

**Anna Iannone, M.D., Ph.D.**

Department of Biomedical Sciences

University of Modena and Reggio Emilia

**Curriculum vitae**

Born in Mantova (Italy) February 4th, 1957.

**Education and appointments:** Associate Professor in General Pathology (MED-04) at the Department of Biomedical Sciences of the University of Modena and Reggio Emilia; professor of Pathophysiology at the Faculty of Medicine(2002-today); Researcher in General Pathology (2000-2002); Specialist in Clinical Pathology (1999); PhD in Hepatology (1995); Visiting Assistant Research Scientist at the University of Arizona (Tucson, AZ) (1993-1994), Visiting Researcher Assistant Professor at the University of Illinois at Urbana-Champaign (1987-1989); Specialist in Gastroenterology (1988); MD at the University of Modena (1984).

**Research activity:** Most part of the research activity has been conducted by the application of the ESR (Electron Spin Resonance) spectroscopy in the biomedical research area. The research field involve the study of diseases characterized by the presence of oxidative and nitrosative stress, in the search of pathophysiological mechanisms and markers of oxidative stress. The research activity involves the chemical field (radical reactions in chemical systems for studying the mechanism of action of antioxidant and the decomposition of drugs leading to free radical formation), the biological field (studies on the effects of antioxidants and free radicals on biological membranes, cells and animals) and the medical field (studies on redox equilibrium during oxidative and nitrosative stress in ischemia/reperfusion injury, shock and end stage renal disease, both in animals and humans). Another research field involves the identification of proteins modified by oxidative damage in neoplastic diseases (breast and ovarian cancer) to be used as diagnostic and prognostic markers.

**Teaching**

Lecturer of Pathophysiology in the Specialization Schools of Clinical Biochemistry, Clinical Pathology, Sport Medicine, General Surgery, Pathology, and Microbiology & Virology;

Course of "Pathophysiology" in the School of Medicine;

Course of "General Pathology and Pathophysiology" in the School of "Biomedical Laboratory Techniques";

Course of "General Pathology" in the School of Medicine;

Course of "General Pathology" in the School of Dietistic

**Reviewer activity for the following journals:**

- Free Radical Research;
- Nitric Oxide Biology and Chemistry;
- Critical Care Medicine;
- Artificial Organs;
- Biochimica Biophysica Acta;
- FEBS Letters;
- Pharmacological Research;
- Journal of Endocrinological Investigation
- Chemical Research Toxicology
- Heart International
- Genes and Nutrition

**Publications:**

1. Bobyleva-Guarriero, V., Iannone, A., Di Lisa, F., Capone, R., and Siliprandi, N. Effect of acute exercise and L-carnitine administration on rat liver mitochondria. *IRCS Med. Sci.*, 13: 868-869, 1985.

2. Bobyleva-Guarriero, V., Di Lisa, F., Iannone, A., and Siliprandi, N. Ameliorating effect of carnitine on liver mitochondria functions in ammonium intoxicated rats. *IRCS Med. Sci.*, *13*: 399-400, 1985.
3. Tomasi, A., Albano, E., Banni, S., Botti, B., Corongiu, F. P., Dessì, M. A., Iannone, A., Vannini, V., and Dianzani, M. U. Free radical metabolism of carbon tetrachloride in rat liver mitochondria. A study of the mechanism of activation. *Biochem. J.*, *246*: 313-317, 1987.
4. Tomasi, A., Iannone, A., and Vannini, V. Applicazioni biomediche delle sonde nitrossidiche (spin label): approccio allo studio delle membrane. *In*: G. S. C. Vergani (ed.), *Le Biomembrane in Condizioni Normale e Patologiche. Atti del XXI Congresso della Società Italiana per lo Studio del Metabolismo Normale e Patologico.*, pp. 89-96. Modena: Poligrafico Artioli, 1987.
5. Bobyleva-Guarriero, V., Iannone, A., Bellei, M., and Muscatello, U. Effects of single or multiple doses of L-carnitine on liver energetic metabolism of rat forced to run. *J. Sports Med.*, *28*: 298-303, 1988.
6. Albano, E., Tomasi, A., Gorla-Gatti, L., and Iannone, A. Free radical activation of monomethyl and dimethyl hydrazines in isolated hepatocytes and liver microsomes. *Free Rad. Biol. Med.*, *6*: 3-8, 1989.
7. Bacic, G., Alameda, J. C., Iannone, A., Magin, R. L., and Swartz, H. M. NMR study of water exchange across the hepatocyte membrane. *Magn. Res. Imaging*, *7*: 411-416, 1989.
8. Banni, S., Corongiu, F. P., Dessì, M. A., Iannone, A., Lombardi, B., Tomasi, A., and Vannini, V. Free radicals and lipid peroxidation in liver of rats kept on a diet devoid of choline. *Free Rad. Res. Comms.*, *7*: 233-240, 1989.
9. Federico, M., Iannone, A., Chan, H. C., and Magin, R. L. Bone marrow uptake of liposome-entrapped spin label after liver blockade with empty liposomes. *Magn. Res. Med.*, *10*: 418-425, 1989.
10. Iannone, A., Hu, H., Tomasi, A., Vannini, V., and Swartz, H. M. Metabolism of aqueous soluble nitroxides in hepatocytes: effects of cell integrity, oxygen, and structure of nitroxides. *Biochim. Biophys. Acta*, *991*: 90-96, 1989.
11. Iannone, A., Bini, A., Swartz, H. M., Tomasi, A., and Vannini, V. Metabolism in rat liver microsomes of the nitroxide spin probe Tempol. *Biochem. Pharmacol.*, *38*: 2581-2586, 1989.
12. Iannone, A., Tomasi, A., Vannini, V., and Swartz, H. M. Metabolism of nitroxide spin labels in subcellular fractions of rat liver. II. Reduction in the cytosol. *Biochim. Biophys. Acta*, *1034*: 290-293, 1990.
13. Iannone, A., Tomasi, A., Vannini, V., and Swartz, H. M. Metabolism of nitroxide spin labels in subcellular fractions of rat liver. I. Reduction by microsomes. *Biochim. Biophys. Acta*, *1034*: 285-289, 1990.
14. Iannone, A., Magin, R. L., Walczak, T., Federico, M., Swartz, H. M., Tomasi, A., and Vannini, V. Blood clearance of dextran magnetite particles determined by a non-invasive in vivo ESR method. *Magn. Reson. Med.*, *22*: 435-442, 1991.
15. Iannone, A. and Tomasi, A. Nitroxide radicals, their use as metabolic probes in biological model systems: an overview. *Acta Pharm. Jugosl.*, *41*: 277-297, 1991.
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17. Gorla-Gatti, L., Iannone, A., Tomasi, A., Poli, G., and Albano, E. *In vitro* and *in vivo* evidence for the formation of methyl radical from procarbazine: a spin trapping study. *Carcinogenesis*, *13*: 799-805, 1992.
18. Iannone, A., Federico, M., Tomasi, A., Magin, R. L., Casasco, A., Calligaro, A., and Vannini, V. Detection and quantitation in rat tissues of the superparamagnetic magnetic

