	Marianna H. Antonelou
Academic position:	**Assistant Professor of Animal Cell Biology** Department of Biology, School of Sciences, NKUA
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ACADEMIC QUALIFICATIONS:

2003: Ph.D. in Biology, Dept. of Biology, School of Sciences, NKUA
1994: B.Sc Degree In Biology, Dept. of Biology, School of Sciences, NKUA

APPOINTMENTS:

2016-: Assistant Professor of Animal Cell Biology
2013-2016: Lecturer of Cell Biology
2007-2008: Visiting Lecturer (degree-law 407/80)
2003-2013: Post-doctoral Research Fellow and Teaching Assistant

EDUCATIONAL ACTIVITIES:

Teaching in undergraduate courses (NKUA)

- Cell Biology (Dept. of BIOLOGY) 2007-2008 and 2013-
- Advanced Cell Biology (Dept. of BIOLOGY) 2007-2008 and 2013-
- Developmental Biology and Histology (Dept. of BIOLOGY) 2012-
- Current issues on Biology of the Cell (Dept. of PHYSICS) 2013-
- Current issues on Cell Biology (Dept. of CHEMISTRY) 2013-

Teaching in postgraduate courses (NKUA and University of West Attica -UWA)

- Cell Biology and Biophysics, Postgraduate course for Ph.D. students, Dept. of Biology, School of Sciences, NKUA, 1999-2010
- Cell Biology, M.Sc. Applications of Biology in Medicine, (Dept. of Biology, School of Scinces and Medical School, NKUA, 2004-
- Aging and age-related diseases, 2013-
- Image Analysis and Processing in Biomedicine, 1998-2004
- Biology I, M.Sc. Teaching of Biology (Dept. of Biology, NKUA), 2010-2014
- Biology II, 2010-2014
- New Technologies, 2004-2012
- Biology and Experiment I, 2014-
- Molecular Biology and Genomics, M.Sc. Bioinformatics, (Dept. of Biology, NKUA), 2018-
- Red Blood Cell Pathophysiology-Transfusion and Proteomics, M.Sc. Biomedical Methods and Technology in Diagnosis, (Dept. of Medical Laboratories, West Attica University), 2016-

Teaching in European research networks and workshops

COST Action BM1202, ME-HaD European Network on Microvesicles and Exosomes in Health and Disease, Course title: “Extracellular Vesicles and Exosomes: Analysis and Properties”, **2016**

Supervisor of: **17** undergraduate Diploma Theses, **3** MSc Diploma Theses (2013-), **2** PhD Theses and **1** post-Doc Research (SIEMENS program) (2013-)

Avademic consultant of: **3** PhD Theses and **1** Post-Doc Research Grant

External examiner to: **8** PhD Theses (2014-), **23** MSc Diploma Theses (2013-) and **2** European Biomedical Research Fellowship Programs (2017).

RESEARCH INTERESTS/ACTIVITIES:

- Aging and death signaling in erythrocytes
- Extracellular vesicles and nanoparticles
- Blood transfusion biology-Storage lesions in blood labile products
- Detection of biomarkers in blood - Biological networks
- Cell biology of anemia -Secondary anemia in aging and diseases
- Hereditary red blood cell membrane disorders and enzymopathies (G6PD deficiency)
- Erythrocyte physiology in end-stage renal disease
- Ultrastructure of cell and sub-cellular components

HONORS & AWARDS:

1996-1999 PhD Fellowship, GSRT of Greece
2005, 2007, 2008, 2009, 2015, 2018 Hellenic Society of Haematology
2010 International Society of Blood Transfusion (ISBT) and Deutsche Gesellschaft für Transfusionmedizin und Immunhämatologie (DGTI)
2011: "Arkagathos Gouttas" award of the year, Hellenic Society of Haematology
2011: Research grant, Hellenic Society of Blood Transfusion

PLENARY SPEAKER INVITATIONS:

2010 Hellenic Society of Haematology
2012, 2016, 2018 Hellenic Society of Blood Transfusion
2013 European Congress of Biomedical Laboratory Science
2016 COST Action BM1202, ME-HaD European Network on Microvesicles and Exosomes in Health and Disease
2016 British Blood Transfusion Society (BBTS)
2017 Korean Society of Blood Transfusion (KSBT)

