CURRICULUM VITAE ET STUDIORUM

Chiara CIACCIO, *Ph.D.*

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PERSONAL DATA

Date of birth: August 15, 1974

Place of birth: Rome, Italy

EDUCATION

- **2017**: National Scientific Qualification as Associate Professor, competition sector 05/E1
- **2006**: Qualification at the National Council of Biology
- **2005**: Ph.D. degree on Biochemistry and Molecular Biology, University of Rome "Tor Vergata" (Supervisor: M.D Massimo Coletta).
- **2000:** Degree in Biological Sciences, University of Rome "Roma tre" (first class honors).
- **1993:** High school diploma "Maturità classica"

POSITIONS AND RESEARCH EXPERIENCE

- **2008 to date:** Technician with research functions, Department of Experimental Medicine and Biochemical Sciences, Second University of Rome, Rome, Italy.
- **2005-2007: Fellowship** of C.I.R.C.M.S.B. (Interuniversity Consortium for Research in Chemistry of Metals in Biological Systems) as part of F.I.R.B. 'Chemistry/Pharmaceuticals' Research Project 'Folding and aggregation of proteins: metals and biomolecules in conformational diseases', University of Roma Tor Vergata.
- **2004-2005: Fellowship** of C.I.R.C.M.S.B. (Interuniversity Consortium for Research in Chemistry of Metals in Biological Systems), University of Roma Tor Vergata**.**
- **2004**: International school: "Physics meets Biology", Institute of Solid State Research (IFF), Jülich, Germany.
- **2004**: Theoretical and practical advanced course in Rapid Kinetic, University of Varese, Italy.
- **2001**: National School for PhD students: "Modelling and Nuclear Magnetic Resonance: interaction between macromolecules and ligands", University of Verona, Italy.

WORK EXPERIENCE ABROAD

2003: Visiting scientist at the Institute of Biochemistry, Metalloprotein Research Group, Department of Chemistry, BOKU-University of Natural Resources and Applied Life Sciences, Vienna, Austria (Supervisor: M.D Christian Obinger).

TEACHING EXPERIENCES

- **2022 to date**: Integrative seminars, 0.5 ECTS credits (4 teaching hours), PhD in Tissue Engineering and Remodeling Biotechnologies for body function, University of Tor Vergata, Rome. Topic: "Redox homeostasis in bone regeneration".
- ***AY* 2020/21-2021/22**: Professor of Chemistry and Introductory Biochemistry, 25 hours, 2 ECTS credits, School of Medicine (lessons provided in English), University of Rome Campus Biomedico
- ***AYA* 2021/22 to date**: Professor of Chemistry and Introductory Biochemistry 8 hours, 1 ECTS credit, Integrated course in Basic Biological Sciences, Dietician School, Faculty of Medicine, University of Rome Tor Vergata.
- ***AY* 2016/17 to date**: Professor of Chemistry and Introductory Biochemistry 12 hours, 1 ECTS credit, international School of Medicine, University of Rome Tor Vergata.
- ***AA* 2005/06 to date**: Subject Tutor for the teaching of General Chemistry and Biochemical Propaedeutics, SSD BIO/10, One cycle Masters Degree in Medicine and Surgery, University of Rome Tor Vergata.

Teaching experience in foreign Universities:
***AY* 2015/16 to date**: Professor of Chemistry and Introductory Biochemistry, School of Medicine, 2 ECTS credits, Universiteti katolik Zoja e Këshillit të Mirë, Tirana (Albany).

PATENTS

Patent Number 102016000117469 applied the 21/11/2016: "Rapid Diagnostic Method for Rett Syndrome". Patent owner: University of Rome Tor Vergata. Inventors: Stefano Marini, Massimiliano Coletta, Chiara Ciaccio, Donato Di Pierro, Diego Sbardella, Grazia Raffaella Tundo, Paolo Curatolo, Augusto Orlandi.

RESEARCH PROJECTS

- **2008-2010:** Member of Research Project Unit: PRIN - prot. 2007SFZXZ7_002, Scientific-disciplinary area: Chemical sciences. Project title: 'Multiple functional aspects in haemoproteins from Arctic and Antarctic organisms'.
- **2011-2013**: Member of the operative unit of the Research Project PRIN - prot. 200993WWF9_003, Scientific-disciplinary area: Chemical sciences. Project title: 'Functional characterisation and modulation of enzymes involved in the evolution of tuberculosis infection'.

