

EFIS Congress



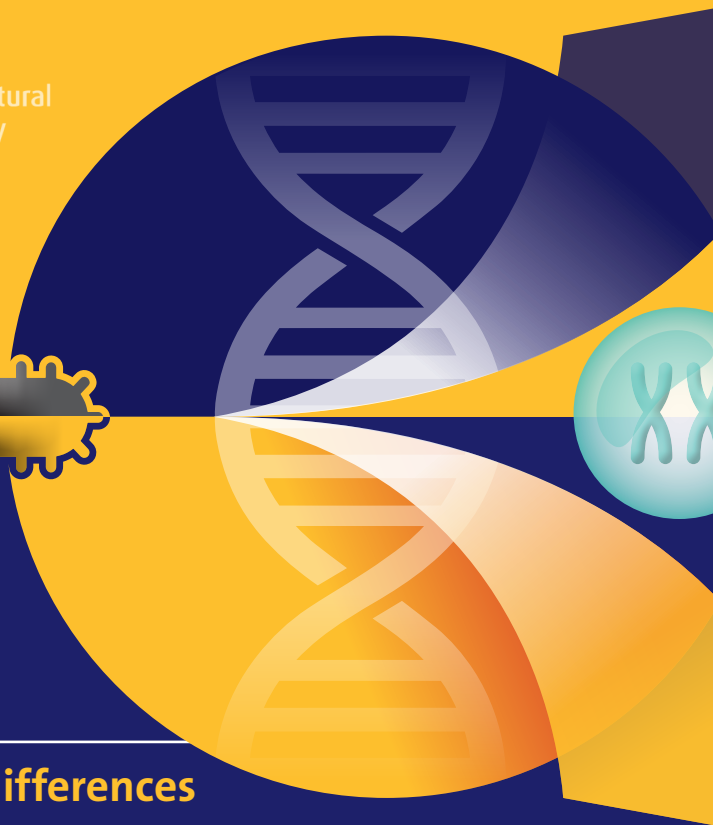
Sex Differences in Immunity

8/9th October 2026

CSSB | Hamburg



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Centre for Structural
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Gender and sex differences
Immunity across age and sex
Mucosal and tissue immunology
Evolutionary immunology
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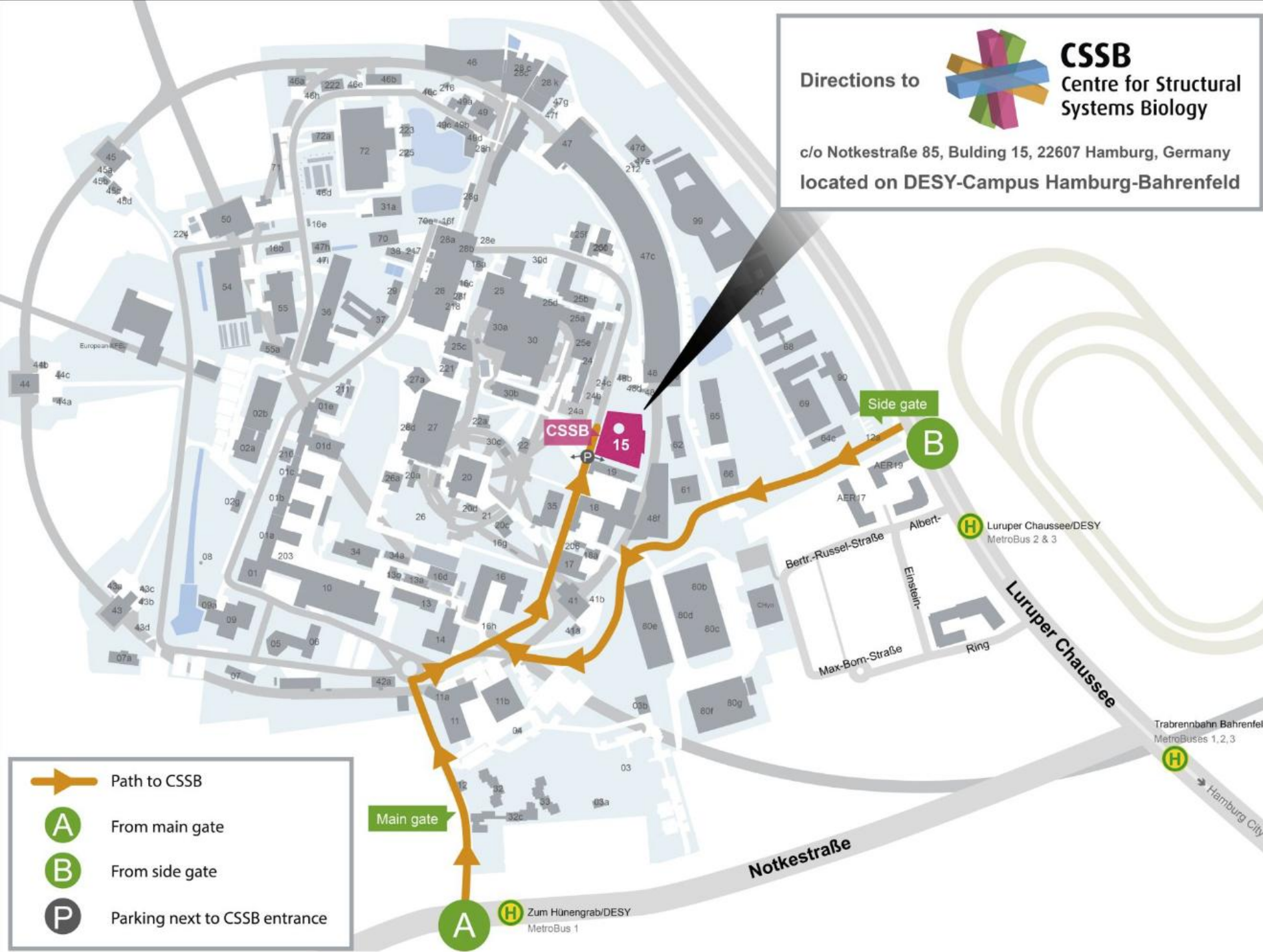
Bernhard-Nocht-Institut für Tropenmedizin



Research Center Borstel
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Directions to



CSSB
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c/o Notkestraße 85, Bulding 15, 22607 Hamburg, Germany
located on DESY-Campus Hamburg-Bahrenfeld

By city bike ([StadtRAD](#))

from the following central S- train stations:

- Train station Altona: 6 km to DESY main entrance Notkestraße 85
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 - Train station Othmarschen: 2 km to the DESY main entrance Notkestraße 85
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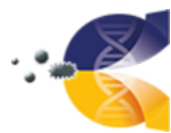
- Bus stop for the main entrance: Zum Hünengrab (DESY)
- Bus stop for the side entrance: Luruper Chaussee (DESY)
- For further information about the route planner: www.hvv.de

By car

- Due to construction work on our campus, access to **CSSB (Notkestraße 85, Building 15)** is only possible via the **Notkestraße entrance** (main campus entrance, **path A** on the map) on this day. Please pick up a „Guest parking ticket“ at the Notkestraße entrance and display it visibly in your car. Parking with car is available in front of CSSB and elsewhere on campus.

