



Università degli Studi di Roma "Tor Vergata"

CURRICULUM DIDATTICO-SCIENTIFICO DELLA PROF. SSA ANNA PAOLA MAZZETTI

DATI PERSONALI

Nome e Cognome: Anna Paola Mazzetti

Luogo e data di nascita: Stienta (RO) 12/04/1954

ATTUALE POSIZIONE: Ricercatore

Dipartimento: Biologia

Indirizzo: via Della Ricerca Scientifica

Numero studio: 375

E-mail: anna.paola.mazzetti@uniroma2.it

Orario ricevimento: martedì 11-13

Settore scientifico-disciplinare: BIO/10

ATTIVITA' DIDATTICA - SCIENTIFICA

Titoli accademici e di studio: Maturità scientifica, laurea in Scienze Biologiche

Formazione post-laurea presso istituzioni italiane ed estere ed incarichi professionali:

Master Phil. in Genetica Molecolare (università di Cranfield U.K.)

Dal 2010 al 2012 docente di Biochimica Clinica e Biologia molecolare Clinica (6CFU)

Dal 2013 ad oggi docente di Biochimica Molecolare Clinica nella laurea magistrale di BCM e Scienze Biomediche

Dal 2017 fa parte del corso di Biochimica Cellulare (2CFU) in Biotecnologie Mediche

Attività di ricerca: pubblicazioni selezionate

La sua ricerca è stata finalizzata allo studio di due importanti enzimi: l'antiossidante Cu/Zn SOD e la detossificante GST P1-1 umana

1. Lo Bello M, Battistoni A, Mazzetti A.P, Board P.G, Muramatsu M, Federici G, Ricci G. (1995). Site directed mutagenesis of human placental glutathione transferase P1-1. The Journal Of Biological Chemistry. vol. 270, pp. 1249-1253.
2. Battistoni A, Mazzetti A.P, Petruzzelli R, Muramatsu M, Federici G, Ricci G, Lo Bello M. (1995). Cytoplasmic and periplasmic production of human placental glutathione transferase in *Escherichia coli*. Protein Expression And Purification vol.6 pp.579-587
3. Di Ilio C, Sacchetta P, Angelucci S, Bucciarelli T, Pennelli A, Mazzetti A.P, Lo Bello M, Aceto A. (1996) Interaction of Glutathione Transferase P1-1 with Captan and Captafol. Biochemical Pharmacology. Vol.52 pp.43-48
4. Ricci G, Caccuri A.M, Lo Bello M, Rosato N, Mei G, Nicotra M, Chiessi E, Mazzetti A.P, Federici G. (1996). Structural Flexibility Modulates the Activity of Human Glutathione Transferase P1-1. Journal Of Biological Chemistry vol.271 pp.16187
5. Oakley A, Lo Bello M, Mazzetti A. P, Federici G, Parker M.(1997). The glutathione conjugate of ethacrynic acid can bind in human pi class glutathione transferase P1-1 in two different modes. Febs Letters vol.419 pp.32-36
6. Lo Bello M., Oakley A., Battistoni A., Mazzetti A.P., Nuccetelli M., Mazzarese G., Rossjohn J, Parker M.W., Ricci G. (1997). Multifunctional role of Tyr 108 in the catalytic mechanism of glutathione transferase P1-1. BIOCHEMISTRY. vol. 36, pp. 6207-6217 ISSN: 0006-2960

