

**Concetta Quintarelli**

## **CURRICULUM VITAE E STUDIORUM**

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Current Professional Position Faculty SSD Bio10 – “Federico II” University, Naples Italy

### **Educational Qualification**

**2010 – Fellowship in Biochemistry, Molecular Biology and Medical Biotechnology with honour–** Postgraduate School of Clinical Biochemistry, University “Federico II”, Naples Italy. (Thesis Title: Development of adoptive T-cell immunotherapy approaches to patients with leukemia”. Supervisor: Dr. F. Pane, MD, Professor).

**2005 - PhD in Medical Biotechnology Science**, University “Federico II”, Naples Italy. (Thesis Title: Regulation of the immune surveillance in hematological tumor: Tumor-associated antigen and Immune-costimulatory molecules expression”. Supervisor: Dr. B. Rotoli, MD, Professor).

**2001 - Medical Biotechnology Science Degree** with honor, University “Federico II”, Naples, Italy (Experimental Thesis Title: “Molecular Characterization of the genetic mutation occurring in Acute Myeloid Leukemia to address diagnosis, molecular monitoring and differential therapy”. Advisor: Prof. F. Pane, Department of Biochemistry and Medical Biotechnology, University “Federico II”, Naples, Italy).

### **Professional Education and Positions**

**2007- at present**, Faculty (Bio/10) at Department of Clinical Medicine and Surgery, University of Naples Federico II.

**2005-2009**, Post-doctoral fellowship in Translational research (Cancer vaccine) (Laboratory directed by Brenner MK, MD, Center for Cell and Gene Therapy, Baylor College of Medicine, Houston, Texas).

**2004-2007**, Junior Research Fellowship (MIUR Rome project PS35-126/IND, Italy), at CEINGE - Biotecnologie Mediche s.c.a r.l, Naples Italy, in agreement with the research/educational program between “CEINGE-Biotecnologie Mediche” and “Ministero dell’Istruzione dell’Università e della Ricerca”.

**2001-2004**, Doctoral Associated Research, at Department of Biochemistry and Medical Biotechnology, University “Federico II”, Naples, Italy.

**1999-2001**, Bachelor's research Internship, at Department of Biochemistry and Medical Biotechnology, University “Federico II”, Naples, Italy.

### **University Teaching Activities by nominal assignment:**

2009-2010: "Metodologie in diagnostica molecolare" (III anno del Corso di Laurea in Biotecnologie per la Salute, Università degli Studi di Napoli "Federico II").

2011-2012: "Metodologie Biochimiche Applicate alla Terapia Cellulare" (Corso di Laurea Magistrale in Biotecnologie Mediche, Università degli Studi di Napoli "Federico II").

2011-2012: "Corso di Comprensione di testi scientifici in lingua inglese (I anno della Scuola di Specializzazione in Biochimica Clinica della Facoltà di Medicina e Chirurgia, Università degli Studi di Napoli "Federico II").

2011-2012: "Corso Integrato di Ematologia" (II anno della Scuola di Specializzazione in Biochimica Clinica della Facoltà di Medicina e Chirurgia, Università degli Studi di Napoli "Federico II").

2012-2013: "Metodologie Biochimiche Applicate alla Terapia Cellulare" (Corso di Laurea Magistrale in Biotecnologie Mediche, Università degli Studi di Napoli "Federico II").

2012-2013: "Metodologie in diagnostica molecolare" (III anno del Corso di Laurea in Biotecnologie per la Salute, Università degli Studi di Napoli "Federico II").

2013-2014: "Metodologie Biochimiche Applicate alla Terapia Cellulare" (Corso di Laurea Magistrale in Biotecnologie Mediche, Università degli Studi di Napoli "Federico II").

