CURRICULUM VITAE

Prof. **MAURO PRATO**, PhD
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Education

1991-1996: classical high school studies (final marks: 60 out of 60), Liceo Classico "C.Cavour", Torino, Italy.
1996-2001: graduation studies at the School of Biotechnology, University of Torino and achievement of the Graduate Degree in Medical Biotechnology (final marks: 110 out of 110, with honors and print dignity). Title of the final dissertation: "Anti-angiogenetic role of IL12: *in vitro* study of the matrix metalloproteinases (MMPs) activity", performed at the Molecular Angiogenesis Division of the Institute for Research and Therapy of Cancer of Candiolo, Torino, Italy.
2001-2005: PhD studies in Biochemistry and Cellular Biotechnology, University of Torino and achievement of the PhD Degree in Biochemistry and Cellular Biotechnology. Title of the final dissertation: "Involvement of matrix metalloproteinases in malaria pathology; study of the MMP-9-mediated regulation of TNFalpha and IL-1beta in human monocytes and their environment after phagocytosis of hemozoin", performed at the Biochemistry Division of the Department of Genetics, Biology and Biochemistry, Torino Medical School, University of Torino, Italy.

Career

1997-2001: undergraduate student, Biology division, Dept. of Genetics, Biology and Biochemistry, Torino Medical School, University of Torino, Italy (1997); Oncology Division, Institute for Research and Therapy of Cancer of Candiolo, Torino, Italy (1998); Molecular Angiogenesis Division, Institute for Research and Therapy of Cancer of Candiolo, Torino, Italy (1999-2001).
2001-2012: PhD student (2001-2005) and post-Doc researcher (2005-2012), Biochemistry Division, Dept. of Genetics, Biology and Biochemistry, Torino Medical School, University of Torino, Italy.
2003-present day: lecturer of Biochemistry, Torino Medical School, University of Torino, Italy (schools of Nursing, Paediatric Nursing, Obstetrics, Radiology Techniques, Audiometry Techniques, Audioprotesis Techniques, Neurophysiopatology Techniques, Biomedical Laboratory Techniques).
2008-present day: adjunct Professor of Biochemistry, Dept. of Public Health and Pediatrics, University of Torino, Italy (school of Nursing, displaced branch of Asti).
2009, 2012: visiting researcher, Laboratory of Immunobiology, Rega Institute, Catholic University of Leuven, Belgium.
2012, 2013: visiting researcher, Laboratory of Photoacoustics, FujiFilm VisualSonics, Amsterdam, The Netherlands.
2012-2015: post-Doc researcher, Physiology Division, Dept. of Neuroscience, University of Torino, Italy.
2014, 2017: high school teacher of Natural Sciences, Liceo Scientifico "C. Cattaneo", Torino, Italy.
2015-16: post-Doc researcher, Microbiology Division, Dept. of Public Health and Paediatrics, University of Torino, Italy.
2016-18: Principal Investigator, Dept. of Neuroscience, University of Torino, Italy.

Main Research Interests

1999-2001: Role of human MMPs in angiogenesis
2001-present day: Role of human MMPs in *falciparum* malaria (HZ-dependent regulation of MMPs and related molecules, including tissue inhibitors of metalloproteinases (TIMPs), cytokines and chemokines in mononuclear and endothelial cells; signal transduction; biological effects; pharmacological implications; blood-brain barrier models)
2012-present day: Oxygen-loaded nanobubbles and nanodroplets as therapeutic tools for hypoxia-related diseases (complicated malaria, preeclampsia, cancer, chronic wounds)

Early Achievement-Track-Record

No. International patents: 1.
No. papers in peer-reviewed international journals with ISSN: 51. As first/last author: 37. As corresponding author: 31.
No. peer-reviewed international books with ISBN: 1.
No. chapters in peer-reviewed international books with ISBN: 10. As first/last author: 7. As corresponding author: 6.
No. communications in national/international conferences/schools: 121 (oral:44; poster:75). As first/last author:94; as presenter:73.
Total Impact Factor: 143.638. *h* index: 12. No. Citations: 439. Year range: 2003-present.

Representative Publications

1. Prato M, Magnetto C, Jose J, Khadjavi A, Cavallo F, Quaglino E, Panariti A, Rivolta I, Benintende E, Varetto G, Argenziano M, Troia A, Cavalli R, and Guiot C. 2H,3H-decafluoropentane-based nanodroplets: new perspectives for oxygen delivery to hypoxic cutaneous tissues. PLoS One. 2015 Mar 17;10(3):e0119769.
2. Khadjavi A, Magnetto C, Panariti A, Argenziano M, Gulino GR, Rivolta I, Cavalli R, Giribaldi G, Guiot C, and Prato M. Chitosan-shelled oxygen-loaded nanodroplets abrogate hypoxia dysregulation of human keratinocyte gelatinases and inhibitors: New insights for chronic wound healing. Toxicol Appl Pharmacol. 2015 Aug 1;286(3):198-206.
3. Gulino GR, Magnetto C, Khadjavi A, Panariti A, Rivolta I, Soster M, Argenziano M, Cavalli R, Giribaldi G, Guiot C, and Prato M. Oxygen-Loaded Nanodroplets Effectively Abrogate Hypoxia Dysregulating Effects on Secretion of MMP-9 and TIMP-1 by Human Monocytes. Mediators Inflamm. 2015;2015:964838.
4. Basilico N, Magnetto C, D'Alessandro S, Panariti A, Rivolta I, Genova T, Khadjavi A, Gulino GR, Argenziano M, Soster M, Cavalli R, Giribaldi G, Guiot C, and Prato M. Dextran-shelled oxygen-loaded nanodroplets reestablish a normoxia-like pro-angiogenic phenotype and behavior in hypoxic human dermal microvascular endothelium. Toxicol Appl Pharmacol. 2015 Nov 1;288(3):330-8.
5. Argenziano M, Banche G, Luganini A, Finesso N, Allizond V, Gulino GR, Khadjavi A, Spagnolo R, Tullio V, Giribaldi G, Guiot C, Cuffini AM, Prato M*, and Cavalli R*. Vancomycin-loaded nanobubbles: A new platform for controlled

antibiotic delivery against methicillin-resistant Staphylococcus aureus infections. Int J Pharm. 2017 May 15;523(1):176-188. *equal contribution.