**CURRICULUM VITAE**

**Ohara Augusto**

**Address**

Departamento de Bioquímica

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**Present position**

Full Professor of Biochemistry, Departamento de Bioquímica, Instituto de Química, Universidade de São Paulo.

**Orcid**

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**Research interests**

Chemistry and biochemistry of free radicals and oxidants. Oxidants derived from the bicarbonate buffer. Protein-protein crosslinks mediated by radical mechanisms. Applications of electron paramagnetic resonance (EPR) to biomedical problems.

**Previous professional positions**

Assistant Professor- Faculty of Education, Universidade Estadual de Campinas, 1976-1977.

Assistant Professor- Dept. of Biochemistry, Instituto de Química, Universidade de São Paulo from 1977-1983

Associate Professor- Dept. of Biochemistry, Instituto de Química, Universidade de São Paulo from 1983-1993

Full Professor- Dept. of Biochemistry, Instituto de Química, Universidade de São Paulo from 1993 to present.

**Education**

BS in Chemistry. Instituto de Química, Universidade de São Paulo, São Paulo, Brasil, 1971.

PhD, Biochemistry. Instituto de Química, Universidade de São Paulo, São Paulo, Brasil, 1976.

Postdoctoral work. Lawrence Berkeley Laboratories, Berkeley, CA (1980).

Postdoctoral work. University of California, San Francisco (1981-1982).

**Scientific visits**

Expert, National Institute of Environmental Health Sciences, North Caroline, 02-04/1986. Support: National Institute of Health, USA.

Associate Professor, Eppley Institute for Cancer Research, Nebraska Medical Center, Omaha, Nebraska, 06-08/89. Support: BID-USP.

Visiting Scientist,Universidade de la Republica, Montevideu, Uruguay, 04-05/95. Support: CONICET, Uruguay.

Visiting Scientist, National Institute of Environmental Health Sciences, North Caroline, 11/99-01/00. Support: NIEHS, NIH, USA and USP, Brazil.

**Prizes and Achievements:**

2022- Brazilian Women in Chemistry awards from American Chemical Society and Sociedade Brasileira de Química as academic leadership.

2020- Listed among the "Top 2%" of researchers with the greatest impact in the world throughout their career (<https://doi.org/10.1371/journal.pbio.3000918>).

2018- Rheinboldt-Hauptmann Prize

2013-2018- Associated Editor of Free Radical Biology and Medicine.

2016- People behind the Science Podcast (November 16).

2016- Professor honored by the students at the 33rd Chemistry Week.

2011- Member of the Academy of Sciences for the Developing World (TWAS).

2011- Member of the Academy of Sciences of the São Paulo State.

2010- Prize for Research in Chemistry from the American Chemical Society/CAPES.

2009- Scopus Prize- Elsevier/CAPES.

2008- Science focus on ASBMB Today, May.

2006- Brazilian Order of Scientific Merit-Comendador.

2006- Adhonorum Professor, Faculdad de Medicina, Universidad de la Republica, Montevideo, Uruguay.

2005- South American Free Radical Research Personality.

2002- Silver Medal for Biology and Medicine of the International EPR Society.

2002- Member of the Brazilian Academy of Sciences.

2000- Fellow of the Society for Redox Biology and Medicine former Oxygen Society.

1992-1994- Brazilian representative on theIUPAC Comission on Toxicology.

**Educational activities**

Participation in the elaboration of educational videos (in Portuguse) on redox research that are found on the homepage of our Research, Innovation and Dissemination Center of Redox Processes in Biomedicine-Redoxoma ((<http://redoxoma.iq.usp.br/>)

Publishing a paradidatic book in 2006 named “Radicais livres: bons, maus a naturais (Free radicals: good, bad and natural) to attract young students to the redox area.

Teaching of undergratuate Biochemistry courses at the Department of Biochemistry, Instituto de Química, Universidade de São Paulo (USP) yearly from 1982 to 2020.