## Publications

### Original articles with IF

1. Kaeda J, Ringel F, Oberender C, Mills K, **Quintarelli C**, Pane F, Koschmieder S, Slany R, Schwarzer R, Saglio G, Hemmati P, van Lessen A, Amini L, Greese M, Vagge E, Burmeister T, Serra A, Carson A, Schwarz M, Westermann J, Jundt F, Dörken B, le Coutre P. Upregulated MS12 is associated with more aggressive leukemia. *Leuk Lymphoma*. 2014 Nov 3:1-28.
2. Picardi M, Pugliese N, Cirillo M, Zeppa P, Cozzolino I, Ciancia G, Pettinato G, Salvatore C, **Quintarelli C**, Pane F. Advanced-stage Hodgkin Lymphoma: US/Chest Radiography for Detection of Relapse in Patients in First Complete Remission-A Randomized Trial of Routine Surveillance Imaging Procedures. *Radiology*. 2014 Apr 6:132154.
3. **Quintarelli C**, De Angelis B, Errichiello S, Caruso S, Esposito N, Colavita I, Raia M, Pagliuca S, Pugliese N, Risitano Am, Picardi M, Luciano L, Saglio G, Martinelli G, Pane F. Selective strong synergism of Ruxolitinib and second generation tyrosine kinase inhibitors to overcome bone marrow stroma related drug resistance in chronic myelogenous leukemia. *Leuk Res*. 2014 Feb;38(2):236-42. doi: 10.1016/j.leukres.2013.11.006.
4. Colavita I, Esposito N, **Quintarelli C**, Nigro E, Pane F, Ruoppolo M, Salvatore F. Identification of Annexin A1 interacting proteins in chronic myeloid leukemia KCL22 cells. *Proteomics*. 2013 Jun 10. doi: 10.1002/pmic.201200444
5. Esposito N, Colavita I, **Quintarelli C**, Sica AR, Peluso AL, Luciano L, Picardi M, Del Vecchio L, Buonomo T, Hughes TP, White D, Radich JP, Russo D, Branford S, Saglio G, Melo JV, Martinelli R, Ruoppolo M, Kalebic T, Martinelli G, Pane F. SHP1 expression accounts for resistance to imatinib treatment in Philadelphia chromosome-positive cells derived from patients with chronic myeloid leukemia. *Blood*. 2011 Sep 29;118(13):3634-44.
6. **Quintarelli C**, Dotti G, Hasan ST, De Angelis B, Hoyos V, Errichiello S, Mims M, Luciano L, Shafer J, Leen AM, Heslop HE, Rooney CM, Pane F, Brenner MK, Savoldo B. High-avidity cytotoxic-T-lymphocytes specific for a new preferentially expressed antigen of melanoma (PRAME)-derived peptide can target leukemic- and leukemic-precursor cells. *Blood*. 2011 Mar 24;117(12):3353-62.
7. **Quintarelli C**, Savoldo B, Dotti G. Gene therapy to improve function of T cells for adoptive immunotherapy. *Methods Mol Biol*. 2010;651:119-30.

