

## Europass Curriculum Vitae



### Personal information

First name(s) / Surname(s)

**Angela Santoni**

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Nationality

Italian

Date of birth

21.02.1950

Gender

Female

### Occupational field

Immunology and Immunopathology SSD MED/04

### Work experience

Occupation or position held

Since 2010 Head of the Department of Molecular Medicine – “Sapienza” University of Rome  
since 2009 Scientific Director of the Pasteur Institute, Cenci Bolognetti Foundation, Rome  
since 2009 Member of the Patent Committee, “Sapienza” University of Rome  
since 2006 Coordinator of PhD program in Molecular Biology and Medicine, “Sapienza” University of Rome  
since 2005 Member of AIRC Advisory Board  
since 2003 Vice President of Master Program in Medical Biotechnologies, “Sapienza” University of Rome  
since 2003 Head of Molecular Pathology section, IBPM CNR Institute, Rome  
since 2001 Principal Investigator of the Centre of Excellence “Molecular Biology. and Medicine” (BEMM) “Sapienza” University of Rome  
since 1993 Coordinator of Ph.D. Program in Immunology, from 2011 named Immunological, Haematological and Rheumatologic Sciences, “Sapienza” University of Rome  
since 1989 Full Professor, Chair of Immunology and Immunopathology, SSD MED/04, Medical School, “Sapienza” University of Rome.

Main activities and responsibilities

Since 2007 Member of the National Research Committee of Health Ministry  
Since 2003 Director of the Speciality School in Clinical Pathology, “Sapienza” University of Rome  
2011-2013 Member of ERC Starting grant Committee Panel Infection and Immunity  
2011-2010 Member of Grant Committee PRIN – Ministry of University and Research (MIUR) -  
2011-1993 Head of Ph.D. Course of Immunology, “Sapienza” University of Rome  
2009-1994 Member, Scientific Council "Istituto Pasteur - Fondazione Cenci Bolognetti", “Sapienza” University of Rome  
2007-2004 Member of EMBO Long Term Fellowship Committee  
2003-2000 Member of AIRC Grant Committee  
2001-1998 President of Scientific Council of Biomedical Technologies Institute, CNR, Rome  
2001-1996 Member, Scientific Council "Centre for the Study of Immunogenetics and Experimental Oncology", C.N.R., Turin

## Educational activities

2000-1991 Head of Pathophysiology Laboratory, "Regina Elena" Cancer Institute, Rome  
1999-1997 Member of the National Committee for A.I.D.S. (Ministry of Health)  
1997-1994 Director of Biomedical Technologies Institute, CNR, Rome  
1993-1988 Head of Ph.D. Program in Biotechnology, University of L'Aquila

1989-1986 Full Professor, Chair of General Pathology, SSD MED/04, Medical School, University of l'Aquila  
1986-1983 University Researcher, Department of Experimental Medicine, "Sapienza" University of Rome  
1981-1978 University Researcher, Chair of Virology, University of Perugia  
1973-1972 Acting Assistant Professor, Institute of Hygiene, Medical School, University of Perugia

Since 1989 Professor of Immunology and Immunopathology, Medical School, "Sapienza" University of Rome  
since 2003 Professor of Immunology and Immunopathology Master program in Medical Biotechnology, "Sapienza" University of Rome  
since 2000 Member of Committee of the undergraduate courses in Biotechnology, "Sapienza" University of Rome  
since 1990 Teacher in the Schools of Speciality in Clinical Pathology, Haematology, Nephrology, Medical Oncology, Clinical Immunology and Allergology, "Sapienza" University of Rome  
2004-1995 Professor of General Pathology, Master Program in Biological Sciences, University of Urbino  
2002-2001 Professor of Immunology, Undergraduate Program in Biotechnology, "Sapienza" University of Rome  
2001-2000 Professor of Immunology, Master Program in Biological Sciences, University of Rome Tre  
1989-1986 Professor of General Pathology, Medical School, University of l'Aquila.

