

## Papadimitriou Vassiliki

PhD / Researcher B

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### CURRENT POSITION

2017-present            **Senior Researcher (Researcher B)**  
Institute of Chemical Biology (ICB)/National Hellenic Research  
Foundation (NHRF)/ Greece

### PREVIOUS POSITIONS

2009 – 2017            **Associate Researcher (Researcher C)**  
Institute of Biology, Medicinal Chemistry & Biotechnology  
National Hellenic Research Foundation (NHRF)/Greece

2006-2009            **Assistant Researcher (Researcher D)**  
Institute of Biological Research & Biotechnology/National Hellenic  
Research Foundation (NHRF)/Greece

1999-2005            **Research Associate**  
Institute of Biological Research & Biotechnology/National Hellenic  
Research Foundation (NHRF)/Greece

1997-1998            **Research Associate**  
Pesticide Residue Laboratory/National Agricultural Research  
Foundation (NAGREF)/Greece

1995-1996            **Post-Doctoral Fellow**  
Department of Synthesis and Development of Industrial  
Processes/School of Chemical Engineering/National Technical  
University of Athens (NTUA)/Greece

### EDUCATION

1996:            **PhD in Biology**, University of Athens, School of Science, Department of  
Biology. PhD Thesis title: Enzymatic studies in microemulsions.

1990:            **Bachelor's Degree in Chemistry**, University of Athens, School of  
Science, Department of Chemistry.

## FOREIN LANGUAGES

English, French, Italian

## RESEARCH INTERESTS

### ***Colloidal nanodispersions as solubilization vehicles of bioactive compounds***

- Development and physicochemical characterization of colloidal nanodispersions.
- Nanoencapsulation of bioactive compounds (peptides, enzymes, vitamins, drugs, pesticides, antioxidants, essential oils).
- Structural characterization using Electron Paramagnetic Resonance spectroscopy (EPR), Dynamic light scattering (DLS), Small-angle X-ray scattering (SAXS), microscopy, viscometry, conductometry.
- Encapsulation efficiency, chemical stability and bioavailability of encapsulated compounds.

### ***Electron Paramagnetic Resonance (EPR) spectroscopy***

- Spin-labeling, spin trapping.
- Oxidative Stability/Radical Scavenging Activity of plant extracts and commercial products.

### ***Natural products and nanotechnology***

- Colloidal dispersions based on natural ingredients.
- Encapsulation of natural products from biotechnological sources.

## FUNDED PROJECTS

- **“Nanoemulsions of plant oils with moisturizing and insect repellent properties” (QFytoTera).** National Strategic Reference Framework Program, Operational Program Competitiveness, Entrepreneurship and Innovation 2014-2020 (EPAnEK) Budget: 629.780,00 € (Budget ICB/NHRF 289.900 €) (Coordinator Dr S. Zographos, WP1 leader Dr V. Papadimitriou).
- **“Application of nanotechnology for the development of sunscreens using natural extracts” (Nano-UV-Extracts).** National Strategic Reference Framework Program, Operational Program Competitiveness, Entrepreneurship and Innovation 2014-2020 (EPAnEK) Budget: 425.830 € (Budget ICB/NHRF 100.000 €).
- **“CO<sub>2</sub> Biotransformation to high value bio products via sustainable microalgae cultures” (CO<sub>2</sub>-BioProducts).** National Strategic Reference Framework, Operational Program Competitiveness, Entrepreneurship and Innovation 2014-2020 (EPAnEK) Budget: 1.000.000 € (Budget ICB/NHRF 150.000 €). (Coordinator NHRF Dr Maria Zoumpantioti).

