

Curriculum Vitae – Federica Sallusto

Personal Information

Name	Federica Sallusto
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Education

1988	University degree with honors of doctor in Biology, University "La Sapienza", Roma
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Employment history

1989-1991	Postdoctoral fellow, Italian National Institute of Health, Roma
1991-1997	Research scientist (tenured position), Italian National Institute of Health, Roma
1993-1995	Visiting scientist, Basel Institute for Immunology, Basel
1997-2000	Member, Basel Institute for Immunology, Basel
Since 2000	Group leader, Institute for Research in Biomedicine, Bellinzona
Since 2015	Director, Center of Medical Immunology, Institute for Research in Biomedicine, Università della Svizzera italiana (USI), Bellinzona
Since 2017	Full Professor in Medical Immunology, Institute of Microbiology, D-BIOL, ETH Zurich and Faculty of Biomedical Sciences, Università della Svizzera italiana (USI), Lugano (joint professorship)

Institutional responsibilities

2004-2015	Organization of the IRB International PhD program
Since 2021	ETH Zurich Lymphoma Challenge programme, Member Steering Board
Since 2021	ETH Zurich MedLab programme
Since 2022	ETHZ digital Trial Innovation Platform, Member Steering Board

Supervision of young researchers

Between 1998 and 2026: 41 PhD students; 24 Postdocs. Among successful junior researchers trained in the lab: Eva Acosta-Rodriguez, Simone Becattini, Dirk Baumjohann, Thomas Duhon, Daniela Latorre, Jun Siong Low, Giorgio Napolitani, Samuele Notarbartolo, Andrea Reboldi, Francesca Ronchi, Tomasz Wypych, Christina Zielinski

Teaching activities

Infection and Immunology: Health Sciences BSc and Human Medicine BSc, ETH Zurich; Hematology, Immunology and Infectious diseases: Human Medicine BSc, ETH Zurich; Blockcourse "Analysis of human T and B cell responses to infectious agents", Biology BSc, ETH Zurich; Clinical Day, Rheuma Lab, Medicine MSc, USI Lugano.

Memberships in boards

2001-2005	Member, Immunology Section Committee, EAACI
Since 2005	Member, Executive Committee, Swiss Society for Allergology and Immunology
2007-2017	Member, Swiss National Science Foundation Professorship Program
2012-2020	Member, International Advisory Board, Medical University of Vienna
2013, 2020	Member, Scientific Advisory Board, Department for Molecular Biomedical Research VIB-UGent
2014-2018	Member, ERC Start Grant Program, LS6 Immunity and Infection Panel
2015-2022	Member, Scientific Advisory Board, Stanford Human Systems Immunology Center
2017	Member, Scientific Advisory Board, MRC Human Immunology Unit, University of Oxford
2018-2023	Member, GlaxoSmith&Klein R&D Advisory Board
2018-2024	Member, National Research Council, Swiss National Science Foundation
2019-2023	Member, Board of Trustees, Marcel Benoist Foundation
2020-2023	Member, Specialised Committee Careers, Swiss National Science Foundation
2020-2021	Member, Swiss National COVID-19 Science Task Force, Expert Group Immunology
Since 2020	Member, Scientific Advisory Board, Department of Biomedicine, University of Basel
2021-2023	Chair, Postdoc Mobility Program, Swiss National Science Foundation
Since 2022	Member, Scientific Advisory Board, Fondation ISREC, Lausanne

Since 2024 Member, Scientific Advisory Board, Institute Imagine, Paris
 Since 2024 Member, Scientific Council, Institut Pasteur, Paris

Memberships in scientific societies

Since 1989 Italian Society of Immunology, Clinical Immunology and Allergology (SIICA)
 Since 2000 Swiss Society for Allergology and Immunology (SSAI)
 Since 2001 European Academy of Allergy and Clinical Immunology (EAACI)
 Since 2014 American Association of Immunologists (AAI)
 Since 2017 International Cytokine & Interferon Society (ICIS)

