

Curriculum Vitae

PATRIZIA SCAPINI

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Section of General Pathology
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Education

2003-2005	Ph.D. in Molecular and Cellular Biology and Pathology Department of Pathology, Section of General Pathology of the Medical School of the University of Verona Thesis dissertation on June 22 nd 2006
1997-2000	Specialization school in Hospital Pharmacy Faculty of Pharmaceutical Chemistry and Technology University of Padua, Italy Graduated with full marks on July 18 th 2000
1990-1996	Faculty of Pharmaceutical Chemistry and Technology University of Padua, Italy Master Degree in Pharmaceutical Chemistry and Technology Graduated with full marks on December 18 th 2006

Research Experience

November 2019- present:	Associate Professor Department of Medicine, Division of General Pathology, University of Verona, Italy.
November 2006- October 2019	Assistant Professor Department of Medicine, Division of General Pathology, University of Verona, Italy. Sabbatical leave for scientific reasons (November 2006-December 2010)
March 2017:	Achievement of eligibility as Associate Professor
July 2005-November 2010	Postdoctoral Employee Department of Laboratory Medicine University of California, San Francisco San Francisco, CA (USA) P.I: Clifford A. Lowell, M.D.-Ph.D.

March 2004 – June 2005	Visiting Scientist Laboratory of Molecular Genetics and Immunology Rockefeller University NY (USA) P.I: Jeffrey V. Ravetch, M.D.-Ph.D.
1998 - 2004	Research Fellow Department of Pathology – Section of General Pathology School of Medicine University of Verona, Italy P.I: Marco A. Cassatella, M.D.-Ph.D.
1997	Trainee Experimental Scientist Department of Pharmacology Glaxo Research and Development Division, Verona, Italy P.I: Roberto Alban, Ph.D.
1995-1996	Undergraduate Student Department of Pharmacology Glaxo Research and Development Division, Verona, Italy P.I: Christian Chiamulera, Ph.D.

Fellowships and Awards

1998-2000	Training Fellowship awarded by the Hospital Pharmacy School of Padua;
2000-2002	Training Fellowship awarded by the "Italian Association for Cancer Research";
2003-2005	PhD Training Program Scholarship from the University of Verona;
2004-2005	Fellowship for one year training abroad awarded by the "Italian Association for Cancer Research";
2001	Travel Award, Euroconferences on Angiogenesis, Paris, France;
2002	Young Investigator Award for best poster presented by the Italian Society of Immunology Clinical Immunology And Allergology (SIICA);
2003	Travel Award, Translational Research in Autoimmunity, Portofino, Italy.

Grants

(2009-2011): Cariverona Foundation Grant 2008; Scapini P. effort: Principal investigator.
 (2013-2016): F.I.R.B-Futuro in Ricerca Grant; Scapini P. effort: Research Unit Leader.
 (2019-2021): Research grant for basic science from the University of Verona (RB2018SCAPINI); Scapini P. effort: Principal investigator.
 (2018-2022): Research grant 2017 from the Italian Association on Cancer Research (AIRC, IG20339 to Marco A. Cassatella P.I); Scapini P. effort: Scientific collaborator.
 (2018-2020): Cariverona Foundation Grant 2018; Scapini P. effort: Scientific collaborator.
 (2023-2027): Research grant 2022 from the Italian Association on Cancer Research (AIRC, IG27613 to Marco A. Cassatella P.I); Scapini P. effort: Scientific collaborator.
 (2023-2024): Research grant for basic science from the University of Verona (RB2022SCAPINI) ; Scapini P. effort: Principal investigator.

Main scientific activities

Her main studies had the purpose of clarifying:

- the molecular mechanisms regulating the gene expression and production of novel cytokines and chemokines in human neutrophils;

- the role of neutrophils in the modulation of the angiogenic process;
- the mechanisms and the possible implications of the production of B cell-activating factor (BAFF/BLyS) by neutrophils in autoimmune disorders;
- the contribution of myeloid cells to the development of lupus-like disease in mice deficient for the Src kinase member, Lyn;
- the contribution of B regulatory cells to the development of lupus-like disease in mice deficient for the Src kinase member, Lyn.