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- Hamburg Airport "Helmut Schmidt"
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- Taxi from there: travelling time about 40 minutes
- For further information about the route planner: www.hvv.de



08:30 – 09:00 Registration & Welcome Coffee

09:00 – 09:30 Opening Session

Welcome by Marcus Altfeld and Tal Pacht

Welcome Addresses by:

- **Senator Maryam Blumenthal**, Präses der Behörde für Wissenschaft, Forschung und Gleichstellung, Hamburg
- **Prof. Dr. Petra Arck**, Vice-Dean for Research, University Medical Center Hamburg-Eppendorf

09:30 – 11:00 | Session 1: Sex Differences in Infections

Chairs: Barbara Honecker & Cliona O'Farrelly

KEYNOTE TALK: Sabra Klein, Johns Hopkins University

- **Juliana Gonçalves** (NOVA University, Portugal): Long-term sex differences in symptoms and immune profile in long COVID
- **Sabrina Leddy** (Leibniz Institute of Virology, Germany): Sex-biased immune regulatory networks in CD4+ T cells are associated with HIV-1 control
- **Laura Ramirez Finn** (Institute Pasteur, France): Understanding the early immune response between the sexes during urinary tract infection
- **Marta Araujo** (University of Minho, Portugal): Sex-dependent lipid remodeling determines the response to cPLA2 inhibition during visceral leishmaniasis

11:00 – 11:30 Coffee Break & Networking with Refreshments

11:30 – 12:30 Session 2: Temperature- and Cycle-Dependent Regulation of Immunity

Chairs: Maria Pujantell & Helena Soares

KEYNOTE TALK: Tal Pecht, University of Bonn

- **Niamh Kenny** (Trinity College, Ireland): Immune dysregulation in endometriosis-associated infertility: insights from bioinformatic analysis and menstrual blood immune profiling
- **Elizabeth Maloney** (Institute Pasteur, France): Differences in body temperature drive sex-specific immune responses

12:30 – 12:45 Group Picture

12:45 – 14:30 Lunch & Poster Session

14:30 – 16:00 Session 3: Impact of Sex Chromosome Effects

Chairs: Lara Buer & Tal Shay

KEYNOTE TALK: Lars Forsberg, Uppsala University

- **Amy L. Roberts** (King's College London, UK): Diminished sex hormone levels influence the risk of skewed X chromosome inactivation in ageing females
- **Miriam Bollmann** (University of Gothenburg, Sweden): Untangling sex chromosome effects on human antiviral immunity through 46XX/46XY mosaicism
- **Nila H. Servaas** (Amsterdam UMC, Netherlands): Examining exhaustion: X chromosome inactivation dynamics shape sex-biased T cell exhaustion
- **Alisdair Mallard** (Charité Universitätsmedizin, Germany): Estrogen-independent Estrogen Receptor β signaling maintains X chromosome inactivation and prevents lupus-associated escape from inactivation in Th17 polarized cells

16:00 – 16:30 Coffee Break & Networking

16:30 – 17:30 Session 4: Sex-Specific Regulation of Immunity

Chairs: Michael Brehler & Camila Consiglio

- **Tal Shay** (Ben-Gurion University of the Negev, Israel): Transcriptional sexual dimorphism in mouse T cells
- **Dhaifaf Sarhan** (Karolinska Institutet, Sweden): Host FPR2 limits immunotherapy response through sex dependent macrophage niches in pancreatic ductal adenocarcinoma
- **Dakyung Lee** (University Medical Center Hamburg-Eppendorf, Germany): Sex differences and the role of androgens in murine cholangiocytes
- **Joan Escrivá-Font** (Lund University, Sweden): Androgen signaling drives the pro-reparative immune transition during COVID-19 recovery

17:30 – 18:00

Themis & Institut Pasteur present:

Closing the Sex & Gender Gap in Biomedical Research: A European Framework for Scientific, Regulatory, and Institutional Change

18:00 – 20:00 Poster Session & Finger Food Reception



08:30 – 09:00 **Arrival & Morning Coffee**

09:00 – 10:30 **Session 5: Gender-Affirming Hormone Therapy and Transgender Health**

