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EDUCATIONAL BACKGROUND

1993: Degree of School of Pharmacy, University of Athens, Greece

1995: License of Pharmaceutical Profession, Ministry of Health, Athens, Greece

1999: Ph.D. Diploma of the School of Pharmacy, University of Athens, Greece

POSTDOCTORAL EDUCATION AND RESEARCH

2000-2001: Lab of Pharmaceutical Technology, School of Pharmacy, National and Kapodistrian University of Athens.

SCIENTIFIC WORKSHOPS AND SEMINARS

1995: Postgraduate six month Seminar of Pharmaceutical Marketing, School of Pharmacy, Athens, Greece

1998: Course on «Safety assessment of cosmetic products», Hellenic Society of Cosmetology, Athens, Greece

2007: Course on Laboratory Animal Science 24/9 – 5/10/, coordinated by the BSRC Alexander Fleming and the Dept of Laboratory Animal Science, Utrecht University.

2005: Summer School: Methods in micro – nanotechnology and nanobiotechnology, National Centre for Scientific Research «Democritos», Greece

2003: Advanced Customer Seminar on Thermal Analysis (Mettler Toledo), Zurich, Switzerland

2003: Microencapsulation: Formulation and Process Technologies Workshop in 30th Annual Meeting & Exposition of the Controlled Release Society, Glasgow, UK

2006: 18th mountain/Sea Liposome Workshop, Ameland, Holland

2011: Dendrimers as composites of Advanced Drug Delivery Nano Systems: Biomedical applications. COST Action TD0802, Athens, Greece

2013: 1st Summer Training School on Thermal Analysis and Calorimetry: From Theory to Practice, Athens, Greece

2014: Summer School: Thermal Analysis Techniques, Aristotle University of Thessaloniki, Greece, June 29 to July 12, 2014 (Erasmus IP)

2014: “Seminar on Bioequivalence of Drugs”, Bionian Cluster, Athens, 18-19/06/2014

2019: Start-Up Workshop, COST CA 16227 «INVESTIGATION AND MATHEMATICAL ANALYSIS OF AVANTGARDE DISEASE CONTROL VIA MOSQUITO NANO-TECH-REPELLENTS», Malta 10-10/12/19

RESEARCH EXPERIENCE AND ACTIVITIES

- Preparation and physicochemical characterization of nanoparticles (liposomes, solid lipid nanoparticles, nanoemulsions and dendrimers) as carriers of biologically active substances for pharmaceutical or cosmetic products.
- Thermal Analysis (Differential Scanning Calorimetry) and Raman spectroscopy studies on interactions of biologically active substances with model lipid membranes and liposomes.
- Development of several in vivo pharmacological models:

- on SCID NOD mice: development of xenografts for several cancer cell lines and anti-tumor activity assessment of natural products and liposomal drugs
- on SKH1 (hairless mice): anti-inflammatory activity assessment of natural products on UV induced skin barrier disruption models
- on albino rabbits: (Safety assessment of pharmaceutical and cosmetic products - eye irritation and skin irritation tests)
- in vitro Safety assessment of pharmaceutical and cosmetic products (HET-CAM tests).

SCIENTIFIC INTERESTS

- Design and study of nanocarriers as transporters of biologically active molecules
- Incorporation of drug molecules in nanosystems (liposomes, nanoemulsions, solid state lipid nanoparticles (SLN), polymeric systems, dendrimers), to improve the pharmacokinetic properties, bioavailability and pharmacological response in target tissues (tumors, lung, skin).
- Formulation of novel carriers of bioactive molecules into final products and study their characteristics (size distribution, zeta-potential, particle surface morphology, content of actives and excipients, active bioavailability, stability).
- Study of the interaction of bioactive molecules with model lipid membranes mainly by Thermal Analysis in order to design new formulations, as well as to predict their interaction with biological membranes.
- Development of cosmetics and pharmaceutical product for topical application. Study of the physicochemical characteristics and stability. Safety assessment and evaluation of their efficacy using non-invasive biomechanical methods for claim substantiation.

