

PAOLA TURANO

Place & date of birth: Florence, July 5th, 1964

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Biographical Sketch

PAOLA TURANO graduated in Chemistry cum laude at the University of Florence in 1989, she received the Ph.D. in Chemical Sciences from the same institution in 1993. She became researcher in Chemistry at the Faculty of Sciences (University of Florence) in 1997, and Associate Professor of General and Inorganic Chemistry in 2002. Her main research interests are nuclear magnetic resonance, metalloproteins (with particular emphasis on paramagnetic metalloproteins), structure and dynamics of proteins, partially folded and unfolded proteins, and high molecular weight systems.

Paola Turano has been invited to give talks to many national and international meetings. She has organized a number of international and national conferences and schools. She has received the "Raffaello Nasini Medal 2003" of the Inorganic Chemistry Division of the Italian Chemical Society.

Paola Turano is author of about 70 publications in peer reviewed international journals.

Detailed CV

Education:

1989 – Degree in Chemistry (110/110 cum laude) – University of Florence

1993 – Ph.D. in Chemical Sciences – University of Florence

Positions held:

November 1993 - January 1994: Visiting Associate in Chemistry - California Institute of Technology.

May 1994 - April 1996: Postdoctoral fellowship – University of Florence.

June 1996 – September 1997: Research contract –Dept. Of Chemistry –University of Florence.

October 1997 – October 2002: Researcher at the Faculty of Sciences – University of Florence.

November 2002 – present: Associate professor of General and Inorganic Chemistry, Faculty of Sciences – University of Florence.

Awards:

"Raffaello Nasini Medal 2003" of the Inorganic Chemistry Division of the Italian Chemical Society.

Invited Conference Talks:

She has been invited to hold conferences at the following meetings and schools:

- "Convegno Nazionale di Risonanze Magnetiche", Rome, October 21-23, 1992.
- "4th Joint Greek-Italian Meeting on Chemistry of Biological Systems and Molecular Chemical Engineering", Turin, June 1-3, 1996.
- "Workshop: The Dynamics of Protein Structure", San Miniato, September 14-15, 1996.
- "IV Convegno Nazionale di Chimica dei Sistemi Biologici", Siena, September 24-26, 1996.
- On the occasion of the *Laurea honoris causa* to K. Wuthrich, Siena, March 20, 1997.
- "Modern Techniques in Industrial Biology: Metodi per la determinazione della struttura delle proteine", Turin, January 31 – February 4, 2000.
- Metodologie in Biologia Strutturale, Collaretto Giacosa (Turin) February 12-15, 2001
- Tavola Rotonda "La biologia strutturale e le biotecnologie" Collaretto Giacosa (Torino) – February 14, 2001
- SAPIO NMR/MRI Conferences 2001 "NMR in Puglia: ambiente, alimentazione, salute" Bari, June 1, 2001.
- Progress meeting of EEC METALBIOREDUCTION RTD project, Marseilles, France, June 11-12, 2001.
- Scuola Nazionale di Chimica Bioinorganica per Dottorandi, San Miniato (Pisa, Italy), June 24-28, 2002.
- 2nd International Conference on Porphyrins and Phthalocyanines (ICPP-2), Kyoto (Japan), June 30 – July 5, 2002.
- COST D21 Working Group meeting "Structural and Spectroscopic Studies of Metalloproteins and Electron Transfer Proteins", Marseille (France), October 3-6, 2002.
- Sapio Meeting 2003, Firenze, May 10, 2003.
- 10th Chianti Workshop on Magnetic Resonance, San Miniato (Pisa, Italy), May 25-30, 2003.
- 7th FIGIPS Meeting in Inorganic Chemistry, Lisboa (Portugal), June 11-15, 2003.
- National Meeting of the Italian Chemical Society, Torino (Italy), June 22-25, 2003.
- 11th International Conference on Biological Inorganic Chemistry (ICBIC), Cairns (Australia), July 19-23, 2003.
- 3rd International Conference on Porphyrins and Phthalocyanines (ICPP-3), New Orleans (US), July 11-16, 2004.
- XXXIII National Congress of the Inorganic Chemistry Division of the Italian Chemical Society, July 11-16, 2005.
- COST D21 Final Workshop on "Metalloenzymes and Chemical Biomimetics", Leuven (Belgium), May 25-28, 2006.
- 4th International Conference on Porphyrins and Phthalocyanines (ICPP-4), Roma (Italy), July 2-7, 2006.
- VI International Symposium on Metals, Environment and Health, Szklarska Poreba (Poland), September 6-9, 2006.
- NMR solid state Bruker user's meeting, Florence (Italy), April 19, 2007.
- XXXVII National Congress on Magnetic Resonance Verbania Pallanza (Italy), September 12-15, 2007.

