

Workshop Program 1. Day - Wednesday, 6 July 2022

Workshop 1 B-cells in immune response

Room: Davos 1 Chairs: Menno van Zelm, Mübecce Akdis

- 14:30 - 14:40 WS01 **Willem van de Veen**
Characterization of B cell responses in metastatic melanoma under checkpoint inhibitor therapy
- 14:40 - 14:50 WS02 **Sharon Kagan Ben Tikva**
Spatial expression programs in germinal centers reveal a T cell-dependent post selection site
- 14:50 - 15:00 WS03 **Pattraporn Satitsuksanoa**
Characterization of single allergenspecific IgE+ B cell from cow's milk allergic children during the oral immunotherapy
- 15:00 - 15:10 WS04 **Richard Chahwan**
Intercellular epigenomic signaling during B cell maturation

Workshop 2 Infections, microbiome and metabolism

Room: Davos 2 Chairs: Yasutaka Mitamura, Bernd Lepenies

- 14:30 - 14:40 WS05 **Michael Berger**
Improving T cell activation by limiting mitochondrial-derived ATP transfer to the cytosol
- 14:40 - 14:50 WS06 **Mengting Huang**
Distinct metabolic reprogramming of airway epithelium in asthma in response to infection with rhinovirus
- 14:50 - 15:00 WS07 **Lalita Oparija-Rogenmozere**
The role of lipid kinase PI3Kgamma enzyme complexes in metabolic syndrome
- 15:00 - 15:10 WS08 **Alexandra Wallimann**
Antibiotic therapy for orthopedic device-related infection: Prolonged microbiome disturbances and systemic responses of relevance to bone health
- 15:10 - 15:20 WS09 **Pierre-Yves Mantel**
Investigating the role of cellular communication to promote bacterial infections during malaria

Workshop 3 T-cells, innate lymphoid cells and immune response

Room: Forum Chairs: Nicole Joller, Ibon Eguiliz

- 14:30 - 14:40 WS10 **Sonia Aristin**
Characterizing the role of regulatory T (Treg) cells in colorectal cancer
- 14:40 - 14:50 WS11 **Leticia Martin-Cruz**
The tumor-associated carbohydrate A10 (Ca10) from Ehrlich tumor cells promotes functional regulatory T cells
- 14:50 - 15:00 WS12 **Pedro Ventura**
Concomitant deletion of Shp-1 and Shp-2 in T cells fails to improve anticancer responses
- 15:00 - 15:10 WS13 **Riekje Winzer**
Human effector T cell-derived extracellular vesicles convey immune suppression by CD73-mediated adenosine generation
- 15:10 - 15:20 WS14 **Rabia Ülkü Kokmaz**
C5a signalling in myeloid cells regulates ILC2 development through unique, cell-dependent mechanisms

19:30 Poster presentations of workshops 1 - 3, Room: Main Corridor

Workshop Program 2. Day - Thursday, 7 July 2022

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| Workshop 4 | Transcriptomics |
| <i>Room: Davos 1</i> | <i>Chairs: Pierre-Yves Mantel, Zsolt Komlosi</i> |
| 14:30 - 14:40 | WS15 Jana Koch Characterization of Protein Prenylation in T helper 1 cell activation |
| 14:40 - 14:50 | WS16 Claire Ma Stimulation strength controls the rate of initiation but not the molecular organization of the TCR-induced signalling network |
| 14:50 - 15:00 | WS17 Klara Ruppova Curation and integration of single-cell RNA-Seq data for meta-analysis |
| 15:00 - 15:10 | WS18 Katja Bärenfaller Machine Learning reveals patterns in transcriptomics and clinical datasets associated with atopic dermatitis in African children |
| Workshop 5 | COVID-19 mechanisms and treatment |
| <i>Room: Davos 2</i> | <i>Chairs: Volker Thiel, Carlo Cerva</i> |
| 14:30 - 14:40 | WS19 Özge Ardicli Exposure to avian coronavirus vaccines is associated with increased levels of SARS-CoV-2-cross-reactive antibodies |
| 14:40 - 14:50 | WS20 Elisabeth de Leeuw Efficacy and Safety of the Investigational Complement C5 Inhibitor Zilucoplan in Patients Hospitalized with Covid-19: an RCT |
| 14:50 - 15:00 | WS21 Urszula Radzikowska Rhinovirus-induced epithelial RIG-I inflammasome activation suppresses antiviral immunity and promotes inflammatory responses in virus-induced asthma exacerbations and COVID-19 |
| 15:00 - 15:10 | WS22 Tiziano Schweizer Blunted sFasL signalling exacerbates TNF-driven neutrophil necroptosis in critically ill COVID-19 patients |
| 15:10 - 15:20 | WS23 Philippe Gevaert Waning levels of SARS-CoV-2 neutralizing antibodies in the nasal mucosa after SARS-CoV-2 vaccination |
| Workshop 6 | Biologicals and molecular aspects in diagnosis and treatment |
| <i>Room: Forum</i> | <i>Chairs: Araceli Diaz Perelas, Willem van de Veen</i> |
| 14:30 - 14:40 | WS24 Nishelle Dsouza Expression, Purification and biochemical characterization of recombinant Blomia tropicalis allergens |
| 14:40 - 14:50 | WS25 Kevin Plattner On the role of glycan in the protection against anaphylaxis by anti-IgE IgG antibodies |
| 14:50 - 15:00 | WS26 Inna Tulaeva BM325, a component of the recombinant grass pollen allergy vaccine BM32 can overcome immunological HBV- non-responsiveness |
| 15:00 - 15:10 | WS27 Ana Xavier Targeting PI3Kg complexes containing the p84 protein to attenuate allergy without impact on host immunity |
| 15:10 - 15:20 | WS28 Alexandra Lee Quantitative Analysis of Urinary Cytokines in Food Allergic and Healthy Twins |
| 17:00 - 17:15 | Award Ceremony for workshop prizes of workshops 1 - 3 , Room: Davos 1 |
| 19:30 | Poster presentations of workshops 4 - 6 , Room: Main Corridor |