- **“Targeted therapeutic approaches against degenerative diseases, focusing on cancer and aging optimization of targeted bioactive compounds” (STHENOS-b).** National Strategic Reference Framework Program, Action Developmental Projects of Research Organizations- Kripis, 2014-2020. (Coordinator Dr A. Pintzas).
- **“Targeted therapeutic approaches against degenerative diseases, with special focus on cancer and ageing” (STHENOS).** National Strategic Reference Framework Program, Action “Developmental Projects of Research Organisations-Kripis”2013-2015: Budget: 1.500.000 € (Biomimetics 174.773 €). (Coordinator Dr A. Pintzas).
- **“Nanobiotechnology”.** National Hellenic Research Foundation 2402, 2015-2018, (Budget 162.635 €). (Coordinator Dr. A. Xenakis).
- **“Application of Nanoemulsion Technology to food products based on Oil in Water Emulsions such as vegetable cream and fudge icings”.** National Strategic Reference Framework program (NSRF 2007-2013) PAVET Budget: 300.000 € Contractor: JOTIS SA (Budget NHRF 61.250 €) **(Coordinator NHRF, Dr Vassiliki Papadimitriou).**
- **“Development of nanoemulsions as new materials for managing phytoprotective products to reduce the environmental charge” (NanoBioEnviro)** National Strategic Reference Framework (NSRF), Cooperation, Action I, 2010-2013, research programme. Budget: 449.040 € (Budget NHRF 147.743 €). **(Coordinator Dr Vassiliki Papadimitriou).**
- **“Quality and stability of virgin olive oil. The role of endogenous enzymes and antioxidants -biotechnological applications”.** Operational Program “Competitiveness and Entrepreneurship”, Cyprus-Hellenic Collaboration 2006-8. Collaboration with the research\_group of Prof. Ep. Leondidis, Chemistry Dept. University of Cyprus, Nicosia (Budget NHRF 11.740 €). **(Greek Coordinator Dr. Vassiliki Papadimitriou).**
- **“Micro/nano-émulsions de type e/h biocompatibles et riches en micronutriments: préparation et caractérisation”.** Program Agence Nationale de Recherche (ANR), Institut Carnot, Projet Lipides pour l’industrie et la santé (LISA), France. 2013-14. (Budget: 43.000 €). (Coordinator Prof. F. Calderon, INP Bordeaux).
- **“Nanobiotechnology. Lipase activity”.** Program CAPES, Ministry of Education, Brazil. 2010-2014. (Budget 40.000 €). (Coordinator Prof. R. Souza)
- **“Biocatalysis by immobilized enzymes in mesoporous materials for the biotechnological production of high added value products”.** Operational Program “Competitiveness and Entrepreneurship”, Franco-Hellenic Collaboration 2006-2007. (Budget NHRF 12.400 €).

- **“Production of high added value products by the biotechnological application of lipases as biocatalysts”**. Program PAVET 2005. 2006-2007). Contractor NEOKEM SA (Budget: 35.000 €) (Coordinator NHRF Dr A. Xenakis).
- **“Determination of the most significant and usual quality problems encountered in greek olive oils. Evaluation and therapeutic actions”**. Program "Cooperation" of the Dir.1334/02 - ELAIOURGIKI - ΟΠΕΚΕΠΕ (2003-2004) (Budget 20.000 €)
- **“Study of parameters affecting the quality of greek virgin olive oils. Degree of maturity and natural antioxidants content”**. Program "CRETE - ΣΥΝΕΡΓΑΣΙΑ" of the Dir.1334/02 - Sitia, Mirampelo, Peza and Milopotamos Unions-ΟΠΕΚΕΠΕ (2004-2005) (Budget 29.759,52 €)
- **“Study of the presence and bioavailability of phenolic antioxidants in foods of the Mediterranean diet”**. Program ΕΠΕΤ II - Subprogram 1, Action 2.3, Nutrition Program 97ΔΙΑΤΡΟ-29 (1999-2001) Contract with: Univ. of Thessaloniki Budget: 95.000.000 Grd (NHRF 17.450.000 Grd.)
- **“Polyphenols and their polymers (tannins) in virgin olive oil and olive oil waste waters. Antioxidant action and free radical mechanism. The biotechnological importance for health, food and environment”**. Program ΕΠΕΤ II - ΠΕΝΕΔ 99ΕΔ33 (1999-2001) (Coordinator Dr T. Sotiroudis)
- **“Structure-function lipase relationships in low water media”**. Program BIOTECH of the European Union (1994-1996) (in collaboration with Prof. F.N. Kolisis) (Budget 55.000 ECU). Budget: 55.000 ECU.
- **“Enzymic studies in microemulsions. Structural aspects”**. Program PLATON 1993. (16<sup>th</sup> Collaboration protocol). Budget: 2.000.000 Grd. Collaboration with the research groups of Prof. M.P. Pileni Structure and Activity on interfaces lab., Univ. Paris VI, France and Dr C. Petit CEA Saclay, Paris, France.
- **“Enzymic studies in microemulsions. Structural aspects”**. Program PLATON 1992. (Contract N 02001910092- 15<sup>th</sup> Collaboration protocol). (Budget 2.000.000 Grd). Collaboration with the research groups of Prof. M.P. Pileni Structure and Activity on interfaces lab., Univ. Paris VI, France and Dr C. Petit CEA Saclay, Paris, France.

## TEACHING ACTIVITIES

2015-present      Lecturer and member of the Coordination Committee in the Interinstitutional Program of Postgraduate Studies (MSc) entitled “Bioenterpreneurship” co-organized by the University of Thessaly and the National Hellenic Research Foundation (Greece).

- 2019-present    Lecturer in the Interinstitutional Program of Postgraduate Studies (MSc) entitled "Oncology" co-organized by the University of Crete and the National Hellenic Research Foundation (Greece).
- 2014-2018      Lecturer in the postgraduate program (MSc) entitled "Food Science and Technology, Food Processing, Preservation and Innovation" organized by the Department of Food Technology, University of West Attica (Greece).