REVIEW EDITOR IN:

2018: Journal "*Frontiers in Physiology*" (Frontiers), section of "*Red Blood Cell Physiology*"
2018: Journal "*PLOS ONE*" (Public Library of Science), Academic Guest Editor

MEMBER OF:

1996: Hellenic Society of Biological Sciences
2011: Hellenic Society of Biochemistry and Molecular Biology
2013: Hellenic Society of Blood Transfusion
2019**:** International Society of Blood Transfusion

FUNDED RESEARCH PROJECTS AS COORDINATOR and PARTNER

Collaborative researcher and member and of the Main Coordinating and Research Team in **19 scientific proposals** (General Secretariat for Research and Technology of Greece, Empirikion Foundation, Research Committee of the NKUA, FP7 EU grant "INsPiRE" (REGPOT-CT-2011-284460), Hellenic Society of Blood Transfusion, Research Committee of the Technological and Educational Institute of Athens, National Scholarships Foundation (NSF, IKY) Fellowships of Excellence for Postgraduate Studies in Greece -Siemens Program, YPER 1996, PENED 1999, PYTHAGORAS I, PENED 2006, HSBT 2011, ARCHIMEDES III etc).

SCIENTIFIC PUBLICATIONS IN REFEREED JOURNALS (46)

IF: total 135-144; **Citations** >1360-1840; **Allo-citations** >1050-1530; ***h*-index**: 20-22.

1. The frequency of the allele αLELY, a low expression allele of the gene encoding erythroid spectrin α-chain, in the Greek population. Papassideri I, **Antonelou M**, Karababa F, Loutradi–Anagnostou A, Delaunay J, Margaritis LH. *Haematologica*, 84(8): 754-755, **1999.**

2. A novel case of a haemoglobin H disease associated with clinical and morphological characteristics of congenital dyserythropoetic anaemia type I. **Antonelou M,** Papassideri IS, Karababa F, Gyparaki M, Loutradi–Anagnostou A, Margaritis LH. DOI: 10.1034/j.1600-0609.2002.01590.x. *European Journal of Haematology*, 68(4): 247-252, **2002**.

3. Ultrastructural characterization of the erythroid cells in a novel case of congenital anaemia. **Antonelou MH,** Papassideri IS, Karababa FJ, Loutradi A, Margaritis LH. DOI: 10.1016/S1079-9796(03)00006-8. *Blood Cells, Molecules & Diseases*, 30(1):30-42, **2003**.

4. Defective organization of the erythroid cell membrane in a novel case of congenital anemia. **Antonelou MH,** Papassideri IS, Karababa FJ, Stravopodis DJ, Loutradi A, Margaritis LH DOI: 10.1016/S1079-9796(03)00007-X. *Blood Cells, Molecules & Diseases*, 30(1): 43-54, **2003**.

5. Membrane protein carbonylation in non-leukodepleted CPDA-preserved red blood cells. Kriebardis AG, **Antonelou MH**, Stamoulis KE, Economou-Petersen E, Margaritis LH, Papassideri IS. DOI: 10.1016/j.bcmd.2006.01.003. *Blood Cells Molecules & Diseases* 36(2): 279-282, **2006**.

6. The dual role of chorion peroxidase in Bactrocera oleae chorion assembly. International Journal of Konstandi OA, Papassideri IS, Stravopodis DJ, **Antonelou MH**, Kenoutis CA, Stefanidou DC, Margaritis LH DOI: 10.1387/ijdb.052122ok. *Developmental Biology*, 50(6):543-552, **2006**.

7. Physiologically important secondary modifications of red cell membrane in hereditary spherocytosis-evidence for in vivo oxidation and lipid rafts protein variations. Margetis P, **Antonelou M,** Karababa F, Loutradi A, Margaritis L, Papassideri I. DOI: 10.1016/j.bcmd.2006.10.163 *Blood Cells Molecules & Diseases*, 38(3):210-220, **2007**.