- 7.** Battistoni A, Mazzetti A.P, Rotilio G.(1999).In vivo formation of Cu,Zn Superoxide Dismutase disulfide bond in Escherichia coli.FEBS LETTERS vol.443,pp.313-316
- 10.** Lo Bello M., M. Nuccetelli, E. Chiessi, A. Lahm, A.P. Mazzetti, A. Battistoni, A.M. Caccuri, A.J.Oakley, M.W. Parker, A. Tramontano, G. Federici, G. Ricci. (1998). Mutations of Gly to Ala in human glutathione transferase P1-1 affect helix 2 (G-site) and induce positive cooperativity in the binding of glutathione. Journal Of Molecular Biology. vol. 284, pp. 1717-1725 ISSN: 0022-2836.
- 8.** Stella L, Caccuri A.M, Rosato M, Nicotra M, Lo Bello M, De Matteis F, Mazzetti A.P, Federici G, Ricci G.(1998). Flexibility of Helix 2 in the Human Glutathione Transferase P1-1: Time-Resolved Fluorescence Spectroscopy. Journal Of Biological Chemistry. Vol 273 pp.23267-23273
- 9.** Nuccetelli M, Mazzetti A.P, Rossjohn J, Parker M.W, Board P, Caccuri A.M, Federici G, Ricci G, Lo Bello M, (1998). Shifting substrate specificity of human glutathione transferase (from class Pi to class Alpha) by a single point mutation. Biochemical Biophysic Research Communication. Vol 252 (1) pp.184-189
- 10.** Caccuri A.M, Antonini G, Ascenzi P, Nicotra M, Nuccetelli M, Mazzetti A.P, Federici G, Lo Bello M, Ricci G. (1999). Temperature Adaptation of Glutathione STransferase P1-1. Journal Of Biological Chemistry. Vol.274(27) pp.19276-19280
- 11.** Oakley A.J, Lo Bello M, Nuccetelli M, Mazzetti A.P, Parker M.W. (1999) The Ligandin (Non-substrate) Binding Site of Human Pi Class Glutathione Transferase is located in the Electrophilic Binding Site (H-site).Journal Of Molecular Biology.Vol.291 p.913
- 12.** C. Micaloni, A.P. Mazzetti, M. Nuccetelli, J. Rossjohn, W.J. Mckinstry, G. Antonini, A.M. Caccuri, A.J. Oakley, G. Federici, G. Ricci, M.W. Parker, Lo Bello M. (2000). Valine 10 may act as a driver for product release from the active site of human glutathione transferase P1-1. BIOCHEMISTRY. vol. 39, pp. 15961-15970 ISSN: 0006-2960.
- 13.** Battistoni A, Pacello F, Mazzetti A.P, Capo C, Kroll Js, Langford P.R, Sansone A, Donnarumma G, Valenti P, Rotilio G.(2001). A histidine-rich metal binding domain at the N terminus of Cu,Zn superoxide dismutases from pathogenic bacteria: a novel strategy for metal chaperoning. Journal Of Biological Chemistry vol.276,pp.30315-30325
- 14.** Micaloni C, Mazzetti A.P, Nuccetelli M, Rossjohn J, Mckinstry W.J, Antonini G, Caccuri A.M, Oakley A.J, Federici G, Ricci G, Parker M.W, Lo Bello M. (2001) Exit of products from the active site of human glutathione transferase P1-1 is promoted by valine 10. Chemical Biology Interaction vol.133 pp.192-195
- 15.** C. Micaloni, K.W. Kong, A.P. Mazzetti, M. Nuccetelli, G. Antonini, L. Stella, W.J. Mckinstry, J. Rossjohn, G.Federici, G. Ricci, M.W. Parker, Lo Bello M. (2003). Engineering a new C-terminal tail in the H-site of human glutathione transferase P1-1: structural and functional consequences. Journal Of Molecular Biology. vol. 325, pp. 111-122 ISSN: 0022-2836.
- 16.** Berducci G, Mazzetti A.P, Rotilio G, Battistoni A. (2004).Periplasmic competition for zinc uptake between the metallochaperone ZnuA and Cu,Zn superoxide dismutase.Febs Letters.vol.569,pp.289-292
- 17.** Cesareo E, Parker Lj, Pedersen Jz, Nuccetelli M, Mazzetti Ap, Pastore A, Federici G, Caccuri Am, Ricci G, Adams Jj, Parker Mw, Lo Bello M. (2005). Nitrosylation of human glutathione transferase P1-1 with dinitrosyl diglutathionyl iron complex in vitro and in vivo. The Journal Of Biological Chemistry. vol. 280, pp. 42172-42180 ISSN: 0021-9258.
- 18.** Mazzetti A.P, Fiorile M.C, Primavera A, Lo Bello M. (2015). Glutathione transferases and neurodegenerative diseases. Neurochemistry International. vol.82,pp.10-18.