### **SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS**

- 2006 –present    Postdocs (2) in collaboration with the ICB/NHRF (Greece).
- PhD theses (4) in collaboration with the Department of Biochemistry and Biotechnology, University of Thessaly, (Greece), Department of Biological Applications and Technology, University of Ioannina (Greece), Department of Pharmaceutical Technology and Cosmetology, Faculty of Pharmacy, University of Belgrade, Belgrade (Serbia).
- PhD theses (7) co-supervision in collaboration with the Department of Chemistry, University of Athens (Greece), Faculty of Pharmacy, Federal University of Rio de Janeiro (Brazil), School of Science and Technology, Örebro University (Sweden), Ecole Supérieure des Industries Alimentaires de Tunis (Tunisia), Department of Biological Engineering, National Engineering Scholl in Sfax (Tunisia), Department of Chemistry University of Cyprus (Cyprus).
- Master Students (19) in collaboration with the Department of Biochemistry and Biotechnology, University of Thessaly (Greece), Department of Chemistry, University of Ioannina (Greece), Department of Food Technology, University of West Attica (Greece), Department of Food Technology, School of Food Technology and Nutrition, Alexander Technological Educational Institution of Thessaloniki (Greece), Department of Food Science and Human Nutrition, Agricultural University of Athens (Greece).

### **FELLOWSHIPS and AWARDS**

- 2008              STSM, COST, Action D43, (Workgroup 4: Colloid and Interface Chemistry for Nanotechnology, Nanostructured and bio-inspired materials) to conduct research with Prof. Otto Glatter in the Department of Chemistry, Institute of Chemistry Physical Chemistry, University of Graz, Austria.

- 1993 EMBO fellowship to conduct part of my PhD research in the Service de Chimie Moléculaire, CEA, CE Saclay, France and (L.U.R.E), CNRS-CEA, University Paris-Sud, 91405 Orsay (Paris XI) France.
- 1993 CNRS fellowship, International project for scientific cooperation, to conduct part of my PhD research with Prof. M.P. Pileni in the laboratory of Structure and Activity on Interfaces, Univ. Paris VI, France.
- 1992 PLATON, French government grant, to conduct part of my PhD research with Prof. M.P. Pileni in the laboratory of Structure and Activity on interfaces, Univ. Paris VI, and Service de Chimie Moléculaire, CEA, CE Saclay, France.
- 1990-1994 Doctoral studentship from the National Hellenic Research Foundation.

### **OTHER SCIENTIFIC ACTIVITIES**

**Guest Editor** of the Special Issue of Nanomaterials (MDBI) dedicated to *Nanodispersions Based on Biocompatibility* (2020).

### **Reviewer in International Scientific Journals (30)**

Coatings, Colloids and Surfaces A: Physicochemical and Engineering Aspects, Colloids and Surfaces B: Biointerfaces, Colloids and Interfaces, Cosmetics, Current Drug Delivery, European Journal of Lipid Science and Technology, European Food Research and Technology, Food Research International, Food Chemistry, Food analytical Methods, Food and Function, Food Hydrocolloids, International Journal of Molecular Sciences, International Journal of Cosmetic Science, Journal of Agricultural and Food Chemistry, Journal of Colloid and Interface Science, Journal of Food Biochemistry, Journal of the American Oil Chemistry Society, Journal of Drug Delivery Science and Technology, Journal of Molecular Liquids, Langmuir, Magnetochemistry, Materials, Molecules, Nanomaterials, Pharmaceutics, Pharmaceutical Nanotechnology, Plant Foods for Human Nutrition, Polymers.

**Ekinisi Lab 2014:** (NanoBio Team: V. Papadimitriou, M. Zoumpantioti, A. Xenakis). The NanoBio team has participated in the "EkinisiLab" New Business Development Incubator that provides 6-month coaching and consulting training programs for start-ups and spin-off companies. The EkinisiLAB environment offers opportunities for development and networking, using the expertise of high-ranking executives from SEV member-businesses. It also offers market research services and data on export markets.

