



## Europass Curriculum Vitae

### Personal information

First name(s) / Surname(s) **Rossella Paolini**  
Address(es) Department of Molecular Medicine, "Sapienza" University of Rome, Viale Regina Elena, 291 00161 Rome, Italy  
Telephone(s) 06-49255670  
Fax(es) 06-44340632  
E-mail rossella.paolini@uniroma1.it  
Nationality Italian  
Date of birth  
Gender Female

**Occupational field** (S s/d) MED/46

### Work experience

Dates **November 2016 to present**  
Occupation or position held Full Professor in Immunology  
Dates **November 2001- 2016**  
Occupation or position held Associate Professor in Immunology  
Main activities and responsibilities Project coordinator, research projects in the field of Immunology and Cell Biology  
Academic teacher, Immunology and General Pathology for Medical School students and Immunology for students of the First-Level Master in Biotechnology  
Name and address of employer Dept. Molecular Medicine, "Sapienza" University of Rome  
Viale Regina Elena, 291  
00161, Rome Italy  
Sector General Pathology and Immunology  
Dates **January 1991- October 2001**  
Occupation or position held Occupation Researcher  
Main activities and responsibilities Research, academic teaching, and student training  
Name and address of employer Dept. Molecular Medicine, "Sapienza" University of Rome  
Sector General Pathology and Immunology

### Education and training

Dates **1993-1995**  
Title of qualification awarded **Visiting Associate**  
Name and type of organisation providing education and training Section of Molecular Immunology and Allergy, National Institute of Allergy and Infectious Diseases (NIAID), National Institutes of Health (NIH), Bethesda, (MD), USA  
Dates **1990-1993**

Title of qualification awarded **Visiting Fellow**  
 Name and type of organisation providing education and training Section of Molecular Immunology and Allergy, National Institute of Allergy and Infectious Diseases (NIAID), National Institutes of Health (NIH), Bethesda, (MD), USA  
 Dates **1989-1992**

Title of qualification awarded **PhD in Experimental Medicine**  
 Name and type of organisation providing education and training Laboratory of Immunology, Dept. Experimental Medicine, "Sapienza" University of Rome  
 Dates **1987**

Title of qualification awarded **License in Biological Science**  
 Name and type of organisation providing education and training "Sapienza" University of Rome  
 Dates **1982- 1986**

Title of qualification awarded **Master Degree in Biological Science**  
 Name and type of organisation providing education and training "Sapienza" University of Rome

**Personal skills and competences**

Mother tongue(s) **Italian**

Other language(s)

Self-assessment  
*European level (\*)*

**English Language**

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
C2	Proficient user	C2	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user

(\*) [Common European Framework of Reference for Languages](#)

Scientific activities Since 1991 Dr. Paolini has been involved in the study of signal transduction pathways implicated in the regulation of different aspects of leukocyte biology. Her studies have importantly contributed to elucidate the intracellular biochemical events leading to the activation of mast cell functional program. In particular, she has first demonstrated that FcεRI subunits undergo reversible tyrosine phosphorylation upon antigen stimulation, and proposed that cycles of phosphorylation and dephosphorylation serve to maintain the propagation of intracellular signalling. More recently, she has been focused in studying the pathways and effectors responsible for negative signalling generated upon engagement of activating receptors in NK and mast cells, highlighting a critical contribution of the ubiquitin pathway in limiting the rate and the extent of cell functional responses.

Dr. Paolini is author of several original publications in high rank journals. She is referee of international journals and responsible of research grants from MIUR and Ministero della Salute.

**MEMBER OF SCIENTIFIC SOCIETIES:**

Italian Society of Immunology, Clinical Immunology and Allergology (SIICA)  
 Society for Natural Immunity  
 American Association of Immunologists (AAI)

**Additional information**

Keywords: mast cells; NK cells; Fc receptor and other immune receptors; signal transduction; phosphorylation; ubiquitination; endocytosis.

Link of academic website: <http://www.farmaciamedicina.uniroma1.it/?s=docenti&cognome=403>