8. Structural alterations of the erythrocyte membrane proteins in diabetic retinopathy. Graefe's Petropoulos IK, Margetis PI, **Antonelou MH,** Koliopoulos JX, Gartaganis SP, Margaritis LH, Papassideri IS. DOI: 10.1007/s00417-006-0500-6. *Archive for Clinical and Experimental Ophthalmology*, 245(8): 1179-1188, **2007**.

9. Progressive oxidation of cytoskeletal proteins and accumulation of denatured hemoglobin in stored red cells. Kriebardis AG, **Antonelou MH,** Stamoulis KE, Economou-Petersen E, Margaritis LH, Papassideri IS. DOI: 10.1111/j.1582-4934.2007.00008.x. *Journal of Cellular and Molecular Medicine*, 11(1):148-155, **2007**.

10. Storage-dependent remodeling of the red blood cell membrane is associated with increased immunoglobulin G binding, lipid raft rearrangement and caspase activation. Kriebardis AG, **Antonelou MH**, Stamoulis KE, Economou-Petersen E, Margaritis LH, Papassideri IS. DOI: 10.1111/j.1537-2995.2007.01254.x. *Transfusion*, 47(7) 1212-1220, **2007**.

11. RBC-derived vesicles during storage. Ultrastructure, protein composition, oxidation and signalling components. Kriebardis AG, **Antonelou MH**, Stamoulis KE, Economou-Petersen E, Margaritis LH, Papassideri IS. DOI: 10.1111/j.1537-2995.2008.01794.x. *Transfusion*, 48(9): 1943-1953, **2008**.

12. Intracellular clusterin inhibits mitochondrial apoptosis by suppressing p53-activating stress signals and stabilizing the cytosolic Ku70-Bax protein complex. Trougakos IP, Lourda M, **Antonelou MH,**

Kletsas D, Gorgoulis VG, Papassideri IS, Zou Y, Margaritis LH, Boothman DA, Gonos ES. DOI: 10.1158/1078-0432.CCR-08-1805. *Clinical Cancer Research*, 15(1):48-59, **2009**.

13. Increased protein carbonylation of red blood cell membrane in diabetic retinopathy. Margetis PI, **Antonelou MH**, Petropoulos IK, Margaritis LH, Papassideri IS. DOI: 10.1016/j.yexmp.2009.04.001 *Experimental and Molecular Pathology*,87(1):76-82, **2009**.

14. Red blood cell aging markers during storage in citrate-phosphate-dextrose–saline-adenine-glucose-mannitol. **Antonelou MH,** Kriebardis AG, Stamoulis KE, Economou-Petersen E, Margaritis LH, Papassideri IS. DOI: 10.1111/j.1537-2995.2009.02449.x . *Transfusion*, 50(2):376-389, **2010**.

15. Aging and death signaling in mature red cells: from basic science to transfusion practice. Review **Antonelou MH**, Kriebardis AG, Papassideri IS. DOI: 10.2450/2010.007S. *Blood Transfusion*, 8(s3):39-47, **2010**.

16. Oxidative stress-associated shape transformation and membrane proteome remodeling in erythrocytes of end stage renal disease patients on hemodialysis. **Antonelou MH**, Kriebardis AG, Velentzas AD, Kokkalis AC, Georgakopoulou S-C, Papassideri IS. DOI: 10.1016/j.jprot.2011.04.009 *Journal of Proteomics*, 74:2441-2452, **2011**.

17. Apolipoprotein J/Clusterin is a novel structural component of human erythrocytes and a biomarker of cellular stress and senescence. **Antonelou MH**, Kriebardis AG, Stamoulis KE, Trougakos IP, Papassideri IS. DOI: 10.1371/journal.pone.0026032. *PLoS ONE* 6(10): e26032, **2011**.

18. Apolipoprotein J/Clusterin in human erythrocytes is involved in the molecular process of defected material disposal during vesiculation. **Antonelou MH**, Kriebardis AG, Stamoulis KE, Trougakos IP, Papassideri IS. DOI: 10.1371/journal.pone.0026033. *PLoS ONE* 6(10): e26033, **2011**.