**Member** of committees for the evaluation of research proposals, Secretariat for Research and Technology (GSRT), Greece

**Member** of the organization committee of the 34th Conference of the European Colloid and Interface Society (ECIS2020), Athens, Greece (postponed for 2021)

**Member** of the of Greek Chemists Association.

**Member** of the Greek Lipid Forum.

**Member** of Euro Fed Lipid.

## **COLLABORATIONS**

- Department of Pharmaceutical Technology and Cosmetology, Faculty of Pharmacy, University of Belgrade, Belgrade, Serbia.
- Technion- Israel Institute of Technology, Haifa, Israel.
- University of Copenhagen, Copenhagen, Denmark.
- Ecole Supérieure des Industries Alimentaires de Tunis, Tunis, Tunisia.
- Department of Biological Engineering, National Engineering School in Sfax, Sfax, Tunisia.
- University of Cyprus, Nicosia, Cyprus.
- Department of Chemistry, University of Graz, Austria.
- Faculty of Pharmacy, Federal University of Rio de Janeiro, Rio de Janeiro, Brazil
- Biocatalysis and Organic Synthesis Group, Chemistry Institute, Federal University of Rio de Janeiro, Rio de Janeiro, Brazil.
- Colloids and Surfaces Research Center, Al-Quds University 51000 East Jerusalem, Palestine.
- Faculty of Chemistry, University of Belgrade.
- University of Örebro, Örebro, Sweden.
- Agricultural University of Athens, Athens, Greece.
- Department of Biological Applications & Biotechnology, University of Ioannina, Ioannina, Greece.
- Department of Chemistry, University of Ioannina, Greece.
- Department of Biochemistry and Biotechnology, University of Thessaly, Larissa, Greece.
- Department of Food Technology, Technological Educational Institute of Athens, Athens, now University of West Attica, Greece.
- Food Technology Department, Alexander Technological Education Institute of Thessaloniki, Greece.
- Benaki Phytopathological Institute, Kifissia, Greece.
- Material Synthesis and Physical Chemistry, Theoretical & Physical Chemistry Institute, National Hellenic Research Foundation, Athens, Greece.
- Department of Pharmacy, University of Patras, Greece.

## COLLABORATION WITH INDUSTRIES

- Provision of services to food companies in order to determine properties of different types of products (use of EPR, DLS etc.). (Total budget: 58.129 €).
- Product development through common projects (food products, cosmetics etc.)

APIVITA; JOTIS SA; VIORYL S.A.; Public Power Corporation (ΔΕΗ); PAGONIS-DAIRY; QUALIA PHARMA; ELAIS-UNILEVER HELLAS AE; MINERVA SA; ELAIOURGIKI; PEZA UNION ; MIRABELLO UNION; SITIA UNION; MYLOPOTAMOS UNION., GAEA; CLEANWAY Ltd.

## PUBLICATIONS

PhD Thesis (1996): "Enzymatic studies in microemulsions". University of Athens, School of Science, Department of Biology.

### *In peer-review journals*

1. S. Demisli, I. Theochari, P. Christodoulou, M. Zervou, A. Xenakis, **V. Papadimitriou**. "Structure, activity and dynamics of extra virgin olive oil-in-water nanoemulsions loaded with vitamin D3 and calcium citrate". *J. Mol. Liquids* (2020) 306, 112908 (IF 4.561) (**Corresponding author**).
2. Nikolic, I., E. Mitsou, A. Damjanovic, **V. Papadimitriou**, J. Antic Stankovic, B. Stanojevic, A. Xenakis, S. Savic. "Curcumin-loaded low-energy nanoemulsions: Linking EPR spectroscopy-analysed microstructure and antioxidant potential with in vitro evaluated biological activity". *J. Mol. Liquids* (2020) 301, 112479 (IF 4.561).
3. Nikolic, I., E. Mitsou, I. Pantelic, D. Randjelovic, B. Markovic, **V. Papadimitriou**, A. Xenakis, D.J. Lunter, A. Zugic, R. Daniels, S. Savic. "Microstructure and biopharmaceutical performances of curcumin-loaded low-energy nanoemulsions containing eucalyptol and pinene: terpenes' role overcomes penetration enhancement effect". *Eur. J. Pharm. Sci.* (2020) 142, art.105135. (IF 3.532).
4. M.D. Chatzidaki, F. Balkiza, E. Gad, V. Alexandraki, S. Avramiotis, M. Georgalaki, **V. Papadimitriou**, E. Tsakalidou, K. Papadimitriou, A. Xenakis. "Reverse micelles as nano-carriers of nisin against foodborne pathogens. Part II: The case of essential oils". *Food Chem.* (2019) 278, 415-423. (IF 5.399)
5. Golfomitsou, I., E. Mitsou, A. Xenakis, **V. Papadimitriou**. "Development of O/W nanoemulsions as carriers of vitamin D: A structural study". *J. Mol. Liquids* (2018) 268, 734-742 (IF 4.513) (**Corresponding author**).
6. Chaari, M., Theochari, I., **Papadimitriou, V.**, Xenakis, A., Ammar, E. Encapsulation of carotenoids extracted from halophilic *Archaea* in oil-in-water