8. Hoyos V, Savoldo B, **Quintarelli C**, Mahendravada A, Zhang M, Vera J, Heslop HE, Rooney CM, Brenner MK, Dotti G. Engineering CD19-specific T lymphocytes with interleukin-15 and a suicide gene to enhance their anti-lymphoma/leukemia effects and safety. *Leukemia*. 2010 Jun;24(6):1160-70.
9. De Angelis B, Dotti G, **Quintarelli C**, Huye LE, Zhang L, Zhang M, Pane F, Heslop HE, Brenner MK, Rooney CM, Savoldo B. Generation of Epstein-Barr virus-specific cytotoxic T lymphocytes resistant to the immunosuppressive drug tacrolimus (FK506). *Blood*. 2009 Nov 26;114(23):4784-91. Epub 2009 Sep 16.
10. Vera JF, Hoyos V, Savoldo B, **Quintarelli C**, Giordano Attianese G, Leen AM, Liu H, Foster AE, Heslop HE, Rooney CM, Brenner MK and Dotti G. Genetic manipulation of tumor-specific cytotoxic T lymphocytes to restore responsiveness to IL-7. *Mol Ther*. 2009 May;17(5):880-8.
11. **Quintarelli C**, Dotti G, De Angelis B, Hoyos V, Mims M, Luciano L, Heslop H, Rooney CM, Pane F and Savoldo B. Cytotoxic T lymphocytes directed to the Preferentially Expressed Antigen of Melanoma (PRAME) target chronic myeloid leukemia. *Blood*. 2008 Sep 1;112(5):1876-85.
12. **Quintarelli C**, Vera JF, Barbara Savoldo, Greta M. P. Giordano Attianese, Martin Pule, Aaron E. Foster, Helen E. Heslop, Cliona M. Rooney, Malcolm K. Brenner, and Gianpietro Dotti. Co-expression of cytokine and suicide genes to enhance the activity and safety of tumor-specific cytotoxic T lymphocytes. *Blood*, 15 October 2007, Vol. 110, No. 8, pp. 2793-2802.
13. Pane F, Cimino G, Izzo B, Camera A, Vitale A, **Quintarelli C**, Picardi M, Specchia G, Mancini M, Cuneo A, Mecucci C, Martinelli G, Saglio G, Rotoli B, Mandelli F, Salvatore F, Foà R. Significant reduction of the hybrid *BCR/ABL* transcripts after induction and consolidation therapy is a powerful predictor of treatment response in adult Philadelphia-positive acute lymphoblastic leukemia. *Leukemia*, 2005 Apr;19(4):628-3
14. Picardi F, Pane F, **Quintarelli C**, De Renzo A, Del Giudice A, de Divitiis B, Persico M, Ciancia R, Salvatore F, Rotoli B. Hepatitis B virus reactivation after fludarabine-based regimens for indolent non-Hodgkin's lymphomas: high prevalence of acquired viral genomic mutations. *Haematologica*. 2003 Nov;88(11):1296-303.
15. Pane F, Intriery M, Izzo B, **Quintarelli C**, Vitale D, Migliorati R, Sebastio L, Salvatore F. A novel *MLL/AF4* fusion gene lacking the AF4 transactivating domain in infant acute lymphoblastic leukemia. *Blood*. 2002 Dec 1;100(12):4247-8.
16. Pane F, Intriery M, **Quintarelli C**, Izzo B, Muccioli GC, Salvatore F. *BCR/ABL* genes and leukemic phenotype: from molecular mechanisms to clinical correlations. *Oncogene*. 2002 Dec 9;21(56):8652-67.

### **Poster presentations to National/International congress**

1. 18th Congress of the European Hematology Association, 13-16 Jun 2013 Stockholm, Sweden. P114: "The axis shp-1/shp-2 modulates vegfr2 signaling in cml cell lines: vegfr2 deregulation may be implicated in imatinib (IMA) resistance".
2. 18th Congress of the European Hematology Association, 13-16 Jun 2013 Stockholm, Sweden. P115: "Synergy between jak inhibitor ruxolitinib and tyrosine kinase inhibitors (TKIs) to overcome drug resistance related to bone marrow (BM) stroma microenvironment in chronic myeloid leukemia (CML)".
3. 18th Congress of the European Hematology Association, 13-16 Jun 2013 Stockholm, Sweden. P250: "A differential centrosome localization of wild type (wt) and JAK2V617F protein in human leukemia cell lines".
4. 18th Congress of the European Hematology Association, 13-16 Jun 2013 Stockholm, Sweden. P257: "All-trans retinoic acid potentiates the inhibitory effects of interferon alpha (ifn) on chronic myeloproliferative neoplasms (mpn) progenitors in vitro".
5. XII National Meeting of the Italian Society of Hematology Experimental SIES", October 17-19 2012, Roma, Italy.