Organization of conferences

2007 Keystone Symposium, Immunological Intervention in Human Diseases, Big Sky Montana, Co-organizers: J. Banachereau, R. Coffman
 2008 Keystone Symposium: Leukocyte Traffic, Keystone, Co-organizers: U.H. von Andrian, K. Ley
 2009 SIICA Workshop on Th17, Certosa di Pontignano, Co-organizers: F. Annunziato, L. Adorini, L. Romani
 2010 11th International Symposium on Dendritic Cells in Fundamental and Clinical Immunology, Lugano, Co-organizers: A. Lanzavecchia, M.G. Manz
 2011 Keystone Symposium: Dendritic Cells and the Initiation of Adaptive Immunity, Santa Fe, Co-organizers: I. Mellman, M.C. Nussenzweig, V. Pascual
 2011 Annual Congress SSAI, Lugano, President Organizing Committee
 2012 SIICA-SSAI Joint Workshop on "Targeting Dendritic Cells for Immunity and Tolerance", Ravello, Co-organizers: V. Barnaba, P. De Berardinis, A. Lanzavecchia
 2014 Keystone Symposium, Emerging Cytokine Networks, Vancouver, Co-organizers: D.J. Cua, H. Spits
 2016 Gordon Research Conference "Immunochemistry and Immunobiology", Barga, Vice-chair, Chair: Y. Belkaid
 2018 Gordon Research Conference "Immunochemistry and Immunobiology", Mount Snow, Chair
 2020 Keystone Symposia: Vaccinology eSymposia: Vaccinology in the Era of Pandemics: Strategies against COVID-19 & other global threats, Co-organizers: R. Rappuoli, L.M. Stuart
 2021 IUIS-EFIS 2021 Day of Immunology Webinar: Immunology in the time of COVID-19: achievements, challenges and opportunities, Co-organizers: M. Merad, C. Gray, P. Engel.
 2022 IUIS-EFIS 2022 Day of Immunology Webinar: Science, State and Challenges of COVID-19 vaccines, Co-organizer: F. Osier, M. Merad, M. van Ham
 2023 11th Annual Congress of the International Cytokine and Interferon Society (ICIS), Athens, Co-organizers: E. Andreaskos, G.N. Pavlakis, I. Sereti, A. Tzioufas
 2023 IUIS-EFIS 2023 Day of Immunology: How to make better vaccines for respiratory infections, Co-organizers: R. Carsetti, U. Wiedermann, F. Osier, M. Merad, L. Notarangelo
 2024 IUIS-EFIS 2024 Day of Immunology Webinar, Immunity Through the Ages: Navigating the Science of Aging and Immunology. Co-organizer: R. Carsetti

Awards and Distinctions

1999 Pharmacia Research Foundation Award
 2007 Elected Member of the Henry Kunkel Society
 2009 Behring Lecture Prize
 2009 Elected Member of the German National Academy of Science Leopoldina
 2010 Science Award from the Foundation for Study of Neurodegenerative Diseases
 2011 Elected Member of the European Molecular Biology Organization (EMBO)
 2011 Elected Member of the European Academy of Tumor Immunology
 2012 Elected Member of Academia-Net
 2013-2015 President Swiss Society for Allergology and Immunology (SSAI)
 2019 Honorary member, Swiss Society for Allergology and Immunology (SSAI)
 2019-2021 President elect European Federation of Immunological Societies (EFIS)
 2022-2024 President European Federation of Immunological Societies (EFIS)
 2019 Prize "I Numeri Uno" Camera di Commercio Italiana in Svizzera (CCIS)
 2022 Elected international member of the U.S. National Academy of Sciences
 2022 Doctor honoris causa, Faculty of Science and Medicine of the University of Fribourg

Editorial Boards

2003-2009 Associate Editor, International Archives of Allergy and Applied Immunology
 2003-2006 Editorial Board, Immunology Letters
 2006-2014 Editorial Board, Journal of Experimental Medicine

2007-2016	Editorial Board, Human Immunology
2008-2011	Associate Editor, Immunology
2009-2010	Editorial Board, Journal of Clinical Immunology
Since 2011	Associate Editor, Frontiers in Immunology – Chemoattractants
Since 2014	Monitoring Editor, Journal of Experimental Medicine
Since 2016	Chief Scientific Editor and then Advisor, Science Immunology
Since 2019	Editorial Board, Current Research in Immunology
2019-2023	Editor, Seminars in Immunopathology
Since 2025	Editorial Board, Immunity and Inflammation

