



The International Society of Exercise and Immunology



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16th ISEI Symposium

Training the Immune System for New Challenges 9th–12th September 2024

Campus of the University of Vienna, Hof 2, Hörsaalzentrum, C2
Spitalgasse 2, 1090 Vienna, Austria

	Monday 09 September, 2024	Tuesday 10 September, 2024	Wednesday 11 September, 2024	Thursday 12 September, 2024
08:30-10:00		Immuno-Oncology 1	Ageing Immune System	Optimizing Immunity Through Exercise
10:00-10:30		Coffee break	Coffee break	Coffee break
10:30-12:00		Immuno-Oncology 2	Challenging the Immune System	Travel Award Winner Session
12:00-13:30	Registration (12:00 - 15:30)	Lunch / Board Meeting	Lunch	Closing & Awards
13:30-15:00		Muscle - Immune Interaction	Immuno-Nutrition	
15:00-15:30		Coffee break	Coffee break	
15:30-17:00	Opening & Keynote (15:30 - 17:00)	Brain - Immune Interaction	Gut - Immune Interaction	
17:00-18:30	Welcome reception (17:00 - 20:00)	Poster Session (17:00 - 20:00)	Symposium dinner (Reception of the Mayor of the City of Vienna) Fuhrgassl-Huber, Hauerkuchl, Neustift am Walde 66, 1190 Vienna	
18:30-20:00				
20:00-21:30				

Monday, 9th of September 2024

12:00 – 15:30	Registration and poster mounting (Hörsaalzentrum, Hof 2, Campus)
15:30 – 16:00	Opening of the Symposium Manuela Baccharini (Vice Rector University of Vienna), Arnold Baca (Dean Centre for Sport Science and University Sports, University of Vienna), Richard Simpson (ISEI President, University of Arizona), Barbara Wessner (Symposium Chair)
16:00 – 17:00	WELCOME KEYNOTE SPEECH – Christoph BOCK (Austria) “Looking into the past and future of cells: Epigenetic cell states in immunity” Chairs: Richard Simpson & Barbara Wessner
17:00 – 20:00	WELCOME RECEPTION Welcome Reception will be held at the Aula am Campus (Hof 1.11), Spitalgasse

Tuesday, 10th of September 2024

07:30 – 08:30	Registration and poster mounting (Hörsaalzentrum, Hof 2, Campus)
08:30 – 10:00	SESSION 1: Immuno – Oncology 1 – Presidential Lecture Chairs: Richard Simpson & Per thor Straten
08:30 – 09:00	SIMPSON, Richard (USA) “Exercise as an immune adjuvant for adoptive cell therapies in hematologic malignancies”
09:00 – 09:30	THOR STRATEN, Per (Denmark) “The exercise of mobilizing the immune system in cancer patients”
09:30 – 09:45	KOELWYN, Graeme (Canada) “Exercise modulation of the tumor microenvironment and cancer cell phenotypes”
09:45 – 10:00	LAVOY, Emily (USA) “Longitudinal Relationships Between Inflammation and Somatic Symptoms and Depression in Breast Cancer Patients During and After Chemotherapy”
10:00 – 10:30	Coffee break
10:30 – 12:00	SESSION 2: Immuno – Oncology 2 Chairs: Katharina Leuchte & Emily Lavoy
10:30 – 10:45	BATATINHA, Helena (USA) “Isoproterenol infusion improves the composition and function of G-CSF mobilized allogeneic peripheral blood hematopoietic cell grafts.”
10:45 – 11:00	McKENZIE, Grace (USA) “Daratumumab Augments Exercise Expanded $\gamma\delta$ T-cells Cytotoxic Function against Multiple Myeloma”
11:00 – 11:15	COX, Phoebe (UK) “Evaluating the effect of interval cycling over 3-hours on peripheral blood concentrations of hematopoietic stem and cytolytic natural killer cells.”

- 11:15 – 11:30 **McDOUGAL, London (USA)**
“Exercise-mobilized donor lymphocyte infusions enhanced with cytokines have increased polyfunctionality and anti-leukemia activity.”
- 11:30 – 11:45 **SPILIOPOULOU, Polyxeni (Greece)**
“Effects of exercise training in the bone marrow immune microenvironment of multiple myeloma patients after first-line treatment.”
- 11:45 – 12:00 **LEUCHTE, Katharina (Denmark)**
“Dynamics of T cell specificity before and after high-intensity aerobic exercise (INHALE study).”