- (O/W) micro- and nano-emulsions. *Colloids and Surfaces B: Biointerfaces* (2018) 161, 219-227 (IF 3.902)
7. Theochari I, **Papadimitriou V**, Papahatzis D, Assimomytis N, Pappou E, Pratsinis H, Xenakis A, Pletsa V. "Oil-in-water microemulsions as hosts for benzothiophene-based cytotoxic compounds: an effective combination" *Biomimetics* (2018), 3, 13
  8. V. Savić, M. Todosijević, T. Ilić, M. Lukić, E. Mitsou, **V. Papadimitriou**, S. Avramiotis, B. Marković, N. Cekić, S. Savic. "Tacrolimus loaded biocompatible lecithin-based microemulsions with improved skin penetration: Structure characterization and in vitro/in vivo performances". *International Journal of Pharmaceutics* (2017) 529, 491-505. (IF<sub>2016</sub> 3.649).
  9. Theochari, I., Goulielmaki, M., Danino, D., **Papadimitriou, V.**, Pintzas, A., Xenakis, A. "Drug nanocarriers for cancer chemotherapy based on microemulsions: the case of Vemurafenib analog PLX4720". *Colloids and Surfaces B: Biointerfaces* (2017) 154, 350-356. (IF<sub>2015</sub> 3.902) (**Corresponding author**).
  10. Kalogianni, E. P, Sklaviadis, L., Nika, S., Theochari, I., Dimitreli, G., Georgiou, D.: **Papadimitriou, V.** "Effect of oleic acid on the properties of protein adsorbed layers at water/oil interfaces: A study by EPR combined with dynamic interfacial properties". *Colloids and Surfaces B: Biointerfaces* (2017) 158, 498-506 (IF<sub>2015</sub> 3.902) (**Corresponding author**).
  11. Papanikolaou, N. E., Kalaitzaki, A., Karamaouna, F., Michaelakis, A., **Papadimitriou, V.**, Dourtoglou, V., Papachristos, D. P. "Nano-formulation enhances insecticidal activity of natural pyrethrins against *Aphis gossypii* (Hemiptera: Aphididae) and retains their harmless effect to non-target predators". *Environmental Science and Pollution Research*, (2017) 1-7. (IF<sub>2015</sub> 2.760).
  12. Mitsou, E., Tavantzis, G., Sotiroudis, G., Ladikos, D., Xenakis, A., **Papadimitriou, V.** "Food grade water-in-oil microemulsions as replacement of oil phase to help process and stabilization of whipped cream." *Colloids and Surfaces A: Physicochemical and Engineering Aspects* (2016), 510, 69-76. (IF<sub>2015</sub> 2.760) (**Corresponding author**).
  13. Khemakhem, M., **Papadimitriou, V.**, Sotiroudis, G., Zoumpoulakis, P., Arbez-Gindre, C., Bouzouita, N., Sotiroudis, T. G. "Melanin and Humic acid-like polymer complex from olive mill waste waters. Part I. Isolation and Characterization." *Food Chemistry* (2016) 203, 540-547. (IF<sub>2015</sub> 4.052) (**Corresponding author**).
  14. Khemakhem, M., Sotiroudis, G., Mitsou, E., Avramiotis, S., Sotiroudis, T. G., Bouzouita, N., **Papadimitriou, V.** "Melanin and humic acid -like polymer complex from olive mill waste waters. Part II. Surfactant properties and