## Clinical activities

2000-1991 Head of Pathophysiology Laboratory, "Regina Elena" Cancer Institute, Rome.

## Education and training

Title of qualification awarded  
Name and type of organisation  
providing education and training

1983-1982 Research Expert, Laboratory of Immunodiagnosics, NCI, NIH, Bethesda, MD, and Biological Response Modifiers Program, Biological Therapeutics Branch, Section of Natural Immunity, NCI, CRF, Frederick, MD.  
1977-1975 Fogarty Fellow, Laboratory of Experimental Chemotherapy and Immunodiagnostic, NCI-NIH, Bethesda, MD  
1975-1974 Research Associate, Institute of Pharmacology, University of Perugia.  
1972 Ph.D. in Biology, University of Perugia, Perugia, Italy, Graduation Score: 110/110 cum laude

## Personal skills and competences

### Scientific activities

#### Scientific Interests

Over the last years, the main interests of Prof. Santoni have been focused on understanding several aspects of NK cell biology. In particular she has been involved in studying the role of the intracellular signaling pathways triggered by several surface activation/adhesion receptors in NK cell functions, first demonstrating that integrins function as signaling receptors in NK cells. More recently she has been interested in analyzing the molecular mechanisms regulating the expression of NK cell activating receptor ligands on both normal and neoplastic cells. She has first proposed that NK cells may represent an immunosurveillance mechanism eliminating senescent cells.

Author of more than 250 publications in highly qualified international journals with an overall IF for the publications of the last fifteen years > 650 (H-index 49; Number of total citations 5881), and invited as

speaker and chairperson to many national and international scientific congresses

#### Scientific collaborations

Prof. Alberto Mantovani, Istituto Clinico Humanitas IRCCS, Rozzano Milano

Prof. Silvano Sozzani, Brescia University

Prof. Francesco Tedesco, Dr. Roberta Bulla, Trieste University

Prof. Franco Locatelli, Dept of Haematology and Pediatric Oncology, IRCCS Ospedale Pediatrico Bambino Gesù, Roma

Prof.ssa Francesca Velotti, Tuscia University, Viterbo

Prof. Guido Forni, Prof. Federica Cavallo, Torino University

Prof. Robin Foà, Dr. Maria Teresa Petrucci, Haematology Division, Sapienza University, Roma

Prof. Guido Valesini, Dr. Rossana Scrivo, Rheumatological Unit, Dept of Internal Medicine and Clinical Specialities, Sapienza University, Roma

Dr. Isabella Quinti, Dept Molecular Medicine, Sapienza University, Roma

Dr. Francesca Di Rosa, CNR Institute of Molecular Biology and Pathology, Roma

Dr. Paola Nisticò; Laboratory of Immunology, Istituto Nazionale dei Tumori "Regina Elena", Roma

Dr. Ruggero De Maria, Dept Haematology, Oncology and Molecular Medicine, Istituto Superiore di Sanità, Roma

Prof. Luigi Notarangelo Division of Immunology, Children's Hospital, Boston, MA

Dr. James P. Di Santo, Innate Immunity Unit, Immunology Department, Institut Pasteur, Paris

Dr. Tchavdar Vassilev and Dr. Petya Dimitrova, Department of Immunology, Stefan Angelov Institute of Microbiology, Bulgarian Academy of Sciences, Sofia

She is recipient of grants from several research agencies including MIUR (Coordinator of a national program from 1987), CNR, Ministry of Health, AIRC and the European Union

#### Referee and Editorial activities

She is Editor in Chief of Immunology Letters,

- Member of Editorial Board of European Journal of Immunology and American Journal of Reproductive Immunology.
- Referee of several international journals including Journal of Immunology, Blood, Cancer Research, Clinical Cancer Research, Immunology, Journal of Leukocyte Biology, European Journal Immunology

#### Scientific Societies

Since 2010 she is member of The Academy of Europe

She is member of Italian Society of Pathology Board (SIP)

- member of European Molecular Biology Organization (EMBO)
- member of American Association of Immunologists (AAI)
- member of Society for Natural Immunity (SNI)
- member of Italian Society for Immunology, Clinical Immunology and Allergology (SIICA)