- **2019-2020:** Member of the operative unit of the University Research Project - Beyond Borders 2019 (D.R.1347 of 29 May 2019). Project title: Identification of a new method for the diagnosis of RETT syndrome based on defective autophagy', SSD: MED/39/ BIO/10.

SCIENTIFIC CONFERENCES

- **2022**: *Member of the organising committee* of the 21st International Conference on Oxygen Binding and Sensing Proteins", O2BIP 2022, Rome, 6-9 September.
- **2019:** *Speaker* - "Molecular mechanisms involved in stress response pathways and cellular homeostasis in Rett syndrome pathology", Convegno nazionale della chimica dei sistemi biologici, Siena, Italy.
- **2009**: *Speaker* - "Somatostatin effect on insulin degrading enzyme activity toward β-amyloid (1-40)", Meeting FIRB 2009 "New Methods and Technologies for Pharmacology", Verona, Italy.
- **2006**: *Speaker* - "Caratterizzazione della degradazione di forme aggregate dell'insulina umana da parte dell'insulisina", 6° Simposio Pharmaco-Bio-Metallics, Napoli, Italy.
- **2006**: *Speaker* - "Recombinant human eosinophil peroxidase: stable expression and purification of fully active enzyme", VII International Conference on Peroxidase, Aveiro, Portogallo.
- **2005**: *Speaker* - "Kinetic studies on the peroxinitrite reaction with mammalian peroxidases", 5° Simposio Pharmaco-Bio-Metallics, Bertinoro (FC), Italy**.**
- **2005**: *Member of the organising committee* of COST Chemistry D21: 9° Management Committee Meeting and Workshop on bioinorganic enzymology, the chemistry of metalloenzymes and closely related areas concerning metalloprotein functions, Rome, 26-29 May.
- **2004**: *Speaker* - "Relationships of ligand binding, redox properties and protonation in Coprinus Cinereus peroxidase", 4th Simposio Pharmaco-Bio-Metallics, Lecce, Italy.

EDITORIAL ACTIVITY

2023: Guest Editor for the Special Issue: "Bone Cell Responses to Extracellular Stimuli under Physio-Pathological Conditions", *International Journal of Molecular Sciences* (MDPI).

PUBBLICATIONS

Papers in International Refereed Journals: 68

Total number of citations: 1556

H-Index: 24 (Scopus)

