



# Università degli Studi di Roma "Tor Vergata"

## **CURRICULUM DIDATTICO-SCIENTIFICO DEL PROF. MARIA CRISTINA PIRO**

### **DATI PERSONALI**

**Maria Cristina Piro**

**Luogo e data di nascita: Cosenza, 07/10/1965**

**ATTUALE POSIZIONE:** Ricercatore confermato

**Dipartimento: Medicina Sperimentale e Chirurgia**

**Indirizzo: Via Montpellier 1, edificio F-Nord, I piano, st 154**

**Numero studio: 06 72596480**

**E-mail: piro@med.uniroma2.it**

**Orario ricevimento: per appuntamento**

**Settore scientifico-disciplinare: Bio-11**

### **ATTIVITA' DIDATTICA - SCIENTIFICA**

#### **Titoli accademici e di studio:**

1990- Laurea in Scienze Biologiche, 110/110 e lode (Università La Sapienza- Roma)

1994- Diploma di Scuola di Specializzazione in Applicazioni Biotecnologiche, 50/50 e lode (Università "Tor Vergata" Roma,)

2005- Dottorato di Ricerca in Biochimica e Biologia Molecolare (Università "Tor Vergata", Roma)

#### **Formazione post-laurea presso istituzioni italiane ed estere ed incarichi professionali (didattici e di ricerca):**

##### **Esperienze lavorative**

1996-1998 – Post-doc presso University del Maryland at Baltimore.

1998-1999- Post-doc presso University of California, Irvine

Da giugno 2002 ad oggi – Ricercatore presso il Dipartimento di Medicina Sperimentale e Chirurgia dell'Università di Roma "Tor Vergata". E' stata confermata nel ruolo nel giugno 2005.

##### **Attività Didattica:**

E' docente di Biologia Molecolare nei corsi di Laurea in Medicina e Chirurgia ( 3CFU), Farmacia (5CFU), Scienze della Nutrizione (2CFU), Biotecnologie (2CFU), Master Nutrizione e Cosmesi, (2 CFU), e Master in Nutrizione personalizzata (2 CFU), nonché nei corsi di Medicina e Chirurgia ( 4 CFU) e di Odontoiatria (1 CFU) dell'Università di Tirana UNSBC.

##### **Attività di ricerca: 15 pubblicazioni selezionate**

Panatta E, Lena AM, Mancini M, Affinati M, Smirnov A, Annicchiarico-Petruzzelli M, Piro MC, Campione E, Bianchi L, Mazzanti C, Melino G, Candi E. Kruppel-like factor 4 regulates keratinocyte senescence. *Biochem Biophys Res Commun.* 2018 May 5;499(2):389-395. doi: 10.1016/j.bbrc.2018.03.172. Epub 2018 Mar 26. PubMed PMID: 29580988.

Nicolai E, Sinibaldi F, Sannino G, Laganà G, Basoli F, Licoccia S, Cozza P, Santucci R, Piro MC. Omega-3 and Omega-6 Fatty Acids Act as Inhibitors of the Matrix Metalloproteinase-2 and Matrix Metalloproteinase-9 Activity. *Protein J.* 2017 Aug;36(4):278-285. doi: 10.1007/s10930-017-9727-9. PubMed PMID: 28646265.

Milazzo L, Tognaccini L, Howes BD, Sinibaldi F, Piro MC, Fittipaldi M, Baratto MC, Pogni R, Santucci R, Smulevich G. Unravelling the non-native low-spin state of the cytochrome c - cardiolipin complex: evidence for the formation of a His ligated species only. *Biochemistry.* 2017 Mar 9. doi: 10.1021/acs.biochem.6b01281. [Epub ahead of print] PubMed PMID: 28277678.

Candi E, Smirnov A, Panatta E, Lena AM, Novelli F, Mancini M, Viticchiè G, Piro MC, Di Daniele N, Annicchiarico-Petruzzelli M, Melino G. Metabolic pathways regulated by p63. *Biochem Biophys Res Commun.* 2017 Jan 15;482(3):440-444. doi:10.1016/j.bbrc.2016.10.094. Review. PubMed PMID: 8212728.