1. **Paolini R.**, Jouvin M.H., Kinet J.-P. Phosphorylation and dephosphorylation of the high-affinity receptor for IgE immediately after receptor engagement and disengagement. *Nature*. 1991 Oct 31;353(6347):855-8. DOI:10.1038/353855a0
2. **Paolini R.**, Numerof R., Kinet J.-P. Phosphorylation/dephosphorylation of high affinity IgE receptors: a mechanism for coupling/uncoupling a large signaling complex. *Proc Natl Acad Sci U S A*. 1992 Nov 15;89(22):10733-7.
3. **Paolini R.**, Kinet J.-P. Cell surface control of the multiubiquitination and deubiquitination of high affinity immunoglobulin E receptors. *EMBO J*. 1993 Feb;12(2):779-86.
4. **Paolini R.**, Renard V., Vivier E., Ochiai K., Jouvin M.-H., Malissen B., Kinet J.-P. Different roles for the FcεRI γ chain as a function of the receptor context. *J Exp Med*. 1995 Jan 1;181(1):247-55.
5. **Paolini R.**, Serra A., Kinet J.-P. Persistence of tyrosine-phosphorylated FcεRI in deactivated cells. *J Biol Chem*. 1996 Jul 5;271(27):15987-92.
6. **Paolini R.**, Serra A., Molfetta R., Piccoli M., Frati L., Santoni A. Tyrosine kinase-dependent ubiquitination of CD16 ζ subunit in human NK cells following receptor engagement. *Eur J Immunol*. 1999 Oct;29(10):3179-87.
7. Gismondi A., Jacobelli J., Mainiero F., **Paolini R.**, Piccoli M., Frati L., Santoni A. Cutting edge: Functional role for Proline-Rich Tyrosine Kinase 2 in NK cell-mediated natural cytotoxicity. *J Immunol*. 2000 Mar 1;164(5):2272-6.
8. **Paolini R.**, Molfetta R., Piccoli M., Frati L., Santoni A. Ubiquitination and degradation of Syk and ZAP-70 protein tyrosine kinases in human NK cells upon CD16 engagement. *PNAS U S A*. 2001 Aug 14;98(17):9611-6. DOI:10.1073/pnas.161298098
9. **Paolini R.**, Molfetta R., Beitz, L.O., Zhang J., Scharenberg A.M., Piccoli M., Frati L., Siraganian R., Santoni A. Activation of Syk tyrosine kinase is required for c-Cbl-mediated ubiquitination of FcεRI and Syk in RBL-2H3 cells. *J Biol Chem*. 2002 Oct 4;277(40):36940-7. DOI:10.1074/jbc.M204948200
10. Torelli G. F., **Paolini R.**, Tatarelli C., Soriani A., Vitale A., Guarini A., Santoni A., Foà R. Defective expression of the T-cell receptor-CD3 zeta chain in T-cell acute lymphoblastic leukaemia. *Br J Haematol*. 2003 Jan;120(2):201-8.
11. Molfetta R., Belleudi F., Peruzzi G., Morrone S., Leone L., Dikic I., Piccoli M., Frati L., Torrisi M.R., Santoni A., **Paolini R.** CIN85 regulates the ligand-dependent endocytosis of the IgE receptor: a new molecular mechanism to dampen mast cell function. *J Immunol*. 2005 Oct 1;175(7):4208-16.
12. Molfetta R., Peruzzi G., Santoni A., **Paolini R.** Negative signal from FcεRI engagement attenuate mast-cell functions. *Arch Immunol Ther Exp (Warsz)*. 2007 Jul-Aug;55(4):219-29. DOI:10.1007/s00005-007-0028-4
13. Peruzzi G., Molfetta R., Gasparrini F., Vian L., Morrone S., Piccoli M., Frati L., Santoni A., **Paolini R.** The adaptor molecule CIN85 regulates Syk tyrosine kinase level by activating the ubiquitin-proteasome degradation pathway. *J Immunol.* 2007 Aug 15;179(4):2089-96.
14. Molfetta R., Gasparrini F., Peruzzi G., Vian L., Piccoli M., Frati L., Santoni A., **Paolini R.** Lipid-raft dependent FcεRI ubiquitination regulates receptor endocytosis through the action of ubiquitin binding adaptors. *PLoS One*. 2009 May 19;4(5):e5604. doi: 10.1371/journal.pone.0005604.
15. Porzia A., Lanzardo S., Citti A., Cavallo F., Forni G., Santoni A., Galandrini R., **Paolini R.** Attenuation of PI3K/Akt-mediated tumorigenic signals through PTEN activation by DNA vaccine-induced anti-ErbB2 antibodies. *J Immunol.* Apr 15;184(8):4170-7. doi: 10.4049/jimmunol.0903375.
16. Molfetta R., Gasparrini F., Santoni A., **Paolini R.** Ubiquitination and endocytosis of the high affinity receptor for IgE. *Mol. Immunol*. 2010 Sep;47(15):2427-34. doi: 10.1016/j.molimm.2010.06.003.
17. Gasparrini F., Molfetta R., Santoni A., **Paolini R.** Cbl family proteins: balancing FcεRI-mediated mast cell activation and functions. *Inter Arch Allergy Immunol*. 2011;156(1):16-26.