1. Alloisio G., Becerril Rodriguez D., Luce M., **Ciaccio C**., Marini S., Cricenti A. and Gioia M. Cyclic Stretch-Induced Mechanical Stress Applied at 1 Hz Frequency Can Alter the Metastatic Potential Properties of SAOS-2 Osteosarcoma Cells by *Int. J. Mol. Sci*. 2023, 24(9), 7686.
2. **Ciaccio C**, Coletta, A., Coletta, M. Role of hemoglobin structural functional relationships in oxygen transport. *Molecular Aspects of Medicine*, 2022, 84, 101022.
3. Alloisio G. *, **Ciaccio C**. *, Fasciglione G.F., Tarantino U., Marini S., Coletta M., Gioia M., Effects of extracellular osteoanabolic agents on the endogenous response of osteoblastic cells, *Cells*, 2021, 10(9), 2383. *These authors have equally contributed to the study.
4. De Simone, G., di Masi, A., Fattibene, P., **Ciaccio C.**, Platas-Iglesias C., Coletta M., Pesce A., Ascenzi P., Oxygen-mediated oxidation of ferrous nitrosylated nitrobindins, *J Inorg Biochem*. 2021 Nov; 224:111579.
5. Gioia M*, **Ciaccio C***, Calligari P, De Simone G, Sbardella D, Tundo G, Francesco Fasciglione G, di Masi A, Di Pierro D, Bocedi A, Ascenzi P, Coletta M. Role of Proteolytic Enzymes In the COVID-19 Infection And Promising Therapeutic Approaches. *Biochem Pharmacol*. 2020 Sep 18:114225. *These authors have equally contributed to the study.
6. Di Masi, A.*, De Simone, G.*, **Ciaccio, C.***, Coletta, M., Ascenzi, P., Haptoglobin: From hemoglobin scavenging to human health (Review), *Molecular Aspects of Medicin*e, 2020, 73, 100851. *These authors have equally contributed to the study.
7. De Simone G, di Masi A, Vita GM, Polticelli F, Pesce A, Nardini M, Bolognesi M, **Ciaccio C,** Coletta M, Turilli ES, Fasano M, Tognaccini L, Smulevich G, Abbruzzetti S, Viappiani C, Bruno S, Ascenzi P. Mycobacterial and Human Nitrobindins: Structure and Function. *Antioxid Redox Signal.* 2020 Aug 1;33(4):229-246.
8. Ascenzi, P., De Simone, G., **Ciaccio, C.,** Coletta, M. Ligand-dependent inequivalence of the α and β subunits of ferric human hemoglobin bound to haptoglobin, *Journal of Inorganic Biochemistry* 2020, 202,110814.
9. De Simone G, di Masi A, **Ciaccio C**, Coletta M, Ascenzi P. NO Scavenging through Reductive Nitrosylation of Ferric Mycobacterium tuberculosis and Homo sapiens Nitrobindins. *Int J Mol Sci*. 2020 Dec 10;21(24):9395.
10. Di Pierro, D*., **Ciaccio, C**.*, Sbardella, D., Coletta, M., *et al*., Effects of oral administration of common antioxidant supplements on the energy metabolism of red blood cells. Attenuation of oxidative stress-induced changes in Rett syndrome erythrocytes by CoQ10. *Molecular and Cellular Biochemistry*, 2020, 463(1-2), pp. 101-113. *These authors have equally contributed to the study.
11. Sbardella, D., Tundo, G.R., Cunsolo, V., **Ciaccio, C.,** *et al.,* Defective proteasome biogenesis into skin fibroblasts isolated from Rett syndrome subjects with MeCP2 non-sense mutations, *Biochimica et Biophysica Acta - Molecular Basis of Dise*ase, 2020, 1866(7), 165793.
12. Sbardella D, Tundo GR, Coletta A, Marcoux J, Koufogeorgou EI, **Ciaccio C**, Santoro AM, Milardi D, Grasso G, Cozza P, Bousquet-Dubouch MP, Marini S, Coletta M. The insulin-degrading enzyme is an allosteric modulator of the 20S proteasome and a potential competitor of the 19S. *Cell Mol Life Sci.* 2018 Sep;75(18):3441-3456.

