

## Curriculum Vitae



**Natassa Pippa**

**Pharmacist, MSc, PhD**

**Laboratory of Pharmaceutical Nanotechnology**

**Faculty of Pharmacy,**

**National and Kapodistrian University of Athens**

## Personal Details

<b>Name- Surname:</b>	<b>Natassa (Anastasia-Georgia) Pippa</b>
<b>Affiliation:</b>	Laertou 41-45, Kaisariani, Athens
<b>Telephone:</b>	+30 6946253628,+30210 7274037, +30 210 7014468
<b>E-mail:</b>	<a href="mailto:natpippa@pharm.uoa.gr">natpippa@pharm.uoa.gr</a>
<b>Nationality:</b>	Greek
<b>Date of birth:</b>	13-08-1987
<b>Researcher unique identifier(s):</b>	54974390600

## Education

<b>2010</b>	Degree of School of Pharmacy, University of Athens, Greece
<b>2011</b>	License of Pharmaceutical Profession, Ministry of Health, Athens, Greece
<b>2012</b>	MSc in Pharmaceutical Technology: "Industrial Pharmaceutics", School of Pharmacy, University of Athens <i>Degree: 8.95/10</i>
<b>July 2012-July 2015</b>	PhD Thesis: "Pharmaceutical Nanotechnology: Study on the morphology of advanced Drug Delivery nano Systems".
<b>September 2015-today</b>	Postdoctoral Researcher in Department of Pharmaceutical Technology, Faculty of Pharmacy, University of Athens, Greece

## Research Interests

- Pharmaceutical Nanotechnology
  - Preparation of liposomes, polymersomes, polyelectrolytes, nanoemulsions, dendrimers, micelles and mixed (chimeric) Drug Delivery nano Systems.
  - Drug loading and release studies
  - Protein/Peptide loading and release studies
  - Physicochemical and thermodynamic evaluation of nanoparticles
  - Morphological characterization and Fractal Analysis of Drug Delivery nano Systems.
- Physical Pharmacy
- Pharmaceutical Compounding

**Techniques:** Dynamic, Static and Electrophoretic Light Scattering techniques, Differential Scanning Calorimetry, Freeze-Drying, UV-Vis and Fluorescence spectroscopy.

### Participation in Research Programmes

- Functional Self-assembled Nanostructures from Block Copolymers and Proteins (NANOMACRO) (1/12/2012-25/9/2015) . (Coordinator: Dr. Stergios Pispas)

### Participation in Programmes in collaboration with Greek Big Pharma

- «Physical pharmacy studies of the cosmeceuticals of INTERMED S.A.». Distinctive title: «interTECH:New claims for innovative products» in collaboration with INTERMED S.A. (Coordinator: Prof. Costas Demetzos)
- «Restatement of labels and claims of the leaflet of the nutritional supplement “Sideral©”. Distinctive title: “Study on the technology of Fe supramolecular complexes” in collaboration with WINMEDICA S.A. (Coordinator: Prof. Costas Demetzos)
- «Physicochemical study for determining new and innovative claims for the product “PREGNADERM extreme hydration body cream”». Distinctive title: “Application of the cerasomes technology on cosmetic products” in collaboration with INTERMED S.A. (Coordinator: Prof. Costas Demetzos)
- «Development of generic liposomal Amphotericin B» in collaboration with DEMO S.A. (Coordinator: Prof. Costas Demetzos)
- «Development of nanocarriers for antitumor peptide» in collaboration with ENORASIS (Coordinator: Prof. G. Sivolapenko)

### Patents

Granted patent GR1008332 (17-07-2014): “Nanocarriers formulations” N. Pippa, S. Pispas, C. Demetzos, G. Sivolapenko.

### Teaching experience

- Assistant in lab training of undergraduate students in the lab of Pharmaceutical Technology, Faculty of Pharmacy, University of Athens(Supervisor: Prof. Costas Demetzos) (2012- today)
- Scientific Assistant in Continuing Professional Development (CPD) in training practice in galenic and cosmetic exercises (Lab. of Pharmaceutical Technology, University of Athens) (Supervisor: Prof. Costas Demetzos) (June 2013- June 2015)

### Awards

- Award in Excellence of Applied Pharmaceutical Technology and post-doctoral research dedicated to the memory “Kleon Tsetis”, founder of the Pharmaceutical Industry “Uni-Pharma” 2014-2015. This grant was awarded by Hellenic Pharmaceutical Society (HPS) for the period 2015-2016

- *Best Poster Presentation:* Study on the physicochemical characteristics of innovative liposomal systems: the role of thermoresponsive liposomes. M. Chountoulesi, A. Kyrili, **N. Pippa**, A. Meristoudi, S. Pispas, C. Demetzos, 17<sup>th</sup> Panhellenic Pharmaceutical Congress. 8<sup>th</sup>-11<sup>th</sup> October 2015, Athens, Greece
- *Award in Excellence of Applied Pharmaceutical Technology and one –year Scholarship dedicated to the memory of “Kleon Tsetis”, founder of the Pharmaceutical Industry “Uni-Pharma” 2014-2015.* This grant was awarded by the Hellenic Pharmaceutical Society (HPS) for the period 2014-2015.
- *Best Poster Presentation:* “Preparation, development and in vitro release evaluation of amphotericin B-loaded amphiphilic block copolymer vectors.” **N. Pippa**, M. Mariaki, S. Pispas, C. Demetzos, Convention of the Hellenic Society of Biomaterials. 7<sup>th</sup> -8<sup>th</sup> November 2014, B.&M. Theocharakis Foundation for the Fine Arts and Music, Athens, Greece
- *Best Oral Presentation:* “The metastable phases as modulators of functionality in chimeric liposomes.” C. Demetzos, **N. Pippa**, S. Pispas, Therma 2014, 26<sup>th</sup> -28<sup>th</sup> September 2014, Larisa, Greece
- *Best Poster Presentation:* “Physicochemical characterization of liposomal systems and fractal analysis of their morphology.” **N. Pippa**, S. Pispas, C. Demetzos, 1<sup>st</sup> Congress of Pharmaceutical Sciences, 27<sup>th</sup> -30<sup>th</sup> April 2013. Athens, Greece