- encapsulation in W/O microemulsions". *Journal of Molecular Liquids* (2016) 222, 480-486. (IF<sub>2015</sub> 2.740) **(Corresponding author)**.
15. Chatzidaki, M., Papadimitriou, K., Alexandraki, V., Tsirovouli, E., Chakim, Z., Ghazel, A. Mortensen, K., Yaghmur, A., Salentinig, S., **Papadimitriou, V.**, Tsakalidou, E., Xenakis, A. "Microemulsions as potential carriers of nisin: effect of composition on the structure and efficacy". *Langmuir* (2016) 32, 8988-8998. (IF<sub>2015</sub> 4.457)
  16. Gonçalves, K., I.I. Junior, **V. Papadimitriou**, M. Zoumpanioti, I.C.R., Leal, R.O.M.A. de Souza, Y. Cordeiro, A. Xenakis. "Nanoencapsulated Lecitase Ultra and Thermomyces lanuginosus Lipase, a Comparative Structural Study". *Langmuir* (2016) 32, 6746-6756. (IF<sub>2015</sub> 4.457)
  17. Chatzidaki, M., N. Arik, J. Monteil, **V. Papadimitriou**, F. Leal-Calderon, A. Xenakis "Microemulsion versus emulsion as effective carrier of Hydroxytyrosol". *Colloids and Surfaces B. Biointerfaces* (2016) 137, 146-151.(IF<sub>2015</sub> 3.902).
  18. Kalaitzaki, A., Papanikolaou, N.E., Karamaouna, F., Dourtoglou, V., Xenakis, A., Papadimitriou, V. "Biocompatible Colloidal Dispersions as Potential Formulations of Natural Pyrethrins: A Structural and Efficacy Study." *Langmuir* (2015) 31, 5722-5730. (IF<sub>2015</sub> 4.457) **(Corresponding author)**.
  19. Chatzidaki, M., Mitsou, E., Yaghmur, A., Xenakis, A., **Papadimitriou, V.** "Formulation and characterization of food-grade microemulsions as carriers of natural phenolic antioxidants". *Colloids and Surfaces A: Physicochem. Eng. Aspects* (2015) 483, 130-136 .(IF<sub>2015</sub> 2.760). **(Corresponding author)**.
  20. Kalaitzaki, A., Xenakis, A., **Papadimitriou, V.** "Highly Water Dilutable Microemulsions: A structural study". *Colloid Polym.Sci.* (2015) 293, 1111-1119 (IF<sub>2014</sub> 1.850) **(Corresponding author)**.
  21. Sereti, V., Zoumpanioti, M., **Papadimitriou, V.**, Pispas, S., Xenakis, A. "Bicollloids Based on Amphiphilic Block Copolymers as a Medium for Enzyme Immobilization". *J.Phys.Chem. B* (2014) 118, 9808 – 9816. (IF<sub>2013</sub> 3.377).
  22. Kalaitzaki, A., Pouloupoulou, M., **Papadimitriou, V.**, Xenakis, A. "Surfactant-rich biocompatible microemulsions for transdermal administration of methylxanthine drugs" *Colloids and Surfaces A: Physicochem. Eng.Aspects* (2014) 442, 80-87 (IF<sub>2013</sub> 2.760). **(Corresponding author)**.
  23. Kalaitzaki, A., Emo, M., Stébé, M.J., Xenakis, A., Papadimitriou, V. "Biocompatible nanodispersions as delivery systems of food additives", *Food Research International* (2013) 54, 1448-1454.(IF<sub>2013</sub> 3.871) **(Corresponding author)**.
  24. Kyriazi, A. **Papadimitriou, V.**, Sotiroudis, T. G., Xenakis. A. "Development and characterization of a digestion model based on olive oil microemulsions". *Eur. J. Lipid Sci. Technol.* (2013) 115, 601-611. (IF<sub>2013</sub> 2.033) **(Corresponding author)**.

25. **V. Papadimitriou**, M. Dulle, W. Wachter, T.G. Sotiroudis, O. Glatter, A. Xenakis: "Structure and dynamics of veiled virgin olive oil: Influence of production conditions and relation to its antioxidant capacity". *Food Biophysics* (**2013**) 8, 112-121. (IF<sub>2013</sub> 2.187)
26. Fanun, M., **V. Papadimitriou**, V., Xenakis, A. "Characterization of cephalixin loaded non-ionic microemulsions". *J. Colloid Inter. Sci.* (**2011**), 361, 115-121. (IF 3.758) (**Corresponding author**).
27. **Papadimitriou, V.**, Tzika, E.D., Pispas, S., Sotiroudis, T.G., Xenakis, A. "Microemulsions based on virgin olive oil: a model biomimetic system for studying native oxidative enzymatic activities". *Colloids and Surfaces A* (**2011**) 382, 232-237. (IF<sub>2010</sub> 2.359) (**Corresponding author**).
28. Tzika, E.D., M. Christoforou, S. Pispas, M. Zervou, **V. Papadimitriou**, T.G. Sotiroudis, E. Leontidis, A. Xenakis. "Influence of nanoreactor environment and substrate location on the activity of horseradish peroxidase in olive oil-based w/o microemulsions". *Langmuir*, (**2011**) 27, 2692-2700. (IF<sub>2010</sub> 4.186)
29. Xenakis, A. **Papadimitriou, V.**, Sotiroudis, T.G.. "Colloidal structures in natural oils". *Current Opinion in Colloid and Interface Science*, (**2010**), 15, 55-60. (IF<sub>2010</sub> 7.837).
30. Tzika, E.D., Sotiroudis, T.G., **Papadimitriou, V.**, Xenakis, A. "Partial purification and characterization of peroxidase from olives (*olea europaea* cv. Koroneiki)" *Eur Food Res Technol.*, (**2009**) 228, 487-495. (IF<sub>2008</sub> 1.585) (**Corresponding author**).
31. **Papadimitriou, V.**, S. Pispas, S. Syriou, A. Pournara, M. Zoumpantioti, T. Sotiroudis and A. Xenakis "Biocompatible microemulsions based on Limonene: Formulation, Structure and Applications". *Langmuir*, (**2008**) 23, 3380-3386. (IF<sub>2008</sub> 4.186) (**Corresponding author**).
32. Tzika, E.D., **Papadimitriou, V.**, Sotiroudis, T.G., Xenakis, A. "Oxidation of oleuropein studied by EPR and spectrophotometry". *Eur. J. Lipid Sci. Technol.*, (**2008**) 110, 149-157. (IF<sub>2008</sub> 1.733). (**Corresponding author**).
33. Tzika, E.D, **V. Papadimitriou**, T.G. Sotiroudis, A. Xenakis. "Antioxidant Properties of Fruits and Vegetables Shots and Juices: An Electron Paramagnetic Resonance Study". *Food Biophysics*, (**2008**) 3, 48-53. (IF<sub>2008</sub> 2.187). (**Corresponding author**).
34. Avramiotis, S., **V. Papadimitriou**, E. Hatzara, V. Bekiari, P. Lianos and A. Xenakis "Lecithin Organogels Used as Bioactive Compounds Carriers. A Microdomain Properties Investigation". *Langmuir*, (**2007**) 23, 4438-4447. (IF<sub>2006</sub> 4.186)
35. **Papadimitriou, V.**, T.G. Sotiroudis and A. Xenakis. "Olive Oil Microemulsions: Enzymatic Activities and Structural Characteristics". *Langmuir*, (**2007**) 23, 2071-2077. (IF<sub>2006</sub> 4.186)