Workshop Program 3. Day - Friday, 8 July 2022

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| Workshop 7 | Epithelial responses and barrier |
| <i>Room: Davos 1</i> | <i>Chairs: Jonathan Coquet, Silvia Melgar</i> |
| 15:00 - 15:10 | WS29 Alessandro Cutilli Chemotherapy-induced damage of the intestinal epithelium attracts T cells and enhances T cell activation |
| 15:10 - 15:20 | WS30 Taryn Liu Exploratory Studies On Human GI Resident Gamma Delta T Cells Before and After Peanut Oral Immunotherapy |
| 15:20 - 15:30 | WS31 Ismail Ögüller Gut epithelial barrier damage by commonly used emulsifiers polysorbate-20 and polysorbate-80 |
| 15:30 - 15:40 | WS32 Ella Sandrine Parsons Detection of Gut and Mucosal Peptides in Plasma in Atopic Individuals through TOMAHAQ |
| 15:40 - 15:50 | WS33 An-Sofie Viskens Fluticasone propionate suppresses the SARS-CoV-2 induced increase in respiratory epithelial permeability in vitro |
| Workshop 8 | Swiss Young Immunology Scientists Workshop Novel mechanisms of immune response |
| <i>Room: Davos 2</i> | <i>Chairs: Daniela Latorre, Annika Hausmann</i> |
| 15:00 - 15:10 | WS34 Olivia Bucheli Correlating cellular functionalities and metabolic fluxes on the single-cell level - a proof-of-concept study of individual antibody-secreting cells in mice |
| 15:10 - 15:20 | WS35 Jean de Lima How Do Lung T cells Shape Local Immunity During Infection? |
| 15:20 - 15:30 | WS36 Lydia Kirsche Restoring a Dysregulated Immune Response Caused by Early-life Antibiotic Exposure |
| 15:30 - 15:40 | WS37 Fabian Luther Effector functions of human Th9 cells depend on PPAR-g-regulated glucose metabolism |
| 15:40 - 15:50 | WS38 Sarah Mundt CNS-specific tolerance: controlled immune surveillance without causing trouble |
| 15:50 - 16:00 | WS39 Federica Piattini Monocyte-derived alveolar macrophages autonomously determine severe outcome of respiratory viral infection |
| Workshop 9 | Vaccines in COVID-19 |
| <i>Room: Forum</i> | <i>Chairs: Pia Gattinger, Luca M. Zaeck</i> |
| 15:00 - 15:10 | WS40 Daryl Geers mRNA-based COVID-19 booster vaccination after Ad26.COV2.S priming induces cross-reactive humoral and cellular immune responses to multiple SARS-CoV-2 variants |
| 15:10 - 15:20 | WS41 Michael Jäger Investigation of humoral and cellular immune response against SARS-CoV-2 BA.1 and BA.2 of twice vaccinated as well as boosted individuals |
| 15:20 - 15:30 | WS42 Eliott Lafon three COVID-19 vaccines against variants of concerns |
| 15:30 - 15:40 | WS43 Dominik Rothen Intranasal administration of a VLP-based vaccine induces neutralizing antibodies against SARS-CoV-2 and variants of concern |
| 15:40 - 15:50 | WS44 Anne-Cathrine Vogt Virus-like particles (VLPs) are efficient tools for boosting mRNA-induced antibodies |
| 17:30 - 17:45 | Award Ceremony for workshop prizes of workshops 4 - 6 , Room: Davos 1 |
| 19:30 | Poster presentations of workshops 7 - 12 , Room: Main Corridor |