## Publications in peer-reviewed journals

- 1) Design and development of pH-responsive HSPC:C<sub>12</sub>H<sub>25</sub>-PAA chimeric liposomes. N. Naziris, **N. Pippa**, A. Meristoudi, S. Pispas, C. Demetzos, Journal of Liposome Research, In press
- 2) Innovative Excipients and Formulation Platforms in Cosmetic Product Series for Acne (ACNOFIX®): The Physicochemical Characteristics of Cosmeceutical Vehicle, N. Pippa, I. Tseti, C. Demetzos, Advanced Science, Engineering and Medicine, 2016, 8(4):284-289
- 3) Polymer self-assembled nanostructures as innovative drug nanocarrier platforms. **N. Pippa**, S. Pispas, C. Demetzos, Curr. Pharm. Des., 2016, 22(19):2788-95.
- 4) Efficacy of a new heparan sulfate mimetic dressing in the healing of foot and lower-extremity ulcerations in type 2 diabetes: A case series. N. Papanas, C. Demetzos, **N. Pippa**, E. Maltezos, N. Tentolouris, Int. J. Low Extrem. Wounds., 2016, 15(1):63-7
- 5) The modulation of physicochemical characterization of innovative liposomal platforms: The role of the grafted thermosensitive polymers. M. Chountoulesi, A. Kyrili, **N. Pippa**, A. Meristoudi, S. Pispas, C. Demetzos, Pharmaceutical Development and Technology, 2015, In press.
- 6) A dual stimuli-responsive polymer into phospholipid membranes: a thermotropic approach. I. Kolman, **N. Pippa**, A. Meristoudi, S. Pispas, C. Demetzos. Journal of Thermal Analysis and Calorimetry, 2016, 123(3):2257-2271.
- 7) Cerasomes as innovative excipients in cosmetic product: “Preganderm extreme hydration body cream”: a physicochemical study. N. Pippa, G. Mountrichas, I. Tseti, C. Demetzos, Advanced Science, Engineering and Medicine, 2016, 8(1):26-30.
- 8) Calorimetric study on pH-responsive block copolymer grafted lipid bilayers: Rational design and development of liposomes. **N. Pippa**, M. Chountoulesi, A. Kyrili, A. Meristoudi, S. Pispas, C. Demetzos, Journal of Liposome Research, 2015, In press
- 9) Delivery nanoparticle platform of liposomes – incorporated dendrimers: physicochemical, and thermotropic characterization, **N. Pippa**, S. Pispas, C. Demetzos, Advanced Science, Engineering and Medicine, 2015, 7,805-810.
- 10) Complexation of cationic-neutral block polyelectrolyte with insulin and in vitro release studies. **N. Pippa**, M. Karayianni, S. Pispas, C. Demetzos, Int. J. Pharm., 2015, 491(1-2):136-143.
- 11) Insulin/Poly(ethylene glycol)-*block*-poly(L-lysine) Complexes: Physicochemical Properties and Protein Encapsulation. **N. Pippa**, R. Kalinova, I. Dimitrov, S. Pispas, C. Demetzos, J. Phys. Chem. B., 2015, 119(22):6813-9