Sinibaldi F, Milazzo L, Howes BD, Piro MC, Fiorucci L, Polticelli F, Ascenzi P, Coletta M, Smulevich G, Santucci R. The key role played by charge in the interaction of cytochrome c with cardiolipin. *J Biol Inorg Chem.* 2017 Jan;22(1):19-29. doi: 10.1007/s00775-016-1404-5. PubMed PMID: 27826772.

Regina C, Compagnone M, Peschiaroli A, Lena A, Annicchiarico-Petruzzelli M, Piro MC, Melino G, Candi E. Setdb1, a novel interactor of  $\Delta$ Np63, is involved in breast tumorigenesis. *Oncotarget.* 2016 May 17;7(20):28836-48. doi:10.18632/oncotarget.7089. PubMed PMID: 26840455; PubMed Central PMCID: PMC5045360.

Latina A, Viticchiè G, Lena AM, Piro MC, Annicchiarico-Petruzzelli M, Melino G, Candi E.  $\Delta$ Np63 targets cytoglobin to inhibit oxidative stress-induced apoptosis in keratinocytes and lung cancer. *Oncogene.* 2016 Mar 24;35(12):1493-503. doi: 10.1038/onc.2015.222. PubMed PMID: 26096935.

Sinibaldi F, Howes BD, Droghetti E, Polticelli F, Piro MC, Di Pierro D, Fiorucci L, Coletta M, Smulevich G, Santucci R. Role of lysines in cytochrome c-cardiolipin interaction. *Biochemistry.* 2013 Jul ;52(26):4578-88. doi:10.1021/bi400324c. Epub 2013 Jun 21. PubMed PMID: 23738909.

Conforti F, Li Yang A, Piro MC, Mellone M, Terrinoni A, Candi E, Tucci P, Thomas GJ, Knight RA, Melino G, Sayan BS. PIR2/Rnf144B regulates epithelial homeostasis by mediating degradation of p21(WAF1) and p63. *Oncogene.* 2012 Nov 5. doi: 10.1038/onc.2012.497. [Epub ahead of print] PubMed PMID: 23128396.

Patriarca A, Polticelli F, Piro MC, Sinibaldi F, Mei G, Bari M, Santucci R, Fiorucci L. Conversion of cytochrome c into a peroxidase: Inhibitory mechanisms and implication for neurodegenerative diseases. *Arch Biochem Biophys.* 2012 Apr 9. [Epub ahead of print] PubMed PMID: 22507899.

Sinibaldi F, Droghetti E, Polticelli F, Piro MC, Di Pierro D, Ferri T, Smulevich G, Santucci R. The effects of ATP and sodium chloride on the cytochrome c-cardiolipin interaction: The contrasting behavior of the horse heart and yeast proteins. *J Inorg Biochem.* 2011 Nov;105(11):1365-72. Epub 2011 Aug 4. PubMed PMID: 21946436.

Formosa A, Piro MC, Docimo R, Maturo P, Sollecito DR, Kalimutho M, Sancesario G, Barlattani A, Melino G, Candi E, Bernardini S. Salivary miRNAome profiling uncovers epithelial and proliferative miRNAs with differential expression across dentition stages. *Cell Cycle.* 2011 Oct 1;10(19):3359-68. Epub 2011 Oct 1. PubMed PMID: 21926479.

Sayan BS, Yang AL, Conforti F, Tucci P, Piro MC, Browne GJ, Agostini M, Bernardini S, Knight RA, Mak TW, Melino G. Differential control of TAp73 and  $\Delta$ Np73 protein stability by the ring finger ubiquitin ligase PIR2. *Proc Natl Acad Sci U S A.* 2010 Jul 20;107(29):12877-82. Epub 2010 Jul 6. PubMed PMID: 20615966; PubMed Central PMCID: PMC2919933.

Sinibaldi F, Howes BD, Piro MC, Polticelli F, Bombelli C, Ferri T, Coletta M, Smulevich G, Santucci R. Extended cardiolipin anchorage to cytochrome c: a model for protein-mitochondrial membrane binding. *J Biol Inorg Chem.* 2010 Jun;15(5):689-700. Epub 2010 Mar 18. PubMed PMID: 20238133.