ACADEMIC AND SCIENTIFIC CURRICULUM OF PROF. ANNA PAOLA MAZZETTI

PERSONAL DATA

Name and Surname: Anna Paola Mazzetti

Place and date of birth: Stienta (RO) 12/04/1954

CURRENT POSITION: Researcher

Department: Biology

Address: via Della Ricerca Scientifica

Phone number: 06.72594375

E-mail: anna.paola.mazzetti@uniroma2.it

Consulting hours: Tuesday 11-13 am

Italian Ministry of Education Academic-Scientific sector: BIO/10

SCIENTIFIC AND DIDACTIC ACTIVITY

Education and academic positions: first degree in Biological Sciences at the university of Ferrara (Italy), Master phil. In Molecular Genetics in the U.K. (university of Cranfield)

Professional and didactic activities in Italian and Foreign Institutions:

From 2010 to 2012 teacher of Biochimica Clinica e Biologia molecolare Clinica (6CFU)

From 2013 to now teacher of Biochimica Molecolare Clinica in Master's degree BCM and Scienze Biomediche

From 2017 takes part to the course of Biochimica Cellulare (2CFU) in Biotecnologie Mediche

Research activity: 15 most significant publications

Almost her research has been devoted to the study of two very important enzymes: the antioxidant Cu/Zn SOD and the detoxificant human GST P1-1

1. Lo Bello M, Battistoni A, Mazzetti A.P, Board P.G, Muramatsu M, Federici G, Ricci G. (1995). Site directed mutagenesis of human placental glutathione transferase P1-1. The Journal Of Biological Chemistry. vol. 270, pp. 1249-1253 ISSN:0021-9258.

2. Battistoni A, Mazzetti A.P, Petruzzelli R, Muramatsu M, Federici G, Ricci G, Lo Bello M. (1995). Cytoplasmic and periplasmic production of human placental glutathione transferase in *Escherichia coli*. Protein Expression And Purification vol.6 pp.579-587

3. Di Ilio C, Sacchetta P, Angelucci S, Bucciarelli T, Pennelli A, Mazzetti A.P, Lo Bello M, Aceto A. (1996) Interaction of Glutathione Tranferase P1-1 with Captan and Captafol. Biochemical Pharmacology. Vol.52 pp.43-48

4. Ricci G, Caccuri A.M, Lo Bello M, Rosato N, Mei G, Nicotra M, Chiessi E, Mazzetti A.P, Federici G. (1996). Structural Flexibility Modulates the Activity of Human Glutathione Transferase P1-1. Journal Of Biological Chemistry vol.271 pp.16187

5. Oakley A, Lo Bello M, Mazzetti A. P, Federici G, Parker M.(1997). The glutathione conjugate of ethacrynic acid can bind in human pi class glutathione transferase P1-1 in two different modes. Febs Letters vol.419 pp.32-36

6. Lo Bello M., Oakley A., Battistoni A., Mazzetti A.P., Nuccetelli M., Mazzarese G., Rossjohn J, Parker M.W., Ricci G. (1997). Multifunctional role of Tyr 108 in the catalytic mechanism of glutathione transferase P1-1. BIOCHEMISTRY. vol. 36, pp. 6207-6217 ISSN: 0006-2960