2008-2002 Council Officer of the Italian Society for Immunology, Clinical Immunology and Allergology (SIICA)

2002-1994 Vice President and President of the International Society for Natural Immunity (SNI)

<b>Mother tongue(s)</b>					
Other language(s)	<b>English</b>				
Self-assessment	<b>Understanding</b>		<b>Speaking</b>		<b>Writing</b>
<i>European level (*)</i>	Listening	Reading	Spoken interaction	Spoken production	
<b>Language</b>	C2	C2	C2	C2	C2

(\*) [Common European Framework of Reference for Languages](http://www.cerl.eu)

**Additional information**

Include here any other information that may be relevant, for example contact persons, references, etc.

Receiving

**Annexes**

List any items attached.

## Scientific Publication

(max 30)

1. Ardolino M, Zingoni A, Cerboni C, Cecere F, Soriani A, Iannitto ML, Santoni A. **DNAM-1 ligand expression on Ag-stimulated T lymphocytes is mediated by ROS-dependent activation of DNA-damage response: relevance for NK-T cell interaction.** Blood. 2011;117:4778-86.
2. Sciumè G, De Angelis G, Benigni G, Ponzetta A, Morrone S, Santoni A, Bernardini G. **CX3CR1 expression defines 2 KLRG1+ mouse NK-cell subsets with distinct functional properties and positioning in the bone marrow.** Blood. 2011;117: 4467-75.
3. Stabile H, Carlino C, Mazza C, Giliani S, Morrone S, Notarangelo LD, Notarangelo LD, Santoni A, Gismondi A. **Impaired NK-cell migration in WAS/XLT patients: role of Cdc42/WASp pathway in the control of chemokine-induced beta integrin high-affinity state.** Blood. 2010;115:2818-26.
4. Fionda C, Soriani A, Malgarini G, Iannitto ML, Santoni A, Cippitelli M. **Heat shock protein-90 inhibitors increase MHC class I-related chain A and B ligand expression on multiple myeloma cells and their ability to trigger NK cell degranulation.** J Immunol. 2009;183:4385-94.
5. Soriani A, Zingoni A, Cerboni C, Iannitto ML, Ricciardi MR, Di Gialleonardo V, Cippitelli M, Fionda C, Petrucci MT, Guarini A, Foà R, Santoni A. **ATM-ATR-dependent up-regulation of DNAM-1 and NKG2D ligands on multiple myeloma cells by therapeutic agents results in enhanced NK-cell susceptibility and is associated with a senescent phenotype.** Blood. 2009 ;113:3503-11.
6. Cerboni C, Ardolino M, Santoni A, Zingoni A. **Detuning CD8+ T lymphocytes by down-regulation of the activating receptor NKG2D: role of NKG2D ligands released by activated T cells.** Blood. 2009;113:2955-64.
7. Parretta E, Cassese G, Santoni A, Guardiola J, Vecchio A, Di Rosa F. **Kinetics of in vivo proliferation and death of memory and naive CD8 T cells: parameter estimation based on 5-bromo-2'-deoxyuridine incorporation in spleen, lymph nodes, and bone marrow.** J Immunol. 2008;180:7230-9.
8. Bernardini G, Sciumè G, Bosisio D, Morrone S, Sozzani S, Santoni A. **CCL3 and CXCL12 regulate trafficking of mouse bone marrow NK cell subsets.** Blood. 2008;111:3626-34.
9. Cassese G, Parretta E, Pisapia L, Santoni A, Guardiola J, Di Rosa F. **Bone marrow CD8 cells down-modulate membrane IL-7Ralpha expression and exhibit increased STAT-5 and p38 MAPK phosphorylation in the organ environment.** Blood. 2007;110:1960-9. .
10. Cerboni C, Zingoni A, Cippitelli M, Piccoli M, Frati L, Santoni A. **Antigen-activated human T lymphocytes express cell-surface NKG2D ligands via an ATM/ATR-dependent mechanism and become susceptible to autologous NK- cell lysis.** Blood. 2007;110:606-15.
11. Fionda C, Nappi F, Piccoli M, Frati L, Santoni A, Cippitelli M. **15-deoxy-Delta12,14-prostaglandin J2 negatively regulates rankl gene expression in activated T lymphocytes: role of NF-kappaB and early growth response transcription factors.** J Immunol. 2007;178:4039-50.
12. Di Modugno F, Mottolese M, Di Benedetto A, Conidi A, Novelli F, Perracchio L, Venturo I, Botti C, Jager E, Santoni A, Natali PG, Nisticò P. **The cytoskeleton regulatory protein**