More recently, the scientific interests of her research group have been focusing on the investigation of:

- the transcriptional profile, the phenotype and the immunoregulatory properties of mature and immature neutrophils from cancer patients and from G-CSF-mobilized peripheral blood stem cell (PBSC);
- the role of human neutrophils in tumors. Particular interest has been directed at determining the mechanisms that regulate the immunoregulatory properties of these cells toward T lymphocytes;
- the role of mouse and human of myeloid cells, in particular monocytes and neutrophils, in autoimmune diseases, including lupus and psoriasis

Other competences

Member of the teaching committee of the Ph.D program in “Inflammation, Immunity and Cancer”, University of Verona.

Tutor/supervisor of graduate/PhD students and post-doctoral fellows;

Teaching:

- **2023 - present:** General Pathology course for the Bachelor's Degree in Laboratory Technique, University of Verona; Course coordinator
- **2017 – present:** General Pathology course for the Bachelor's Degree in Physiotherapy, University of Verona, (Rovereto); Course coordinator
- **2018 – 2022:** General Pathology course for the Bachelor's Degree in Environmental and Workplace Accident Prevention Techniques, University of Verona (Trento); Course coordinator
- **2019 – present:** General Pathology course for the Bachelor's Degree in Dental Hygiene, University of Verona (Verona);
- **2019 – present:** General Pathology course for the Bachelor's Degree in Dental Hygiene, University of Verona (Rovereto); Course coordinator
- **2019 – present:** General Pathology course for the Bachelor's Degree in Cardiocirculatory and Cardiovascular Perfusion Technique, University of Verona (Verona); Course coordinator
- special courses within the Ph.D program in “Inflammation, Immunity and Cancer”, University of Verona;

Editorial activities:

ad-hoc Reviewer for scientific journals (e.g European Journal of Immunology, Journal of Leukocyte Biology, Immunology, Frontiers in Immunology, Clinical Cancer Research, etc.) and national scientific evaluation programs assigned by the governmental Agencies (Agenzia Nazionale di Valutazione del Sistema Universitario e della Ricerca; ANVUR)

Associate Editor (2017–2023), Frontiers Immunology-Cytokines and Soluble Mediators in Immunity Section

Associate Editor (2023–present), Frontiers Immunology- Cancer Immunity and Immunotherapy Section

Member of the Italian Society of Immunology Clinical Immunology and Allergology (SIICA) and SLB (Society for Leukocyte Biology)

Member of two European COST actions (Mye-Euniter- <http://www.mye-euniter.eu/> and Mye-InfoBank www.cost.eu/actions/CA20117) aimed at defining standardized guidelines for the scientific research on myeloid regulatory cells (MRCs).

Invited speaker/chairman at national and international scientific meetings

Among the most recent:

The Society For Leukocyte Biology's 49th Annual Meeting and "Neutrophil 2016". Verona, Italy. September 15-17, 2016. Invited speaker; National Congress 2017 of the Italian Society of Immunology, Clinical Immunology and Allergology (SIICA). Bari, Italy. Maggio 28-31, 2017. Invited speaker; Annual Meeting for the French Society for Immunology and the French Cytometry Association. Reims, France. November 7-9, 2017. Invited speaker; Neutrophil 2018. Québec City, Canada. June 2-5, 2018. Invited speaker. 32nd Annual Conference EMDS2018. September 27-29, 2018 – Verona, Italy. Invited chairman; 1st European Symposium on Myeloid Regulatory Cells in Health and Disease. 1-3 November, 2018. Essen, Germany. Invited chairman; National Congress 2022 of the Italian Society of Immunology, Clinical Immunology and Allergology (SIICA). Naples, Italy May 23-26, 2022 Invited speaker; E-COST-MEETING-CA20117-150224-65598069 neutrphil meeting group. February 15-16, 2024. Verona, Italy. Invited speaker.

Publication record

Author and co-author of 50 original publications on international peer review scientific journals and one book chapter. *total citations: 4950, h-index: 33. Source: Scopus*