13. Hydroxylamine-induced oxidation of ferrous CO-bound carboxymethylated-cytochrome c Ascenzi, P., De Simone G., **Ciaccio C.,** Santucci R., and Coletta M., *Journal of Porphyrins and Phthalocyanines,* 2018 Vol. 22, No. 12, pp. 1082-1091.
14. Ascenzi P, **Ciaccio C**, Gasperi T, Pesce A, Caporaso L, Coletta M. Hydroxylamine-induced oxidation of ferrous carbonylated truncated hemoglobins from Mycobacterium tuberculosis and Campylobacter jejuni is limited by carbon monoxide dissociation. *J Biol Inorg Chem.* 2017 Aug;22(6):977-986.
15. Sbardella D, Tundo GR, Campagnolo L, Valacchi G, Orlandi A, Curatolo P, Borsellino G, D'Esposito M, **Ciaccio C**, Cesare SD, Pierro DD, Galasso C, Santarone ME, Hayek J, Coletta M, Marini S. Retention of Mitochondria in Mature Human Red Blood Cells as the Result of Autophagy Impairment in Rett Syndrome. *Sci Rep*. 2017 Sep 26;7(1):12297.
16. Grasso G, Santoro AM, Lanza V, Sbardella D, Tundo GR, **Ciaccio C**, Marini S, Coletta M, Milardi D., The double faced role of copper in Ab homeostasis: A survey on the interrelationship between metal dyshomeostasis, UPS functioning and autophagy in neurodegeneration, *Coordination Chemistry Reviews*, 2017, 347, pp. 1-22.
17. **Ciaccio C**, Tognaccini L, Battista T, Cervelli M, Howes BD, Santucci R, Coletta M, Mariottini P, Smulevich G, Fiorucci L., The Met80Ala and Tyr67His/Met80Ala mutants of human cytochrome c shed light on the reciprocal role of Met80 and Tyr67 in regulating ligand access into the heme pocket. *J Inorg Biochem*. 2017, Apr;169:86-96.
18. **Ciaccio C**, Di Pierro D, Sbardella D, Tundo GR, Curatolo P, Galasso C, Santarone ME, Casasco M, Cozza P, Cortelazzo A, Rossi M, De Felice C, Hayek J, Coletta M, Marini S. Oxygen exchange and energy metabolism in erythrocytes of Rett syndrome and their relationships with respiratory alterations. *Mol Cell Biochem*. 2017 Feb;426(1-2):205-213.
19. Tundo GR, Sbardella D., **Ciaccio C**., Grasso G., Gioia M., Coletta A., Polticelli F., Di Pierro D., Milardi D., Van Endert P., Marini S. & Coletta M., Multiple functions of insulin-degrading enzyme: a metabolic crosslight?, 2017, *Critical Reviews in Biochemistry and Molecular Biology*, 52:5, 554-582.
20. Ascenzi, P., **Ciaccio, C.,** De Simone, G., Santucci, R., Coletta, M., Reductive nitrosylation of ferric carboxymethylated-cytochrome c, *Journal of Porphyrins and Phthalocyanines*, 2017 Volume 21, Issue 1, Pages 1 – 91.
21. Tundo GR, Di Muzio E, **Ciaccio C**, Sbardella D, Di Pierro D, Polticelli F, Coletta M, Marini S., Multiple allosteric sites are involved in the modulation of insulin-degrading-enzyme activity by somatostatin. *FEBS J*. 2016 Oct;283(20):3755-3770.
22. Tognaccini L, **Ciaccio C**, D'Oria V, Cervelli M, Howes BD, Coletta M, Mariottini P, Smulevich G, Fiorucci L. Structure-function relationships in human cytochrome c: The role of tyrosine 67. *J Inorg Biochem*. 2016;155:56-66.
23. Santoro AM, Cunsolo A, D'Urso A, Sbardella D, Tundo GR, **Ciaccio C**, Coletta M, Diana D, Fattorusso R, Persico M, Di Dato A, Fattorusso C, Milardi D, Purrello R. Cationic porphyrins are tunable gatekeepers of the 20S proteasome. Chem Sci. 2016 Feb 1;7(2):1286-1297.
24. Tundo GR, Sbardella D, **Ciaccio C**, De Pascali S, Campanella V, Cozza P, Tarantino U, Coletta M, Fanizzi F.P., Marini S. Effect of cisplatin on proteasome activity. *J Inorg Biochem*. 2015;153:253-8.
25. Polticelli F, Zobnina V, **Ciaccio C**, de Sanctis G, Ascenzi P, Coletta M. Enhanced heme accessibility in horse heart mini-myoglobin: Insights from molecular modelling and reactivity studies. *Arch Biochem Biophys*. 2015; 585:1-9.
26. Sbardella D, Tundo GR, Sciandra F, Bozzi M, Gioia M, **Ciaccio C**, Tarantino U, Brancaccio A, Coletta M, Marini S. Proteasome Activity Is Affected by Fluctuations in Insulin-Degrading Enzyme Distribution. *PLoS One*. 2015;10(7):e0132455,
27. Tilleman L, Abbruzzetti S, **Ciaccio C**, De Sanctis G, Nardini M, Pesce A, Desmet F, Moens L, Van Doorslaer S, Bruno S, Bolognesi M, Ascenzi P, Coletta M, Viappiani C, Dewilde S.

Structural Bases for the Regulation of CO Binding in the Archaeal Protoglobin from Methanosarcina acetivorans. *PLoS One*. 2015;10(6):e0125959.