36. **Papadimitriou, V.**, Sotiroudis, T.G., Xenakis, A., Sofikiti, N., Stavyiannoudaki, V., Chaniotakis, N.A. "Oxidative stability and radical scavenging activity of extra virgin olive oils by using Electron Paramagnetic Resonance spectroscopy". *Analytica Chimica Acta*, (2006), 573-574, 453-458. (IF<sub>2005</sub> 4.144). **(Corresponding author)**.
37. Zoumpanioti, M., H. Stamatis, **V. Papadimitriou** and A. Xenakis. "Spectroscopic and catalytic studies of lipase in ternary hexane-1-propanol water surfactantless microemulsion systems". *Colloids Surfaces B*, (2006), 47, 1-9. (IF<sub>2013</sub> 4.287).
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### **Book Chapters**

1. Theochari, I., Xenakis, A., **Papadimitriou, V.** (**2020**) "Nanocarriers for effective drug delivery" In Smart Nanocontainers, Elsevier, Part 3 Chapter 26, 315-341 (**Corresponding author**).
2. M.D. Chatzidaki, **V. Papadimitriou**, A. Xenakis, (**2019**) "Encapsulation of food ingredients by microemulsions". In Nanoencapsulation in the Food Industry, Vol 2: Lipid-Based Nanostructures for Food Encapsulation Purposes, Elsevier, pp 129-149.
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### **Conference Proceedings**

1. Tzika, E.D., **V. Papadimitriou**, T.G. Sotiroudis, A. Xenakis. "Oxidation of oleuropein by tyrosinase in aqueous solution and olive oil microemulsions: a comparative study". In *Hellenic Society of Biochemistry & Molecular Biology, Newsletter*, Proceedings of the 57<sup>th</sup> meeting (**2005**), 52, 739-742.
2. Tzika, E. D., M. Mastorakis, **V. Papadimitriou**, T.G Sotiroudis A. Xenakis, S. Miniadis-Meimaroglou. "Enzymatic Oxidation of olive oil polyphenols: the case of oleuropein". In "*Traditional Mediterranean Diet: Past Present & Future. Focusing on Olive Oil & Traditional Food Products*", Proceedings of the 2nd International Conference (**2005**), 1-5.
3. **Papadimitriou, V.**, A. Xenakis & A.E. Evangelopoulos. "Enzymic Studies in Microemulsions. Effect of Reverse Micelles on the Activity of Trypsin". *Biochem. Biophys. Newslett.*, (**1992**), 34, 29-31.
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### **Patents**

1. Papadimitriou K., Chatzidaki M. D., Alexandraki S., **Papadimitriou V.**, Tsakalidou E., Xenakis A. (**2015**). "Water-in-oil (W/O) microemulsions as

carriers of bacteriocins for the antimicrobial protection of foods" (OBI – 1008858).

2. Chatzidaki M. D., Mitsou E., Theochari I., **Papadimitriou V.**, Xenakis A., (2015). "Edible microemulsions with encapsulated plant extracts as dressing type products" (OBI –1008863).
3. Kalaitzaki A, Xenakis A, **Papadimitriou V.** (2013) "Biocompatible nanodispersions as media for encapsulating bioactive substances with phytoprotective activity" (OBI, 20130100305).

