NSI Immunology Journal Club

List of papers presented in 2025 with names of speakers

Coupling antigens from multiple subtypes of influenza can broaden antibody and T cell responses, published in ***Science***, December 2024, presented by Taissa de Matos Kasahara on 28.02.2025
https://www.science.org/doi/10.1126/science.adi2396

Conversion of vaccines from low to high immunogenicity by antibodies with epitope complementarity, published in ***Immunity***, October 2024, presented by Elias Tjärnhage on 28.02.2025
https://pubmed.ncbi.nlm.nih.gov/39305904/

Functional differences between rodent and human PD-1 linked to evolutionary divergence, published in ***Science Immunology***, January 2025, presented by Thibault Leray on 07.03.2025
https://www.science.org/doi/10.1126/sciimmunol.ads6295

Integrating single-cell RNA and T cell/B cell receptor sequencing with mass cytometry reveals dynamic trajectories of human peripheral immune cells from birth to old age, published in ***Nature Immunology***, January 2025, presented by Fatemeh Kaveh on 07.03.2025
https://www.nature.com/articles/s41590-024-02059-6

Continuous replenishment of the dysfunctional CD8 T cell axis is associated with response to chemoimmunotherapy in advanced breast cancer, published in ***Cell Reports Medicine***, March 2025, presented by Hassen Kared on 14.03.2025
https://doi.org/10.1016/j.xcrm.2025.101973

Robust mucosal SARS-CoV-2-specific T cells effectively combat COVID-19 and establish polyfunctional resident memory in patient lungs, published in ***Nature Immunology***, January 2025,
presented by Hassen Kared on 14.03.2025
https://doi.org/10.1038/s41590-024-02072-9

Splenic TNF-α signaling potentiates the innate-to-adaptive transition of antiviral NK cells, published in ***Immunity***, March 2025, presented by Erik Dissen on 21.03.2025
https://www.cell.com/immunity/abstract/S1074-7613(25)00079-2

NK cells restrain cytotoxic CD8+ T cells in the submandibular gland via PD-1–PD-L1, published in ***Science Immunology***, December 2024, presented by Erik Dissen on 21.03.2025
https://www.science.org/doi/10.1126/sciimmunol.adl2967

Direct presentation of inflammation-associated self-antigens by thymic innate-like T cells induces elimination of autoreactive CD8+ thymocytes, published in ***Nature Immunology***, July 2024, presented by Adrianna Jebrzycka on 28.03.2025 https://www.nature.com/articles/s41590-024-01899-6

Apex1 safeguards genomic stability to ensure a cytopathic T cell fate in autoimmune disease models, published in ***The Journal of Clinical Investigation***, December 2024, presented by Dorsa Iraji on 28.03.2025
https://www.jci.org/articles/view/183671

Long-lasting B cell convergence to distinct broadly reactive epitopes following vaccination with chimeric influenza virus hemagglutinin, published in ***Immunity***, March 2025, presented by Ina Werninghaus on 04.04.2025
https://doi.org/10.1016/j.immuni.2025.02.025

Early influenza virus exposure shapes the B cell response to influenza vaccination in individuals 50 years later, published in ***Immunity***, March 2025, presented by Demo Tesfaye on 04.04.2025
10.1016/j.immuni.2025.02.004

Altered X-chromosome inactivation of the TLR7/8 locus and heterogeneity of pDCs in systemic sclerosis, published in the ***Journal of Experimental Medicine***, December 2024, presented by Christine Skagen on 11.04.2025
https://doi.org/10.1084/jem.20231809

A triad of somatic mutagenesis converges in self-reactive B cells to cause a virus-induced autoimmune disease, published in ***Immunity***, February 2025, presented by Rasmus Iversen on 11.04.2025
https://doi.org/10.1016/j.immuni.2024.12.011

Regulatory T cells constrain T cells of shared specificity to enforce tolerance during infection, published in ***Science***, February 2025, presented by Corentin Le Saos Patrinos on 25.04.2025
https://www.science.org/doi/10.1126/science.adk3248

System vaccinology analysis of predictors and mechanisms of antibody response durability to multiple vaccines in humans, published in ***Nature Immunology***, January 2025, presented by Gro Tunheim on 09.05.2025
https://www.nature.com/articles/s41590-024-02036-z

Suppression of melanoma by mice lacking MHC-II: Mechanisms and implications for cancer immunotherapy, published in the ***Journal of Experimental Medicine***, October 2024, presented by Shuo-Wang Qiao on 16.05.2025
https://doi.org/10.1084/jem.20240797

RNase T2 restricts TLR13-mediated autoinflammation in vivo, published in the ***Journal of Experimental Medicine***, January 2025, presented by Shuo-Wang Qiao on 16.05.2025
https://doi.org/10.1084/jem.20241424

Autophagy repression by antigen and cytokines shapes mitochondrial, migration and effector machinery in CD8 T cells, published in ***Nature Immunology***, February 2025, presented by Marit Inngjerdingen on 23.05.2025
https://www.nature.com/articles/s41590-025-02090-1

Uptake of lipids from ascites drives NK cell metabolic dysfunction in ovarian cancer, published in ***Science Immunology***, May 2025, presented by Marit Inngjerdingen on 23.05.2025
https://www.science.org/doi/10.1126/sciimmunol.adr4795

Scalable TCR synthesis and screening enables antigen reactivity mapping in vitiligo, published in ***bioRxiv***, April 2025, presented by Lucas Weissenbornon on 06.06.2025
https://www.biorxiv.org/content/10.1101/2025.04.24.649726v1.article-info

Immunosequencing identifies signatures of T cell responses for early detection of nasopharyngeal carcinoma, published in ***Cancer Cell***, August 2025, presented by Fridtjof Lund-Johansen on 06.06.2025
https://www.sciencedirect.com/science/article/pii/S1535610825001680?via%3Dihub