19. Brain proteome response following whole body exposure of mice to mobile phone or wireless DECT base radiation. Fragopoulou A, Samara A, **Antonelou M,** Xanthopoulou A, Papadopoulou A, Vougas K, Koutsogiannopoulou E, Anastasiadou E, Stravopodis D, Tsangaris G, Margaritis L. DOI: 10.3109/15368378.2011.631068. *Electromagnetic Biology and Medicine* 31(4):250-274, **2012**.

20. Effects of pre-storage leukoreduction on stored red blood cells signaling: a time-course evaluation from shape to proteome. **Antonelou MH**, Tzounakas VL, Velentzas AD, Stamoulis KE, Kriebardis AG, Papassideri IS. DOI: 10.1016/j.jprot.2012.06.032. *Journal of Proteomics*, 76:220-238, **2012**.

21. Cell-derived microparticles in stored blood products: innocent-bystanders or effective mediators of post-transfusion reactions? Review. Kriebardis AG*, **Antonelou MH*,** Stamoulis KE, Papassideri IS. *Equal first authors. DOI: 10.2450/2012.006S. *Blood Transfusion* 10 (SUPPL. 2):s21-s34, **2012**

22. Detrimental effects of proteasome inhibition activity in Drosophila melanogaster: implication of ER stress, autophagy and apoptosis. Velentzas PD, Velentzas AD, Mpakou VE, **Antonelou MH,** Margaritis LH, Papassideri IS, Stravopodis DJ. DOI: 10.1007/s10565-012-9235-9. *Cell Biology and Toxicology*, 29:13-37, **2013**.

23. Blood modifications associated with end stage renal disease duration, progression and cardiovascular mortality: a 3-year follow-up pilot study. **Antonelou MH*,** Georgatzakou HT*, Tzounakas VL, Velentzas AD, Kokkalis AC, Kriebardis AG, Papassideri IS [*Equal first authors] DOI: 10.1016/j.jprot.2014.02.009. *Journal of Proteomics*, 101: 88-101, **2014**.

24. Uric acid variation among regular blood donors is indicative of red blood cells susceptibility to storage lesion markers: a new hypothesis tested. Tzounakas VL, Georgatzakou HT, Kriebardis AG, Papageorgiou EG, Stamoulis KE, Foudoulaki-Paparizos LE, **Antonelou MH*,** Papassideri IS. DOI: 10.1111/trf.13211. *Transfusion*, 55: 2659-2671, **2015**.

25. An update on red blood cell storage lesions, as gleaned through biochemistry and omics technologies. Review. D'Alessandro A, Kriebardis A, Rinalducci S, **Antonelou M**, Hansen K, Papassideri I, Zolla L DOI: 10.1111/trf.12804. *Transfusion* 55(1):205-219, **2015**.

26. Donor variation effect on red blood cell storage lesion: a multi-parameter, yet consistent, story Tzounakas VL, Georgatzakou HT, Kriebardis AG, Voulgaridou AI, Stamoulis KE, Foudoulaki-Paparizos LE, **Antonelou MH*,** Papassideri IS. DOI: 10.1111/trf.13582. *Transfusion*, 56:1274-1286; **2016**

27. Microparticles variability in fresh frozen plasma: preparation protocol and storage time effects Kriebardis AG*, **Antonelou MH*,** Georgatzakou HT, Tzounakas VL, Stamoulis KE, Papassideri IS. [* Equal first authors] DOI: 10.2450/2016.0179-15. *Blood Transfusion*, 14(2):228-237; **2016**.