Chairs: Dorothee Schwinge & Marcus Altfeld

KEYNOTE TALK: Richard Saffery, University of Melbourne

- **Barbara Honecker** (Bernhard Nocht Institute for Tropical Medicine, Germany): Modulation of monocyte immune responses by sex hormones during gender-affirming hormone therapy
- **Mario A. Duque-Villegas** (Leibniz Institute of Virology, Germany): Downregulation of complement proteome during feminizing gender-affirming hormone therapy
- **Anthony Willems** (Ghent University, Belgium): Divergent innate and humoral immune responses to 4CMenB vaccination in transgender individuals receiving gender-affirming hormone therapy

10:30 – 11:00 **Coffee Break**

11:00 – 12:45 **Session 6: Sex-Specific Immunity from Health to Healthy Aging and Disease**

Chairs: Hanna Lotter & Molly Ingersoll

- **Chun-Chi Chang** (Lund University, Sweden): From hormones to host defense: immune adaptation following Androgen deprivation therapy
- **Jamie Sugrue** (Institut Pasteur, France): Pathway-specific sex differences in type I interferon responses in humans
- **Johannes U Mayer** (University Medical Center Mainz, Germany): The SAGE-Immune clock: determining sex-specific patterns of immune cell aging in healthy individuals
- **Dimitrios Nikolaos Kapisiris** (University Medical Center Hamburg-Eppendorf, Germany): Interactions between lung microenvironment and immune responses in the sex-specific manifestation of asthma
- **Sneha Kanungo** (University of Bonn, Germany): Sex shapes obesity-associated immune transcriptional signatures in a Tanzanian cohort

KEYNOTE TALK: Darragh Duffy, Institute Pasteur

12:45 – 13:00 **Closing Remarks & Feedback Session**

13:00 – 14:00 **Networking Lunch**

P.1 Sex Differences in Response to Anti-Viral Vaccines in Healthcare Workers: Potential Sex-Specific Biomarkers

A. Ruggiero (1), S. Anticoli (1), M. Dorrucchi (2), T. Giovagnoli (1), M.T. Pagano (1), C. Albano (3), R. Carsetti (3), K.M. Kwiatkowska (4), P. Garagnani (4), N. Vonesch (5), P. Tomao (5) and A. Ruggieri (1)

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(5) Department of Occupational and Environmental Medicine, Epidemiology and Hygiene, Italian Workers' Compensation Authority (INAIL), Monte Porzio Catone, Rome, Italy

P.2 Sex-dependent symptom-specific immune dysregulations trigger the onset of Long COVID through a comprehensive longitudinal cohort analysis

Aristeidis Roubanis (1), Jochen Ohnmacht (2), Olivia Domingues (1), Dmitry Bulaev (3), Susanne V. Schmidt (4), Antonio Cosma (5), Markus Ollert (1), Rejko Krüger (2,6), Feng Q. HeFeng (1)

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(5) National Cytometry Platform, Luxembourg Institute of Health, Esch-sur-Alzette, Luxembourg;

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(7) Luxembourg Centre for Systems Biomedicine (LCSB), University of Luxembourg, Belvaux, Luxembourg;

P.3 Enhanced Hmga1/CCL2-mediated monocytic inflammation drives accelerated glomerular injury in male mice

Elena Jost (1,2), Charlotte Kolck (1,2), Emily Schepke (1,2), Josephine Quaas (1,2), Nikolay Zolotarev (2,3), Pamela Marie Sendon (2,3), Nastassia Maier (2,3), Maja Lindenmeyer (2,3), Anja Obser (2,3), Ilka Edenhofer (2,3), Catherine Meyer-Schwesinger (2,4), Wiebke Sachs (2,4), Tobias B. Huber (2,3), Dimitra Zazara (1), Shun Lu (2,3), Shuya Liu (2,3), Fabian Braun (2,3), Ania C. Muntau (1), Jun Oh (1,2), Anne K. Mühlig (1,2,3)

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(3) III. Department of Medicine, University Medical Center Hamburg-Eppendorf

(4) Institute of Cellular and Integrative Physiology, University Medical Center Hamburg-Eppendorf

P.4 Cytokine Dynamics Following Initiation of Gender-Affirming Hormone Therapy in Transgender Subjects.