Workshop Program 4. Day - Saturday, 9 July 2022

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| Workshop 10 | Mechanisms in asthma, allergy and immune regulation |
| <i>Room: Davos 1</i> | <i>Chairs: R. Sharon Chinthrajah, Caroline Roduit</i> |
| 14:00 - 14:10 | WS45 Manal Bel imam Detection of food-antigen specific antibodies in the plasma of eosinophilic esophagitis patients |
| 14:10 - 14:20 | WS46 Ruben Fernandez-Santamaria Dendrimer-Based Silica Particle as a platform for Quantification of IgE specific to Amoxicillin and Benzylpenicillin |
| 14:20 - 14:30 | WS47 Taryn Liu CD8+ T cell differentiation status correlates with the feasibility of sustained unresponsiveness to food allergy immunotherapy |
| 14:30 - 14:40 | WS48 Mariem Radhouani From local infection to multi-organ crosstalk: Skin infection induced eosinophil mobilization and its impact on asthma development |
| 14:40 - 14:50 | WS49 Marlena Tynecka MSC mediated regulation of lower airway remodeling in eosinophilic and neutrophilic experimental asthma model |
| 14:50 - 15:00 | WS50 Rabia Ülkü Korkmaz Short- and long- term effects of post-natal dysbiosis in pulmonary development and function |
| 15:00 - 15:10 | WS51 Jez Marston Single-cell transposable element expression in B-cell differentiation in pseudotime |
| Workshop 11 | Innate immunity |
| <i>Room: Davos 2</i> | <i>Chairs: Greta Guarda, Claudio Rhyner</i> |
| 14:00 - 14:10 | WS52 Heike Hawerkamp Haemophilia-mediated bleeding induces red pulp macrophage expansion |
| 14:10 - 14:20 | WS53 Renate Bauer Intranasal allergic sensitization to birch pollen extract is reduced in NLRP3-deficient animals |
| 14:20 - 14:30 | WS54 Jozefien Declercq Chitinases in the lung: do they influence the development of allergic airway disease? |
| 14:30 - 14:40 | WS55 Asma Farhat A bone to pick: The impact of an ageing bone marrow on bleomycin induced lung fibrosis |
| 14:40 - 14:50 | WS56 Ashok Kumar Selective induction of cell death in human M1 macrophages by Smac mimetics is mediated by cIAP-2 and RIPK-1/3 through the activation of mTORC1 |
| 14:50 - 15:00 | WS57 Anthony Lefebvre Impact of Nasopharyngeal Carcinoma Exosomes on Maturation and Function of Human Dendritic Cells |
| Workshop 12 | Autoimmunity |
| <i>Room: Forum</i> | <i>Chairs: Thomas Conlon, Klaus Warnatz</i> |
| 14:00 - 14:10 | WS58 Chakib Hamoudi The purinergic receptor P2X4 promotes Th17 development and its inhibition reduced the severity of arthritis |
| 14:10 - 14:20 | WS59 Evelyn Peelen IMU-935, an Orally Available ROR γ T Inverse Agonist in Phase 1 Clinical Trial for Psoriasis, Inhibits Th17-Dependent Autoimmunity without Inducing Thymocyte Aberrations |
| 14:20 - 14:30 | WS60 Chris Platsoucas Clonally expanded gamma/delta TCR+T-cells are present in skin biopsies and peripheral blood of patients with Systemic Sclerosis (SSc) |
| 14:30 - 14:40 | WS61 Ying Wong The identification of genetic and epigenetic changes that contribute to Type 1 diabetes (T1D) |
| 14:40 - 14:50 | WS62 Lena Siewert Microbial triggering of myelin-specific immune cells in the gut drives central nervous system inflammation |
| 14:50 - 15:00 | WS63 Radka Cisarova Tolerogenic dendritic cells and its optimal application routes during prevention of type 1 diabetes: NOD and NOD-SCID mice models |
| 15:00 - 15:10 | Award Ceremony for workshop prizes of workshops 7 - 9, Room: Davos 1 Award Ceremony for workshop prizes of workshops 10 - 12 (will be given directly after the workshops by the chairpersons) |