28. Glucose 6-phosphate dehydrogenase deficient subjects may be better "storers" than donors of red blood cells. Tzounakas VL, Kriebardis, AG, Georgatzakou HT, Foudoulaki-Paparizos LE, Dzieciatkowska M, Wither MJ, Nemkov T, Hansen KC, Papassideri IS, D'Alessandro AD, **Antonelou MH*** DOI: 10.1016/j.freeradbiomed.2016.04.005. *Free Radical Biology and Medicine*, 96:152-165, **2016**

29. Data on how several physiological parameters of stored red blood cells are similar in glucose 6-phosphate dehydrogenase deficient and sufficient donors. Tzounakas VL, Kriebardis AG, Georgatzakou HT, Foudoulaki-Paparizos LE, Dzieciatkowska M, Wither MJ, Nemkov T, Hansen KC, Papassideri IS, D'Alessandro AD, **Antonelou MH*.** DOI: 10.1016/j.dib.2016.06.018. *Data in Brief*, 8:618-627, **2016**

30. Red blood cell abnormalities and the pathogenesis of anemia in end stage renal disease. Review Georgatzakou HT,* **Antonelou MH,*** Papassideri IS, Kriebardis AG. [*Equal first authors] DOI: 10.1002/prca.201500127. *Proteomics Clinical Applications*, 10(8):778-90; **2016**

31. Donor-variation effect on red blood cell storage lesion: A close relationship emerges. Tzounakas VL, Kriebardis AG, Papassideri IS, **Antonelou MH*** DOI: 10.1002/prca.201500128. *Proteomics Clinical Applications*, 10(8):791-804; **2016**

32. Update on extracellular vesicles inside red blood cell storage units: Adjust the sails closer to the new wind. Review. **Antonelou MH*,** Seghatchian J. DOI: 10.1016/j.transci.2016.07.016. *Transfusion and Apheresis Science*, 55(1):92-104; **2016**.

33. Insights into red blood cell storage lesion: toward a new appreciation. Review. **Antonelou MH*,** Seghatchian J. DOI: 10.1016/j.transci.2016.10.019. *Transfusion and Apheresis Science*, 55(3):292-301; **2016**.

34. Temperature-dependent haemolytic propensity of CPDA-1 stored erythrocytes vs. whole blood - Red cell fragility as a donor's signature on blood units. Tzounakas VL, Anastasiadi AT, Karadimas DG, Zeqo RA, Georgatzakou HT, Pappa OD, Papatzitze OA, Stamoulis KE, Papassideri IS, **Antonelou MH*,** Kriebardis, AG*. DOI: 10.2450/2017.0332-16. *Blood Transfusion*, 15:447-455, **2017**.

35. Pathophysiological aspects of red blood cells in end-stage renal disease patients resistant to recombinant human erythropoietin therapy. Georgatzakou HT, Tzounakas VL, Kriebardis, AG, Velentzas A, Papageorgiou E, Voulgaridou A, Kokkalis A, **Antonelou MH*,** Papassideri IS. DOI: 10.1111/ejh.12875. *European Journal of Haematology*, 98(6):590-600, **2017**.

36. Unraveling the Gordian knot: red blood cell storage lesion and transfusion outcomes. Review. Tzounakas VL, Kriebardis A, Seghatchian J, Papassideri I, **Antonelou MH*.** DOI: 10.2450/2017.0313-16. *Blood Transfusion*, 15(2):126-130; **2017**.

37. Red blood cell transfusion in surgical cancer patients: Targets, risks, mechanistic understanding and further therapeutic opportunities. Review. Tzounakas VL, Seghatchian J, Grouzi E, Kokoris S, **Antonelou MH*. DOI**: 10.1016/j.transci.2017.05.015. *Transfusion and Apheresis Science*, 56(3):291-304; **2017**.

38. Erythrocyte-based drug delivery in Transfusion Medicine: Wandering questions seeking answers. Review. Tzounakas VL, Karadimas DG, Papassideri IS, Seghatchian J, **Antonelou MH*.** DOI: 10.1016/j.transci.2017.07.015. *Transfusion and Apheresis Science*; 56:626-634; **2017.**

39. Short-term effects of hemodiafiltration versus conventional hemodialysis on erythrocyte performance. Georgatzakou HT, Tzounakas VL, Kriebardis, AG, Velentzas AD, Kokkalis AC, **Antonelou MH*,** Papassideri IS. https://doi.org/10.1139/cjpp-2017-0285. *Canadian Journal of Physiology and Pharmacology*, 96(3):249-257, **2018**

40. Hypoxia modulates the purine salvage pathway and decreases red blood cell and supernatant levels of hypoxanthine during refrigerated storage. Nemkov T, Sun K, Reisz JA, Song A, Yoshida T, Dunham A, Wither MJ, Francis RO, Roach RC, Dzieciatkowska M, Rogers SC, Doctor A, Kriebardis A, **Antonelou M,** Papassideri I, Young C, Thomas T, Hansen KC, Spitalnik SL, Xia Y, Zimring JC, Hod EA, D'Alessandro A. DOI: 10.3324/haematol.2017.178608. *Haematologica*; 103(2):361-372; **2018**.