Yaël Sertons (1)*, Sarah Collet (1)*, Jeroen Vervalcke (1), Justine Defreyne (1,2), Sven C. Mueller (3), Mattias Hofmans (4,5), Carolien Bonroy (4,5), Valentino D'Onofrio (5), Guido Snaterse (1), Guy T'Sjoen (1,2), Bruno Lapauw (1)

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(5) Department of Diagnostic Sciences, Ghent University, Ghent, Belgium. *These authors contributed equally and share first authorship of this work.

P.5 Sex differences in morphological and functional compartments of the human thymus identified by spatial multiomic studies

Viktoria Hennings (1,2), Anneke van Dijk (1), Andri Lemarquis (3,4,5), Vanja Lundberg (1), Karolina Thörn (1), Carolina Oses Selpulveda (6), Christina Lundqvist (1), Charlotte Stadler (6), Olov Ekwall (1,2)

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(6) Science for Life Laboratory, School of Biotechnology, KTH Royal Institute of Technology, Stockholm, Sweden.

P.6 Steatotic liver disease risk is imprinted on systemic immunity by sex and PNPLA3 I148M genotype: Evidence for early myeloid-mediated liver stress.

Hio Lam Phoebe TSOU (1), Sara MARGARITA (2), Serena PELUSI (2), Andrea SICILIANO (2), Lorenzo MIANO (2), Daniele PRATI (2), Luca VALENTI (2,3,4), Antonio RIVA (1,4,5)

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(3) Department of Pathophysiology and Transplantation, Università degli Studi di Milano, Milan, Italy;

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P.7 The impact of pharmacological female sex hormone modulation on disease activity and disease experience in patients with IMiDs: A Systematic Review

Catherine Westhead (1), Iona Glidden (1), Anika Schwarze-Chintapatla (2), Sung-Hee Kim (2), Laura Coates (1), James Fullerton (1)

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(2) Oxford University Hospitals, NHS Foundation Trust, Oxford, UK

P.8 Development of a novel in vitro toolbox to investigate the influence of sex hormones on human immune cell phenotype and function.

Iona Glidden (1), Loren Kell (1), Barbara Kronsteiner (2), Jen Southcombe (3), James Fullerton (1)

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P.9 Advanced Imaging and AI Analysis Reveal Sex-Specific B Cell Responses During Mycobacterium tuberculosis Infection

David Hertz (1), Ali A. Tuz (2), Sebastian Marwitz (3), Jochen Behrends (4), Matthias Gunzer (2), Torsten Goldmann (3), Bianca E. Schneider (1)

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(4) Core Facility Fluorescence Cytometry, Research Center Borstel, Borstel, Germany

P.10 The Endometrial Orchestra: How hormones direct immune cell dynamics

Anna Castellet (1), Camila R. Consiglio (1)

(1) Systems Immunology Lab, Division of Molecular Hematology, Department of Laboratory Medicine, Lund Stem Cell Center, Lund University, Lund, Sweden

P.11 Longitudinal multi-layer profiling reveals structured, feature-specific peripheral immune variation across the menstrual cycle

Lisa Holsten (1,2)*, Pia Grundschoettel (1,2)*, Alina Malin Schieren (3), Laura Lang (1,2), Sabrina Schenk (3), Philipp Koch (1), Nico Reusch (1,2), Johanna Franz (1), Sophie Lindenberg (1,4), Jannis B Spintge (1), Waqar Hanif (1,2), Janina Lösch (1), Nòra Balzer (2), Martina van Uelft (1,2), Dina Huesson (1), Elena De-Domenico (5), Marc D Beyer (1,5), Matthias Becker (1,6), Ramona Dolscheid-Pommerich (4), Manfred Schmolz (7), Jonas Schulte-Schrepping (1,5), Lorenzo Bonaguro (1,5), Anna C Aschenbrenner (1), Thomas Ulas (1,2,5), Joachim L Schultze (1,5), Marie-Christine Simon (3)†, Tal Pecht (1,2,4)†

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(7) HOT Screen GmbH, Reutlingen, Germany. (*) These authors contributed equally to this work. (†) These authors jointly supervised this work.