- 12) Temperature-dependent drug release from DPPC:C12H25-PNIPAM-COOH liposomes: control of the drug loading / release by modulation of the nanocarriers' components. **N. Pippa**, A. Meristoudi, S. Pispas, C. Demetzos, *International Journal of Pharmaceutics*, 2015, 485(1-2):374-382.
- 13) Fractal geometry as a new approach for proving nanosimilarity: a reflection note. C. Demetzos, **N. Pippa**, *International Journal of Pharmaceutics*, 2015, 483(1-2):1-5.
- 14) Antibody-Drug conjugates: a mini-review. The synopsis of two approved drugs. A. Papachristos, **N. Pippa**, C. Demetzos, G. Sivolapenko, *Drug Delivery*, 2016, 23(5):1662-6.
- 15) The metastable phases as modulators of biophysical behavior of liposomal membranes: The role of biomolecular sculpture of polymeric guest. **N. Pippa**, S. Pispas, C. Demetzos, *Journal of Thermal Analysis and Calorimetry*, 2015, 120:937-945.
- 16) Liposomal forms of anticancer agents beyond anthracyclines: Present and Future perspectives. A. Papachristos, **N. Pippa**, K. Ioannidis, G. Sivolapenko, C. Demetzos, *Journal of Liposome Research*, 2015, 25(2):166-73.
- 17) The contribution of "omics" to the development of new medicines. **N. Pippa**, C. Demetzos, *Pharmakeftiki*, 2014,26, IV, 128-134.
- 18) The alliance between nanotechnology, biosciences and regulatory agencies promotes innovative medicines. The signaling pathways from Greece. C. Demetzos and **N. Pippa**, *Pharakeftiki*, 2014, 26(2): 57-65.
- 19) Fractal analysis as a complementary approach to predict the stability of drug delivery nano systems in aqueous and biological media: A regulatory proposal or a dream? C. Demetzos, **N. Pippa**, *International Journal of Pharmaceutics*, 2014, 473(1-2):213-218.
- 20) Preparation, development and in vitro release evaluation of Amphotericin B-loaded amphiphilic block copolymer vectors. **N. Pippa**, M. Mariaki, S. Pispas, C. Demetzos, *International Journal of Pharmaceutics*, 2014, 473, 80-86.
- 21) The interplay between the rate of the release from polymer grafted liposomes and their fractal morphology. **N. Pippa**, A. Dokoumetzidis, S. Pispas, C. Demetzos, *International Journal of Pharmaceutics*, 2014, 465, 63-69.
- 22) The imaging and the fractal metrology of chimeric liposomal Drug Delivery nano Systems: The role of macromolecular architecture of polymeric guest. **N. Pippa**, S. Pispas, C. Demetzos, *Journal of Liposome Research*, 2014,24(3):223-9.
- 23) Gradient block copolymer structures as drug nanocarriers. **N. Pippa**, E. Kaditi, S. Pispas, C. Demetzos, *Advanced Science, Engineering and Medicine*, 2014, 6(6):642-648.
- 24) PEO-b-PCL grafted DPPC liposomes: physicochemical characterization and stability studies of novel bio-inspired advanced Drug Delivery nano Systems (aDDnSs). **N. Pippa**, E. Deli, E. Mentzali, S. Pispas, C. Demetzos, *Journal of Nanoscience and Nanotechnology*, 2014, 14, 5676-5681.
- 25) The physicochemical/thermodynamic balance of advanced drug liposomal delivery systems. **N. Pippa**, K. Gardikis, S. Pispas, C. Demetzos, *Journal of Thermal Analysis and Calorimetry*, 2014, 116(1): 99-105.
- 26) Advanced Drug Delivery nano Systems (aDDnSs): A Mini-Review. C. Demetzos and **N. Pippa**, *Drug Delivery*, 2014, 21(4):250-257.
- 27) Preparation of liposomal nanoparticles incorporating TBH. *In vitro* drug release studies. C. Koutsoulas, **N. Pippa**, C. Demetzos, M. Zabka, *Journal of Nanoscience and Nanotechnology*, 2014, 14(6): 4529-4533.
- 28) Advanced nanocarriers for an antitumor peptide. **N. Pippa**, S. Pispas, C. Demetzos, G. Sivolapenko, *J Nanopart Res*, 2013, 15(11),2062.
- 29) The thermotropic behavior of chimeric liposomes as the mechanistic explanation of drug release. **N. Pippa**, S. Pispas, K. Gardikis, C. Demetzos, *Pharakeftiki*,2013, 25(3): 94-99.

- 30) On the ubiquitous presence of fractals and fractal concepts in Pharmaceutical Sciences: A Review. **N. Pippa**, A. Dokoumetzidis, C. Demetzos, P. Macheras, International Journal of Pharmaceutics, 2013, 456(2):340-352.
- 31) Advanced therapies: New guidelines and the approval process. C. Demetzos, **N. Pippa**, Y. Tountas, Pharakeftiki, 2013, 25, II, 49-54.
- 32) DPPC/poly(2-methyl-2-oxazoline)-grad-poly(2-phenyl-2-oxazoline) chimeric nanostructures as potential drug nanocarriers. **N.Pippa**, E. Kaditi, S. Pispas, C. Demetzos, J. Nanopart. Res. 2013. 15,1685.
- 33) The shape/morphology balance: A study of stealth liposomes via fractal analysis and drug encapsulation. **N.Pippa**, F. Psarommati, S. Pispas, C. Demetzos, Pharmaceutical Research, 2013, 30(9):2385-95.
- 34) The role of  $\zeta$ -potential on the stability of nanocolloidal systems. C. Koutsoulas, **N. Pippa**, C. Demetzos, M. Zabka, Pharmakeftiki, 24 IV, 106-111, 2012
- 35) Incorporation of dimethoxycurcumin into charged liposomes and the formation kinetics of fractal aggregates of uncharged vectors. M. Hadjidemetriou, **N. Pippa**, S. Pispas, C. Demetzos, Journal of Liposome Research, 2013, 23(2):94-100.
- 36) PEO-b-PCL/DPPC chimeric nanocarriers: self-assembly aspects in aqueous and biological media and drug incorporation. **N.Pippa**, E. Kaditi, S. Pispas, C. Demetzos Soft Matter, 2013, 9, 4073-4082.
- 37) DPPC:MPOx chimeric advanced Drug Delivery nanosystems (chi-aDDnSs): physicochemical and structural characterization, stability and drug release studies. **N.Pippa**, M. Merkouraki, S. Pispas, C. Demetzos, International Journal of Pharmaceutics, 2013, 450(1-2),1-10.
- 38) Fractal analysis of liposomal aggregation, **N. Pippa**, C. Demetzos, Pharakeutiki, 2012, 24,III,57-62.
- 39) The delineation of the morphology of charged liposomal vectors via a fractal analysis in aqueous and biological media: physicochemical and self-assembly studies, **N. Pippa**, S. Pispas, C. Demetzos, International Journal of Pharmaceutics, 2012, 437, 264-274.
- 40) The fractal hologram and elucidation of the structure of liposomal carriers in aqueous and biological media. **N. Pippa**, S. Pispas, C. Demetzos, International Journal of Pharmaceutics, 2012, 430(1-2):65-73
- 41) The Formalism of Fractal Aggregation Phenomena of Colloidal Drug Delivery Systems. **N. Pippa**, C. Demetzos, E. Danezis, Journal of Liposomes Research, 2012, 22(1):55-61
- 42) Preparation and Thermal Behavior of Liposomal Nanoparticles Incorporating Bioactive Labdane Epimers. **N. Pippa**, S. Hatziantoniou, E.A. Mourelatou, J. M. Amaro-Luis, D. Villalobos-Osorio, C. Demetzos, Advanced Science Letters, 2012, 16, 336-341