Selected research articles

1. **Scapini P.**, Nardelli B., Nadali G., Calzetti F., Pizzolo G., Montecucco C., and Cassatella M.A. 2003. G-CSF-stimulated neutrophils are a prominent source of functional BlyS. *J. Exp. Med.* 197:297-302; 2021-2022 *I.F.* 14,3.
2. **Scapini P.**, Morini M., Tecchio C., Minghelli S., Di Carlo E., Albini A., Lowell C., Berton G., Noonan D.M., and Cassatella M.A. 2004. CXCL1/macrophage inflammatory protein-2-induced angiogenesis in vivo is mediated by neutrophil-derived vascular endothelial growth factor. *J. Immunol.* 172:5034-40; 2021-2022 *I.F.* 5,44.
3. **Scapini P.**, Carletto A., Nardelli B., Calzetti F., Roschke V., Nicola Tamassia T., Pieropan S., Biasi D., Sozzani S., Bambara L., Cassatella M.A. 2005. Proinflammatory mediators elicit the secretion of the intracellular B-lymphocyte stimulator (BLyS) pool that is stored in activated neutrophils: implications for inflammatory diseases. *Blood* 105:830-7; 2021-2022 *I.F.* 22,12
4. **Scapini P.**, Hu Y, Chu C.L., Migone T.S., DeFranco A.L., Cassatella M.A., Lowell C.A. 2010. Myeloid cells, BAFF, and IFN- γ establish an inflammatory loop that exacerbates autoimmunity in Lyn-deficient mice. *J. Exp. Med.* 207: 1757-1773; 2021-2022 *I.F.* 14,3.
5. Tavares R.M., Turer Ee, Liu Cl, Advincula R, **Scapini P.**, Rhee L, Barrera J, Lowell C.A., Utz P.J., Malynn B.A., Ma A. 2010. The Ubiquitin Modifying Enzyme A20 Restricts B Cell Survival and Prevents Autoimmunity. *Immunity*. 33: 181-191; 2021-2022 *I.F.* 31,74.
6. **Scapini P.**, Lamagna P, Hu Y, Lee K, Tang Q, DeFranco AL, & Lowell CA. 2011. B cell-derived IL-10 suppresses inflammation and autoimmunity in Lyn-deficient mice. *PNAS*. 108:E823-832; 2021-2022 *I.F.* 12,29
7. Lamagna C, **Scapini P.**, van Ziffle JA, DeFranco AL, Lowell CA. Hyperactivated MyD88 signaling in dendritic cells, through specific deletion of Lyn kinase, causes severe autoimmunity and inflammation. *Proc Natl Acad Sci U S A*. 2013. 110:E3311-20. 2021-2022 *I.F.* 12,29.
8. Marini O, Spina C, Mimiola E, Cassaro A, Malerba G, Todeschini G, Perbellini O, Scupoli M, Carli G, Facchinelli D, Cassatella M, **Scapini P.**, Tecchio C. 2016. Identification of granulocytic myeloid-derived suppressor cells (G-MDSCs) in the peripheral blood of Hodgkin and non-Hodgkin lymphoma patients. *Oncotarget*. 7:27676-88. 2021-2022 *I.F.* 4,16.
9. Marini O, Costa S, Bevilacqua D, Calzetti F, Tamassia N, Spina C, De Sabata D, Tinazzi E, Lunardi C, Scupoli MT, Cavallini C, Zoratti E, Tinazzi I, Marchetta A, Vassanelli A, Cantini M, Gandini G, Ruzzenente A, Guglielmi A, Missale F, Vermi W, Tecchio C, Cassatella MA, **Scapini P.** 2017. Mature CD10+ and immature CD10- neutrophils present in G-CSF-treated donors display opposite effects on T cells. *Blood*. 129:1343-1356. 2021-2022 *I.F.* 22,12
10. Costa S, Marini O, Bevilacqua D, DeFranco AL, Hou B, Lonardi S, Vermi W, Rodegher P, Panato A, Tagliaro F, Lowell CA, Cassatella MA, Girolomoni G, **Scapini P.** 2017. Role of MyD88 signaling in the imiquimod-induced mouse model of psoriasis: focus on innate myeloid cells. *J Leukoc Biol*. 102:791-803. 2021-2022 *I.F.* 4,96