Teaching of graduate courses in molecular toxicology (1983) and Free Radicals in Biology and Medicine at the Department of Biochemistry, Instituto de Química, Universidade de São Paulo (USP) biannually since 1990.

Teaching of “Oxidants Biochemistry and EPR methodologies in several national and international courses and pre-congresses symposia.

Host of short visit stays of graduate students from Uruguay, Argentina and Chile.

**MS Dissertations and PhD Thesis Supervised:**

Álbert Alberto de Souza Peixoto, MS- “Peroxynitrite preferentially oxidizes the dithiol redox motifs of protein disulfide isomerase” Instituto de Química, USP, 2017 (CNPq Fellowship)

Veronica Paviani, PhD- “Oxidação de residuos de triptofano em proteínas: formação da ligação cruzada ditriptofano e implicações patofisiológicas”- Instituto de Química, USP, 2016 (CAPES fellowship).

Raphael F. Queiroz-PhD- “Estudos in vitro e in vivo dos mecanismos pelos quais nitróxidos cíclicos inibem lesões oxidativas”- Instituto de Química, USP, 2012 (CNPq fellowship).

Danilo B Medinas- PhD- “Atividade peroxidásica da enzima superóxido dismutase humana: Produção do radical carbonato, dimerização covalente da enzima e implicações para a esclerose lateral amiotrófica”. Instituto de Química, USP, 2010 (FAPESP fellowship).

Renata Ogusucu- PhD- “Interacions of cytosolic peroxiredoxins from Sacharomyces cerevisiae with peroxides”. Estudos cinéticos e funcionais. Instituto de Química, USP, 2009 (FAPESP fellowship).

Sandra Muntz Vaz- PhD- "Oxidation and nitration of proteins mediated by peroxynitrite and peroxidases"- Instituto de Química, USP, 2008 (FAPESP fellowship).

Fernanda Menezes Cerqueira- MS- “Consequences of superoxide dismutase 1 and its G93A mutant neuroblastomes. Implications to amyotrophic lateral sclerosis. Instituto de Química, USP, 2007 (FAPESP fellowship).

Denise de Castro Fernandes- MS- “Effects of tempol on the interaction of peroxynitrite/carbon dioxide with albumin and macrophages”. Instituto de Química USP, Brazil, 2003 (FAPESP fellowship).

Marcelo G. Bonini- PhD- “Production and biological targets of nitrogen dioxide and carbonate radical”- Instituto de Química USP, Brazil, 2003 (FAPESP fellowship).

Edlaine Linares- PhD- “Role of peroxynitrite on the leishmanicidal activity of macrophages in murine models”. Instituto de Química USP, Brazil, 2003.

Célio C. X. Santos- PhD- "Peroxynitrite reaction with urate and tyrosine. Implications for the development of peroxynitrite scavengers and biomarkers. Instituto de Química USP, Brazil, 2002 (FAPESP fellowship).

Silvia L. de Menezes- MS- "EPR studies of the interaction between peroxynitrite and cells". Instituto de Química USP, Brazil, 2002 (FAPESP fellowship).

Lia S. Nakao- PhD- "Radical metabolites of ethanol and nucleic acid alkylation. *In vitro* and *in vivo* studies. Instituto de Química USP, Brazil, 2002 (FAPESP fellowship).

Sonia Hix- Ph.D.- "DNA alkylation by methyl radicals produced from tert-butyl hydroperoxide metabolism *in vitro* and *in vivo"*. Instituto de Química USP, Brazil, 1998 (FAPESP fellowship).

Reynaldo M. Gatti- Ph.D. "Biochemical reactions of peroxynitrite, the potent oxidant produced from nitric oxide and superoxide anion." Instituto de Química USP, Brazil, 1998 (FAPESP fellowship).

Jolie K. Kwee- Ph.D. "Cellular proliferation induced by 8-oxoguanosine and 8-methylguanosine, two products of free radical attack on ribonucleosides and RNA." Instituto de Química USP, Brazil, 1998.