## Chapters in Books

- 1) Physicochemical characterization and basic research principles of advanced Drug Delivery nano Systems (aDDnSs). **N. Pippa\***, S. Pispas, C. Demetzos, In: "Intelligent Nanomaterials (2<sup>nd</sup> Ed.), (Chapter 5), Advanced Materials Book Series, Editors: A. Tiwari, YK Mishra, H. Kobayashi and A.P.F. Turner, WILEY-Scrivener Publishing LLC, USA
- 2) Mixed biocompatible block copolymer/ lipid nanostructures as drug nanocarriers: advantages and pharmaceutical perspectives. **N. Pippa**, S. Pispas, Costas Demetzos Handbook of Polymers for Pharmaceutical Technologies, Vijay Kumar Thakur and Manju Kumari Thakur (eds.) Volume 4 (257-284) © 2015 Scrivener Publishing LLC, Wiley
- 3) Bio-Inspired Chimeric Drug Delivery Nano Systems (chi-DDnSs): Their Fractal Morphology and Regulatory Aspects. **N. Pippa**, S. Pispas, C. Demetzos. (Chapter 4) In: Recent Advances in Drug Delivery Research. 2015, Nova Science Publishers, Inc. New York, USA.



## Oral Presentations in International Conferences

- 1) Controlled release from advanced Drug Delivery nano Systems: the physicochemical, morphological and thermodynamic characteristics of the vesicle. **N. Pippa** S. Pispas and C. Demetzos. International Liposome Society 2015 Meeting. Liposome Advances: Progress in Drug and Vaccine Delivery, 19-22 December 2015, UCL School of Pharmacy, London, UK. (*Oral presentation*)
- 2) Chimeric biocompatible block copolymer/ lipid nanostructures: innovative therapeutic devices for controlled release. **N. Pippa** S. Pispas and C. Demetzos. 6<sup>th</sup> BBBB Conference on pharmaceutical sciences to improve the quality and performance of modern drug delivery systems, September 10-12, 2015, Helsinki, Finland (*Oral presentation*)
- 3) Pharmaceutical Fractal-omics: The application of -omics in design and development of advanced Drug Delivery nano Systems. **N. Pippa** and C. Demetzos. 306<sup>th</sup> OMICS International Conference. International Conference on Medical Physics, 03-05 August, 2015, Birmingham, UK (*Oral presentation*)
- 4) Fractal analysis as an analytical tool for bridging the gaps from biosimilars to nanosimilars. C. Demetzos and **N. Pippa**, EUFEPS Annual Meeting, June 15-17, 2015, Geneva, Switzerland (*Oral presentation*)
- 5) Functional Macromolecular Nanostructures Based on Cationic Amphiphilic Block Polyelectrolyte Aggregates with Insulin, **N. Pippa**, M. Karayianni, S. Pispas, C. Demetzos, Proteins in the World of Synthetic Polymers (workshop), 19-20 March 2015, NHRF, Athens, Greece (*Oral presentation*)
- 6) Chimeric biocompatible block copolymer/lipid nanostructures as drug nanocarriers: from bio-inspiration to in vitro evaluation. **N. Pippa**, S. Pispas, C. Demetzos, 1<sup>st</sup> International Congress: from drug discovery to drug delivery. 13-15 November, 2014, Athens, Greece (*Oral presentation*)
- 7) Bio-inspired chimeric Drug Delivery nano Systems (chi-DDnSs): their fractal hologram and regulatory aspects. **N. Pippa**, S. Pispas, C. Demetzos, 1<sup>st</sup> World Congress on Geriatrics and Neurodegenerative Disease Research, 10-13 April, 2014, Corfu, Greece (*Oral presentation*)
- 8) The fractal analysis as a complementary approach to predict the stability of Drug Delivery nano Systems (DDnSs) in aqueous and biological media: a regulatory proposal or a dream? C. Demetzos, **N. Pippa**, 1<sup>st</sup> World Congress on Geriatrics and Neurodegenerative Disease Research, 10-13 April, 2014, Corfu, Greece (*Oral presentation*)
- 9) The fractal analysis as a complementary approach to predict the stability of Liposomal Drug Delivery nano Systems (LDDnSs) in aqueous and biological media: a regulatory proposal? C. Demetzos, **N. Pippa**. ILS 2013 MEETING Liposome advances: progress in drug and vaccine delivery, School of Pharmacy, University of London, London, December 14-17, 2013. (*Oral presentation*)
- 10) Studies on the Self Assembly of Sterically Stabilized Liposomal Drug Delivery nano Systems (LDDnSs) via fractal analysis. **N. Pippa**, S. Pispas and C. Demetzos, ILS 2013 MEETING Liposome advances: progress in drug and vaccine delivery, School of Pharmacy, University of London, London, December 14-17, 2013. (*Oral presentation*)
- 11) PEO-b-PCL: DPPC chimeric nanocarriers: self-assembly aspects in aqueous and biological media and drug release studies. **N. Pippa**, S. Pispas, A. Dokoumetzidis, C. Demetzos, 5<sup>th</sup> BBBB International Conference, 26-28 September, Athens, Greece (*Oral Presentation*)