TEACHING ACTIVITY

Undergraduate Program (2013-up to date):

- Introduction To Pharmaceutical Science: History of Pharmacy (1st Semester)
- Bioethics - Elements Of Drug Regulation: Regulatory Framework for cosmetics, Pharmaceutical Law (Pharmacy Operation) (4th Semester)
- Pharmaceutical Technology I: Pharmaceutical Compounding, Pharmaceutical Excipients, Packaging of Pharmaceutical products
Practical course in Pharmaceutical Technology I: Pharmaceutical Compounding (6th Semester)
- Pharmaceutical Technology II: Design, Preparation-Manufacturing and Quality Control of Drug Formulations, GMP/GLP.
Practical course in Pharmaceutical Technology (Preparation and Quality Control of Drug Formulations) (7th Semester)
- CHEMISTRY AND TECHNOLOGY OF COSMETICS (9th Semester)

Postgraduate Program of Department of Pharmacy:

Advanced Pharmaceutical Technology (Pharmaceutical Thermal analysis) (2013-2018)

Nanomedicines and Special Formulations for Administration and / or Targeting of Medicines / Diagnostics (Lipid nanoparticles) (2013-2018)

Discovery and Development of Medicines (New Postgraduate Program of Department of Pharmacy: (2018-up to date)

- Design and Discovery of Pharmaceutical Products

- Nanomedicines and Special Formulations for Administration and / or Targeting of Medicines / Diagnostics

Postgraduate Program of Department of Pharmacy: Cosmetology - Preparation And Evaluation Of Cosmetic Products (2018-up to date)

- Legislation and Regulatory Framework on the Manufacture and Distribution of Cosmetic Products
- Ingredients of Cosmetic Products
- Development of Cosmetic Products
- Safety Assessment and Quality Control of Cosmetic Products
- Efficacy testing and Claim Support of Cosmetic Products
- Industrial Production of Cosmetic Products
- Practical Course on Preparation of Cosmetic Products

PRIZES-HONOURS

- 1995-1999: Scholarship from Greek State Scholarships' Foundation (IKY) for doctorate studies.
- Evaluator for the Pedagogical Institute of the Greek Ministry of Education, as a reviewer of the book "Teaching Pharmacy Technology - Cosmetology to Pharmacy Assistants", in the framework of the project entitled "Curriculum Development - Production of Books and Aids for Technical - Vocational Schools".
- Evaluator for the RANNIS Foundation for Icelandic Research Fund for Graduate Students 2012 (after invitation),
- Evaluator of the Research Proposal: "Integrated Service of Greek Academic Electronic Books Battery" in the context of Call 3 - "Medical Sciences and Life Sciences" (2014)
- Evaluator in Partnership Agreement for the Development Framework (ΕΣΠΑ) Project of "Cooperation 2011" Action
- Member of Section IA 'of the Scientific Council for Approval (ΕΣΕ) of the National Organization for Medicines (ΕΟΦ) (2013-up to date).
- Coordinator of the Postgraduate Program *Cosmetology - Preparation And Evaluation Of Cosmetic Products* for the Dept. of Pharmacy, Univ. of Patras (2018-up to date).
- Reviewer for over 20 Pharmaceutical and related Scientific journals
- Editor for the official Journal of the Hellenic Society of Cosmetology "To Kallyntiko" (Cosmetic) (2019-)
- Editorial Board of the official Journal of the Hellenic Pharmaceutical Society "Archives of Pharmaceutics" (2010-)
- Editorial Board of "Pharmaceutics" MDPI (2020)
- Regional committee member of more than 20 Conferences and Scientific Meetings
- Young researcher Award for best poster presentation for I. Vrouvaki, E. Koutra, M. Kornaros, K. Avgoustakis, F. N. Lamari, and S. Hatziantoniou, Preparation and characterization of Pistacia lentiscus var. Chia essential oil- loaded poly(lactic acid) nanoparticles as novel wound healing agent, NanoBio 2018, The 1st International conference of Nanotechnologies and Bionanoscience, 23-28 September 2018, Heraklion, Crete, Greece.
- Member of the "Scoring Committee" of the Office of Continuing Education of Pharmacists, which operates under the Institute of Lifelong Learning & Professional Development of Pharmacists (IDEAF) (2016 to date).
- Member of the Coumpounding Committee, which operates within the Institute of Lifelong Learning & Professional Development of Pharmacists (IDEAF) (2016 to date)