Ligia F. Gomes- Ph.D.- “Role of carbon centered radical on the toxicity of hydrazine.”-Instituto de Química USP, Brazil, 1996.

Maurício da Silva Moraes- M.S.- “Synthesis and characterization of 8-methyl-2'-deoxyguanosine, a product of methyl radical attack on DNA." Instituto de Química, USP, Brazil, 1995 (FAPESP fellowship).

Jeannette Vasquez-Vivar- Ph.D.- “Hydroxylated metabolites of the antimalarial drug primaquine. Auto-oxidation and redox-cycling in vitro and in vivo". Instituto de Química,USP, Brazil, 1992 (FAPESP fellowship).

Luis E. S. Netto- PhD “Metabolic activation of 1,2-dimethylhydrazine to methyl radicals. Potential roles in gentoxic processes". -Instituto de Química, USP, Brazil, 1992 (FAPESP fellowship).

Maria Heloisa Tsuhako- M.S.- “Reductive metabolism of the trypanomicidal agents megazol e nifurtimox”- Instituto de Química-USP, Brazil, 1990.

Luciana C. C. Leite- Ph.D. “2-Phenylethylhydrazine metabolism: Production of 2-phenylethyl radical and interaction with DNA." Instituto de Química-USP, Brazil, 1988 ((FAPESP fellowship).

**Current students and PDs**

Edlaine Linares- PD

Matheus Paulino Romano- PhD student

Under recruitment 1PD

**Scientific organization**

Organized with Jacek Zielonka the Pre-Meeting Workshop “Fundamentals in Redox Biology” 2016 Meeting of the SfRBM, San Francisco, CA.

Director of the Research, Innovation and Dissemination Center of Redox Processes in Biomedicine-Redoxoma (CEPID Project from FAPESP 01/06/2013 to 30/08/2024) <http://redoxoma.iq.usp.br/>

Organizing Committee of the “São Paulo Advanced School on Redox Processes in Biomedicina”-August 13-21, 2011, São Pedro, SP, Brazil.

Coordinator of a Brazilian Network on Redox Processes- Redoxoma- Project INCT CNPq-FAPESP-CAPES (03/2009 a 03/2014).

Coordinator of a Brazilian Network on Redox Processes- Redoxoma- Project Institutos do Milênio CNPq 11/2005 a 03/2009.

Member of the Council of the Society for Free Radical Biology and Medicine (former Oxygen Society) 1996-1998; 2004-2006.

Coordinator (with Homero Rubbo) of The Sunrise Free Radical School in the IV Meeting of the South American Group of the Society for Free Radical Biology and Medicine, Aguas de Lindoia, SP, 29/06-02/07, 2005.

President of the Organizing Committee of the IX Biennial Meeting of the ISFRR, realizada no Hotel Transamérica, São Paulo, Brazil, 7-11/09/1998.

Founding Committee of the South American Group of Free Radical Research, 1998.

Founding Committee of the Brazilian Group of Free Radical Research (C@BRal), 1998.

**Scientific reviewing**

Associate Editor of *Free Radical Biology and Medicine*; 2013 to April 2018.

Member of the Editorial Board of the *Chemical Research in Toxicology* (American Chemical Society); 2006-2014.

Member of the editorial board of the *Brazilian Journal of Medical and Biological Research;* 2002-present.

Member of the Editorial Board of the journal *Free Radical Biology and Medicine* from 1999-2009.

Reviewer of scientific Brazilian and International Journals(*Arch. Biochem. Biophys, Chem. Res. Toxicol., Proc. Natl Acad Sci. USA, Free Radic. Biol. Med*., *Biochemistry*, among others).

Reviewer of Brazilian and International funding agencies, such as FAPESP (Brazil); CNPq (Brazil); CONICET (Uruguay); Academy of Sciences of Israel (Israel); Austrian Science Fund (Austria); Novo Nordisk Fonden (Denmark) and others.