## Proceedings in International Conferences

- 1) Bio-inspired chimeric Drug Delivery nano Systems (chi-aDDnSs): Their fractal hologram and regulatory aspects. **N. Pippa**, S. Pispas, C. Demetzos. (Chapter 23) In: Advances in Experimental Medicine and Biology, Springer International Publishing Switzerland 2015.

- 2) The fractal analysis as a complementary approach to predict the stability of Drug Delivery nano Systems (DDnSs) in aqueous and biological media: a regulatory proposal or a dream? C. Demetzos and **N. Pippa**, (Chapter 27) In: Advances in Experimental Medicine and Biology, Springer International Publishing Switzerland 2015

## Poster Presentations in International Conferences

- 1) The effect of grafted thermosensitive polymers on the physicochemical characteristics of chimeric liposomal platforms. A. Kyrili, M. Chountoulesi, **N. Pippa**, A. Meristoudi, S. Pispas, C. Demetzos, . International Liposome Society 2015 Meeting. Liposome Advances: Progress in Drug and Vaccine Delivery, 19-22 December 2015, UCL School of Pharmacy, London, UK.
- 2) Calorimetric results of pH-responsive grafted lipid bilayers may contribute torational design and investigation of pH-sensitive liposomes. M. Chountoulesi, A. Kyrili, **N. Pippa**, A. Meristoudi, S. Pispas, C. Demetzos, . International Liposome Society 2015 Meeting. Liposome Advances: Progress in Drug and Vaccine Delivery, 19-22 December 2015, UCL School of Pharmacy, London, UK.
- 3) Temperature-responsive block polyelectrolyte/lysozyme nanocomplexes. Design and Development of potential nutraceuticals. **N. Pippa**, A. Meristoudi, S. Pispas, C. Demetzos. 6<sup>th</sup> BBBB Conference on pharmaceutical sciences to improve the quality and performance of modern drug delivery systems, September 10-12, 2015, Helsinki, Finland
- 4) Thermo-responsive innovative polymer grafted liposomes. **N. Pippa**, A. Meristoudi, S. Pispas, C. Demetzos, EUFEPS Annual Meeting, June 15-17, 2015, Geneva, Switzerland.
- 5) The modulation of physicochemical characterization of chimeric liposomes: the role of the thermoresponsive grafted polymers. A. Kyrili, M. Chountoulesi, **N. Pippa**, A. Meristoudi, S. Pispas, C. Demetzos, IXth Joint Meeting in Medicinal Chemistry, 7-10 June 2015, Athens, Greece
- 6) Preparation and physicochemical characterization of novel block polyelectrolyte aggregates with antitumor peptide, G. Mountrichas, **N. Pippa**, S. Pispas, C. Demetzos, IXth Joint Meeting in Medicinal Chemistry, 7-10 June 2015, Athens, Greece
- 7) Antibody-drug conjugates are already marketed: lessons learned. A. Papachristos, **N. Pippa**, C. Demetzos, G. Sivolapenko, Small molecules (original-generics) and Biotechnological Drugs (biosimilars). 1<sup>st</sup> International Congress of Controlled Release Society-Greek Local Chapter, 27<sup>th</sup>-28<sup>th</sup> May 2015, Aegli Zappiou, Athens, Greece
- 8) Temperature-dependent drug release from innovative polymer grafted liposomes. **N. Pippa**, A. Meristoudi, S. Pispas, C. Demetzos, 1<sup>st</sup> International Congress of Controlled Release Society-Greek Local Chapter, 27<sup>th</sup>-28<sup>th</sup> May 2015, Aegli Zappiou, Athens, Greece
- 9) Advanced drug delivery nanosystems: A thermotropic study on a dual stimuli-responsive copolymer into phospholipid membranes. I. Kolman, **N. Pippa**, A. Meristoudi, S.Pispas, C. Demetzos, Challenges in Science and Technology of Polymer Materials, 19-23 May, 2015, Bansko, Bulgaria.
- 10) Insulin/PEG-b-PLys hybrid nanostructures: Physicochemical properties and protein encapsulation. **N. Pippa**, R. Kalinova, I. Dimitrov, S. Pispas, C. Demetzos, Challenges in Science and Technology of Polymer Materials, 19-23 May, 2015, Bansko, Bulgaria.
- 11) Block copolymers as membrane protein mimetics: A dual stimuli-responsive copolymer into phospholipid membranes, I. Kolman, **N. Pippa**, A. Meristoudi, S. Pispas, C. Demetzos, Proteins in the World of Synthetic Polymers (workshop), 19-20 March 2015, NHRF, Athens, Greece
- 12) Stealth polypeptide micelles for insulin encapsulation, **N. Pippa**, M. Karayianni, S. Pispas, C. Demetzos, I. Dimitrov, Proteins in the World of Synthetic Polymers (workshop), 19-20 March 2015, NHRF, Athens, Greece



