
BARBARA CASSANI
BIOGRAPHICAL SKETCH

POSITION TITLE

Principle Investigator (Primo Ricercatore CNR), Institute of Genetic and Biomedical Research (IRGB)- Italian National Research Council (CNR)
Junior Principle Investigator, Humanitas Clinical and Research Center

EDUCATION/TRAINING

| INSTITUTION AND LOCATION | DEGREE | YEAR(s) | FIELD OF STUDY |
|--|---------------------|-------------|--------------------------------|
| University of Milan, Italy | B.Sc. | 2001 | Pharmacy |
| Vita-Salute San Raffaele University, Milan (IT)-Open University, London (UK) | Ph.D. | 2007 | Molecular and Cellular Biology |
| HSR-TIGET, Milan (IT) | Postdoctoral Fellow | 2007 – 2008 | Immunology |
| Fondazione Humanitas, Milan (IT) | Postdoctoral Fellow | 2008 – 2010 | Immunology |
| Massachusetts General Hospital, Harvard Medical School, Boston, MA (USA) | Postdoctoral Fellow | 2010 – 2012 | Mucosal Immunology |

A. Positions and Honors

Positions and Employment

2012–PRESENT Tenured Researcher, IRGB-CNR, Milan (IT)

2017–PRESENT Junior PI, Humanitas Clinical and Research Center, Rozzano (IT)

2010–2012 Postdoctoral Fellow, Massachusetts General Hospital, Harvard Medical School, Boston, MA.
Advisor: Prof. JR. Mora

2008–2010 Postdoctoral Fellow, Fondazione Humanitas per la Ricerca, Rozzano, Italy. Advisor: Dr. A.Villa

2007–2008 Postdoctoral Fellow, HSR-TIGET, Milan (IT).

2003–2007 Ph.D. Student, HSR-TIGET, Milan (IT). Advisor: Prof. A. Aiuti

2002–2003 Research Fellow, HSR-TIGET, Milan (IT).

Qualifications

2021- Delegate to ARC Coordinator Open University PhD Program c/o Humanitas, Rozzano (IT)

2019- Associate Professor of Histology (05/H2, Idoneita' till 2028)

2019- Associate Professor of General and Clinical Pathology (06/A2, Idoneita' till 2028)

2014- Associate Professor of Applied Biology (05/F1, Idoneita' till 2023)

Professional Memberships

2008-PRESENT Member, European Society for Immunodeficiency (ESID)

2012-PRESENT Member, Italian Society of Immunology, Clinical immunology and Allergology (SIICA)

2017-PRESENT Junior Faculty, Society of Immunology, Clinical Immunology and Allergology (SIICA)

2016-PRESENT Member, CNR Immunology Network (CIN)

B. Awards and Research Support

2021-2023 Grant from European Food Authority Agency (EFSA) GP/EFSA/SCER/2020/04. Role: PI

2019-2022 Grant from Italian Ministry of Health GR-2016-02362572, Role: Unit Coordinator

2015-2019 Grant from Fondazione Telethon GGP15109 Role: PI

2014-2017 Grant from Italian Ministry of Health GR-2011-02349759, Role: PI

2013-2016 Grant Italian Ministry of Education, Universities and Research (MIUR) RBFR12I3UB, Role: PI

2012 BioEconomy Prize on Rare Disease (Rome, Italy)

2011-2012 Long-term Fellowship, European Molecular Biology Organization (EMBO), International Mobility

2008-2011 Grant Fondazione Cariplo per la Ricerca n. 2008.2218. Role: Unit Coordinator

C. Professional Activities

Ad-hoc Journal Reviewer: Journal of Allergy and Clinical Immunology, Mucosal Immunology, Journal of Immunology, Gut, Gastroenterology, Journal of Clinical Investigation, Journal of Leukocyte Biology, European Journal of Immunology, Plos One, Molecular Immunology, Frontiers in Immunology (Review Editor).

Ad-hoc External Grant Reviewer: Italian Ministry of Research, United States-Israel Binational Science Foundation, Catalan Biomedical Research on Rare Disease.

Academic Supervision: PhD program in Molecular and Experimental Medicine, Hunimed, Rozzano (IT), International Ph.D. Program in Immunology and Immunopathology, Open University (UK)-Istituto Clinico Humanitas, Rozzano (IT).