- (Member of the management Committee of COST Action CA 16227 «INVESTIGATION AND MATHEMATICAL ANALYSIS OF AVANTGARDE DISEASE CONTROL VIA MOSQUITO NANO-TECH-REPELLENTS» (2018)
- Scientific Responsibility of the Training Program for Pharmacists titled: "Exemplary Preparation of Extemporaneous Preparations - Quality Assurance in the Pharmacy Laboratory in Accordance with the European Pharmacopoeia", co-organized by the Panhellenic Pharmaceutical Association (ΠΦΣ) and the Institute for Lifelong Learning and Professional Development of Pharmacists (ΙΔΕΕΑΦ) in collaboration with local Pharmaceutical Associations

PROFESSIONAL AFFILIATIONS

- Hellenic Society of Cosmetology: President (2019) and Founding Member (1995)
- Hellenic Pharmaceutical Society (Member of Board of Directors)
- Hellenic Society for Thermal Analysis (ESTA): Secretary General (2011-2017)
- Panhellenic Association of Pharmacists (PEF)
- Hellenic Society of Pharmaceutical Technology
- International Federation of Cosmetic Chemists (IFSCC)
- Controlled Release Society (CRS) local Chapter
- International Liposome Society (ILS)

Websites

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Google Scholar: <https://scholar.google.com/citations?hl=el&user=YKJnSM0AAAAJ>

PUBLICATIONS / METRICS

- Number of papers in refereed journals: **56**
- Number of chapters in books: **5**
- Number of communications in international scientific meetings: over **60**
- Number of Invited Lectures in National and International scientific or educational meetings: **22**
- h-index: **24**, citations: **1447** (Scopus, Feb. 2020)

SELECTED PUBLICATIONS

1. Melissa officinalis ssp. altissima extracts: A therapeutic approach targeting psoriasis in mice and skin dryness in humans. Christina Karamani, Aggeliki Liakopoulou, Sophia Hatziantoniou, Ekaterina-Michaela Tomou, Ioanna Siakavella, Michael Rallis, Ioannis Sfiniadakis, Dimitris Dimas, H. Skaltsa, *J Ethnopharmacol.* 2020 Jan10;246:112208.
2. Folic Acid-Functionalized Gold Nanorods For Controlled Paclitaxel Delivery: In Vitro Evaluation And Cell Studies. Papaioannou L., Angelopoulou A., **Hatziantoniou S.**, Papadimitriou M., Apostolou P., Papatotiriou I., Avgoustakis K. *AAPS PharmSciTech.* 2018 Dec 17;20(1):13.
3. Canagliflozin-loaded magnetic nanoparticles as potential treatment of hypoxic tumors in combination with radiotherapy. Angelopoulou A, Kolokithas-Ntoukas A, Papaioannou L, Kakazanis Z, Khoury N, Zoumpourlis V, Papatheodorou S, Kardamakis D, Bakandritsos A, **Hatziantoniou S**, Avgoustakis K. *Nanomedicine (Lond).* 2018 13 (19), pp. 2435-2454