- 13) Design and development of temperature-responsive block polyelectrolyte/lysozyme complexes as potential nutraceuticals, **N. Pippa**, A. Meristoudi, S. Pispas, C. Demetzos, Proteins in the World of Synthetic Polymers (workshop), 19-20 March 2015, NHRF, Athens, Greece
- 14) Synthesis and Solution Properties of Poly(Oligoethylene Glycol Methacrylate-b-Vinyl Benzyl Trimethylammonium Chloride). G. Mountrichas, **N. Pippa**, S. Pispas, Proteins in the World of Synthetic Polymers (workshop), 19-20 March 2015, NHRF, Athens, Greece
- 15) Liposomal forms of anticancer agents beyond liposomal anthracyclines: present and future perspectives. A. Papachristos, **N. Pippa**, K. Ioannidis, G. Sivolapenko, C. Demetzos, 1<sup>st</sup> International Congress: from drug discovery to drug delivery. 13-15 November, 2014, Athens, Greece
- 16) The thermotropic behavior of chimeric DPPC:PAMAM G-4 liposomes: their fractal morphology and drug encapsulation. **N. Pippa**, S. Pispas, C. Demetzos, 1<sup>st</sup> International Congress: from drug discovery to drug delivery. 13-15 November, 2014, Athens, Greece
- 17) Design and development of amphotericin B – loaded amphiphilic block copolymer vectors. **N. Pippa**, M. Mariaki, S. Pispas, C. Demetzos, 1<sup>st</sup> International Congress: from drug discovery to drug delivery. 13-15 November, 2014, Athens, Greece
- 18) Complexation of cationic amphiphilic block polyelectrolyte aggregates with insulin. *In vitro* release studies. **N. Pippa**, M. Karayianni, S. Pispas, C. Demetzos, NN14, 11<sup>th</sup> International Conference on Nanosciences & Nanotechnologies, 8-11 July, 2014, Thessaloniki, Greece (*Poster*)
- 19) Preparation, development and *in vitro* release evaluation of amphotericin B-loaded amphiphilic block copolymer vectors, **N. Pippa**, M. Mariaki, S. Pispas, C. Demetzos, NN14, 11<sup>th</sup> International Conference on Nanosciences & Nanotechnologies, 8-11 July, 2014, Thessaloniki, Greece (*Poster*)
- 20) Advanced Drug Delivery nano Systems (aDDnSs): A proposal for their classification. C. Demetzos, **N. Pippa**, Biodendrimer 2014, 4<sup>th</sup> International Symposium on Biomedical Applications of Dendrimers, June 18-20, 2014 Lugano, Switzerland (*Poster*)
- 21) The fractal morphology and thermal behavior of DPPC:PAMAM G4 chimeric liposomes. **N. Pippa**, S. Pispas, C. Demetzos, Biodendrimer 2014, 4<sup>th</sup> International Symposium on Biomedical Applications of Dendrimers, June 18-20, 2014 Lugano, Switzerland (*Poster*)
- 22) Bio-inspired chimeric drug delivery nano systems (chi-DDnSs): Their fractal morphology and regulatory aspects. **N. Pippa**, S. Pispas, C. Demetzos, Industrial Technologies 2013, Smart Growth through Research and Innovation, 9-11 April, 2013, Athens, Greece (*Poster*)
- 23) The imaging and the fractal metrology of chimeric liposomes: The role of macromolecular architecture of polymeric guest. **N. Pippa**, S. Pispas, C. Demetzos. ILS 2013 MEETING Liposome advances: progress in drug and vaccine delivery, School of Pharmacy, University of London, London, December 14-17, 2013. (*Poster*)
- 24) The physicochemical/thermodynamic balance of advanced drug liposomal delivery systems as reflected on the drug release profile. **N. Pippa**, A. Dokoumetzidis, S. Pispas, C. Demetzos, ILS 2013 MEETING Liposome advances: progress in drug and vaccine delivery, School of Pharmacy, University of London, London, December 14-17, 2013. (*Poster*)
- 25) Mixed/chimeric liposomes incorporating copolymers as advanced drug delivery systems. **N. Pippa**, S. Pispas, C. Demetzos. In: Materials Today: Biomaterials virtual conference, November 19-21, 2013 (*Invited Poster*)
- 26) Complexation of cationic amphiphilic block polyelectrolyte aggregates with antitumor peptide. **N. Pippa**, S. Pispas, C. Demetzos, G. Sivolapenko, In: 8<sup>th</sup> International Dendrimer Symposium, Madrid, 23-27 June, 2013, Spain. AND 5<sup>th</sup> BBBB International Conference, 26-28 September, Athens, Greece (*Poster*)
- 27) The interplay between the rate of release from advanced drug delivery nanosystems and their fractal morphology. **N. Pippa**, A. Dokoumetzidis, S. Pispas, C. Demetzos In: 8<sup>th</sup> International Dendrimer