Conference/Course Organization: Annual meeting Milan Meets Immunology (2013-2019); SIICA School of Immunology (Bari, 2017); SIICA School of Immunology (Messina, 2018); FOCIS-SIICA European Advanced course of Immunology (Florence, 2019); PhD Retreat (Camogli, 2020); Univax Day (2019-2021)

D. Selected peer-reviewed publications (selected from 38 peer-reviewed publications)

(A complete list is available <https://www.scopus.com/authid/detail.uri?authorId=35261437900>)

1. Rigoni R, Fontana E, Dobbs K, Marrella V, Taverniti V, Maina V, Facoetti A, D'Amico G, Al-Herz W, Cruz-Munoz ME, Schuetz C, Gennery AR, Garabedian EK, Giliani S, Draper D, Dbaibo G, Geha RS, Meyts I, Tousseyn T, Neven B, Moshous D, Fischer A, Schulz A, Finocchi A, Kuhns DB, Fink DL, Lionakis MS, Swamydas M, Guglielmetti S, Alejo J, Myles IA, Pittaluga S, Notarangelo LD, Villa A, **Cassani B**. Cutaneous barrier leakage and gut inflammation drive skin disease in Omenn syndrome. *J Allergy Clin Immunol*. 2020 Apr 18:S0091-6749(20)30492-9.
2. Pellicciotta M, Rigoni R, Falcone EL, Holland SM, Villa A, **Cassani B**. The microbiome and immunodeficiencies: Lessons from rare diseases. *J Autoimmun*. 2019 Mar;98:132-148
3. Faggioli F, Palagano E, Di Tommaso L, Donadon M, Marrella V, Recordati C, Mantero S, Villa A, Vezzoni P, **Cassani B**. B lymphocytes limit senescence-driven fibrosis resolution and favor hepatocarcinogenesis in mouse liver injury. *Hepatology*. 2018 May;67(5):1970-1985. DOI: 10.1002/hep.29636.
4. R. Rigoni, E. Fontana, S. Guglielmetti, B. Fosso, A.M. D'Erchia, V. Maina, V. Taverniti, M.C. Castiello, S. Mantero, G. Pacchiana, S. Musio, R. Pedotti, J.R. Mora, G. Pesole, P. Vezzoni, P.L. Poliani, F. Grassi, A. Villa and **B. Cassani**. Intestinal microbiota sustains inflammation and autoimmunity induced by hypomorphic RAG defects. 2016 *J Exp Med*. 213(3):355-75.
5. **Cassani B**, Villablanca EJ, Quintana FJ, Love PE, Lacy-Hulbert A, Blaner WS, Sparwasser T, Snapper SB, Weiner HL, Mora JR. Gut-Tropic T Cells That Express Integrin $\alpha 4\beta 7$ and CCR9 Are Required for Induction of Oral Immune Tolerance in Mice. 2011 *Gastroenterology*. 141(6):2109-18.
6. **Cassani B**, Poliani PL, Marrella V, Schena F, Sauer AV, Ravanini M, Strina D, Busse CE, Regenass S, Wardemann H, Martini A, Facchetti F, van der Burg M, Rolink AG, Vezzoni P, Grassi F, Traggiai E, Villa A. Homeostatic expansion of autoreactive immunoglobulin-secreting cells in the Rag2 mouse model of Omenn syndrome. 2010 *J Exp Med*. 207(7):1525-40.
7. **Cassani B**, Poliani PL, Moratto D, Sobacchi C, Marrella V, Imperatori L, Vairo D, Plebani A, Giliani S, Vezzoni P, Facchetti F, Porta F, Notarangelo LD, Villa A, Badolato R. Defect of regulatory T cells in patients with Omenn syndrome. 2010 *J Allergy Clin Immunol*. 125(1):209-16.
8. Aiuti A, Cattaneo F, Galimberti S, Benninghoff U, **Cassani B**, Callegaro L, Scaramuzza S, Andolfi G, Mirolo M, Brigida I, Tabucchi A, Carlucci F, Eibl M, Aker M, Slavin S, Al-Mousa H, Al Ghonaium A, Ferster A, Duppenhaler A, Notarangelo L, Wintergerst U, Buckley RH, Bregni M, Markt S, Valsecchi MG, Rossi P, Ciceri F, Miniero R, Bordignon C, Roncarolo MG. Gene therapy for immunodeficiency due to adenosine deaminase deficiency. 2009 *N Engl J Med*. 360(5):447-58.
9. **Cassani B**, Mirolo M, Cattaneo F, Benninghoff U, Hershfield M, Carlucci F, Tabucchi A, Bordignon C, Roncarolo MG, Aiuti A. Altered intracellular and extracellular signaling leads to impaired T-cell functions in ADA-SCID patients. 2008 *Blood*. 111(8):4209-19.
10. Aiuti A, **Cassani B**, Andolfi G, Mirolo M, Biasco L, Recchia A, Urbinati F, Valacca C, Scaramuzza S, Aker M, Slavin S, Cazzola M, Sartori D, Ambrosi A, Di Serio C, Roncarolo MG, Mavilio F, Bordignon C. Multilineage hematopoietic reconstitution without clonal selection in ADA-SCID patients treated with stem cell gene therapy. 2007 *J Clin Invest*. 117(8):2233-40.