Curriculum Vitae



Chrysostomou Varvara

Material Scientist, MSc, PhD Student

Laboratory of Pharmaceutical Nanotechnology Faculty of Pharmacy,

National and Kapodistrian University of Athens

Personal Details

Name-Surname:	Varvara Chrysostomou
Date of birth:	27 July 1991
Nationality:	Greek
Telephone Number:	(+30) 6970478847
E-mail:	chrysostomou.v@gmail.com
	vchrysost@pharm.uoa

Education

2009-2015	Diploma (BSc) in Materials Science, Department of Materials Science, School of Natural Sciences, University of Patras, Greece (Degree: 7.03/10)
2015-2017	MSc. in Polymers Science and its Applications, Department of Chemistry, School of Natural Sciences, National and Kapodistrian University of Athens, Greece (Degree: 9.17/10)
2017-Present	PhD Research on "Pharmaceutical Technology", Section of Pharmaceutical Technology, Department of Pharmacy, School of Health Sciences, National and Kapodistrian University of Athens

Research Interests

- Pharmaceutical Nanotechnology
- > Design and Development of Advanced Drug Delivery Nanosystems
- Synthesis and Physicochemical Characterization of well defined polymers with various macromolecular architectures via RAFT polymerization
- Preparation and Characterization of liposomes, polymeric micelles, polyelectrolytes, magnetic nanoparticles and chimeric/mixed nanosystems
- Block Copolymers Self-assembly in solutions
- > Nanocomplexes as non viral gene delivery vectors
- > In vitro and in vivo evaluation of Advanced Therapy Medicinal Products (ATMP's)

Experimental Analysis Techniques

- > Light Scattering Techniques: Dynamic (DLS), Static (SLS) and Electrophoretic (ELS)
- Spectroscopy Techniques: Ultraviolet-Visible (UV/Vis), Fourier Transform Infrared Spectroscopy (FT-IR), Fluorescence Spectroscopy (FS), Nuclear Magnetic Resonance (NMR)
- Thermal Analysis Techniques: Thermogravimetric Analysis (TGA), Differential Scanning Calorimetry (DSC)
- Microscopic Techniques: Transmission Electron Microscopy (TEM), Atomic Force Microscopy (AFM)
- Chromatography Techniques: Size Exclusion Chromatography (SEC)

Thesis

- Diploma Thesis: "Studying the interaction of proteins with magnetic drug nanocarriers", under the supervision of Bakandritsos Aristides, Assistant Professor in the Department of Material Science, University of Patras. (Grade: 10/10)
- Master Diploma Thesis: "Amphiphilic diblock copolymers of poly(2-dimethylaminoethylmethacrylate)b-poly(lauryl methacrylate): Synthesis, Chemical Modification, Physicochemical Characterization, Self-assembly in aqueous solutions and Complexation with DNA", under the supervision of Dr. Pispas Stergios, Director of Research in Theoretical and Physical Chemistry Institute of National Hellenic Research Foundation. (Grade: 10/10)
- PhD Thesis: Pharmaceutical Nanotechnology: Design and Development of Nanocarriers for Gene Therapy, under the guidance of Professor Demetzos Costas, Department of Pharmaceutical Technology, Faculty of Pharmacy, University of Athens.

Teaching Experience

2017-Present:

- Teaching Laboratory Exercises of Pharmaceutical Technology to undergraduate students of 8th and 9th Semester, Department of Pharmacy, School of Health Sciences, University of Athens.
- Assistant in lab training of undergraduate and postgraduate students in the lab of Pharmaceutical Technology, Faculty of Pharmacy, University of Athens (Director: Prof. Demetzos

Costas) and in Theoretical and Physical Chemistry Institute of National Hellenic Research Foundation, Athens, (Director: Dr. Pispas Stergios)