- Symposium, Madrid, 23-27 June, 2013, Spain. AND 5<sup>th</sup> BBBB International Conference, 26-28 September, Athens, Greece (*Poster*)
- 28) DPPC:MPOX chimeric nanocontainers: the fractal sculpture of novel advanced drug delivery nanosystems and drug release studies. M. Merkouraki, **N. Pippa**, S. Pispas, C. Demetzos, In: 8<sup>th</sup> International Dendrimer Symposium, Madrid, 23-27 June, 2013, Spain. AND 5<sup>th</sup> BBBB International Conference, 26-28 September, Athens, Greece (*Poster*)
  - 29) Preparation and in vitro release of liposomal cells incorporating terbinafine hydrochloride. Ch. Koutsoulas, **N. Pippa**, C. Demetzos, M. Zabka In: 5<sup>th</sup> BBBB International Conference, 26-28 September, Athens, Greece (*Poster*)
  - 30) Fractal analysis of conventional and chimeric liposomal aggregates. **N. Pippa**, S. Pispas, C. Demetzos. In: 8<sup>th</sup> International Dendrimer Symposium, Madrid, 23-27 June, 2013, Spain. (*Poster*)
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  - 32) Incorporation of dimethoxycurcumin into charged liposomes and the formation kinetics of fractal aggregates of uncharged vectors. M. Hadjidemetriou, **N. Pippa**, S. Pispas, C. Demetzos, 5<sup>th</sup> BBBB International Conference, 26-28 September, Athens, Greece (*Poster*)
  - 33) Fractal analysis of liposomal aggregation. **N. Pippa**, S. Pispas, C. Demetzos, 5<sup>th</sup> BBBB International Conference, 26-28 September, Athens, Greece (*Poster*)
  - 34) The fractal morphology and the thermal behavior of liposomal drug nanocarriers, **N. Pippa**, S. Pispas, C. Demetzos, 11<sup>th</sup> Mediterranean Conference on Calorimetry and Thermal Analysis, Medicta 2013, 12-15 June, Athens, Greece. (*Poster*)
  - 35) Preparation and thermal behavior of DPPC/MPOx chimeric liposomes, **N. Pippa**, K. Gardikis, S. Pispas, C. Demetzos, 11<sup>th</sup> Mediterranean Conference on Calorimetry and Thermal Analysis, Medicta 2013, 12-15 June, Athens, Greece. (*Poster*)
  - 36) Fractal analysis of liposomal aggregation, **N. Pippa**, S. Pispas, C. Demetzos, 9th Central European Symposium on Pharmaceutical Technology with focus on Nanopharmaceuticals and Nanomedicine, 20-22 September, 2012, Dubrovnic, Croatia (*Poster*)
  - 37) Incorporation of dimethoxycurcumin into charged liposomes and the formation kinetics of fractal aggregates of corresponding uncharged vectors. Marilena Hadjidemetriou, **N. Pippa**, Stergios Pispas, Costas Demetzos, International Conference on Chemistry for Health, National Hellenic Research Foundation, 9-14 September 2012, Athens, Greece (*Poster*)
  - 38) MPOx grafted DPPC liposomes: stability, self-assembly, fractal analysis of the nanostructures and drug encapsulation, **N. Pippa**, E. Kaditi, S. Pispas, C. Demetzos, Biodendrimer 2012, 3<sup>rd</sup> International Symposium on Biological Application of Dendrimers, 5<sup>th</sup>-8<sup>th</sup> September 2012, Toledo, Spain (*Poster*)
  - 39) PEO-b-PCL grafted DPPC liposomes: self-assembly, stability and fractal analysis of novel Advanced Drug Delivery nano Systems (aDDnSs), **N. Pippa**, S. Pispas, C. Demetzos, 9th International Conference on Nanosciences & Nanotechnologies, 3-6 July 2012, Thessaloniki, Greece (*Poster*)
  - 40) Preparation, physicochemical characterization and elucidation of stealth liposomal nanocarriers' morphology in accordance to fractal analysis, F. Psarommati, **N. Pippa**, S. Pispas, C. Demetzos, 9th International Conference on Nanosciences & Nanotechnologies, 3-6 July 2012, Thessaloniki, Greece (*Poster*)
  - 41) Preparation and physicochemical characterization of liposomal nanoparticles incorporating bioactive derivative of curcumin, M.Hadjidemetriou, **N. Pippa**, C. Demetzos, 9th International Conference on Nanosciences & Nanotechnologies, 3-6 July 2012, Thessaloniki, Greece (*Poster*)

## [Publications in Greek Journals](#)

- 1) “Biosimilars: the regulatory landscape in European Medicines Agency (EMA)” N. Pippa, C. Demetzos, *Archeia Pharmakeftikis*, 4, 8-11, 2015.
- 2) “Pharmakopoieia-Pharmakotechnia” The book of Prof. Emmanuel Emmanuel. An overview. **N. Pippa**, A. Papachristos, C. Demetzos, *Archeia Pharmakeftikis*, 1, 22-27, 2014.

