26 HLA-DPB1 allele and rs9277534 expression SNP mismatch number drive increased aGVHD and TRM, in a UK cohort of 10/10 matched HCT patients
Thomas R. Turner
- O27 High-resolution KIR genotyping and its implication in allogeneic hematopoietic stem cell transplantation
Antonia Schäfer
- O28 Cryopreservation of Peripheral Blood Stem Cell Grafts for Hematopoietic Stem Cell Transplantation Changes the Frequencies of CD56+ MAIT Cells
Elke Rücker-Braun
- O29 Study of HLA-DP mismatch effects in a Swiss hematopoietic stem cell transplantation cohort
Julien Racle
- O30 Cytomegalovirus Antigen Load as a new predictive factor after haploidentical hematopoietic stem cell transplantation
Antonio Milano
- O31 A Biomarker Model for Non-relapse Mortality (NRM) Risk Monitoring After Hematopoietic Stem Cell Transplantation
Xiangjun Liu
- O32 Mutations in leukemic cells may lead to difficulties in HLA typing: Report of ten challenging cases
Christine Neuchel

Hall C

14:00 – 15:30 Abstract session 8: Autoimmunity, Infection, Reproduction & Cancer

Chairpersons

Danillo Augusto, Fatma Oguz

- O8 Structural basis of public TCRs recognition of immunodominant NQK-Q8 spike epitope presented by COVID protective HLA-B15 molecule
Stephanie Gras



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- O10 HLA Variation Shapes the Autoantibody Repertoire in Healthy Individuals
Juliano Boquett
- O11 Heterogeneity of HLA-associated type 1 diabetes susceptibility among populations suggests that some risk may be conferred by novel mechanisms
Janelle A. Noble
- O12 Single-cell transcriptomics of immune cells from zymosan-treated mice clarifies the anti-inflammatory effect of β -NMN in sepsis treatment
Nicolas Hulo
- O13 Paternal HLA-Derived Epitopes and Live Birth in Secondary Recurrent Pregnancy Loss: New Insights from a Clinical Trial
Emma Peereboom
- O14 Characterization of LAIR-1 polymorphism, an inhibitory collagen-binding receptor, present in various primate species
Annemiek de Vos-Rouweler
- O15 HLA combination analysis reveals differentially multiple sclerosis associated combinations, suggesting differences in the underlying pathogenesis mechanism
Anna Serova-Erard
- O16 Gene expression of TLRs, MYD88 and NF κ B associated with risk for severe autism
Anna Alekseeva

THURSDAY 23 MAY 2024

Hall B

8:30 – 10:00

Best abstract session

Chairpersons

Marco Andreani, Luca Vago

- O1 Do End-Of-Life Events Perturb the Peptide Landscape of Transplant Donor Tissues
Nicole Mifsud
- O2 High-resolution MHC sequencing reveals local genetic architecture of multiple sclerosis in a trans-ethnic cohort
Kristen Wade
- O3 HLA class I mismatches associate with reduced survival in contemporary HCT with PTCy: a comprehensive study by the Cellular Therapy and Immunobiology Working Party of the EBMT
Esteban Arrieta-Bolaños
- O4 Megakaryocytes with downregulated HLA class I and II expression are protected from cellular and humoral allogeneic immune responses
Alice Rovai
- O5 Molecular diversity of Human Leukocyte Antigen (HLA) genes in Africa: extensive analysis of long-range DNA sequences for 12 Class I and Class II loci in 32 populations living across the whole continent
Ndeye K. Faye
- O6 Natural killer and T cell repertoire reconstitution is established early after allogeneic hematopoietic stem cell transplantation and is profoundly imprinted by CMV reactivation
Antonia Schäfer
- O7 Peptide sharing between CMV and mismatched HLA class I peptides promotes T-cell-mediated rejection after kidney transplantation
Emma Peereboom
- O9 Potential imprinting of frequent HLA-DPB1 alleles on the genome and immunogenicity of cytomegalovirus
Luisa Betke