Seminars:

- Fachbereich Chemie, Universität Dortmund, February 1, 1996.
- Institut für Anorganische Chemie, Universität Basel, April 15, 1996.
- Institut de Chimie Minérale et Analytique, Université de Lausanne, April 16, 1996.
- Siena Biotech, Siena, March 16, 2005.
- Institut Pasteur, Paris, June 21, 2005.
- University of Bayreuth, November 29, 2006.

Conference organization:

- Member of the organizing Committee of "NMR for the development of Science and Technology", Florence, June 7-8, 1996.
- Organizer of the "VIII Chianti Workshop of Magnetic Resonance, Nuclear and Electron Relaxation", San Miniato, Pisa, May 30 – June 5, 1999
- Organizer of "IX Chianti Workshop of Magnetic Resonance, Nuclear and Electron Relaxation", Tirrenia, Pisa, May 26 – June 1, 2001.
- Organizer of "X Chianti Workshop of Magnetic Resonance, Nuclear and Electron Relaxation", San Miniato, Pisa, May 25 – 30, 2003.
- Member of the organizing Committee of "1st International Meeting on: Genome Based Drug Discovery", Florence, March 22-27, 2004.
- Organizer of "First FECS School on Protein Chemistry", Brixen, January 9-14, 2005.
- Member of the organizing Committee of "First European Conference on Chemistry for Life Sciences", Rimini, October 4-8, 2005
- Member of the organizing Committee of "4th International Conference on Porphyrins and Phthalocyanines (ICPP-4), Roma, July 2-7, 2006.
- Organizer of "Second EuCheMS School on protein Chemistry", Alba di Canazei, January 15-20, 2006.
- Session organizer of "2nd European Conference on Chemistry for Life Sciences", Wroclaw, Poland, September 4-8 2007.

Editorial activities:

- 1994-1995 Assistant to the Editor – La Chimica & l'Industria (the magazine of the Italian Chemical Society)
- 1996-1999 Assistant to the Editor - Journal of Biological Inorganic Chemistry

Teaching:

- 1999-2000 Inorganic Chemistry Lab II (Degree in Chemistry, Faculty of Sciences)
- 2000-2001 Inorganic Chemistry Lab II (Degree in Chemistry, Faculty of Sciences)
- 2001- General & Inorganic Chemistry (Degree in Biotechnology, Faculty of Sciences)
- 2002-2004 Models of Biological Systems (Degree in Biotechnology, Faculty of Sciences)
- 2005- Biogeochemical Cycles (Degree in Biotechnology, Faculty of Sciences)
- 2005- Structural Methods (Degree in Biotechnology, Faculty of Sciences)
- 2005- Spectroscopic Tools for Biomacromolecules (Degree in Chemistry of Biological Molecules, Faculty of Sciences)

Main research interests:

- Advancements in NMR of paramagnetic metalloproteins
- Inorganic structural biology
- Unfolded or partially folded states of metalloproteins
- Protein-protein and protein-ligand interactions
- NMR of high molecular weight systems