28. **Ciaccio C**, Ocaña-Calahorro F, Droghetti E, Tundo GR, Sanz-Luque E, Polticelli F, Visca P, Smulevich G, Ascenzi P, Coletta M. Functional and Spectroscopic Characterization of Chlamydomonas reinhardtii Truncated Hemoglobins. *PLoS One*. 2015;10(5):e0125005.
29. Tundo GR, Sbardella D, De Pascali SA, **Ciaccio C**, Coletta M, Fanizzi FP, Marini S. Novel Platinum(II) compounds modulate insulin-degrading enzyme activity and induce cell death in neuroblastoma cells. *J Biol Inorg Chem*. 2015.
30. Ascenzi P1, Marino M, **Ciaccio C**, Santucci R, Coletta M. Reductive nitrosylation of the cardiolipin-ferric cytochrome c complex. *IUBMB Life*. 2014.
31. Ascenzi P, Leboffe L, Pesce A, **Ciaccio C**, Sbardella D, Bolognesi M, Coletta M. Nitrite-reductase and peroxynitrite isomerization activities of Methanosarcina acetivorans protoglobin. *PLoS One*. 2014.
32. Ascenzi P, Coletta A, Cao Y, Trezza V, Leboffe L, Fanali G, Fasano M, Pesce A, **Ciaccio C**, Marini S, Coletta M. Isoniazid inhibits the heme-based reactivity of Mycobacterium tuberculosis truncated hemoglobin N. *PLoS One*. 2013; 8(8):e69762.
33. Pesce A, Tilleman L, Donné J, Aste E, Ascenzi P, **Ciaccio C**, Coletta M, Moens L, Viappiani C, Dewilde S, Bolognesi M, Nardini M. Structure and haem-distal site plasticity in Methanosarcina acetivorans protoglobin. *PLoS One*. 2013; 8(6):e66144.
34. Bocedi A, De Sanctis G, **Ciaccio C**, Tundo GR, Di Masi A, Fanali G, Nicoletti FP, Fasano M, Smulevich G, Ascenzi P, Coletta M. Reciprocal allosteric modulation of carbon monoxide and warfarin binding to ferrous human serum heme-albumin. *PLoS One*. 2013;8(3):e58842.
35. **Ciaccio C**, Pesce A, Tundo GR, Tilleman L, Bertolacci L, Dewilde S, Moens L, Ascenzi P, Bolognesi M, Nardini M, Coletta M. Functional and structural roles of the N-terminal extension in Methanosarcina acetivorans protoglobin. *Biochim Biophys Acta*. 2013 Sep;1834(9):1813-23
36. Tundo GR, Sbardella D, **Ciaccio C**, Bianculli A, Orlandi A, Desimio MG, Arcuri G, Coletta M, Marini S. Insulin-degrading enzyme (IDE): a novel heat shock-like protein. J Biol Chem. 2013 Jan 25;288(4):2281-9.
37. Ascenzi P, Pesce A, Nardini M, Bolognesi M, **Ciaccio C**, Coletta M, Dewilde S. Reductive nitrosylation of Methanosarcina acetivorans protoglobin: a comparative study. *Biochem Biophys Res Commun.* 2013 Jan 25;430(4):1301
38. Grasso G, Salomone F, Tundo GR, Pappalardo G, **Ciaccio C**, Spoto G, Pietropaolo A, Coletta M, Rizzarelli E. Metal ions affect insulin-degrading enzyme activity. *J Inorg Biochem*. 2012 Dec;117:351-8.
39. Cao Y, Nicoletti FP, De Sanctis G, Bocedi A, Ciaccio C, Gullotta F, Fanali G, Tundo GR, di Masi A, Fasano M, Smulevich G, Ascenzi P, Coletta M. Evidence for pH-dependent multiple conformers in iron(II) heme-human serum albumin: spectroscopic and kinetic investigation of carbon monoxide binding. J Biol Inorg Chem. 2012 Jan;17(1):133-47.
40. Tundo G.R., **Ciaccio C**., Sardella D., Marini S., and Coletta M., Somatostatin modulates insulin-degrading-enzyme metabolism: implication for alzheimer's disease pathogenesis. *PLoS One.* 2012;7(4):e34376
41. Abbruzzetti S, Tilleman L, Bruno S, Viappiani C, Desmet F, Van Doorslaer S, Coletta M, **Ciaccio C**, Ascenzi P, Nardini M, Bolognesi M, Moens L, Dewilde S. Ligation tunes protein reactivity in an ancient haemoglobin: kinetic evidence for an allosteric mechanism in Methanosarcina acetivorans protoglobin. *PLoS One***.** 2012;7(3):e33614

