

Curriculum vitae

Dr. Georgios Vlastos

Name: Georgios Vlastos

Place of Birth: Athens, Greece

Contact Address: Department of Materials Science and Technology
Faculty of Sciences and Engineering
University of Crete
P.O. Box 2208,
GR-710 03 Heraklion, Greece

Phone: +30 697 40 77 909

E-Mail : vlastos@materials.uoc.gr
Web: <http://www.materials.uoc.gr/el/undergrad/courses/ETY494/>

Positions held:

Visiting Assistant Professor, University of Crete, Department of Material Science and Technology, Heraklion, Crete, Greece	2007-present
Research Associate , Institute for Molecular Biology and Biotechnology, Foundation for Research and Technology Hellas Heraklion, Crete, Greece	2005-2006
Research Associate GSF-Research Center for Environment and Health Institute for Clinical Molecular Biology and Tumor Genetics. Working Group: Vascular Genetics, Munich, Germany	2002-2005
Postdoctoral Fellow Emory University School of Medicine, Division of Cardiology, Atlanta, Georgia, USA	2000-2002
Postdoctoral Fellow Preventive Cardiology Center, Section of Cardiology, Rush Presbyterian-St. Luke's Medical Center, Rush University, Chicago, Illinois, USA	1998-2000
Graduate student Institute for Medical Physics and Biophysics, University Hospital Charité, Humboldt University School of Medicine, Berlin, Germany	1990-1997

Education:	Ph.D. Humboldt University, Berlin, Germany Dr. rer. nat. in Biophysics/Bioengineering (Magna cum laude)	1990- 1997
	B.A.in Physics University of Crete, Department of Physics, Heraklion, Greece, Greece	1980-1984
Awards:	Fellow of the German Academic Exchange Organization (DAAD)	1990-1997
Teaching:	Courses in Bioengineering Visiting Assistant Professor, University of Crete Department of Material Science and Technology, Heraklion, Crete, Greece	2007-present
	Tutor, Biophysics Laboratory, Humboldt University, School of Medicine, Berlin, Germany	1990-1997
	Tutor, Physics, Mathematics, Chemistry and Biology courses for high school students Rethymnon, Crete, Greece	1987-1989
Affiliations:	International Society of Biorheology	1996-present
	International Society for Clinical Hemorheology	1996-present
	Society of Rheology (USA)	1994-present
	Co-founder of the Hellenic Society of Rheology (Grece)	1995-present
Manuscript Reviewer:	Journal: <i>Biorheology</i>	
Other Positions:	Research Assistant, Thomas Jefferson University Department of Radiation Oncology Division of Radiobiology Philadelphia, PA USA	1988
	Military Duty as Reserve Officer of the Greek Army	1985-1987

PUBLICATIONS LIST

The impact factor of the scientific Journals in which my work has been published varies between 0.475 and 23.858 with a sum factor of 39.089.

91 citations have been made to my published work (*Last update: June 2008, Source: Library of the University of Crete*).

Peer-Reviewed Papers, Book Chapters, Monographs:

1. Lerche D., **Vlastos G.**, Koch B., Pohl M., Affeld K. Viscoelastic behaviour of human blood and polyacrylamide model fluids for heart valve testing. *J. Phys. III* 1993;3:1283-1289.
2. **Vlastos G.**, Lerche D., Koch B. The superposition of steady on oscillatory shear and its effect on the viscoelasticity of human blood and a blood-like model fluid. *Biorheology* 1997;34:19-36.
3. **Vlastos G.**, Lerche D., Koch B., Samba O., Pohl M. The effect of parallel combined steady and oscillatory shear flows on blood and polymer solutions. *Rheol. Acta* 1997;36:160-172.
4. Pohl M., Samba O., Wendt M.O., **Vlastos G.** Shear stress related hemolysis and its modeling by mechanical degradation of polymer solutions. *Int. J. Artif. Organs* 1998;21:107-113.
5. **Vlastos G.A.** The viscoelastic behavior of blood and blood-like model fluids with emphasis on the superposition of steady and oscillatory shear. *Clin. Hemorheol. and Microcirculation* 1998;19:177-179.
6. Scheibe F., Haupt H., **Vlastos G.A.** Preventive magnesium supplement reduces ischemia-induced hearing loss and blood viscosity in the guinea pig. *Eur. Arch. Otorhinolaryngol.* 2000;257:355-361.
7. Pohl M., Wendt M.O., Koch B., **Vlastos G.A.** Mechanical degradation of polyacrylamide solutions as a model for flow induced blood damage in artificial organs. *Biorheology* 2000;37:313-324.
8. Pohl M., Wendt M.O., Koch B., Kuhnel R., Samba O., **Vlastos G.** Model fluids of blood for in vitro testing of artificial heart valves. *Z. Med. Phys.* 2001;11:187-194.
9. **Vlastos G.A.**, Tangney C.C., Rosenson R.S. Effects of hydration on blood rheology. *Clin. Hemorheol. and Microcirculation* 2003;28:41-49.
10. Wei J., Blum S., Unger M., Jarmy G., Lamparter M., Geishauser A., **Vlastos G.A.**, Chan G., Fischer K.-D., Rattat D., Debatin K.-M., Hatzopoulos A.K., and Beltinger C. Embryonic endothelial progenitor cells armed with a suicide gene target hypoxic lung metastases after intravenous delivery. *Cancer Cell* 2004;5:477-488.
11. Kupatt C., Horstkotte J., **Vlastos, G.A.**, Pfosser A., Lebherz C., Semisch M., Thalgott M., Mages J., Hoffmann R., Deten A., Lamparter M., Beck H., Büning H., Boekstegers P., Hatzopoulos A.K. Embryonic endothelial progenitor Cells expressing a broad range of pro-angiogenic and remodeling factors enhance vascularization and tissue recovery in acute and chronic ischemia. Accepted: *FASEB J.* 2005.