**Conferences/symposium in international meetings (2022-2016)**

2021- “Carbon dioxide redox metabolites in oxidative eustress and distress”. 20th

IUPAB Congress, São Paulo, Brazil, October 4th- 8th.

2018- “CO2 toxicity: A role for redox reactions?”- 19TH Biennial Meeting of the SFRRI, Symposium Molecular Structure and Function, Lisbon, Portugal, 04-07 June 4th-7th.

2017- “Toxicity of elevated CO2 levels: A role for redox reactions?” IUPAC 2017, São Paulo, Brazil, July 14-17.

2017- “Radicals and Oxidants: A close connection of bioinorganic chemistry with redox biology” 18th International Conference on Biological Inorganic Chemistry, Florianópolis, Brazil, July 31st – August 4th.

2016- “Prx1 nitrosationand coordination to dinitrosyl iron complexes”-¨6th Symposium of the DGF Priority Program Thiol-based redox switches in cellular physiology, Irsee Monastery, Germany September 15-17, 2016.

2016- “Oxidative mechanisms of protein aggregation. A role for ditryptophan” In the Symposium Protein oxidation and turnover: relevance in biology and medicine. Montevideo, UY, March 9 and 10, 2016.

**Current Research Support**

01/06/2013 to 30/08/2024- Research, Innovation and Dissemination Center Program from FAPESP (Fundação de Amparo à Pesquisa do Estado de São Paulo)- Research Center of Redox Processes in Biomedicine-Redoxoma- Grant # 2013/07937-8. Director: Ohara Augusto (<http://redoxoma.iq.usp.br/>)

**Total Publications**

International peer-reviewed journals**:** more than 150 articles

International Books: 11 chapters

Book: 01 (Portuguese: Radicais livres: Bons, maus e naturais (Free radicals: Good, Bad and Natural), ISBN 85-86238-50-3, Editora Oficina de textos, July 2006.

**Citations**

Google Scholar <https://scholar.google.com/citations?hl=en&user=D2B_pToAAAAJ>

h index= 55; citations =10,467 (April 20, 2022)

Research ID: <https://publons.com/researcher/2738896/ohara-augusto/>

h index= 45; citations: 7,421 (April 20, 2022)

Scopus ID: <https://www.scopus.com/authid/detail.uri?authorId=7004291005>

h index= 48; citations: 7,811 (October 31, 2022)

**Publications in peer-reviewed journals**

Augusto O, Truzzi DR (2021). Carbon dioxide redox metabolites in oxidative eustress and oxidative distress. Biophys. Rev. 13,889-891.

Truzzi DR, Medeiros NM, Augusto O, Ford PC (2021). Dinitrosyl Iron Complexes (DNICs). From Spontaneous Assembly to Biological Roles. Inorg. Chem. 60, 15835-15845.

Demasi M, Augusto O, Bechara EJH, Bicev RM, Cerqueira FM, da Cunha FM, Denicola A, Gomes F, Miyamoto S, Netto LES, Randall LM, Stevani CV, Thomson L (2021). Oxidative modification of proteins: From damage to catalysis, signaling and beyond. Antiox Redox Signal, 35: 1016-1080.

Paviani V, de Melo PJ, Avakin A, Di Mascio P, Ronsein GE, Augusto O (2020). Human cataractous lenses contain cross-links produced by crystallin-derived tryptophanyl and tyrosyl radicals. Free Radic Biol Med 160, 356-367.

da Silva DA, Correia TMLLC, Pereira RF, da Silva RAA, Augusto O, Queiroz RF (2020). Tempol reduces inflammation and oxidative damage in cigarette smoke-exposed mice by decreasing neutrophil infiltration and activating the Nrf2 pathway. Chem. Biol Interact. 329, 109210.