**hMena (ENAH) is overexpressed in human benign breast lesions with high risk of transformation and human epidermal growth factor receptor-2-positive/hormonal receptor-negative tumors.**

Clin Cancer Res. 2006;12:1470-8.

13. Galandrini R, Micucci F, Tassi I, Cifone MG, Cinque B, Piccoli M, Frati L, Santoni A. **Arf6: a new player in FcγRIIIA lymphocyte-mediated cytotoxicity.** Blood. 2005;106:577-83.
14. Zingoni A, Sornasse T, Cocks BG, Tanaka Y, Santoni A, Lanier LL. **Cross-talk between activated human NK cells and CD4<sup>+</sup> T cells via OX40-OX40 ligand interactions.** J Immunol. 2004;173:3716-24.
15. Pisegna S, Pirozzi G, Piccoli M, Frati L, Santoni A, Palmieri G. **p38 MAPK activation controls the TLR3-mediated up-regulation of cytotoxicity and cytokine production in human NK cells.** Blood. 2004;104:4157-64.
16. Bertini R, Allegretti M, Bizzarri C, Moriconi A, Locati M, Zampella G, Cervellera MN, Di Cioccio V, Cesta MC, Galliera E, Martinez FO, Di Bitondo R, Troiani G, Sabbatini V, D'Anniballe G, Anacardio R, Cutrin JC, Cavalieri B, Mainiero F, Strippoli R, Villa P, Di Girolamo M, Martin F, Gentile M, Santoni A, Corda D, Poli G, Mantovani A, Ghezzi P, Colotta F. **Noncompetitive allosteric inhibitors of the inflammatory chemokine receptors CXCR1 and CXCR2: prevention of reperfusion injury.** Proc Natl Acad Sci U S A. 2004;101:11791-6.
17. Gismondi A, Cifaldi L, Mazza C, Giliani S, Parolini S, Morrone S, Jacobelli J, Bandiera E, Notarangelo L, Santoni A. **Impaired natural and CD16-mediated NK cell cytotoxicity in patients with WAS and XLT: ability of IL-2 to correct NK cell functional defect.** Blood. 2004;104:436-43.
18. Cippitelli M, Fionda C, Di Bona D, Lupo A, Piccoli M, Frati L, Santoni A. **The cyclopentenone-type prostaglandin 15-deoxy-Δ<sup>12,14</sup>-prostaglandin J<sub>2</sub> inhibits CD95 ligand gene expression in T lymphocytes: interference with promoter activation via peroxisome proliferator-activated receptor-γ-independent mechanisms.** J Immunol. 2003;170:4578-92.
19. Gismondi A, Jacobelli J, Strippoli R, Mainiero F, Soriani A, Cifaldi L, Piccoli M, Frati L, Santoni A. **Proline-rich tyrosine kinase 2 and Rac activation by chemokine and integrin receptors controls NK cell transendothelial migration.** J Immunol. 2003;170:3065-73.
20. Galandrini R, Tassi I, Mattia G, Lenti L, Piccoli M, Frati L, Santoni A. **SH2-containing inositol phosphatase (SHIP-1) transiently translocates to raft domains and modulates CD16-mediated cytotoxicity in human NK cells.** Blood. 2002;100:4581-9.
21. Paolini R, Molfetta R, Beitz LO, Zhang J, Scharenberg AM, 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 cells.** J Biol Chem. 2002;277:36940-7.
22. Pisegna S, Zingoni A, Pirozzi G, Cinque B, Cifone MG, Morrone S, Piccoli M, Frati L, Palmieri G, Santoni A. **Src-dependent Syk activation controls CD69-mediated signaling and function on human NK cells.** J Immunol. 2002;169:68-74.
23. 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.** Proc Natl Acad Sci U S A. 2001;98:9611-6.
24. Bernardini G, Spinetti G, Ribatti D, Camarda G, Morbidelli L, Ziche M, Santoni A, Capogrossi MC, Napolitano M. **I-309 binds to and activates endothelial cell functions and acts as an angiogenic molecule in vivo.** Blood. 2000;96:4039-45.
25. Limatola C, Ciotti MT, Mercanti D, Vacca F, Ragazzino D, Giovannelli A, Santoni A, Eusebi F, Miledi R. **The chemokine growth-related gene product beta protects rat cerebellar granule cells from apoptotic cell death through α-amino-3-hydroxy-5-methyl-4-**