- P019: "La proteina indotta da shock termico hsp90 regola l'espressione della proteina preferenzialmente espressa in melanoma (prame) in linee cellulari derivanti da pazienti affetti da leucemia mieloide cronica".
6. XII National Meeting of the Italian Society of Hematology Experimental SIES", October 17-19 2012, Roma, Italy.  
P028: "In vitro ed in vivo analisi della proliferazione e dell'attivazione linfocitaria dopo trattamento con inibitori delle tirosino chinasi (TKI)".
  7. XII National Meeting of the Italian Society of Hematology Experimental SIES", October 17-19 2012, Roma, Italy.  
P106: "Mutazioni del gene ckit in pazienti affetti da leucemia mieloide acuta (lam) caratterizzati da alterazioni del gene del core binding factor (CBF)."
  8. XII National Meeting of the Italian Society of Hematology Experimental SIES", October 17-19 2012, Roma, Italy.  
P173: "ATRA sinergizza con interferone alfa nell'inibizione in vitro di cellule derivanti da pazienti affetti da neoplasia mieloproliferativa cronica."
  9. XII National Meeting of the Italian Society of Hematology Experimental SIES", October 17-19 2012, Roma, Italy.  
P173: "Efficacia della terapia con interferone alfa nella trombocitemia essenziale".
  10. 43° Congress of the Italian Society of Hematology, Napoli, Italy, October 16-19, 2011.  
P088: "High-avidity cytotoxic t lymphocytes specific for a new peptide derived from preferentially expressed antigen of melanoma (PRAME) can target leukemic precursor cells".
  11. 43° Congress of the Italian Society of Hematology, Napoli, Italy, October 16-19, 2011.  
P189: "Spleen volume is the most accurate parameter to avoid understimulation of 25% splenomegalic patients with essential thrombocythemia".
  12. 43° Congress of the Italian Society of Hematology, Napoli, Italy, October 16-19, 2011.  
P189: " High rate of complete response with anagrelide monotherapy or combined with hydroxyurea in essential thrombocythemia".
  13. 43° Congress of the Italian Society of Hematology, Napoli, Italy, October 16-19, 2011.  
P189: "Spleen is the dark side of essential thrombocythemia".
  14. 43° Congress of the Italian Society of Hematology, Napoli, Italy, October 16-19, 2011.  
P192: "Transition index: new original tool to identify subsets overlapping MPN phenotypes".
  15. 43° Congress of the Italian Society of Hematology, Napoli, Italy, October 16-19, 2011.  
P196: "the constitutive activated v617f janus kinase 2 (jak2) induces centrosome abnormalities".
  16. 43° Congress of the Italian Society of Hematology, Napoli, Italy, October 16-19, 2011.  
P275: "Heat shock protein 90 (hsp90) regulates the expression of preferentially expressed antigen of melanoma (prame) in cell lines derived from patients with chronic myeloid leukemia".
  17. 43° Congress of the Italian Society of Hematology, Napoli, Italy, October 16-19, 2011.  
P276: "Mesenchymal stem cells (msc) derived from bone marrow (bm) of patients with chronic myelogenous leukemia protect ph+ leukemic cells from tki induced apoptosis".
  18. 43° Congress of the Italian Society of Hematology, Napoli, Italy, October 16-19, 2011.  
P278: " Deletion and insertion events in tyrosine kynase domain of bcr-abl is a common phenomenon in chronic myeloid leukemia".
  19. Bone Marrow Transplantation Tandem Meetings – Tampa, Florida, February 11-15 2009. PO-155: "Polyclonal prame-specific cytotoxic T lymphocytes generated using protein-spanning pools of overlapping pentadecapeptides target chronic myeloid leukemia".
  20. 50° Annual meeting of the American Society of hematology – San Francisco, California, December 2008. PO-3899: "Polyclonal PRAME-Specific Cytotoxic T Lymphocytes Generated Using Protein-Spanning Pools of Overlapping Pentadecapeptides Target Chronic Myeloid Leukemia".
  21. 50° Annual meeting of the American Society of hematology – San Francisco, California, December 2008  
PO-3536: "Generation of Epstein Barr Virus Specific Cytotoxic T Lymphocytes (EBV-CTLs) Resistant to the Immunosuppressive Drug Tacrolimus (FK506)".
  22. 50° Annual meeting of the American Society of hematology – San Francisco, California, December 2008  
PO-3534: "Safely Improving the in Vivo Survival of Tumor Specific Cytotoxic T Lymphocytes by Co-Transfer of IL7 Receptor Alpha Chain and icaspase9."
  23. 49° Annual meeting of the American Society of hematology – Georgia, Atlanta, December 2007  
PO-2761: "Preferentially Expressed Antigen of Melanoma (PRAME)-Specific Cytotoxic T-Lymphocytes (CTLs) and Transgenic T Cells to Target Chronic Myelogenous Leukemia (CML)"
  24. 49° Annual meeting of the American Society of hematology – Georgia, Atlanta, December 2007  
PO-1191: "A Small Animal In Vivo Imaging Model of Expanded vs. Unexpanded UCB Stem Cells Reveals Differential Patterns of Engraftment"