Dantas LS, Viviani LG, Inague A, Piccirillo E, de Rezende L, Ronsein GR, Augusto O, Medeiros MHG, do Amaral AT, Miyamoto S (2020). Lipid aldehyde hydrophobicity affects apo-SOD1 modification and aggregation. Free Radic Biol Med. 156:157-167.

Truzzi DR, Alves SV, Netto LES, Augusto O (2020). The Peroxidatic Thiol of Peroxiredoxin 1 is Nitrosated by Nitrosoglutathione but Coordinates to the Dinitrosyl Iron Complex of Glutathione. Antioxidants 9, 276.

Alves LCP, Massari J, Licciardi S, Prado FM, Linares E, Klassen A, Tavares MFM, Augusto O, Di Mascio P, Bechara EJH (2020). Singlet oxygen generation by the reaction of acrolein with peroxynitrite via a 2-hydroxyvinyl radical intermediate. Free Radic Biol Med 152, 83-90.

Dario MF, Viana AS, Augusto O, Linares E, Gama RM, Baby AR, Velasco MVR (2020). Dyed hair photoprotection efficacy of a quercetin-loaded cationic nanoemulsion. Photochem Photobiol B. 204,111788.

Truzzi DR, Augusto O, Iretski AV, Ford, PC (2019). Dynamics of Dinitrosyl Iron Complex (DNIC) Formation with Low Molecular Weight Thiols. Inorg. Chem. 58, 13446-13456.

Baptista MS, Alves MJM, Arantes GM, Armelin HA, Augusto O, Baldini RL et al. (2019) Where do we aspire to publish? A position paper on scientific communication in biochemistry and molecular biology. Braz. J. Med. Biol. Res. 52, e8935.

Truzzi DR, Coelho FR, Paviani V, Alves SV, Netto LES, Augusto O (2019). The bicarbonate/carbon dioxide pair increases hydrogen peroxide-mediated hyperoxidation of human peroxiredoxin 1. J.Biol. Chem. 294, 14055-14067.

Truzzi DR, Augusto O, Ford, PC (2019). Thiyl radicals are co-products of dinitrosyl iron complex (DNIC) formation. Chem. Commun. 55, 9156-9159.

[Augusto O](https://www.sciencedirect.com/science/article/pii/S0891584918324894?via%3Dihub#!), [Goldstein S,](https://www.sciencedirect.com/science/article/pii/S0891584918324894?via%3Dihub#!)  [Hurst JK, Lind J,](https://www.sciencedirect.com/science/article/pii/S0891584918324894?via%3Dihub" \l "!) Lymar SV, [Merenyi](https://www.sciencedirect.com/science/article/pii/S0891584918324894?via%3Dihub" \l "!) G, Radi R. (2019) Carbon Dioxide-catalyzed peroxynitrite reactivity – The Resilience of the radical mechanism after two decades of research, Free Radic Biol Med. 135, 210-215.

Dantas LS, Chaves-Filho AB, Coelho FR, Genaro-Mattos TC, Tallman KA, Porter NA, Augusto O, Miyamoto S (2018)Cholesterol secosterol aldehyde adduction and aggregation of Cu,Zn-superoxide dismutase: Potential implications in ALS. Redox Biol. 9,105-115.

Damasceno FC, Lopes AKB, Condeles AL, Facci RR, Linares E, Truzzi DR, Augusto O, Toledo JC Jr (2018). The labile iron pool attenuates peroxynitrite-dependent damage and can no longer be considered solely a pro-oxidative cellular iron source. J Biol Chem. 293, 8530-8542.

Paviani V, Galdino GT, dos Prazeres, JN, Queiroz, RF, Augusto O (2018) Ditryptophan cross-links as novel products of protein oxidation. J Braz. Chem Soc. 29, 925-933.

Peixoto ÁS, Geyer RR, Iqbal A, Truzzi DR, Soares Moretti AI, Laurindo FRM, Augusto O (2018). Peroxynitrite preferentially oxidizes the dithiol redox motifs of protein-disulfide isomerase J Biol Chem. 293,1450-1465.