12. Guest T.M., **Vlastos G.**, Alameddine F.M., Taylor W.R. Mechanoregulation of monocyte chemoattractant protein-1 expression in rat vascular smooth muscle cells. *Antioxid. Redox Signal.* 2006;8:1461-1471.
13. **Vlastos G.**, Koch B., Lerche D., Pohl M. Polymer solutions as model fluids for the non-Newtonian behaviour of blood. In: Moldenaers P., Keunings R., editors. *Theoretical and Applied Rheology*. Vol. 2. Amsterdam: Elsevier; 1992. p. 747-749.
14. Lerche D., Koch B., **Vlastos G.** Flow behaviour of blood. *Rheology* 1993;3:105-112.
15. **Vlastos G.**, Lerche D., Koch B. Viscoelastic behaviour of human blood and blood-like model fluids with emphasis on low oscillatory shear rates. In: Gallegos C., editor. *Progress and Trends in Rheology IV*. Darmstadt: Steinkopff; 1994. p. 32-34.
16. **Vlastos G.**, Lerche D., Koch B., Samba O., Pohl M. Viscoelastic parameters of human blood and blood-like polymer solutions under superposition of a steady on an oscillatory shear. In: Georgiou G., editor. *Rheology and Computational Fluid Mechanics*. Nicosia: University of Cyprus; 1996. p. 97-103.
17. **Vlastos G.** Das viskoelastische Verhalten von Blut und blutähnlichen Modellfluiden unter besonderer Berücksichtigung der Überlagerung von stationärer und oszillatorischer Scherung [Ph.D. dissertation in German]. Berlin, Germany: *Humboldt University, Faculty of Mathematics and Sciences I, Institute of Biology*; 1997.

Abstracts:

18. Lerche D., **Vlastos G.**, Koch B. Viscoelasticity of human blood with and without simultaneous steady shear. *Biorheology* 1992;29:118.
19. Lerche D., **Vlastos G.**, Koch B., Pohl M., Affeld K. Polymer solutions to model the viscoelastic properties of blood for heart valve testing. *Proceedings of the 4th International Conference of Fluid Mechanics*; 1992; Alexandria, Egypt. Renaudaux J.P., editor.
20. Lerche D., Koch B., **Vlastos G.** Steady state and dynamic rheological constitutive functions for whole human blood. *Clin. Hemorheol.* 1993;13:340.
21. Pardemann G., Koch B., Lerche D., **Vlastos G.**, v. Baeyer H., Herrenkind J., Schaper J., Steinhagen-Thiessen E. Efficacy of three different LDL-apheresis methods, evaluated by hemorheological and biophysical measurements. *Clin. Hemorheol.* 1995;15:556.
22. Lerche D., Koch B., **Vlastos G.**, Pardemann G. Alteration of blood viscosity by various blood purification techniques (plasmapheresis, LDL-apheresis, cytapheresis). *Int. J. Artif. Organs* 1995;18:418.
23. Pohl M., Samba O., Wendt M.O., Bezier T., Strowich S., **Vlastos G.** Shear stress related mechanical hemolysis and their modeling by mechanical degradation of polymer solutions. *Int. J. Artif. Organs* 1996;19:516.