25. 49° Annual meeting of the American Society of hematology – Georgia, Atlanta, December 2007  
PO-2756: “Gene Transfer of IL-7R alpha (IL-7R $\alpha$ ) on Antigen-Specific Cytotoxic T Cells (CTLs) Restores Their Ability To Respond to IL-7 Cytokine”
26. IX Congresso Societa' Italiana di Ematologia Sperimentale – Napoli, Settembre 20-22, 2006  
PO-114: “Transgenic expression of IL-15 in antigen specific cytotoxic T cells (CTLs) selectively enhances the expansion of transgenic cells”.
27. 48° Annual meeting of the American Society of hematology – Orlando, Florida, November 2006  
PO-1721: Transgenic Expression of IL15 Selectively Expands Antigen Specific Cytotoxic T Cells (CTLs) Enhancing Their Anti-Tumor Effect In Vivo.
28. 48° Annual meeting of the American Society of hematology – Orlando, Florida, November 2006  
PO-2205: “Generation and Expansion of PRAME-Specific Cytotoxic T-Lymphocytes for Adoptive T-Cell Therapy of Hematological Malignancies”.
29. VIII Congress of the Italian Society of Experimental Hematology Pavia, September 14-16, 2004  
PO-022: “Early detection of residual disease by q-rt-pcr of the hybrid bcr/abl transcript is a powerful predictor of treatment response in adult philadelphia-positive acute lymphoblastic leukemia.”
30. VIII Congress of the Italian Society of Experimental Hematology Pavia, September 14-16, 2004  
PO-125 “Cytogenetic and molecular response in a small cohort of chronic myeloid leukemia patients treated with low dose imatinib.”
31. 39° Congresso Nazionale SIE – Roma, 26-29 ottobre 2003  
PO041: “Elevata incidenza di riattivazione di HBV in pazienti con linfoma NHL trattati con regimi di chemioterapia basati sulla fludarabina ed il ruolo prognostico delle mutazioni virali”.
32. 39° Congresso Nazionale SIE – Roma, 26-29 ottobre 2003.  
PO214: “Gli inibitori della farnesiltrasferasi inducono apoptosi in cellule di leucemia mieloide acuta attraverso l'attivazione dell'enzima inducibile dell'ossido nitrico e della caspasi-3 senza modulazione di FAS, BCL-2 e P53”.
33. 39° Congresso Nazionale SIE – Roma, 26-29 ottobre 2003.  
PO266: “La decitabina induce l'espressione dell'antigene tumore-associato PRAME nelle cellule di CML in fase cronica precoce”.

#### **Oral presentations to National and International congress/meetings:**

1. 18th Congress of the European Hematology Association, 13-16 Jun 2013 Stockholm, Sweden. “Synergistic effect of ruxolitinib and panobinostat to overcome drug resistance related to bm stroma microenvironment in philadelphia–negative myeloproliferative neoplasms”.
2. 18th Congress of the European Hematology Association, 13-16 Jun 2013 Stockholm, Sweden. “The interferon score towards prediction of responsiveness to interferon alpha in essential thrombocythemia”.
3. XII National Meeting of the Italian Society of Hematology Experimental SIES”, October 17-19 2012, Roma, Italy. “L'asse SHP1/SHP2 modula il livello di attivazione del recettore VEGFR2 in una linea cellulare derivante da paziente affetto da CML: la regolazione funzionale di VEGFR2 potrebbe essere implicata in fenomeni di resistenza al trattamento con imatinib”.
4. XII National Meeting of the Italian Society of Hematology Experimental SIES”, October 17-19 2012, Roma, Italy. “Rilevanza clinica nella leucemia mieloide cronica degli eventi di delezione ed inserzione nel dominio tirosino chinasi della Proteina bcr-abl”.
5. XII National Meeting of the Italian Society of Hematology Experimental SIES”, October 17-19 2012, Roma, Italy. “Analisi funzionale della nicchia midollare per la regolazione dell'attività degli inibitori delle tirosina kinasi in linee cellulari philadelphia positive e progenitori cellulari cd34+ derivanti da pazienti affetti da leucemia mieloide cronica”.
6. XII National Meeting of the Italian Society of Hematology Experimental SIES”, October 17-19 2012, Roma, Italy. “La proteina jak2 e la sua controparte mutata jak2v617f si localizzano differenzialmente a livello centrosomico”.
7. XII National Meeting of the Italian Society of Hematology Experimental SIES”, October 17-19 2012,