Carvalho LA, Truzzi DR, Fallani TS, Alves SV, Toledo Junior JC, Augusto O, Netto LE, Meotti FC. Urate hydroperoxide oxidizes human peroxiredoxin 1 and peroxiredoxin 2 (2017). J Biol Chem. 292, 8705-8715.

Hugo M, Martínez A, Trujillo M, Estrada D, Mastrogiovanni M, Linares E, Augusto O, Issoglio F, Zeida A, Estrín DA, Heijnen HF, Piacenza L, Radi R (2017). Kinetics, subcellular localization, and contribution to parasite virulence of a Trypanosoma cruzi hybrid type A heme peroxidase (TcAPx-CcP) (2017) Proc Natl Acad Sci U S A 114, E1326-E1335.

Alegria TG, Meireles DA, Cussiol JR, Hugo M, Trujillo M, de Oliveira MA, Miyamoto S, Queiroz RF, Valadares NF, Garratt RC, Radi R, Di Mascio P, Augusto O, Netto LE (2017). Ohr plays a central role in bacterial responses against fatty acid hydroperoxides and peroxynitrite. Proc Natl Acad Sci U S A. 114,E132–E141.

Weller CA, Dahll A, Ding F, Linares E, Whedon SD, Senger NA, Tyson EL, Bagert JD, Li X1 , Augusto O, Champak C (2016) Aromatic thiol-mediated cleavage of N–O bonds enables chemical ubiquitylation of folded proteins. Nature Commun 2016 Sep 29. doi: 10.1038/ncomms12979.

Tairum CA, Santos MC, Breyer CA, Geyer RR, Nieves CJ, Portillo-Ledesma S, Ferrer-Sueta G, Toledo JC Jr, Toyama MH, Augusto O, Netto LE, de Oliveira MA (2016). Catalytic Thr or Ser Residue Modulates Structural Switches in 2-Cys Peroxiredoxin by Distinct Mechanisms. Sci Rep. 6,33133. doi: 10.1038/srep33133.

Segrettia ND, Serafim RAM, Segrettib MCF, Miyatac M, Coelho FR, Augusto O, Ferreira EI (2016) New antibacterial agents: Hybrid bioisoster derivatives as potential E. coli FabH inhibitors. Bioorg Med Chem Lett 26,3988-3993.

Paviani V; Queiroz RF; Marques EF; Di Mascio P; Augusto O. (2016) Production of lysozyme and lysozyme-superoxide dismutase dimers bound by a ditryptophan cross-link in carbonate radical-treated lysozyme. Free Radic Biol Med. 89,71-82.

Appolinário PP, Medinas DB, Chaves-Filho AB, Genaro-Mattos TC, Cussiol JR, Netto LE, Augusto O, Miyamoto S. (2015) Oligomerization of Cu,Zn-Superoxide Dismutase (SOD1) by Docosahexaenoic Acid and Its Hydroperoxides In Vitro: Aggregation Dependence on Fatty Acid Unsaturation and Thiols. PLoS 10, e 0125146. doi: 10.1371/journal.pone.0125146

Genaro-Mattos TC, Queiroz RF, Cunha D, Appolinario PP, Di Mascio P, Nantes IL, Augusto O, Miyamoto S (2015) Cytochrome C reacts with cholesterol hydroperoxides to produce lipid- and protein-derived radicals. Biochemistry 54, 2841-2850.

Lima FL, Joazeiro, PP, Lancellotti, M, de Hollanda, LM, Lima, BA, Linares, E, Augusto, O Brocchi M, Giorgio, S (2015) Effects of hyperbaric oxygen on Pseudomonas aeruginosa susceptibility to imipenem and macrophages. Future Microbiol 10, 179-189.