41. Donor-specific individuality of red blood cell performance during storage is partly a function of serum uric acid levels. Tzounakas VL, Karadimas DG, Anastasiadi AT, Georgatzakou HT, Kazepidou E, Moschovas D, Velentzas AD, Kriebardis AG, Zafeiropoulos NE, Avgeropoulos A, Lekka M, Stamoulis KE, Papassideri IS, **Antonelou MH*** DOI:10.1111/trf.14379. *Transfusion*, 58(1):34-40, **2018**

42. Metabolic linkage and correlations to storage capacity in erythrocytes from glucose 6-phosphate dehydrogenase deficient donors. Reisz JA, Tzounakas VL, Nemkov T, Voulgaridou AI, Papassideri IS, Kriebardis AG, D'Alessandro A, **Antonelou MH**. DOI: *10.3389/fmed.2017.00248. Frontiers in Medicine*; 4:248; **2018**.

43. Redox status, procoagulant activity and metabolome of fresh frozen plasma in glucose 6-phosphate dehydrogenase deficiency. Tzounakas V, Gevi F, Georgatzakou H, Zolla L, Papassideri I, Kriebardis A, Rinalducci S, **Antonelou MH.** DOI: doi.org/10.3389/fmed.2018.00016. *Frontiers in Medicine; 5:16;* **2018**.

44. Red cell transfusion in paediatric Red cell transfusion in paediatric patients with thalassaemia and sickle cell disease: Current status, challenges and perspectives. Tzounakas VL, Valsami SI, Kriebardis AG, Papassideri IS, Seghatchian J, **Antonelou MH*.** doi: 10.1016/j.transci.2018.05.018. *Transfusion and Apheresis Science*; 57(3):347-357; **2018**.

45. Recipient's effects on stored red blood cell performance: the case of uremic plasma. Georgatzakou H, Tzounakas V, Velentzas A, Papassideri I, Kokkalis A, Stamoulis K, Kriebardis A, **Antonelou M.** doi: 10.1111/trf.15257 *Transfusion, 59:1900-1906;* **2019**.

46. Ex vivo generation of transfusable red blood cells from various stem cell sources: A concise revisit of where we are now. Christaki E-E, Politou M, **Antonelou M**, Athanasopoulos A, Simantirakis E, Seghatchian J, Vassilopoulos G. DOI: 10.1016/j.transci.2018.12.015 *Transfusion and Apheresis Science; pii: S1473-0502(18)30485-3;* **2019**.

34 Refereed conference publications

3 Review Articles in Hellenic Peer Review Journals (2010, 2011, 2019)

CONFERENCES:

45 announcements in **International conferences** organized by the International Society of Hematology (ISH), International Society of Blood Transfusion (ISBT), Deutsche Gesellschaft für Transfusionsmedizin und Immunhämatologie (DGTI), European Hematology Association (EHA), European Federation of Endocrine Societies (EFES), Federation of European Biochemical Societies (FEBS), International Union of Biochemistry and Molecular Biology (IUBMB), American Association of Blood Banks (AABB), Polish Radiation Research Society (PRRS), Society for Free Radical Research International (SFRR), SCinTE, British Blood Transfusion Society (BBTS), Korean Society of Blood Transfusion (KSBT).

93 announcements in **National conferences** organized by the Hellenic Society of Biological Sciences, Hellenic Society of Haematology, Hellenic Society for Clinical Chemistry-Clinical Biochemistry, Hellenic Society of Biochemistry and Molecular Biology, Hellenic Society of Neuroscience, Hellenic Society of Blood Transfusion, Hellenic Lipid Forum.