Publications in Peer-Reviewed Journals

- "Stimuli-responsive amphiphilic PDMAEMA-b-PLMA copolymers and their cationic and zwitterionic analogs", <u>V. Chrysostomou</u>, S. Pispas, *Journal of Polymer Science Part A: Polymer Chemistry*, 2018, 56 (6), 598-610.
- "Morphological diversity of block copolymer/lipid chimeric nanostructures". N. Naziris, N. Pippa, <u>V.</u> <u>Chrysostomou</u>, S. Pispas, C. Demetzos, M. Libera, B. Trzebicka, *Journal of Nanoparticle Research*, 2017, *19* (10), 347.
- "Development and evaluation of stimuli-responsive chimeric nanostructures", N. Naziris, C. Demetzos, N. Pippa, D. Stellas, <u>V. Chrysostomou</u>, S. Pispas, M. Libera, B. Trzebicka, *AAPS PharmSciTech*, 2018. (submitted)
- "Complexation of QPDMAEMA-b-PLMA micelles with different DNA's", <u>V.Chrysostomou</u>, S.Pispas, 2018.(in preparation)

Presentations in Conferences

- "The Formation of Chimeric Nanomorphologies, as a Reflection of Naturally Occurring Thermodynamic Processes", N. Naziris^{*}, N. Pippa, <u>V. Chrysostomou</u>, S. Pispas, C. Demetzos, M. Libera, B. Trzebicka, International Conference on Bio-Medical Instrumentation and related Engineering and Physical Sciences (BIOMEP), 12-13 October 2017, TEI of Athens. (*Poster Presentation*)
- "QPDMAEMA-b-PLMA Ampiphilic Cationic Polyelectrolytes as Non viral Vectors for Gene Delivery",
 <u>V. Chrysostomou</u>^{*}, S. Pispas, in Pharmakeftiki, 2017 29(3). 18th Panhellenic Conference by the Panhellenic Association of Pharmacists, 6-8 October 2017, Athens, Greece. (*Poster Presentation*)
- "The Biophysics of Bio-responsive Drug Delivery Nanosystems through Physicochemical, Morphological and Toxicological Studies". N. Naziris^{*}, N. Pippa, D. Stellas, <u>V. Chrysostomou</u>, S. Pispas, C. Demetzos, M. Libera, B. Trzebicka in Pharmakeftiki, 2017 29(3). 18th Panhellenic

Conference by the Panhellenic Association of Pharmacists, 6-8 October 2017, Athens, Greece. (Oral Presentation)

- "Application of DSC and Imaging Techniques on the Development of Innovative Chimeric/Mixed Nanosystems", N. Naziris, F. Saitta^{*}, N. Pippa, D. Stellas, <u>V. Chrysostomou</u>, S. Pispas, D. Fessas, C. Demetzos, M. Libera, B. Trzebicka, 13th Mediterranean Conference on Calorimetry and Thermal Analysis (Medicta2017), 24-27 September, Loano, Italy. (*Poster Presentation*)
- "Connecting the Morphology with the Thermodynamic and Biophysical Properties of pH-responsive Chimeric Nanosystems", N. Naziris^{*}, N. Pippa, <u>V. Chrysostomou</u>, S. Pispas, C. Demetzos, M. Libera, B. Trzebicka, ILS Liposome Advances and Liposomes Research Days Combined Conference: Progress in Liposomal Drug and Vaccine Delivery, 16-18 September 2017, Athens, Greece. (Oral Presentation)
- "Self-assembly of chimeric systems composed of HSPC and pH-sensitive PDMAEMA-b-PLMA copolymers", N. Naziris^{*}, N. Pippa, <u>V. Chrysostomou</u>, S. Pispas, C. Demetzos, M. Libera, B. Trzebicka, 28th Annual Meeting of the European Society for Biomaterials (ESB 2017), 04-08 September 2017, Athens, Greece. (*Poster Presentation*)
- "The contribution of amphiphilic and pH-sensitive diblock copolymers in the development of functionalized drug delivery nanosystem", N. Naziris^{*}, N. Pippa, <u>V. Chrysostomou</u>, S. Pispas, C. Demetzos, M. Libera, B. Trzebicka, 3rd International Congress of Greek Local Chapter of the CRS (Controlled Release Society), 19-20 June 2017, Athens, Greece. (*Poster Presentation*)
- "Cryo-TEM Studies on the Scale-related Morphology of Block Copolymer/Lipid Chimeric Nanoassemblies for Pharmaceutical Applications", N. Naziris, N. Pippa^{*}, <u>V. Chrysostomou</u>, S. Pispas, C. Demetzos, M. Libera, B. Trzebicka, International Pharmaceutical Federation (FIP): 6th Pharmaceutical Sciences World Congress, 21-24 May 2017, Stockholm, Sweden. (Poster Presentation)
- 9. "Morphology and biophysical properties of pH-responsive nanotechnological chimeric/mixed liposomal platforms as innovative drug delivery systems", N. Naziris^{*}, N. Pippa, <u>V. Chrysostomou</u>, S. Pispas, C. Demetzos, M. Libera, B. Trzebicka, 27th Interdisciplinary Research Conference on Injectable Osteoarticular Biomaterials and Bone Augmentation Procedures (GRIBOI),18-21 May 2017, Athens, Greece. (Oral Presentation)