Forman HA, Augusto O, Brigelius-Flohe R, Dennery PA, Kalyanaraman B, Ischiropoulos H, Mann GE, Radi R, Roberts LJ, Vina J, Davies KJA (2015) Even free radicals should follow some rules: A Suggested Guide to Free Radical Research Terminology and Methodology. Free Radic Biol Med 78, 233-235.

Coelho FR, Iqbal A, Linares E, Silva, DF, Lima FS, Cuccovia I, Augusto O (2014) Oxidation of the tryptophan 32 residue of human superoxide dismutase 1 caused by its bicarbonate-dependent peroxidase activity triggers the non-amyloid aggregation of the enzyme. J Biol Chem 289, 30690-30701.

Iqbal A, Paviani, V, Moretti, AI, Laurindo FRM, Augusto O. (2014) Oxidation, inactivation and aggregation of protein disulfide isomerase promoted by the bicarbonate-dependent peroxidase activity of human superoxide dismutase. Arch Biochem Biophys. 557, 72-81.

Dal Vechio FH, Cerqueira F, Augusto O, Lopes R, Demasi M. (2014) Peptides that activate the 20S proteasome by gate opening increased oxidized protein removal and reduced protein aggregation. Free Radic Biol Med. 67, 304-313.

Linares, E, Seixas, LV, Dos Prazeres JN, Ladd, FVL, Laad, ABLA, Copi, AA and Augusto, O (2013) Tempol moderately extends survival in a hSOD1G93A ALS rat model by inhibiting neuronal cell loss, oxidative damage and levels of non-native hSOD1G93A. PLoS One 8, e55868.

Queiroz RF, Paviani, V, Coelho FR, Marques EF, Di Mascio, P, Augusto, O (2013) The carbonylation and covalent dimerization of human superoxide dismutase 1 caused by its bicarbonate-dependent peroxidase activity is inhibited by the radical scavenger tempol. Biochem J 455, 37-46.

Queliconi BB, Marazzi TB, Vaz SM, Brookes PS, Nehrke K, Augusto O, Kowaltowski AJ. (2013) Bicarbonate modulates oxidative and functional damage in ischemia-reperfusion. Free Radic Biol Med 55, 46-53.

Queiroz RF, Jordão AK, Cunha AC, Ferreira VF, Brigagão MR, Malvezzi A, do Amaral AT, Augusto O. (2012) Nitroxides attenuate carrageenan-induced inflammation in rat paws by reducing neutrophil infiltration and the resulting myeloperoxidase-mediated damage. Free Radic Biol Med. 53, 1942-1953.

Toledo JC Jr, Augusto O (2012) Connecting the chemical and biological properties of nitric oxide. Chem Res Toxicol 25, 975-989.

Queiroz RF, Vaz SM, Augusto O (2011) Inhibition of the chlorinating activity of myeloperoxidase by tempol: Revisiting the kinetics and mechanisms. Biochem J. 439, 423-431.

Malvezzi A, Queiroz RF, de Rezende L Augusto, O T-do Amaral A (2011) MPO inhibitors selected by virtual screening. Mol. Inf. 30, 605-613.

Toledo JC Jr, Audi R, Ogusucu R, Monteiro G, Netto LE, Augusto O (2011) Horseradish peroxidase compound I as a tool to investigate reactive protein-cysteine residues: From quantification to kinetics. Free Radic. Biol Med. 50, 1032-1038.

Busso C, Tahara EB, Ogusucu R, Augusto O, Ferreira-Junior JR, Tzagoloff A, Kowaltowski AJ, Barros MH (2010). Saccharomyces cerevisiae coq10 null mutants are responsive to antimycin A. FEBS J. 277, 4530-4538.

Medinas DB, Gozzo FC, Santos LF, Iglesias AH, Augusto O. (2010) A ditryptophan cross-link is responsible for the covalent dimerization of human superoxide dismutase 1 during its bicarbonate-dependent peroxidase activity. Free Radic Biol Med. 49, 1046-1053.