## INVITED PRESENTATIONS

1. V. Papadimitriou. " Biomimetics & Nanobiotechnology". Department of Pharmaceutical Technology and Cosmetology, Faculty of Pharmacy, University of Belgrade, Belgrade, Serbia, 2019
2. V. Papadimitriou. "Biomimetics & Nanotechnology". Greek Innovation Forum, Research, Design, Technology, Workshops, Conference, Exhibition, Hilton Athens, 2016
3. V. Papadimitriou. "Biomimetics & Nanotechnology". Greek Innovation Forum, Research, Design, Technology, Workshops, Conference, Exhibition, Hilton Athens, 2014
4. V. Papadimitriou. "Biocompatible nanodispersions as media for encapsulating bioactive substances with phytoprotective activity". Ministry of Foreign Affairs, Presenting mature research results, Athens July 17, 2014
5. V. Papadimitriou. "Biocatalysis in Nanodispersions". 3rd Summer school of protein structure, Athens, June 27-29, 2013
6. V. Papadimitriou. Olive Oil Antioxidants. Belgrade Food International Conference. Food, Health and well-being. Belgrade, Serbia, 2012.
7. V. Papadimitriou. Antioxidants and free radicals. Evaluation of the antioxidant properties of commercial fruit and vegetable shots and juices. 3rd Balkan Congress on Obesity, Thessaloniki, Greece 2008.
8. V. Papadimitriou. Antioxidants and free radicals. 1st Greek Nutrition Symposium. HELEXPO, Thessaloniki, Greece 2006.

## CONFERENCES

### (Selected from 80 participations in International/National Conferences)

- 33<sup>rd</sup> Conference of the European Colloid and Interface Society (ECIS), "Structure, activity and dynamics of oil-in-water (O/W) nanoemulsions as carriers of vitamin D3", 8-13 September 2019, Leuven, Belgium

- 32<sup>nd</sup> Conference of ECIS, "Development and characterization of food-grade olive oil in water nanoemulsions for the encapsulation of Vitamin D" , 2-7 September 2018, Ljubljana, Slovenia
- 31<sup>st</sup> Conference of ECIS, "Development of O/W nanoemulsions as carriers of vitamin D: A structural study", 3-8 September 2017, Madrid, Spain
- NanoBio&Med, "Nanodispersions as carriers of bioactive compounds–Biological Applications", 17-19 November, 2017, Barcelona, Spain
- 68<sup>th</sup> Annual Conference of the Hellenic Society for Biochemistry and Molecular Biology (HSBMB), "Oil-in-water microemulsions, as carriers for novel bioactive compounds-Applications in chemotherapeutics", November 2017, Athens, Greece
- 30<sup>th</sup> Conference of ECIS, "Oil-in-water microemulsions, as carriers for anticancer drug against melanoma", September, 2016, Rome, Italy
- 67<sup>th</sup> Annual Conference of the Hellenic Society for Biochemistry and Molecular Biology (HSBMB), "Oil-in-water microemulsions, as carriers for anticancer drug against melanoma", November 25-27, 2016, Ioannina, Greece
- 29<sup>th</sup> Conference of ECIS, "Oil-in-water microemulsions, as carriers for pharmaceutical substances: encapsulation of bioactives, structural study and in vitro cell lines testing", September 2015, Bordeaux, France
- 13<sup>th</sup> Euro Fed Lipid Congress, "High Molecular Weight Protein-Polyphenol Complexes isolated from Olive Oil Mill Wastewater Encapsulated in Reverse Micelles", September 2015, Florence, Italy
- 28<sup>th</sup> Conference of ECIS, "Effect of oleic acid on the properties of protein adsorbed layers at water/oil interfaces: An EPR study combined with dynamic interfacial tension measurements" and "Food Grade Microemulsions as Antioxidant Matrices", September 2014, Limassol, Cyprus.
- 14<sup>th</sup> European Student Colloid Conference, "Preparation and structural characterization of microemulsions used as delivery systems for bioactive compounds", June 10-13, 2013, Potsdam-Golm, Germany.
- 27<sup>th</sup> ECIS Conference, "Development and structural characterization of microemulsions for the encapsulation of natural pyrethrins" and "Nanodispersions as micronutrient carriers", September 2013, Sofia, Bulgaria.
- COST Action CM1101 Joint Meeting of WG3, WG4 and WG5: Synthesis, Kinetics and Catalytic Aspects of Biocolloids, "Biocolloids as effective carriers of bioactive compounds", January 2013, Malta.
- 26<sup>th</sup> ECIS Conference, "Formulation and structural characterization of o/w nanoemulsions as effective carriers of bioactive compounds" and "Surfactant-rich biocompatible microemulsions for transdermal administration of

methylxanthine drugs: a comparative study” and “Reverse Micellar Nanosystems for enzymic biocatalysis: Structure-Activity Relationship” and “Formulation and Structural characterization of o/w nanoemulsions as effective carriers of bioactive compounds” , September 2-7, 2012, Malmö, Sweden.