Selected Publications

1. Caillet-Saguy, C., Turano, P., Piccioli, M., Lukat-Rodgers, G., Czjzek, M., Guigliarelli, B., Izadi-Pruneyre, N., Delepierre, M., Rodgers, K., and Lecroisey, A, Deciphering the structural role of histidine 83 for heme binding in hemophore HasA, **J.Biol.Chem.**, 283, 5960-5970, 2008.
2. Banci, L., Bertini, I., D'Amelio, N., Libralesso, E., Turano, P., and Valentine, J. S., Metallation of the ALS-mutant G37R SOD1 apoprotein restores its structural and dynamical properties in solution to those of metallated wild Type SOD1, **Biochemistry**, 46, 9953-9962, 2007. (*Biochemistry Hot Article*)
3. Caillet-Saguy, C., Delepierre, M., Lecroisey, A., Bertini, I., Piccioli, M., and Turano, P., Direct detected ^{13}C NMR to investigate the Iron(III) hemophore HasA, **J.Am.Chem.Soc.**, 128, 150-158, 2006.
4. Bertini, I., Calderone, V., Cosenza, M, Fragai, M., Lee, Y.-M., Luchinat, C., Mangani, S., Terni, B., and Turano, P., Conformational variability of MMPs: beyond a single 3D structure, **Proc.Natl.Acad.Sci.USA**, 102, 5334-5339, 2005.
5. Assfalg, M., Bertini, I., Dolfi, A., Turano, P., Mauk, A. G., Rosell, F. I., and Gray, H. B., Structural model for an alkaline form of ferricytochrome *c*., **J.Am.Chem.Soc.**, 125, 2913-2922, 2003.
6. Assfalg, M., Bertini, I., Bruschi, M., Michel, C., and Turano, P., The metal reductase activity of some multiheme cytochromes *c*: NMR structural characterization of the reduction of chromium(VI) to chromium(III) by cytochrome *c*₇, **Proc.Natl.Acad.Sci.USA**, 99, 9750-9754, 2002
7. Banci, L., Bertini, I., Bren, K. L., Gray, H. B., Sompornpisut, P., and Turano, P., Solution structure of oxidized *Saccharomyces cerevisiae* Iso-1-cytochrome *c*, **Biochemistry**, 36, 8992-9001, 1997
8. Banci, L., Bertini, I., Bruschi, M., Sompornpisut, P., and Turano, P., A NMR characterization and solution structure determination of the oxidized cytochrome *c*₇ from *Desulfuromonas acetoxidans*, **Proc.Natl.Acad.Sci.USA**, 93, 14396-14400, 1996
9. Banci, L., Bertini, I., Bren, K. L., Gray, H. B., Sompornpisut, P., and Turano, P., Three dimensional solution structure of the cyanide adduct of *Saccharomyces cerevisiae* Met80Ala-iso-1-cytochrome *c*. Identification of ligand-residue interactions in the distal heme cavity, **Biochemistry**, 34, 11385-11398, 1995
10. Bren, K. L., Gray, H. B., Banci, L., Bertini, I., and Turano, P., Paramagnetic ^1H NMR spectroscopy of the cyanide derivative of Met80Ala-iso-1-cytochrome *c*., **J.Am.Chem.Soc.**, 117, 8067-8073, 1995
11. Bertini, I., Turano, P., and Vila, A. J., NMR of paramagnetic metalloproteins, **Chem.Rev.**, 93, 2833-2932, 1993.
12. Banci, L., Bertini, I., Turano, P., Tien, M., and Kirk, T. K., Proton NMR investigation into the basis for the relatively high redox potential of lignin peroxidase, **Proc.Natl.Acad.Sci.USA**, 88, 6956-6960, 1991.

13. Banci, L., Bertini, I., Luchinat, C., Piccioli, M., Scozzafava, A., and Turano, P., ^1H NOE studies on dicopper(II) dicobalt(II) superoxide dismutase, **Inorg.Chem.**, 28, 4650-4656, 1989.