Medinas DB, Augusto O. (2010) Mechanism of the peroxidase activity of superoxide dismutase. Free Radic Biol Med. 49, 682.

Barbosa LF, Cerqueira FM, Macedo AF, Garcia CC, Angeli JP, Schumacher RI, Sogayar MC, Augusto O, Carrì MT, Di Mascio P, Medeiros MH. (2010) Increased SOD1 association with chromatin, DNA damage, p53 activation, and apoptosis in a cellular model of SOD1-linked ALS. Biochim Biophys Acta 1802, 462-471.

Tsuhako MH, Augusto O, Linares E, Chadi G, Giorgio S, Pereira CA. (2010) Tempol ameliorates murine viral encephalomyelitis by preserving the blood-brain barrier, reducing viral load, and lessening inflammation. Free Radic Biol Med. 48, 704-712.

Guerreiro JR, Lameu C, Oliveira EF, Klitzke CF, Melo RL, Linares E, Augusto O, Fox JW, Lebrun I, Serrano SM, Camargo AC (2009) Argininosuccinate synthetase is a functional target for a snake venom anti-hypertensive peptide: role in arginine and nitric oxide production. J Biol Chem 284, 20022-20033.

Vieira AL, Linares E, Augusto O, Gomes SL. (2009) Evidence of a Ca(2+)-()NO-cGMP signaling pathway controlling zoospore biogenesis in the aquatic fungus Blastocladiella emersonii. Fungal Gen Biol. 46, 575-584.

Medinas DB, Toledo Jr J, Cerchiaro G, do-Amaral AT, de Rezende L, Malvezzi A, Augusto, O (2009) Peroxymonocarbonate and carbonate radical displace the hydroxyl-like oxidant under physiological conditions. Chem Res Toxicol. 22, 639-648.

Vaz SM, Prado FM, Di Mascio P, Augusto O (2009) Oxidation and nitration of ribonuclease and lysozyme by peroxynitrite and myeloperoxidase. Arch Biochem Biophys. 484, 127-133.

Ogusucu R, Rettori D, Netto LES, Augusto, O (2009) [Superoxide dismutase1-mediated production of ethanol- and DNA-derived radicals in yeasts challenged with hydrogen peroxide. Molecular insights into the genome instability of peroxiredoxin-null strains.](http://www.ncbi.nlm.nih.gov/pubmed/19106092?ordinalpos=2&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DefaultReportPanel.Pubmed_RVDocSum) J Biol Chem. 284, 5546-5556.

Vaz SM, Augusto O (2008) Inhibition of myeloperoxidase-mediated protein nitration by tempol: Kinetics, mechanism, and implications. Proc. Natl Acad. Sciences USA 105, 8191-8196.

Arai RJ, Ogata FT, Batista WL, Masutani H, Yodoi J, Debbas V, Augusto O, Stern A, Monteiro HP (2008) Thioredoxin-1 promotes survival in cells exposed to S-nitrosoglutathione: Correlation with reduction of intracellular levels of nitrosothiols and up-regulation of the ERK1/2 MAP Kinases. Toxicol Appl Pharmacol. 233, 227-237.

Augusto O, Trindade DF, Linares E , Vaz SM (2008) Cyclic nitroxides inhibit the toxicity of nitric oxide-derived oxidants: mecahnisms and implications. Ann Acad Braz Sci. 80, 179-189.

Linares E, Giorgio S, Augusto O (2008) Inhibition of in vivo leishmanicidal mechanisms by tempol. Nitric oxide down-regulation and oxidant scavenging. Free Radic. Biol Med. 44, 1668-1676.

Loureiro APM, Augusto O (2008) Toxicological issues in Brazil range from long-standing problems to novel challenges. Chem Res Toxicol. 21, 267-271.

Augusto O, Vaz SM (2007) EPR spin-trapping of protein radical to investigate biological oxidative mechanisms. Amino acids 32, 535-542.

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