12:00 – 13:30 Lunch/Board Meeting

13:30 – 15:00 SESSION 3: Muscle – Immune Interaction
Chairs: Jonathan Peake & Karsten Krüger

- 13:30 – 14:00 **PEAKE, Jonathan (Australia)**
“Using -omics technologies to understand exercise-induced muscle damage.”
- 14:00 – 14:30 **CAPOROSSI, Daniela (Italy)**
“Exercise-induced systemic response: the role of circulating extracellular vesicles.”
- 14:30 – 14:45 **KISTNER, Timothy (USA)**
“Single-cell transcriptomic and proteomic changes in peripheral blood mononuclear cells during and after an acute exercise bout.”
- 14:45 – 15:00 **TONG, Yishan (Japan)**
“Effects of 3-(4-Hydroxy-3-methoxyphenyl)propionic Acid on Enhancing Grip Strength and Inhibiting Protein Catabolism Induced by Exhaustive Exercise.”

15:00 – 15:30 Coffee break

15:30 – 17:00 SESSION 4: Brain – Immune Interaction
Chair: Monika Fleshner & Daniela Caporossi

- 15:30 – 16:15 **FLESHNER, Monika (USA)**
“A Fresh Perspective on Exercise Immunology: It’s All in the Brain.”
- 16:15 – 16:30 **RIEHL, Lydia (Austria)**
“Exploring the impact of the signal transducer gp130 in the sensory neuron-gut-brain axis.”
- 16:30 – 16:45 **RICHMOND, Claudia (UK)**
“Childhood adversity and respiratory infection risk in adulthood: a prospective cohort study in military recruits.”
- 16:45 – 17:00 **QIPO, Orgesa (Belgium)**
“Dose-response relationship of resistance training and the effects on circulating biomarkers of inflammation or neuroplasticity in older adults: A Systematic Review and Meta-Analysis.”

17:00 – 20:00 POSTER SESSION

Poster viewing and judging of YIA posters

Wednesday, 11th of September 2024

08:30 – 10:00	SESSION 5: Ageing Immune System Chairs: Barbara Wessner & Ana Teixeira
08:30 – 09:00	TEIXEIRA, Ana (Portugal) “Ageing: the anti-inflammatory power of lifelong exercise.”
09:00 – 09:30	KRÜGER, Karsten (Germany) “Exercise effects on the dynamic interactions between inflammation and T-cell ageing.”
09:30 – 09:45	GEBHARDT, Kristina (Germany) “Associations of PBMC respiration with immunological and metabolic markers in healthy elderly”
09:45 – 10:00	AKALP, Kaan (Portugal) “Effects of Simultaneous Cognitive Training and Group Aerobic Exercise on Inflammation and Cognitive Functions in Older Persons: Preliminary Results.”
10:00 – 10:30	Coffee break
10:30 – 12:00	SESSION 6: Challenging the Immune System Chairs: Neil Walsh & Eva Schernhammer
10:30 – 11:00	SCHERNHAMMER, Eva (Austria) “Stress biology and the circadian system: exercise with the clock.”
11:00 – 11:30	WALSH, Neil (UK) “Sleep (restriction), human performance and the immune system.”
11:30 – 11:45	NOLTE, Svenja (Germany) “Interaction of erythropoiesis, iron metabolism and innate immunity in athletes training at artificial altitude.”
11:45 – 12:00	TYSON, Hayley (UK) “Respiratory infection and exertional heat illness risk: interim findings from a prospective cohort study in military recruits.”
12:00 – 13:30	Lunch
13:30 – 15:00	SESSION 7: Immuno-Nutrition Chairs: Oliver Neubauer & Katsuhiko Suzuki
13:30 – 14:00	NEUBAUER, Oliver (Austria) “Dietary Nitrate, Exercise, and the Immune System.”
14:00 – 14:30	SUZUKI, Katsuhiko (Japan) “Effects of fluid intake on exercise-induced organ damage and inflammation in athletes.”
14:30 – 14:45	CAPERUTO, Erico (Brazil) “Combining L-leucine supplementation and high-intensity interval sprinting exercise to induce changes in plasma cytokines.”
14:45 – 15:00	FRASCHETTI, Emily (Canada) “Immunonutrition: Influence of a high-dairy diet on immune cell populations following a high-fat meal challenge.”
15:00 – 15:30	Coffee break
15:30 – 17:00	SESSION 8: Gut – Immune Interaction Chairs: Jeffrey Woods & Anna Kripp
15:30 – 16:00	WOODS, Jeffrey (USA) “Fitness from Within: Exploring the Exercise Gut Microbiota Connection.”

16:00 – 16:15	HENNINGSSEN, Kayla (Australia) “The impact of ultra-marathon trail running on the gastrointestinal bacterial composition- Is there cause for concern?”
16:15 – 16:30	SCRIVIN, Rachel (Australia) “The impact of 48-h carbohydrate loading with varied FODMAP content on faecal bacterial profile prior to exertional stress.”
16:30 – 16:45	MARKOFSKI, Melissa (USA) “Acute exercise increases circulating cytotoxic gut-homing T cells in middle-aged to older adults.”
16:45 – 17:00	CHO Eunhan (USA) “The effects of 12-weeks of aerobic exercise on circulating myokines in colorectal cancer survivors.”