24. **Vlastos G.A.**, Lerche D. Influence of steady, oscillatory, and combined shear flows on the dextran-mediated red blood cell aggregation. *Proceedings of the 3rd World Congress of Biomechanics*; 1998 Aug 2-8; Sapporo, Japan. Matsuzaki Y., Nakamura T., Tanaka E., editors, p. 328.
25. **Vlastos G.A.**, Tangney C.C., Rosenson R.S. Biochemical determinants of blood viscoelasticity in healthy adults. *Biorheology* 1999;36:157.
26. **Vlastos G.A.**, Tangney C.C., Rosenson R.S. Biochemical predictors of blood viscoelasticity in hyperlipidemic subjects. *Biorheology* 1999;36:158.
27. **Vlastos G.A.**, Tangney C.C., Rosenson R.S. Association of plasma viscosity and viscoelasticity with plasma lipoproteins and lipoprotein particle size. *Biorheology* 1999;36:157.
28. **Vlastos G.A.**, Tangney C.C., Rosenson R.S. Validation of rheological equations in hyperlipidemic populations. *Biorheology* 1999;36:129.
29. **Vlastos G.A.**, Goldschmidt M., Sorescu D., Taylor W.R. Cyclic strain stimulates intracellular superoxide production in vascular smooth muscle cells. *Ann. Biomed. Eng.* 2000;28 (Suppl. 1):S-84.

Conference Presentations and Invited Lectures:

1. Lerche D., **Vlastos G.**, Koch B. Viscoelastic properties of human blood in dependence on simultaneous steady shear. *XIth International Congress on Rheology*; Aug. 17-21, 1992; Brussels, Belgium [Oral Presentation].
2. Pardemann G., Koch B., Lerche D., **Vlastos G.**, v. Baeyer H., Schaper J., Herrenkind J., Steinhagen-Thiessen E. Der Einfluss von drei alternativen LDL-Aphereseverfahren auf die Haemorheologie. *13th Annual Meeting of the German Society of Clinical Microcirculation*; Oct. 6-7, 1994; Aachen, Germany [Oral Presentation].
3. Lerche D., Koch B., Pohl M., **Vlastos G.**, Affeld K. Model fluids for blood. Rheological and shear induced damage behaviour of polymer solutions. *3th International Symposium on Biofluid Mechanics*; July 16-19, 1994; Munich, Germany [Oral Presentation].
4. **Vlastos G.**, Lerche D., Koch B. Viskoelastizität von menschlichem Blut mit und ohne überlagerte Scherung. *Annual Meeting of the German Society of Rheology*; May 22-23, 1995; Berlin, Germany [Oral Presentation].
5. **Vlastos G.** "Effects of parallel combined steady and oscillatory shear on red blood cell aggregation". *Free University Berlin, School of Medicine, Institute of Physiology*; Oct. 1996; Berlin, Germany [Invited Lecture].

6. **Vlastos G.**, Samba O., Pohl M., Koch B., Lerche D. An approach describing the hematocrit dependence of blood viscoelasticity at low oscillating frequencies. *2nd Meeting of the Hellenic Society of Rheology and International Symposium*; Aug. 31-Sept. 2, 1998; Heraklion, Greece [Oral Presentation].
7. **Vlastos G.A.** "Recent advances in Hemorheology". *Institute of Chemical Engineering and High Temperature Chemical Processes*; Sept. 1998; Patras, Greece [Invited Lecture].
8. **Vlastos G.A.**, Goldschmidt M., Sorescu D., Taylor W.R. Cyclic strain stimulates intracellular superoxide production in vascular smooth muscle cells. *Biomedical Engineering Society Annual Fall Meeting*; Oct. 12-14, 2000; Seattle, Washington, USA [Oral Presentation].
9. **Vlastos G.A.** "Mechanical factors and oxidant status of the vascular system". *University of Crete School of Medicine, Sections of Cardiology and Vascular Surgery*; May 2001, Heraklion, Greece [Invited Lecture].
10. **Vlastos G.A.** "Interactions of oxidative stress and biomechanical forces in vascular biology". *University of Crete, Faculty of Sciences and Engineering, Department of Biology*; June 2002, Heraklion, Greece [Invited Lecture].
11. **Vlastos G.A.** "Applications of Bioengineering and Genetic Engineering in the cardiovascular system". *University of Crete, Faculty of Sciences and Engineering, Department of Material Sciences and Technology*; Oct. 2002, Heraklion, Greece [Invited Lecture].
12. **Vlastos G.A.** "Effects of biomechanical forces on blood rheology and oxidant status in the cardiovascular system". *University of Crete, Faculty of Sciences and Engineering, Department of Material Sciences and Technology*; January 2010, Heraklion, Greece [Invited Lecture].
13. **Vlastow G.A.** Effects of biomechanical forces on blood rheology and oxidant status in the cardiovascular system. *2nd International Conference RAHMS. "Recent Advances in Health and Medical Sciences"*; July 8-12, 2010; Paphos, Cyprus [Oral Presentation].