Conference Proceedings

- "QPDMAEMA-b-PLMA Ampiphilic Cationic Polyelectrolytes as Non viral Vectors for Gene Delivery", <u>V. Chrysostomou</u>*, S. Pispas, in Pharmakeftiki, 2017 29(3). 18th Panhellenic Conference by the Panhellenic Association of Pharmacists, 6-8 October 2017, Athens, Greece.
- "The Biophysics of Bio-responsive Drug Delivery Nanosystems through Physicochemical, Morphological and Toxicological Studies". N. Naziris^{*}, N. Pippa, D. Stellas, <u>V. Chrysostomou</u>, S. Pispas, C. Demetzos, M. Libera, B. Trzebicka in Pharmakeftiki, 2017 29(3). 18th Panhellenic Conference by the Panhellenic Association of Pharmacists, 6-8 October 2017, Athens, Greece.

Poster Awards

"Application of DSC and Imaging Techniques on the Development of Innovative Chimeric/Mixed Nanosystems", N. Naziris, F. Saitta^{*}, N. Pippa, D. Stellas, <u>V. Chrysostomou</u>, S. Pispas, D. Fessas, C. Demetzos, M. Libera, B. Trzebicka, 13th Mediterranean Conference on Calorimetry and Thermal Analysis (Medicta2017), 24-27 September, Loano, Italy.

Continuing Training

- Conference of the Hellenic Society of Nanotechnology in Health Sciences (HSnanoHS), 9th Conference + Exhibition in Management & Communication in Health, 21 January 2018, Athens, Greece.
- ILS Liposome Advances and Liposomes Research Days Combined Conference: Progress in Liposomal Drug and Vaccine Delivery, 16-18 September 2017, Athens, Greece.
- Conference of the Hellenic Society of Nanotechnology in Health Sciences, "Applications of Nanotechnology in Health Sciences", 12 February 2017, Athens, Greece.
- Conference and Workshop on the Methodology of Searching the Bibliography and Writing a Scientific Essay – Bibliography as a "Multipotent Tool" for Science, 24-25 November 2016, Athens, Greece.
- 5. Symposium on Current trends and perspectives in organic materials and processes for high performance organic electronic applications, organized by Deutscher Akademischer Austauschdienst (DAAD) and National Hellenic Research Foundation (NHRF), 11 May 2016, Athens, Greece.

- Science in Society-Lecture Series: Safe and Health Food: Truths and Lies, Organized by the Institute of Biology, Medicinal Chemistry & Biotechnology, National Hellenic Research Foundation, 02,09,16,23 February 2016, Athens, Greece.
- 10th Anniversary Conference of the Hellenic Society for Biomaterials, 26-28 November 2015, National Hellenic Research Foundation (NHRF), Athens, Greece.
- 1st International Conference "Science in Technology, SCinTE 2015", Organized by the Technological Educational Institute of Athens, National Hellenic Research Foundation (NHRF), 5-7 November 2015, Athens, Greece.

Other Skills

Languages

Greek:	Native Language
English:	Examination for the Certificate of Competency in English Competency (ECCE)
	University of Michigan, B2
French:	Diplôme d' Études en Langue Française, DELF B2

Computer Knowledge

Microsoft Office: Word, Excel, PowerPoint, Access

Scientific Programs for Measurements and Data Analysis: Origin Pro16 by Microcal- OriginLab, ChemDraw 14 by CambridgeSoft, Zetasizer by Malvern, Opus Spectroscopy (IR), ALV Correlator Software (DLS / SLS), Waters Breeze GPC, FluorEssence by Horiba, MestReNova (NMR) by MestRelab Research

Programming: FORTRAN