Roma, Italy. "Jak1 e SOCS3 rappresentano dei predittori molecolari di risposta all'IFN nella trombocitemia essenziale".

8. 43° Congress of the Italian Society of Hematology, Napoli, Italy, October 16-19, 201. "Frequencies of ckit mutations detected in patients with acute myeloid leukemia (AML) characterized by core binding factor (CBF) rearrangements".
9. 43° Congress of the Italian Society of Hematology, Napoli, Italy, October 16-19, 201. "Shp1 expression accounts for resistance to imatinib treatment in philadelphia chromosome-positive cells derived from patients with chronic myeloid leukemia".
10. 43° Congress of the Italian Society of Hematology, Napoli, Italy, October 16-19, 201. "The activity of tyrosin kinase inhibitors on t cell proliferation and activation".
11. ESH ICMLF International Conference of Chronic Myeloid Leukemia – Biological Basis of Therapy, September 24-26 2010, Washington USA. "Adoptive Immunotherapy for Patients with leukemia".
12. XI National Meeting of the Italian Society of Hematology Experimental SIES", October 6-8 2010, Torino, Italy. "Sviluppo di una immunità specifica verso l'antigene PRAME (antigene preferenzialmente espresso in Melanoma) attraverso l'utilizzo di una libreria di peptidi sovrapposti in pazienti affetti da patologie leucemiche, inclusa la Leucemia Mieloide Cronica (CML)".
13. *BMT tandem meeting – Tampa, Florida, USA. February 11-15 2009.* "Engineering cd19-redirected t lymphocytes to enhance their safety and efficacy".
14. *50° Annual meeting of the American Society of hematology – San Francisco, California, December 2008.*  
"Transgenic Expression of Inducible Caspase9 Suicide Gene for In Vivo Elimination of Antigen Specific Cytotoxic T Cells (CTLs) Engineered To Produce Cytokines."
15. *48° Annual meeting of the American Society of Hematology – Orlando, Florida, November 2006*  
"Transgenic HLA-A\*0201/CD80 K562 cell line efficiently expands epitope-specific HLA-restricted cytotoxic T-lymphocytes".
16. *IX Congresso Societa' Italiana di Ematologia Sperimentale – Napoli, Settembre 20-22, 2006*  
"Decitabine up-regulates the expression of the cancer-associate Prame antigen in early chronic phase CML cells".
17. *IX Congresso Societa' Italiana di Ematologia Sperimentale – Napoli, Settembre 20-22, 2006*  
"A novel strategy for cell therapy of chronic myeloid leukemia using ex vivo treatment of ph positive cells with decitabine and with the by-stander transfer of CD40L".
18. *VIII Congress of the Italian Society of Experimental Hematology - Pavia, Settembre 14-16, 2004*  
"Early Detection of Residual Disease by Q-RT-PCR of the Hybrid BCR/ABL Transcript Is a Powerful Predictor of Treatment Response in Adult Philadelphia-Positive Acute Lymphoblastic Leukemia."
19. *45° Annual meeting of the American Society of Hematology – San Diego, California, 6-9 December 2003*  
"La decitabina induce l'espressione dell'antigene tumore-associato PRAME nelle cellule di CML in fase cronica precoce".

Autorizzo il trattamento di questi dati ai sensi della normativa vigente.

Napoli, 15-01-2015

Dott.ssa Concetta Quintarelli