resonance contrast agent dextran magnetite as demonstrated by ESR spectroscopy. *Invest. Radiol.*, 27: 450-455, 1992.

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20. Iannone, A., Marconi, A., Zambruno, G., Giannetti, A., Vannini, V., and Tomasi, A. Free radical production during organic hydroperoxide metabolism by normal human keratinocytes. *J. Invest. Dermatol.*, 101: 50-63, 1993.
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22. Iannone, A., Tomasi, A., Quaresima, V., and Ferrari, M. Nitroxides as metabolic and EPR imaging probes in biological model systems. *Res. Chem. Intermed.*, 19: 715-731, 1993.
23. Albano, E., Comoglio, A., Clot, P., Iannone, A., Tomasi, A., and Ingelman-Sundberg, I. Activation of alkylhydrazines to free radical intermediates by ethanol-inducible cytochrome P4502E1 (CYP2E1). *Biochim. Biophys. Acta*, 1243: 414-420, 1995.
24. Iannone, A., Tomasi, A., and Canfield, L. M. Generation of N-tert-butyl- $\alpha$ -phenylnitron radical adducts of iron breakdown of tert-butyl hydroperoxide. *Res. Chem. Intermed.*, 22: 469-479, 1996.
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27. Iannone, A., Rota, C., Bergamini, S., Tomasi, A., and Canfield, L. M. Antioxidant activity of carotenoids: an electron spin resonance study on  $\beta$ -carotene and lutein interaction with free radicals generated in a chemical system. *J. Biochem. Mol. Toxicol.*, 12: 299-304, 1998.
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39. Lucchi, L., Bergamini, S., Iannone, A., Perrone, S., Stipo, L., Olmeda, F., Caruso, F., Tomasi, A., and Albertazzi, A. Erythrocyte susceptibility to oxidative stress in chronic renal failure patients under different substitutive treatments. *Artif Organs*, 29: 67-72, 2005.
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52. E. Rossi, L. Della Casa, S. Piana, **A. Iannone** "CLA isomers modulate protein expression profile in rat hepatocytes", *Genes & Nutrition*, 7(4), 511-527, 2012. **IF 2.507**.
53. D. Vergara, A. Tinelli, **A. Iannone**, M. Maffia. "The impact of proteomics in the understanding of the molecular basis of paclitaxel-resistance in ovarian cancer tumors" *Current Cancer Drug Targets*, 2012, **IF 4.327**.
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55. Gibellini, L., De Biasi, S., Nasi, M., **Iannone, A.**, Cossarizza A., Pinti, M. "Mitochondrial proteases as emerging pharmacological targets" *Curr. Pharmacol. Des.* 2016, Feb. 2. **IF: 3.452**
56. Pinti, M., Gibellini, L., Nasi, M., De Biasi, S. Bortolotti C.A., **Iannone A.**, Cossarizza, A. "Emerging role of Lon protease as a master regulator of mitochondrial funtions" *Biochim. Biophys. Acta* 1857, 1300-1306, 2016. **IF: 5.353**
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Modena 18.08.2026