18. Capuano C., **Paolini R.**, Molfetta R., Frati L., Santoni A., Galandrini R. PIP2-dependent regulation of Munc13-4 endocytic recycling: impact on the cytosolic secretory pathway. *Blood*, Mar 8;119(10):2252-62.
19. Gasparrini F., Molfetta R., Quatrini L., Frati L., Santoni A., **Paolini R.** Syk-dependent regulation of Hrs phosphorylation and ubiquitination upon FcεRI-engagement: impact on Hrs membrane/cytosol localization. *Eur. J. Immunol.*, 2012 Oct;42(10):2744-53. doi: 10.1002/eji.201142278.
20. Molfetta R., Quatrini L., Capuano C., Gasparrini F., Zitti B., Zingoni A., Galandrini R., Santoni A., **Paolini R.** c-Cbl regulates MICA-but not ULBP2-induced NKG2D down-modulation in human NK cells. *Eur J Immunol*. 2014 Sep;44(9):2761-2770. DOI: 10.1002/eji.201444512.
21. Molfetta R., Quatrini L., Gasparrini F., Zitti B., Santoni A., **Paolini R.** Regulation of Fc receptor endocytic trafficking by ubiquitination. *Front Immunol*. 2014 Sep 18;5:449. DOI: 10.3389/fimmu.2014.00449.
22. **Paolini R.**, Bernardini G., Molfetta R., Santoni A. NK cells and interferons. *Cytokine Growth Factor Rev*. 2015 Apr;26(2):113-20. doi: 10.1016/j.cytogfr.2014.11.003.
23. Fionda C., Abruzzese M.P., Zingoni A., Soriani A., Ricci B., Molfetta R., **Paolini R.**, Santoni A., Cippitelli M. Nitric oxide donors increase PVR/CD155 DNAM-1 ligand expression in multiple myeloma cells: role of DNA damage response activation. *BMC Cancer*. 2015 Jan 22;15:17. doi: 10.1186/s12885-015-1023-5.
24. Zingoni A., Cecere F., Vulpis E., Amendola M.G., Fionda C., Molfetta R., Soriani A., Cerboni C., **Paolini R.**, Cippitelli M., Santoni A. Genotoxic stress induces senescence-associated ADAM10 dependent release of NKG2D MIC ligands in multiple myeloma cells. *J Immunol*. 2015 Jul 15;195(2):736-48.
25. Fionda C., Abruzzese M. P., Zingoni A., Cecere F., Vulpis E., Peruzzi G., Soriani A., Molfetta R., **Paolini R.**, Ricciardi M.R., Petrucci M.T., Santoni A., Cippitelli M. The IMiDs targets IKZF-1/3 and IRF4 as novel negative regulators of NK cell-activating ligands expression in multiple myeloma. *Oncotarget*. 2015 Sep 15;6(27):23609-30.
26. Capuano C., Romanelli M., Pighi C., Cimino G., Rago A., Molfetta R., **Paolini R.**, Santoni A., Galandrini R. Anti-CD20 therapy acts via FcγRIIIA to diminish responsiveness of human natural killer cells. *Cancer Res*. 2015 Oct 1;75(19):4097-108.
27. Quatrini L., Molfetta R., Zitti B., Peruzzi G., Fionda C., Capuano C., Galandrini R., Cippitelli M., Santoni A., **Paolini R.** Ubiquitin-dependent endocytosis of NKG2D-DAP10 receptor complexes activates signaling and functions in human NK cells. *Science Signaling* 2015 Oct 27; 8(400):ra108. doi: 10.1126/scisignal.aab2724.
28. Molfetta R., Quatrini L., Zitti B., Capuano C., Galandrini R., Santoni A., **Paolini R.** Regulation of NKG2D Expression and Signaling by Endocytosis. *Trends Immunol*. 2016 Nov;37(11):790-802. doi: 10.1016/j.it.2016.08.015. Review.
29. Abruzzese M.P., Bilotta M.T., Fionda C., Zingoni A., Soriani A., Vulpis E., Borrelli C., Zitti B., Petrucci M.T., Ricciardi M.R., Molfetta R., **Paolini R.**, Santoni A., Cippitelli M. Inhibition of bromodomain and extra-terminal (BET) proteins increases NKG2D ligand MICA expression and sensitivity to NK cell-mediated cytotoxicity in multiple myeloma cells: role of cMYC-IRF4-miR-125b interplay. *J Hematol Oncol*. 2016 Dec 1;9(1):134.
30. Soriani A., Borrelli C., Ricci B., Molfetta R., Zingoni A., Fionda C., Carnevale S., Abruzzese M.P., Petrucci M.T., Ricciardi M.R., La Regina G., Di Cesare E., Lavia P., Silvestri R., **Paolini R.**, Cippitelli M., Santoni A. p38 MAPK differentially controls NK activating ligands at transcriptional and post-transcriptional level on multiple myeloma cells. *Oncimmunology*. 2016 Dec 2;6(1):e1264564. doi: 10.1080/2162402X.2016.1264564.

## Textbooks (Chapters, etc.)

1. Molfetta R., Gasparrini F., Santoni A, **Paolini R.** Negative regulation of FcεRI-mediated basophil activation by the Cbl family of adaptor proteins. In: Basophil Granulocytes (Editor: Paul K. Vellis), Nova Science Publishers, 2009.
2. Molfetta R., **Paolini R.** The high affinity receptor for IgE. Not Allergol vol. 33: n.3: 113-120, 2015.

FIRMATO

Rossella Paolini