Major Scientific Achievements

We study the human immune system to address fundamental questions in the context of the immune response to different classes of antigens, such as microbial pathogens, allergens, self-antigens or tumour antigens, and to gain insights into mechanisms that induce host protection or immune-mediated pathology. Our research has focused on dendritic cell and T cell biology, mechanisms of T cell differentiation and immunological memory. Among our original contributions are the development of a method to culture human dendritic cells (Sallusto & Lanzavecchia, 1994), the discovery that human Th1, Th2 and Th17 cells express distinct sets of chemokine receptors (Sallusto et al., 1997; Sallusto et al., 1998; Acosta-Rodriguez et al., 2007), the definition of central and effector memory T cell subsets (Sallusto et al., 1999) and of skin-homing Th22 cells (Duhon et al., 2009). By combining analysis of memory T cells with priming of naïve T cells, we defined mechanisms of Th17 differentiation, characterized two distinct types of Th17 cells that produce IFN- γ or IL-10, and identified IL-1 β as a master regulator of the inflammatory properties of Th17 cells in both humans and mice (Acosta-Rodriguez et al., 2007; Zielinski et al., 2012; Mele et al., 2015; Ronchi et al., 2016; Aschenbrenner et al., 2018). By combining antigenic stimulation and T cell receptor deep sequencing, we also demonstrated that the T cell response induced by pathogens or vaccines is heterogeneous and can comprise not only clones polarized toward a single fate (Th1, Th2, or Th17), but also clones whose progeny have acquired multiple fates (Becattini et al., 2015; Low et al., 2021), providing evidence of intraclonal functional heterogeneity *in vivo*. We are applying the same experimental approaches to study the immune responses against not harmful environmental antigens or self-antigens in patients with autoimmunity or allergy (Nobs et al., 2017; Latorre, Kallweit et al., 2018). The cell-based methods are complemented with powerful analytical technologies, such as next generation sequencing, single cell transcriptomics, metabolomics and proteomics (Geiger et al., 2016; Rieckmann et al., 2017; Hu et al., 2017; Aschenbrenner et al., 2018).

Our efforts towards human immunology have resulted in the development of high-throughput cell-based screening methods to address fundamental and medically relevant questions in the fields of infectious diseases, autoimmunity, allergy and cancer. These enabling technologies allow the analysis of the human immune response at the clonal level in all relevant cellular compartments, providing fundamental information on the metric, specificity and organization of the human immune response to different classes of antigens. The T cell library method that we developed (Geiger et al., 2009) allows the efficient and high-throughput interrogation of the human T cell repertoire without being limited by the complexity of the antigen, the HLA haplotype and the sample size, that is often small when obtained from patients or from donors in clinical trials. The method can be used to predict antigenicity and identify T cell epitopes to guide design of T cell vaccines. When applied to the study of T cells in autoimmunity, it can provide tools for immunotherapy and insights as to the mechanisms of immune-mediated pathology. We used this method to identify HIV-crossreactive memory T cells in healthy donors (Campion et al., 2014), to show that T cells specific for *Mycobacterium tuberculosis* in latent TB-infected individuals are largely contained in a non-classic Th1 subset (Lindestam Arlehamn et al., 2013; Lindestam Arlehamn et al., 2015), to dissect specific and cross-reactive T cell responses to Dengue and Zika viruses in exposed patients (Stettler et al., 2016), and to define specificity, function and cross-reactivity of T cells against commensal and pathogenic bacteria (Cassotta, Goldstein et al., 2020). More recently, we are using the library method to understand why in patients with chronic or disseminated infections, including children with rare primary immunodeficiencies caused by genetic disorders, the immune system fails to protect the host (Okada et al., 2015; Kong et al., 2018; Yang et al., 2020; Philippot et al., 2023; Ogishi et al., 2025) and to identify autoreactive T cells in patients with narcolepsy, GBS or autoimmune hepatitis (Latorre et al., 2018; Súkeníková et al., 2024; Kramer et al., 2025). These studies are performed in close collaboration with colleagues at universities and university hospitals.

Our studies in the human immune system are complemented by studies in experimental models. In the mouse system, our work has focused on leukocyte traffic and function in lymph nodes and brain. We showed that NK cells, T helper cells, and cytotoxic T cells can migrate to inflamed lymph nodes, where they profoundly modulate T cell responses (Martín-Fontecha et al., 2004; Guarda et al., 2007; Martín-Fontecha et al., 2008), and that pioneer CCR6-positive Th17 cells enter the CNS through the choroid plexus, which in turn allows other cells to enter and cause autoimmunity (Reboldi et al., 2009). We also defined the requirements for IL- β in driving encephalitogenic Th1/17 cells and of persistent antigen and germinal center B cells to sustain T follicular helper (Tfh) cell phenotype and function and the

role of T follicular regulatory cells to control Tfh responses, antibody somatic mutations and affinity maturation (Baumjohann et al., 2013, Preite et al., 2015, Ronchi et al., 2016).

In response to the COVID-19 pandemic, we used an established workflow to define immunodominance and crossreactivity of the T cell response in convalescent patients (Cassotta et al., 2000; Low, Vaqueirinho, Mele et al., 2021) and developed a new method for the isolation of broadly crossreactive antibodies that has allowed us to identify a new class of human coronavirus pan-reactive antibodies targeting a cryptic fusion peptide region of the Spike protein (Low, Jerak, Tortorici et al., 2022).

I authorize the processing of the personal data contained in my Curriculum Vitae in accordance with Legislative Decree no. 196 of June 30, 2003, and EU Regulation 2016/679.

Zurich and Bellinzona, 20 July 2026



Federica Sallusto