A distinct priming phase regulates CD8 T cell immunity by orchestrating paracrine IL-2 signals, published in ***Science***, April 2025, presented by Hanna Chan on 13.06.2025
https://www.science.org/doi/epdf/10.1126/science.adq1405

Phase separation of chimeric antigen receptor promotes immunological synapse maturation and persistent cytotoxicity, published in ***Immunity***, December 2024, presented by Anne Spurkland on 13.06.2025
https://www.cell.com/immunity/fulltext/S1074-7613(24)00520-X

Unsupervised evolution of protein and antibody complexes with a structure-informed language model, published in ***Science***, July2024, presented by Aygul Minnegalieva on 20.06.2025
https://www.science.org/doi/10.1126/science.adk8946

Replaying germinal center evolution on a quantified affinity landscape, published in ***bioRxiv***, June 2025, presented by Lina Wolfram on 20.06.2025
https://www.biorxiv.org/content/10.1101/2025.06.02.656870v1.article-info

A wave of Thetis cells imparts tolerance to food antigens early in life, published in ***Science***, May 2025, presented by Tor Stuge on 12.09.2025
https://www.science.org/doi/10.1126/science.adp0535

PRDM16-dependent antigen-presenting cells induce tolerance to gut antigens, published in ***Nature***, April 2025, presented by Tor Stuge on 12.09.2025
https://www.nature.com/articles/s41586-025-08982-4

Macrophages direct location-dependent recall of B cell memory to vaccination, published in ***Cell***, June 225, presented by Elias Tjärnhage on 19.09.2025
https://www.cell.com/cell/fulltext/S0092-8674(25)00407-6

B cells shape naive CD8+ T cell programming, published in ***The Journal of Clinical Investigation***, April 2025, presented by Matos Kasahara on 19.09.2025
https://www.jci.org/articles/view/190106

Metabolic reprogramming of naïve regulatory T cells by IL-7 and IL-15 promotes their persistence and performance upon adoptive transfer, published in ***Communications Biology***, January 2025, presented by Nora Marek on 26.09.2025
https://www.nature.com/articles/s42003-024-07381-1

Multiomics dissection of human RAG deficiency reveals distinctive patterns of immune dysregulation but a common inflammatory signature, published in ***Science Immunology***, January 2025, presented by Thea Sjøgren on 26.09.2025
https://www.science.org/doi/10.1126/sciimmunol.adq1697

Cytotoxic CD4+ T-follicular cells may mediate killing against lymphoma cells, published in ***Frontiers in Immunology***, September 2025, presented by Eveline Scherer on 24.10.2025
https://www.frontiersin.org/journals/immunology/articles/10.3389/fimmu.2025.1657046/full

TIGIT and PD-L1 co-blockade promotes clonal expansion of multipotent, non-exhausted antitumor T cells by facilitating co-stimulation, published in ***Nature Cancer***, December 2024, presented by Gwennan Cadiou on 24.10.2025
https://www.nature.com/articles/s43018-024-00870-6

Proximity between LAG-3 and the T cell receptor guides suppression of T cell activation and autoimmunity, published in ***Cell***, July 2025, presented by Ivan Abbedissen on 07.11.2025
DOI: 10.1016/j.cell.2025.06.004

Temporal and context-dependent requirements for the transcription factor Foxp3 expression in regulatory T cells, published in ***Nature Immunology***, November 2025, presented by Ingvild C Olerud on 07.11.2025
https://www.nature.com/articles/s41590-025-02295-4

SARS-CoV-2 mRNA vaccines sensitize tumours to immune checkpoint blockade, published in ***Nature***, October 2025, presented by Hassen Kared on 14.11.2025
https://www.nature.com/articles/s41586-025-09655-y

EBV induces CNS homing of B cells attracting inflammatory T cells, published in ***Nature***, August 2025, presented by Hassen Kared on 14.11.2025
https://www.nature.com/articles/s41586-025-09378-0

Conversion of pathogenic T cells into functionally stabilized Treg cells for antigen-specific immunosuppression in pemphigus vulgaris, published in ***Science Translational Medicine***, October 2025, presented by Ramakrishna P. Gopalakrishnan on 21.11.2025
https://www.science.org/doi/10.1126/scitranslmed.adq9913

Highly functional and prolonged germinal center T follicular helper cell responses are associated with enhanced neutralizing antibody development, published in ***Immunity***, November 2025, presented by Ranveig Braathen on 21.11.2025 https://www.sciencedirect.com/science/article/pii/S1074761325004625?via%3Dihub

Influenza vaccine based on AS03-adjuvanted chimeric HA induces long-lived stalk-specific plasma cells in bone marrow and lymph nodes of nonhuman primates, published in ***Nature Immunology***, October 2025, presented by Fabio Ruggeri on 05.12.2025 https://www.nature.com/articles/s41590-025-02309-1#Sec2

Isotype conversion of Staphylococcal-specific IgG into IgM broadens the reactivity to other bacterial pathogens, published in ***Cell Reports Medicine***, October 2025, presented by Mirjam Dürkoop on 05.12.2025
https://www.sciencedirect.com/science/article/pii/S2666379125004872?via%3Dihub

Eomesodermin+ CD4+ T cells are critical for curative immunotherapy outcomes, published in ***Immunity***, December 2025, presented by Asia Wolf on 12.12.2025 https://doi.org/10.1016/j.immuni.2025.09.004

Peanut allergy oral immunotherapy drives single-cell multi-omic changes in peanut-reactive T cells associated with sustained unresponsiveness, published in ***Nature Immunology***, November 2025, presented by Johanna Bodin on 12.12.2025 https://www.nature.com/articles/s41590-025-02323-3#Sec12