P.12 Recipient and donor sex influence outcome of allogeneic stem cell transplantation: a retrospective single center analysis

Franziska Marquard (1), Evgeny Klychnikov (1), Carlotta Staschewski (1), Jette Lüdersen (1), Silke Heidenreich (1), Ina Rudolph (1), Jochim Reinert (1), Catherina Lück (1), Boris Fehse (1), Francis Ayuk (1)

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P.13 Sex-dependent circulating mitochondrial DNA signatures in rheumatoid arthritis

Ruoyu Song (1), Zhihua Yang (1), Hanns-Martin Lorenz (1), Karolina Gente (1), M Margarida Souto-Carneiro (1)

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P.14 Sex Differences as a Framework to Define Molecular Regulators of CNS T Cell Residency in Chronic Neuroinflammation

Lena Kristina Pfeffer (1,2), Jana K. Sonner (1), Alexandros Hadjilaou (1), Michael Kilian (2), Max Kaufmann (1), Anastasia Eleftheraki (1), Jan Broder Engler (1), Simone Bauer (1), Nina Meurs (1), Vanessa Vieira (1), Francisco J. Quintana (2,3,4), Manuel A. Friese (1)

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P.15 Sex Differences in Cardiovascular Disease: Single-cell RNA-seq analysis of Immune Responses Post-Myocardial Infarction

Anindita Ray (1), Gabriel Jakobsson (2), Jennifer Vallejo (2), Alexandru Schiopu (2)*, Camila Consiglio (1)*

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P.16 Modeling HIV-1 infection in tonsil/adenoid organoids to study sex differences in viral replication and persistence

Sara Andújar Palomino (1), Marta Mastalska (1), Charlotte Kötting (1,3), Henrike Barbara Zech (3), Anna-Sophie Hoffmann (3), Rupert Stadlhofer (3), Jana Hennesen (1), Maria Pujantell (1), Lennart Hermanussen (1,2), Marcus Altfeld (1)

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P.17 A Stronger Th2 Response Drives Female Resistance to Parasitic Helminth Infection

B. Viebrock (1), W. Hartmann (1), L. Heepmann (1), S. Dörken (1), M. Breloer (1,2), L. Linnemann (1)

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P.18 Why Females Win: Enhanced Th2 Responses During Helminth Infection

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P.19 IL-10+ Foxp3+ Treg cells mediate the prometastatic effects of androgens in the liver

Morsal Sabihi (1), Tao Zhang (1), Siwen Zhang (1), Samuel Huber (1), Anastasios Giannou (1)

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P.20 Immunological profiling across the menstrual cycle: operational challenges and biological insights from a longitudinal observational study

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P.21 Sex-specific activation of the JNK pathway by dopaminergic signaling in human immune cells

Estefania Martinez-Albert (1), Silvia Capellino (1)

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P.22 Sex-specific alteration of immune aging in rheumatoid arthritis patients

Luca Hammen (1), Christian Schütz (2), Maren Claus (1), Laura Ney (2), Xenofon Baraliakos (2), Silvia Capellino (1)

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P.23 Investigating the Impact of Perfluorobutanesulfonic Acid (PFBS) on Endocrine and Immune Function in Young Women: Insights from the Milieu Intérieur Cohort

Andrea Checcoli (1,2), Melanie Briard (1,2), Violaine Saint-André (1,2) and Darragh Duffy (1,2)

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(2) UMR U1223 "Pathophysiology of the immune system", INSERM, Paris, France