4. Liposome percutaneous penetration *in vivo*, A. Lymberopoulos, C. Demopoulou, M. Kyriazi, M.S. Katsarou, N. Demertzis, **S. Hatziantoniou**, H. Maswadeh, G. Papaioanou, C. Demetzos, H. Maibach, and M. Rallis, *Toxicology Research and Application Volume 1: 1–6*, 2017
5. Microbial biosensors to monitor the encapsulation effectiveness of Doxorubicin in chimeric advanced Drug Delivery Nano Systems: A calorimetric approach. K. Gardikis, M. Signorelli, C. Ferrario, A. Schiraldi, M.G. Fortina, **S. Hatziantoniou**, C. Demetzos, D. Fessas. *Int J Pharm.* 2017 516 (1-2), pp. 178-184.
6. Assessment of the physicochemical stability of all-in-one parenteral emulsions for neonates according to usp specifications. Athanasiou C, **Hatziantoniou S**, Skouroliakou M, Markantonis-Kyroudis S. *JPEN J Parenter Enteral Nutr.* 2014, 38 (7), pp. 867-872.
7. Caveolar Uptake And Endothelial-Protective Effects Of Nanostructured Lipid Carriers In Acid Aspiration Murine Acute Lung Injury Kardara, M., **Hatziantoniou, S.**, Sfika, A., Vassiliou, A.G., Mourelatou, E., Magkou, C., Armaganidis, A., Roussos, C., Armaganidis, A., Orfanos, S.E., Kotanidou, A., Maniatis, N.A. *Pharmaceutical Research* (2013) In Press.
8. Chimeric advanced drug delivery nano systems (chi-aDDNSS) for shikonin combining dendritic and liposomal technology. Kontogiannopoulos K.N, Assimopoulou A.N, **Hatziantoniou S**, Karatasos K, Demetzos C, Papageorgiou Vp. *Int J Pharm.* 2012, 422(1-2), pp. 381-9
9. Physicochemical Stability Assessment Of All-In-One Parenteral Emulsion For Neonates Containing Smoflipid Skouroliakou, M., Kountouri, A.M., **Hatziantoniou, S.**, Koutri, K., Chiou, A *European Journal Of Hospital Pharmacy: Science And Practice.* (2012) 19 (6): 514-518.
10. Preparation and characterization of lyophilized EGG PC liposomes incorporating curcumin and evaluation of its activity against colorectal cancer cell lines. M. Pandelidou, K. Dimas, A. Georgopoulos, **S. Hatziantoniou**, C. Demetzos. *Journal of Nanoscience and Nanotechnology*, 2010, 11 (2), pp. 1259-1266.
11. Type And Location Of Interaction Between Hyperbranched Polymers And Liposomes. Relevance To Design Of A Potentially Advanced Drug Delivery Nanosystem (Addns). Mourelatou Ea, Libster D, Nir I, **Hatziantoniou S**, Aserin A, Garti N, Demetzos C. *J Phys Chem B.* 2011 Apr 7;115(13):3400-8
12. Thermodynamic Characterization Of Liposomal–Locked In-Dendrimers As Drug Carriers K. Gardikis, **S. Hatziantoniou**, M. Signorelli, M. Pusceddu, M.Micha-Screttas, A. Schiraldi, C. Demetzos, D. Fessas *Colloids And Surfaces B: Biointerfaces* 2010, 2010 Nov 1;81(1):11-9
13. Chimeric Advanced Drug Delivery Nano Systems (Chi-Addnss) For Shikonin Combining Dendritic And Liposomal Technology. Kontogiannopoulos Kn, Assimopoulou An, **Hatziantoniou S**, Karatasos K, Demetzos C, Papageorgiou Vp. *Int J Pharm.* 2012 Jan 17;422(1-2):381-9
14. Mitochondria-Targeted Liposomes Improve The Apoptotic And Cytotoxic Action Of Sclareol N. R. Patel, **S. Hatziantoniou**, A. Georgopoulos, C. Demetzos, V. Torchillin, V. Weissig, G.G.M. Souza *Journal Of Liposome Res.* 2009, Nov.2.
15. Solid Lipid Nanoparticles And Nanoemulsions Containing Ceramides: Preparation And Physicochemical Characterization. G. Deli, **S. Hatziantoniou**, Y. Nikas, C. Demetzos *Journal Of Liposome Res.* 2009, 19, 180-188
16. Visualisation Of Liposomes Prepared From Skin And Stratum Corneum Lipids By Transmission Electron Microscopy **S. Hatziantoniou ***, I. P. Nezis, L. H. Margaritis , C. Demetzos *Micron.* 2007, 38, 777-781
17. Qualitative And Quantitative One Step Analysis Of Lipids And Encapsulated Bioactive Molecules In Liposome Preparation By Hptlc/Fid (Iatroscan) **S. Hatziantoniou**, C. Demetzos *Journal Of Liposome Research.* 2006, 16, 321-330

18. A DSC and Raman Spectroscopy Study on Tte Effect of PAMAM Dendrimer on DPPC Model Lipid Membranes. K. Gardikis , **S. Hatziantoniou** , K. Viras , M. Wagner , C. Demetzos Int. J Pharm. 2006, 318, 118-123.
19. Phase Transition Of Lipids And Liposomes **S. Hatziantoniou**, C. Demetzos, M. Wagner Usercom,Mettler-Toledo. 2005, 1, 16-19.
20. Cytotoxic And Antitumor Activity Of Liposome-Incorporated Sclareol Against Cancer Cell Lines And Human Colon Cancer Xenografts **S. Hatziantoniou**, K. Dimas, A. Georgopoulos, N.Sotiriadou , C. Demetzos Pharmacological Res. 2006, 53, 80-87.

Office Hours for students

Tuesday, Wednesday & Thursday 12-13 p.m.