19:00 – 22:00 **SYMPOSIUM DINNER (Reception of the Mayor of the City of Vienna)**
Fuhrgassl-Huber, Hauerkuchl, Neustift am Walde 66, 1190 Vienna

Thursday, 12th of September 2024

08:30 – 10:00	SESSION 9: Optimizing Immunity through Exercise Chairs: José Cesar Rosa-Neto & Julian Moser
08:30 – 09:00	ROSA-NETO, José Cesar (Brazil) “Endurance Exercise: Metabolic Adaptations in Immune Cells and Their Impact on Immuno-Fitness.”
09:00 – 09:15	PROSCHINGER, Sebastian (Germany) “A 10-week multi-modal high-intensity interval training beneficially modulates the T cell compartment in relapsing-remitting multiple sclerosis.”
09:15 – 09:30	SICK, Johanna (Austria) “Exercise rehabilitation in post COVID-19 patients: A randomized controlled trial of different training modalities.”
09:30 – 09:45	LEITE, Geovana (USA) “Exercise mobilizes multi-potent viral-specific T-cells enhancing the IFN-response after viral peptide stimulation in healthy humans.”
09:45 – 10:00	SARDELI, Amanda Veiga (UK) “Lifelong physical activity maintains the immune system of older adults.”
10:00 – 10:30	Coffee break
10:30 – 11:15	SESSION 10: Travel Award Session Chairs: Barbara Wessner & Neil Walsh
10:30 – 10:45	VON AH MORANO, Ana Elisa (Brazil) “High-sensitive C-reactive protein does not mediate the association between the sports training volume and total white blood cell count of youth athletes.”
10:45 – 11:00	SALEIHAN, Omid (Iran) “The effects of mixed sour cherry and honey supplementation on Muscle soreness, (CK, LDH, and Mb) and Plasma biomarkers of inflammation (IL6 and CRP) in resistance trained males.”
11:00 – 11:15	PAULA-VIEIRA, Rosa Helena Ramos (Brazil) “Caloric Deficiency in Older Adults Results in Impaired Lung Function involving Pulmonary Immunosuppression.”
11:30 – 12:30	CLOSING OF THE SYMPOSIUM Early Career Researcher and Travel Award Ceremony

Poster Session (10th of September 2024)

P01	Randy CHOU (USA)	“Exercise-mobilized lymphocytes have enhanced cytotoxicity against multiple myeloma in combination with a CD47 targeted monoclonal antibody” (YIA)
P02	Sara FRESNILLO SALÓ (Denmark)	“Exercise as combination partner for immune therapy of cancer” (YIA)
P03	Youyoung KIM (USA)	“The effects of 12-week of aerobic exercise on biomarkers of neutrophil function in colorectal cancer survivors” (YIA)
P04	Loreana S. SILVEIRA (Brazil)	“Short-term aerobic exercise modulates tumour proteomics signatures with no changes in the phenotype”
P05	Carlos M. SOARES (Portugal)	“Lifelong and acute exercise modify human serum composition, affecting human cancer cells' behaviour in vitro” (YIA)
P06	Jeb F. STRUDER (USA)	“Breast cancer survivors and healthy female controls maintained similar acute exercise-induced catecholamine responses independent of training status” (YIA)
P07	John L. SULLIVAN (USA)	“Exercise-mobilized lymphocytes express NKG7 and display enhanced cytotoxicity against acute lymphoblastic leukemia in combination with Blinatumomab” (YIA)
P08	Rebekah HUNT (USA)	“The Impacts of Body Composition on the Metabolic Activity of Regulatory T Cells” (YIA)
P09	Rui CURI* (Brazil)	“Skeletal muscle hypertrophy-associated inflammation and remodeling in Type 1 Diabetic Rats”
P10	Eri OYANAGI (Japan)	“Partially Hydrolyzed Guar Gum Intake Contributes to the Suppression of LPS-induced Systemic Inflammation via an Increase in the Regulatory T Cells in Intestinal Lamina Propria of Mice”
P11	Chihiro WATANABE (Japan)	“FMT from voluntary exercised mice as an ineffectiveness for attenuation of depression-like behavior” (YIA)
P12	Kristina GEBHARDT (Germany)	“Characterisation of controlled downhill running as a model for mild systemic low-grade inflammation” (YIA)
P13	Fábio Santos LIRA* (Brazil)	“A PRELIMINARY STUDY: The role of lifelong exercise in the metabolic programming of CD4+ T cells and its contribution to immune function”
P14	Fábio Santos LIRA* (Brazil)	“A PRELIMINARY STUDY: M1/M2 macrophage polarization and physical fitness status: How substantial is the impact of leptin?”
P15	Fernanda M. SILVA (Portugal)	“Exercise-induced changes on inflammatory markers in middle-aged workers” (YIA)