P.24 Investigating macrophage-nerve crosstalk in homeostasis and post-stroke spontaneous urinary tract infection

Sonia Elder (1), Molly Ingersoll (1), Laura McCulloch (2)

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P.25 Sex and Age Associated Gut Microbiome Dynamics in Healthy Asian and European Populations

Sonia Younas (1), Theodora H Y Luk (1), Peter K C Chung (1), Ashley B S Li (1), Raina Mok (1), Hebronson Yung (1), HHGP-HK Consortium, Milieu Interieur Consortium, Rex L Hung (1,3), Malik Peiris (1,3), Etienne Patin (3), Lluís Quintana-Murci (3), James P. Di Santo (1,2), Milena Hasan (5), Allyson Byrd (6), Roberto Bruzzzone (1,7), Wilson W Ng (1), Vincent Rouilly (1,8), Lai Wei (9), Darragh Duffy (1,10)

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P.26 Sex-specific Immune Profiles in Acute Proinflammatory Sepsis

Stavroula Litsiou (1), Stephan Culemann (1,3) and Claudia Waskow (1,2)

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P.27 Obesity-associated immune dysfunction affects natural immunoglobulin production, vaccination outcomes and B cell maturation

Erika Garner-Spitzer (1), Angelika Wagner (1), Angela Guzek (1), Ines Zwazl (1), Claudia Seidl-Friedrich (1), Melissa Zenker (2), Magdalini Nigritinou (2), Dimitrios Tsiantoulas (2), Sophia Derdak (3), Martin Bilban (3), Christoph J. Binder (2), Michael Kundi (4), Ursula Wiedermann (1)

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P.28 Transient upregulation of REPAIR $\gamma\delta$ T cells in the bloodstream of neonates with Hypoxic-ischemic encephalopathy (HIE)

Vicente Almeida (1), Ximena Leon-Lara (1), Tao Yang (1), Moana Dempsey (1), Rodrigo Gutierrez-Jauregui (1), Anika Janssen (1), Reinhold Förster (1,3), Manuela F Richter (2), Sarina Ravens (1,3)

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P.29 Longitudinal scRNA Sequencing Reveals Hormone-Dependent Regulation of NK cells During Gender Affirming Hormone Therapy

Maria Pujantell (1), Robin Khatri (2,4), Nikolaos-Taxiarchis Skenteris (1), Arne Düsedau (1), Silke Giesemann-Jansen (5), Dakyung Lee (3,4), Dorothee Schwinge (3,4), Christoph Schramm (3,4), Stefan Bonn (2,4), Marcus Altfeld (1,5).

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P.30 Immune aging unmasks sex-specific alterations in IL-15 signalling

Lena Fonteyn (1,2), Paulien Baeten (1,3), Ana Laura Añe Kouri (1), Marie Rutten (1), Jana Van Broeckhoven (1,3), Leen Slaets (1,3), Bert O Eijnde (2), Niels Hellings (1,3)

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P.31 Evidence of sex specific trained immunity against Influenza-A virus infection after exposure to prenatal stress

Ioannis Belios (1,2), Christopher Urbschat (1), Pauline Wiemers (1), Kristin Thiele (1), Stephanie Bertram (3), Gülsah Gabriel (3), Dimitra E. Zazara (1,4), Petra C. Arck (1).

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P.32 Metabolic features impact the immune serum proteome of females with polyendocrine metabolic ovarian syndrome

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P.33 Development of a systems-level immune profiling protocol for the menstrual blood

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P.34 Sex-specific immunometabolic alterations associated with reduced pneumococcal antibody responses in HIV-1-exposed uninfected children

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P.35 Exploration of Global and Female-specific Gene-Based Differences among SLE Genetic Risk Loci in the Context of Environmental Exposures

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P.36 Sex Differences in Immune Response to an MVA-Based Vaccine Against Middle East Respiratory Syndrome (MERS)

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