	<p><b>isoxazolepropionate receptors.</b> Proc Natl Acad Sci U S A. 2000;97:6197-201.</p> <p>26. Gismondi A, Jacobelli J, Mainiero F, Paolini R, Piccoli M, Frati L, Santoni A. <b>Cutting edge: functional role for proline-rich tyrosine kinase 2 in NK cell-mediated natural cytotoxicity.</b> J Immunol. 2000;164:2272-6.</p> <p>27. Mainiero F, Soriani A, Strippoli R, Jacobelli J, Gismondi A, Piccoli M, Frati L, Santoni A. <b>RAC1/P38 MAPK signaling pathway controls beta1 integrin-induced interleukin-8 production in human natural killer cells.</b> Immunity. 2000;12:7-16.</p> <p>28. Cifone MG, D'Alò S, Parroni R, Millimaggi D, Biordi L, Martinotti S, Santoni A. <b>Interleukin-2-activated rat natural killer cells express inducible nitric oxide synthase that contributes to cytotoxic function and interferon-gamma production.</b> Blood. 1999;93:3876-84.</p> <p>29. Mainiero F, Gismondi A, Soriani A, Cippitelli M, Palmieri G, Jacobelli J, Piccoli M, Frati L, Santoni A. <b>Integrin-mediated ras-extracellular regulated kinase (ERK) signaling regulates interferon gamma production in human natural killer cells.</b> J Exp Med. 1998;188:1267-75.</p> <p>30. Galandrini R, Palmieri G, Piccoli M, Frati L, Santoni A. <b>CD16-mediated p21ras activation is associated with Shc and p36 tyrosine phosphorylation and their binding with Grb2 in human natural killer cells.</b> J Exp Med. 1996;183:179-86</p>
Textbooks (Chapters, etc.)	<p>1. Gismondi A, Carlino C, Stabile H and Santoni A (2009). <b>NK Cell And Endothelial Cell Interactions.</b> In: Elsevier "Natural Killer Cells" Lotze Mt And Thomson Aw Book (ISBN: 978-0-12-370454-2).</p> <p>2. Gismondi A, Bernardini G and Santoni A (2009). NK Cells and Chemokines. In: Elsevier "Natural Killer Cells" Lotze Mt And Thomson Aw Book (ISBN: 978-0-12-370454-2).</p> <p>3. Gismondi A, Mainiero F, Santoni A. Evaluation of Rho family small G-protein activity induced by integrin ligation on human leukocytes. Methods Mol Biol. 2004;239:69-76.</p> <p>4. Mainiero F, Gismondi A, Strippoli R, Jacobelli J, Soriani A, Morrone S, Santoni A. Integrin-mediated regulation of cytokine and chemokine production by human natural killer cells. Eur Cytokine Netw. 2000;11(3):493-4.</p> <p>5. Gismondi A, Santoni A. Integrin mediated stimulation of tyrosine phosphorylation in lymphoid cells. Methods Mol Biol. 1999;96:205-10.</p>