P16	Alexandre TEIXEIRA (Canada)	“Exercise has the potential to reduce inflammatory responses in aging macrophages by inhibiting the beta1-adrenergic pathway”
P17	Rodolfo P. VIEIRA* (Brazil)	“High-intensity resistance training (HIRT) improves pulmonary and systemic immune responses in older adults with metabolic syndrome”
P18	Frederike ADAMMEK (Germany)	“Detailed kinetics of immune cell mobilization and cellular inflammation markers during acute aerobic exercise in healthy adults” (YIA)
P19	Carla BAKER (UK)	“Intensified Training May Enhance Anti-Viral Immunity at Rest, but Heighten Immune Tolerance in Response to an Acute Exercise Bout” (YIA)
P20	Justin CRANE (USA)	“Cardiorespiratory Fitness and Mitochondrial Function Relate to Cytotoxic T cell Function” (YIA)
P21	Charles HODGMAN (USA)	“Effects of a 16-Week Exercise and Lifestyle Intervention on Inflammation, Fatigue, and Physical Function Among Adults with CLL” (YIA)
P22	Erik D. HANSON* (USA)	“Acute exercise induces divergent intracellular cytokine responses in T-cells that appear to be modulated by exercise training”
P23	Fendi PRADANA (UK / Indonesia)	“Immunometabolic profiling of isolated and mixed T cell populations in response to prolonged moderate intensity cycling in humans” (YIA)
P24	Seth RINEHART (USA)	“Adults with Allergy History Have Higher Helper T-Cell (CD4+) Counts in Response to Acute Exercise” (YIA)
P25	Yuzuru SAKAMOTO (Japan)	“Effects of long-term voluntary running exercise on immunoreceptor-mediated regulation of allergy”
P26	Kyle SMITH (USA)	“Natural Killer Cell Receptor Expression is Comparable Between Isoproterenol Infusion and Cycling Exercise”
P27	Pascale YOUNG (France)	“The impact of endurance exercise on immune responses in adolescent athletes - Implications for young athletes competing in ultra-endurance sports” (YIA)
P28	Fábio Santos LIRA* (Brazil)	“A PRELIMINARY STUDY: M1/M2 macrophage polarization and physical fitness status: How substantial is the impact of leptin?”
P29	Azin Tariniya GILANI (Canada)	“Optimizing Mitochondrial Health and Reducing Inflammation: The Impact of Post-Exercise Nutrition”
P30	Rosa Helena Ramos PAULA-VIEIRA* (Brazil)	“Resistance Training Positively Affects Pulmonary Immune Response and Lung Function of Older Adults”
P31	Rosa Helena Ramos PAULA-VIEIRA* (Brazil)	“Supplementation with Whey Protein Ameliorates Lung Function, Functional Capacity and Respiratory and Peripheral Muscle Strength in Sedentary Older Adults”

P32	Rosa Helena Ramos PAULA-VIEIRA* (Brazil)	“Are Serum Levels of Klotho Related to Hemodynamic Changes Induced by Combined Training in Overweight and Obese Women?”
P33	Shiva NOSRANI (Portugal)	“Synergistic Effects of HIIT Exercise and Caffeine on Gene Expression in Rats with NAFLD: A Study on FGF21, SIRT1, and Collagen I Alpha” (YIA)
P34	Mohsen PARVANI (Portugal)	“Mitochondrial Dynamics in Non-Alcoholic Fatty Liver Disease: The Effects of HIIT and Caffeine on MFN1, MFN2, and FIS1 Gene Expression in a Rat Model” (YIA)
P35	Omid SALEIHAN (Iran)	“The effects of Mixed Vitamin D3 and honey supplementation on immune system and CK after 12 weeks of on Endurance-Trained Athletes” (YIA)
P36	Hiroki HAMADA (Japan)	“Influence of physical activity on gut microbiota in adult women with mild depression” (YIA)
P37	Hiromi YANO (Japan)	“Immune regulations as the respective survival strategies between host and gut microbiota - A view point of the exercise immunology”
P38	Adriana C. LEVADA-PIRES* (Brazil)	“Impact of Circus Training on Neutrophil Cytokine Secretion in Eutrophic and Overweight/Obese Children”
P39	Cláudia CAVAGLIERI* (Brazil)	“Differences in circulating levels of interleukin-7 between sedentary middle-age men with obesity and normal-weight”
P40	Megan QUICKFALL (UK)	“A randomised control trial to investigate whether regular exercise can reduce the peripheral blood frequency of islet-reactive cytotoxic T cells in people with type 1 diabetes” (YIA)
P41	Renata GORJÃO* (Brazil)	“Modulation of Skeletal Muscle Inflammation in Non-Obese Diabetic Rats by Omega-3 Supplementation”



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