## Presentations in Greek Conferences

- 1) Temperature-dependent drug release from chimeric DPPC:C12H25-PNIPAM-COOH liposomes. **N. Pippa**, A. Meristoudi, S. Pispas, C. Demetzos, 10<sup>th</sup> Anniversary conference of the Hellenic Society of Biomaterials, 26<sup>th</sup> -28<sup>th</sup> November 2015, National Hellenic Research Foundation (NHRF), Athens, Greece (*Oral presentation*).
- 2) From calorimetric results of pH-responsive block copolymer grafted lipid bilayers to rational design and investigation of pH-responsive liposomes. A. Kyrili, M. Chountoulesi, **N. Pippa**, A. Meristoudi, S. Pispas, C. Demetzos, 10<sup>th</sup> Anniversary conference of the Hellenic Society of Biomaterials, 26<sup>th</sup> -28<sup>th</sup> November 2015, National Hellenic Research Foundation (NHRF), Athens, Greece (*Poster presentation*).
- 3) Temperature-dependent drug release from DPPC:PNIPAM chimeric liposomes. **N. Pippa**, A. Meristoudi, N. Naziris, C. Demetzos, S. Pispas, 10<sup>th</sup> Hellenic Polymer Society Conference with international participation. 4<sup>th</sup>-6<sup>th</sup> December, 2014, Patras, Greece
- 4) Development of stealth cationic amphiphilic block polyelectrolyte complexes incorporating antitumor peptide. **N. Pippa**, S. Pispas, C. Demetzos, G. Sivolapenko. 10<sup>th</sup> Hellenic Polymer Society Conference with international participation. 4<sup>th</sup>-6<sup>th</sup> December, 2014, Patras, Greece
- 5) Complexation of cationic amphiphilic block polyelectrolyte aggregated with insulin. In vitro release studies. **N. Pippa**, S. Pispas, C. Demetzos, Convention of the Hellenic Society of Biomaterials. 7<sup>th</sup> -8<sup>th</sup> November 2014, B.&M. Theocharakis Foundation for the Fine Arts and Music, Athens, Greece (*Oral Presentation*)
- 6) Preparation, development and in vitro release evaluation of amphotericin B-loaded amphiphilic block copolymer vectors. **N. Pippa**, M. Mariaki, S. Pispas, C. Demetzos, Convention of the Hellenic Society of Biomaterials. 7<sup>th</sup> -8<sup>th</sup> November 2014, B.&M. Theocharakis Foundation for the Fine Arts and Music, Athens, Greece (*Poster Presentation*)
- 7) DPPC/poly(2-methyl-2-oxazoline)-graft-poly(2-phenyl-2-oxazoline) chimeric nanostructures as drug delivery systems. **N. Pippa**, S. Pispas, C. Demetzos, Convention of the Hellenic Society of Biomaterials. 7<sup>th</sup> -8<sup>th</sup> November 2014, B.&M. Theocharakis Foundation for the Fine Arts and Music, Athens, Greece (*Poster Presentation*)
- 8) The metastable phases as modulators of functionality in chimeric liposomes. C. Demetzos, **N. Pippa**, S. Pispas, Therma 2014, 26<sup>th</sup> -28<sup>th</sup> September 2014, Larisa, Greece (*Oral Presentation*)
- 9) The thermotropic behavior of DPPC:PAMAM G-4 chimeric liposomes. **N. Pippa**, S. Pispas, C. Demetzos, Therma 2014, 26<sup>th</sup> -28<sup>th</sup> September 2014, Larisa, Greece (*Poster Presentation*)
- 10) PEO-b-PCL grafted DPPC liposomes: self-assembly, stability and fractal analysis of the nanostructures, **N. Pippa**, S. Pispas, C. Demetzos, 15<sup>th</sup> Hellenic Symposium on Medicinal Chemistry, Athens, 25-27 May, 2012 (*Poster*)

## Continuing Professional Development

- SafeSciMET course 2.3: “Pharmaco-/Toxicokinetics and Pharmaco-/Toxicodynamycis” 23.02.2015 – 26.02.2015 (Total of 38 hours). This course is given at Uppsala University by academic teachers and experienced scientistits from pharmaceutical industry. It is a SafeSciMET course in the framework of Innovative Medicines Initiative (IMI) Education and Training Programme, intended for participants from industry, Authorities and Academia. Courseleader: Prof. Margareta Hammarlund-Udenaes. (3 ECTS)
- The Onassis Foundation: Science Lecture Series. The 2015 Lectures in Biology: Stem Cells: From basic biology to translational research. Heraklion, Crete, July 6-10<sup>th</sup> , 2015
- The Onassis Foundation: Science Lecture Series.The 2014 Lectures in Chemistry and Biology: Molecular Conformational Fluctuations: Origins of Biological Specificity and Applications in Pharmacochemistry, Heraklion, Crete, August 25-29<sup>th</sup> , 2014.

### Membership of scientific societies

- Member of European Federation of Pharmaceutical Sciences (EUFEPS)
- Member of Hellenic Pharmaceutical Society (H.P.S.)
- Member of Hellenic Society of Cosmetology
- Member of Hellenic Society of Medicinal Chemistry
- Member of Hellenic Society of Biomaterials

References upon request:

- [1]. Prof. Costas Demetzos, *Professor in Pharmaceutical Nanotechnology, Dept. of Pharmaceutical Technology, Faculty of Pharmacy, Tel. 0030 210 7274596, Fax 0030 210 7274027, E-mail: [demetzos@pharm.uoa.gr](mailto:demetzos@pharm.uoa.gr)*
- [2]. Dr. Stergios Pispas *Director of Research, Theoretical and Physical Chemistry Institute National Hellenic Research Foundation, 48 Vassileos Constantinou Ave. 11635 Athens, GREECE, Tel.: 30 210 7273824, FAX: 30 210 7273794, E-mail: [pispas@eie.gr](mailto:pispas@eie.gr)*
- [3]. Prof. **Hermis Iatrou**, *Department of Chemistry National and Kapodistrian University of Athens Zografou 157 84, Greece Tel: +30-210-7274768 Fax: +30-210-7221800, Email: [iatrou@chem.uoa.gr](mailto:iatrou@chem.uoa.gr)*