Patriarca A, Eliseo T, Sinibaldi F, Piro MC, Melis R, Paci M, Cicero DO, Polticelli F, Santucci R, Fiorucci L. ATP acts as a regulatory effector in modulating structural transitions of cytochrome c: implications for apoptotic activity. *Biochemistry.* 2009 Apr 21;48(15):3279-87. PubMed PMID: 19231839.



**ACADEMIC AND SCIENTIFIC CURRICULUM OF PROF. MARIA CRISTINA PIRO**

**PERSONAL DATA**

**Maria Cristina Piro**

**CURRENT POSITION:** Researcher

**Department:** Experimental Medicine and Surgery

**Address:** Via Montpellier 1, building F-Nord, 1st floor, room 154

**Phone number:** 06 72596480

**E-mail:** piro@med.uniroma2.it

**Consulting hours:** on appointment

**Italian Ministry of Education Academic-Scientific sector:** Bio-11

**SCIENTIFIC AND DIDACTIC ACTIVITY**

**Education and academic positions:**

1990- Degree in Biological Sciences, 110/110 cum laude (Università La Sapienza- Roma)

1994- Specialization School in Biotechnological Applications, 50/50 cum laude (Università "Tor Vergata" Roma,)

2005- Ph.D in Biochemistry and Molecular Biology (Università "Tor Vergata", Roma)

**Professional and didactic activities in Italian and Foreign Institutions:**

**Scientific experience:**

1996-1998 Post-doc at University del Maryland at Baltimore.

1998-1999 Post-doc at University of California, Irvine

June 2002 /today Researcher in the Dipartimento di Medicina Sperimentale e Chirurgia of Università di Roma "Tor Vergata".

**Didactic activity:**

She is Professor of Molecular Biology in the Degree courses in Medicine and Surgery (3CFU), Pharmacy (5CFU), Nutrition Sciences (2CFU), Biotechnology (2CFU), Master Nutrition and Cosmetics, (2 CFU), and Master in Personal Nutrition (2 CFU), also in Medicine and Surgery (4 CFU) and Dentistry (1 CFU) of the University of Tirana UNSBC.

**Research activity: 15 selected publications**

Panatta E, Lena AM, Mancini M, Affinati M, Smirnov A, Annicchiarico-Petruzzelli M, Piro MC, Campione E, Bianchi L, Mazzanti C, Melino G, Candi E. Kruppel-like factor 4 regulates keratinocyte senescence. *Biochem Biophys Res Commun.* 2018 May 5;499(2):389-395. doi: 10.1016/j.bbrc.2018.03.172. Epub 2018 Mar 26. PubMed PMID: 29580988.

Nicolai E, Sinibaldi F, Sannino G, Laganà G, Basoli F, Licoccia S, Cozza P, Santucci R, Piro MC. Omega-3 and Omega-6 Fatty Acids Act as Inhibitors of the Matrix Metalloproteinase-2 and Matrix Metalloproteinase-9 Activity. *Protein J.* 2017 Aug;36(4):278-285. doi: 10.1007/s10930-017-9727-9. PubMed PMID: 28646265.

Milazzo L, Tognaccini L, Howes BD, Sinibaldi F, Piro MC, Fittipaldi M, Baratto MC, Pogni R, Santucci R, Smulevich G. Unravelling the non-native low-spin state of the cytochrome c - cardiolipin complex: evidence for the formation of a His ligated species only. *Biochemistry.* 2017 Mar 9. doi:10.1021/acs.biochem.6b01281. [Epub ahead of print] PubMed PMID: 28277678.

Candi E, Smirnov A, Panatta E, Lena AM, Novelli F, Mancini M, Viticchiè G, Piro MC, Di Daniele N, Annicchiarico-Petruzzelli M, Melino G. Metabolic pathways regulated by p63. *Biochem Biophys Res Commun.* 2017 Jan 15;482(3):440-444. doi:10.1016/j.bbrc.2016.10.094. Review. PubMed PMID: 28212728.

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Regina C, Compagnone M, Peschiaroli A, Lena A, Annicchiarico-Petruzzelli M, Piro MC, Melino G, Candi E. Setdb1, a novel interactor of  $\Delta$ Np63, is involved in breast tumorigenesis. *Oncotarget.* 2016 May 17;7(20):28836-48. doi:10.18632/oncotarget.7089. PubMed PMID: 26840455; PubMed Central PMCID: PMC5045360.

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