11. Cassatella, Marco A, **Scapini, P.** 2020. On the Improper Use of the Term High-Density Neutrophils. *Trends in Immunology.* 41: 1059-1061. 2021-2022 I.F. 16.68
12. Calzetti F, Finotti G, Tamassia N, Bianchetto Aguilera F, Castellucci M, Canè S, Lonardi S, Cavallini C, Matte' A, Gasperini S, Signoretto I, Benedetti F, Bonifacio M, Vermi W, Ugel S, Bronte V, Tecchio C, **Scapini P**, Cassatella MA. 2022. CD66b-CD64dimCD115- cells in the human bone marrow represent neutrophil-committed progenitors. *Nature Immunology.* Nat Immunol. May;23:679-691 2021-2022 I.F. 23.5
13. Costa S, Bevilacqua D, Caveggion E, Gasperini S, Zenaro E, Pettinella F, Donini M, Dusi S, Constantin G, Lonardi S, Vermi W, De Sanctis F, Ugel S, Cestari T, Abram CL, Lowell CA, Rodegher P, Tagliaro F, Girolomoni G, Cassatella MA, **Scapini P.** 2022. Neutrophils inhibit $\gamma\delta$ T cell functions in the imiquimod-induced mouse model of psoriasis. *Front Immunol.* Nov 15;13:1049079. 2021-2022 I.F. 7.3
14. Pettinella F, Lattanzi C, Donini M, Caveggion E, Marini O, Iannoto G, Costa S, Zenaro E, Fortunato TM, Gasperini S, Giani M, Belluomini L, Sposito M, Insolda J, Scaglione IM, Milella M, Adamo A, Poffe O, Bronte V, Dusi S, Cassatella MA, Ugel S, Pilotto S, Scapini P. 2023. Plasmacytoid Dendritic Cell, Slan⁺-Monocyte and Natural Killer Cell Counts Function as Blood Cell-Based Biomarkers for Predicting Responses to Immune Checkpoint Inhibitor Monotherapy in Non-Small Cell Lung Cancer Patients. *Cancers (Basel).* 15:5285. 2021-2022 I.F. 5.2
15. Pettinella F, Mariotti B, Lattanzi C, Bruderek K, Donini M, Costa S, Marini O, Iannoto G, Gasperini S, Caveggion E, Castellucci M, Calzetti F, Bianchetto-Aguilera F, Gardiman E, Giani M, Dusi S, Cantini M, Vassanelli A, Pavone D, Milella M, Pilotto S, Biondani P, Höing B, Schleupner MC, Hussain T, Hadashik B, Kaspar C, Visco C, Tecchio C, Koenderman L, Bazzoni F, Tamassia N, Brandau S, Cassatella MA, **Scapini P.** 2024. Surface CD52, CD84, and PTGER2 mark mature PMN-MDSCs from cancer patients and G-CSF-treated donors. *Cell Rep Med.* 5:101380. 2021-2022 I.F. 14.5

Selected Reviews

16. **Scapini P.**, Lapinet-Vera J.A., Gasperini S., Calzetti F., Bazzoni F., Cassatella M.A., 2000. The neutrophils as a cellular source of chemokines. *Immunol. Review* 177:195-203; 2021-2022 I.F. 12.98
17. **Scapini P**, Bazzoni F, Cassatella MA. 2008. Regulation of B-cell-activating factor (BAFF)/B lymphocyte stimulator (BLyS)expression in human neutrophils. *Immunol Lett.* 116:1-6. 2021-2022 I.F. 3.68
18. **Scapini P.**, Pereira S., Zhang H., Lowell CA. 2009 Multiple roles of Lyn kinase in myeloid cell signaling and function. *Immunol. Rev.* 228:1-17; 2021-2022 I.F. 12.98
19. **Scapini P**, Cassatella MA. 2014. Social networking of human neutrophils within the immune system. *Blood.* 124:710-9. 2021-2022 I.F. 22.12
20. **Scapini P.**, Marini O, Tecchio C, Cassatella MA. 2016. Human neutrophils in the saga of cellular heterogeneity: insights and open questions. *Immunol Rev.* 273:48-60. 2021-2022 I.F. 12.98
21. Silvestre-Roig C, Fridlander ZG, Glogauer M, **Scapini P.** Neutrophil Diversity in Health and Disease. *Trends Immunol.* 2019. 40:565-583. 2021-2022 I.F. 16.68
22. Costa S, Bevilacqua D, Cassatella MA, **Scapini P.** Recent advances on the crosstalk between neutrophils and B or T lymphocytes. *Immunology.* 2019. 156:23-32 I.F. 7.39

Book chapter:

23. **Scapini P**, Tamassia N., Pucillo C., Cassatella M.A. "Granulocytes and Mast cells" In FUNDAMENTAL IMMUNOLOGY, Seventh Edition, WE PAUL (Editor), 2012
24. Co-author for the italian translation of the immunology book "Cellular and Molecular Immunology" (Elsevier 8th – 2015; 9th – 2017 and 10th – 2021 Editions) by Abul K. Abbas, Andrew H. Lichman and Shiv Pillai

Verona, February 18th 2024

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