42. Sbardella D, Fasciglione GF, Gioia M, **Ciaccio C**, Tundo GR, Marini S, Coletta M. Human matrix metalloproteinases: an ubiquitarian class of enzymes involved in several pathological processes. *Mol Aspects Med*. 2012 Apr;33(2):119-208.
43. Ascenzi P, di Masi A, Gullotta F, Mattu M**, Ciaccio C**, Coletta M., Reductive nitrosylation of ferric cyanide horse heart myoglobin is limited by cyanide dissociation. *Biochem Biophys Res Commun*. 2010 Mar 5;393(2):196-200.
44. Ascenzi P, **Ciaccio C**, Sinibaldi F, Santucci R, Coletta M. Peroxynitrite detoxification by horse heart carboxymethylated cytochrome c is allosterically modulated by cardiolipin. *Biochem Biophys Res Commun*. 2011 Nov 25;415(3):463-7
45. Pesce A, Tilleman L, Dewilde S, Ascenzi P, Coletta M, **Ciaccio C**, Bruno S, Moens L, Bolognesi M, Nardini M. Structural heterogeneity and ligand gating in ferric Methanosarcina acetivorans protoglobin mutants. IUBMB Life. 2011 May;63(5):287-94.
46. Ascenzi P, De Marinis E, di Masi A, **Ciaccio C**, Coletta M., Peroxynitrite scavenging by ferryl sperm whale myoglobin and human haemoglobin, *Biochem Biophys Res Commun*. 2009 Dec 4;390(1):27-31
47. Ascenzi P, De Marinis E, Visca P, **Ciaccio C**, Coletta M., Peroxynitrite detoxification by ferryl Mycobacterium leprae truncated hemoglobin O, *Biochem Biophys Res Commun*. 2009 Mar 6;380(2):392-6.
48. Ascenzi P, di Masi A, Coletta M, **Ciaccio C**, Fanali G, Nicoletti FP, Smulevich G, Fasano M., Ibuprofen impairs allosterically peroxynitrite isomerization by ferric human serum heme-albumin, *J Biol Chem*. 2009 Nov 6;284(45):31006-17
49. De Marinis E, Casella L, **Ciaccio C**, Coletta M, Visca P, Ascenzi P., Catalytic peroxidation of nitrogen monoxide and peroxynitrite by globins, *IUBMB Life*. 2009 Jan;61(1):62-73.
50. **Ciaccio C,** Tundo GR, Grasso G, Spoto G, Marasco D, Ruvo M, Gioia M, Rizzarelli E, Coletta M., Somatostatin: a novel substrate and a modulator of insulin-degrading enzyme activity, *J Mol Biol*. 2009 Feb 6;385(5):1556-67
51. **Ciaccio** C, Coletta A, De Sanctis G, Marini S, Coletta M.. Cooperativity and allostery in haemoglobin function. *IUBMB Life*. 2008 60(2):112-23.
52. Bolli A, Ciaccio C, Coletta M, Nardini M, Bolognesi M, Pesce A, Guertin M, Visca P, Ascenzi P. Ferrous Campylobacter jejuni truncated hemoglobin P displays an extremely high reactivity for cyanide - a comparative study. *FEBS J.* 2008 Feb;275(4):633-45.
53. Nardini M, Pesce A, Thijs L, Saito JA, Dewilde S, Alam M, Ascenzi P, Coletta M, Ciaccio C, Moens L, Bolognesi M. Archaeal protoglobin structure indicates new ligand diffusion paths and modulation of haem-reactivity. *EMBO Rep*. 2008 Feb;9(2):157-63.
54. Smulevich, G., Droghetti, E., Focardi, C., Coletta, M. Ciaccio, C., Nocentini, M., A rapid spectroscopic method to detect the fraudulent treatment of tuna fish with carbon monoxide *Food Chemistry*, 2007, Volume 101, Issue 3, Pages 1071 – 1077.
55. Nicolis S, Monzani E, **Ciaccio C**, Ascenzi P, Moens L, Casella L., Reactivity and endogenous modification by nitrite and hydrogen peroxide: does human neuroglobin act only as a scavenger? *Biochem J*. 2007 Oct 1;407(1):89-99. *Biochem J.* 2007 Oct 1;407(1):89-99.
56. De Sanctis G, Petrella G., **Ciaccio** C., Feis A., Smulevich G., Coletta M., A comparative study on axial coordination and ligand binding in ferric mini myoglobin and horse heart myoglobin. *Biophys J.* 2007; 93(6): 2135-42.
57. Ascenzi P, Ciaccio C, Coletta M. Peroxynitrite-mediated oxidation of ferrous carbonylated myoglobin is limited by carbon monoxide dissociation. *Biochem Biophys Res Commun*. 2007 Nov 30;363(4):931-6.
58. Giordano D, Russo R, **Ciaccio C**, Howes BD, di Prisco G, Marden MC, Hui Bon Hoa G, Smulevich G, Coletta M, Verde C. Ligand- and proton-linked conformational changes of the ferrous 2/2 hemoglobin of Pseudoalteromonas haloplanktis TAC125. *IUBMB Life*. 2011 Jul;63(7):566-73.

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