- 7.** Battistoni A, Mazzetti A.P, Rotilio G.(1999).In vivo formation of Cu,Zn Superoxide Dismutase disulfide bond in Escherichia coli.FEBS LETTERS vol.443,pp.313-316
- 10.** Lo Bello M., M. Nuccetelli, E. Chiessi, A. Lahm, A.P. Mazzetti, A. Battistoni, A.M. Caccuri, A.J.Oakley, M.W. Parker, A. Tramontano, G. Federici, G. Ricci. (1998). Mutations of Gly to Ala in human glutathione transferase P1-1 affect helix 2 (G-site) and induce positive cooperativity in the binding of glutathione. Journal Of Molecular Biology. vol. 284, pp. 1717-1725 ISSN: 0022-2836.
- 8.** Stella L, Caccuri A.M, Rosato M, Nicotra M, Lo Bello M, De Matteis F, Mazzetti A.P, Federici G, Ricci G.(1998). Flexibility of Helix 2 in the Human Glutathione Transferase P1-1: Time-Resolved Fluorescence Spectroscopy. Journal Of Biological Chemistry. Vol 273 pp.23267-23273
- 9.** Nuccetelli M, Mazzetti A.P, Rossjohn J, Parker M.W, Board P, Caccuri A.M, Federici G, Ricci G, Lo Bello M, (1998). Shifting substrate specificity of human glutathione transferase (from class Pi to class Alpha) by a single point mutation. Biochemical Biophysic Research Communication. Vol 252 (1) pp.184-189
- 10.** Caccuri A.M, Antonini G, Ascenzi P, Nicotra M, Nuccetelli M, Mazzetti A.P, Federici G, Lo Bello M, Ricci G. (1999). Temperature Adaptation of Glutathione STransferase P1-1. Journal Of Biological Chemistry. Vol.274(27) pp.19276-19280
- 11.** Oakley A.J, Lo Bello M, Nuccetelli M, Mazzetti A.P, Parker M.W. (1999) The Ligandin (Non-substrate) Binding Site of Human Pi Class Glutathione Transferase is located in the Electrophilic Binding Site (H-site).Journal Of Molecular Biology.Vol.291 p.913
- 12.** C. Micaloni, A.P. Mazzetti, M. Nuccetelli, J. Rossjohn, W.J. Mckinstry, G. Antonini, A.M. Caccuri, A.J. Oakley, G. Federici, G. Ricci, M.W. Parker, Lo Bello M. (2000). Valine 10 may act as a driver for product release from the active site of human glutathione transferase P1-1. BIOCHEMISTRY. vol. 39, pp. 15961-15970 ISSN: 0006-2960.
- 13.** Battistoni A, Pacello F, Mazzetti A.P, Capo C, Kroll Js, Langford P.R, Sansone A, Donnarumma G, Valenti P, Rotilio G.(2001). A histidine-rich metal binding domain at the N terminus of Cu,Zn superoxide dismutases from pathogenic bacteria: a novel strategy for metal chaperoning. Journal Of Biological Chemistry vol.276,pp.30315-30325
- 14.** Micaloni C, Mazzetti A.P, Nuccetelli M, Rossjohn J, Mckinstry W.J, Antonini G, Caccuri A.M, Oakley A.J, Federici G, Ricci G, Parker M.W, Lo Bello M. (2001) Exit of products from the active site of human glutathione transferase P1-1 is promoted by valine 10. Chemical Biology Interaction vol.133 pp.192-195
- 15.** C. Micaloni, K.W. Kong, A.P. Mazzetti, M. Nuccetelli, G. Antonini, L. Stella, W.J. Mckinstry, J. Rossjohn, G.Federici, G. Ricci, M.W. Parker, Lo Bello M. (2003). Engineering a new C-terminal tail in the H-site of human glutathione transferase P1-1: structural and functional consequences. Journal Of Molecular Biology. vol. 325, pp. 111-122 ISSN: 0022-2836.
- 16.** Berducci G, Mazzetti A.P, Rotilio G, Battistoni A. (2004).Periplasmic competition for zinc uptake between the metallochaperone ZnuA and Cu,Zn superoxide dismutase.Febs Letters.vol.569,pp.289-292
- 17.** Cesareo E, Parker Lj, Pedersen Jz, Nuccetelli M, Mazzetti Ap, Pastore A, Federici G, Caccuri Am, Ricci G, Adams Jj, Parker Mw, Lo Bello M. (2005). Nitrosylation of human glutathione transferase P1-1 with dinitrosyl diglutathionyl iron complex in vitro and in vivo. The Journal Of Biological Chemistry. vol. 280, pp. 42172-42180 ISSN: 0021-9258.
- 18.** Mazzetti A.P, Fiorile M.C, Primavera A, Lo Bello M. (2015). Glutathione transferases and neurodegenerative diseases. Neurochemistry International. vol.82,pp.10-18.
- 19.**