

## Biomimetics & Nanobiotechnology

### Full list of funded projects

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1. Program ΕΣΠΑ "Bioconversion of CO<sub>2</sub> into high added value bioproducts through sustainable microalgae cultivation processes" Budget 1.000.000 € (Biomimetics & Nanobiotechnology 150.000,10 €), Coordinator NHRF: Dr. Maria Zoumpanioti
2. "QFytoTera: Nanoemulsions of plant oils with moisturizing and insect repellent properties". NSRF, Operational Programme Competitiveness, Entrepreneurship and Innovation 2014- 2020, Industrial Partner: Qualia Pharma (Coordinator Dr S. Zographos, IBMCB/NHRF) (Budget: 630,005.37 €, Budget IBMCB/NHRF: 289.900) WP1 leader
3. Program ΕΣΠΑ - "RIS3-AGROFOOD". "Study and exploitation of olive oil as innovative raw material for special industrial applications to baby food products". Budget 250.000 € (Biomimetics & Nanobiotechnology 65.000 €), Coordinator NHRF: Dr. Maria Zoumpanioti
4. Program National Strategic Reference Framework, Action "Developmental Projects of Research Organisations- Kripis"2015-2020:"STHENOS 2", Targeted therapeutic approaches against degenerative diseases, with special focus on cancer and ageing. Optimization of targeted bioactive compounds. Budget: 790.000,00 € (Biomimetics 83.968,39 €). Coordinator Dr A. Pintzas
5. Nanobiotechnology, National Hellenic Research Foundation Project 2402, 2015-2018, Budget. 162.635 €. Coordinator NHRF: Dr. A. Xenakis
6. Program ΕΣΠΑ PAVET "Application of Nanoemulsion Technology to food products based on Oil in Water Emulsions such as vegetable cream and fudge icings" Budget: 300.000,00 € Contractor: JOTIS SA (NHRF 61.250€).
7. Program National Strategic Reference Framework, Action "Developmental Projects of Research Organisations- Kripis"2013-2015:"STHENOS", Targeted therapeutic approaches against degenerative diseases, with special focus on cancer and ageing. Budget: 1.500.000,00 € (Biomimetics 174.773€). Coordinator Dr A. Pintzas
8. EU INCO FP7: Mediterranean Science, Policy, Research & Innovation Gateway (MEDSPRING), 2013-6 Budget: 289.650 €. Coordinator NHRF: Dr A. Xenakis
9. EU INCO FP7: EURO-MEDITERRANEAN Cooperation through ERANET joint activities and beyond (ERANETMED, 2013-6, Budget: 107.649,45 €. Coordinator NHRF: Dr A. Xenakis
10. Program Agence Nationale de Recherche (ANR), Institut Carnot, Projet Lipides pour l'industrie et la santé (LISA), France. 2013-17. «micro/nano-émulsions de type e/h biocompatibles et riches en micronutriments : préparation et caractérisation» Budget: 43.000 €. Coordinator: F. Calderon
11. Program CAPES, Ministry of Education, Brazil. 2010-14. "Nanobiotechnology. Lipase activity" Budget: NHRF 40.000 €. Coordinator R. Souza

12. Program ΕΣΠΑ "Cooperation" 2010-13. "Development of nanoemulsions as new materials for managing phytoprotective products to reduce the environmental charge"  
 Budget: 449.040,00 € (NHRF 147.743€). Coordinator Dr V. Papadimitriou.
13. MED Program 2010-2012 «IP Awareness and Enforcement: innovative services for Mediterranean SMEs -IP-SMEs» No. 1G-MED08-309 (2010-13) Budget: 170.000 €  
 Coordinator NHRF: Dr A. Xenakis
14. South East Europe - Transnational Cooperation Programme 2009-2011, "Solutions and Interventions for the Technological Transfer and the Innovation of the Agro-Food Sector in the South East Regions", SEE/A/160/1.1/X Budget: 238.118 € Coordinator NHRF: Dr A. Xenakis
15. MED Program 2009-2011 "Mediterranean Transnational Technology Transfer - MET3"  
 Budget: 360.000 € Coordinator NHRF: Dr A. Xenakis
16. Program ΕΠΑΝ Cyprus Hellenic Collaboration 2006-7 "Quality and stability of virgin olive oil. The role of endogenous enzymes and antioxidants - biotechnological applications"  
 Budget: 11.740,00 €. Coordinator Dr V. Papadimitriou; Collaboration with the research group of: Prof. Ep. Leondidis, Chemistry Dept. University of Cyprus, Nicosia
17. Program ΕΠΑΝ Franco Hellenic Collaboration 2006-7 "Biocatalysis by immobilized enzymes in mesoporous materials for the biotechnological production of high added value products" Budget: 12.400,00 €. Coordinator NHRF: A. Xenakis; Collaboration with the research group of: Dr M.J. Stébé, Equipe Physico-chimie des Colloïdes (UMR 7565) Faculté des Sciences Université de Nancy
18. Program ΕΠΑΝ - Liaison Offices of Universities & Research Centers. (2005-8) "Development of a Liaison office at the NHRF". Budget: 300.000,00 € Coordinator NHRF: A. Xenakis
19. Program ΠΑΒΕΤ 2005: "Production of high added value products by the biotechnological application of lipases as biocatalysts" Contractor: NEOKEM SA Budget: 35.000,00 €. Coordinator NHRF: A. Xenakis
20. Program «CRETE - COOPERATION» of the Dir.1334/02 – Sitia, Mirampelo, Peza and Milopotamos Unions- ΟΠΕΚΕΠΕ (2004-5) "Study of parameters affecting the quality of greek virgin olive oils. Degree of maturity and natural antioxidants content" Budget 29.759,52 €; Collaboration with the research group of Prof N. Chaniotakis Chemistry dept., Univ.of Crete
21. Program «ΣΥΝΕΡΓΑΣΙΑ» of the Dir.1334/02 – ELAIOURGIKI - ΟΠΕΚΕΠΕ (2003-4) "Determination of the most significant and usual quality problems encountered in greek olive oils. Evaluation and therapeutic actions" Budget 20.000,00 €; Collaboration with the research groups of: 1. ELAIOURGIKI SA.; 2. Ass.Prof. M.Tsimidou, Food Chem. & Technol. Lab., Univ. of Thessaloniki; 3. As.Prof.E.Psomiadou, Food Chem lab., Chemistry dept., Univ.of Ioannina
22. Program IKYDA (2002-4) "Enzyme immobilization in microemulsion organogels – Study in supercritical fluids". Collaboration με Prof. Werner Kuntz Institute of Physical & Theoretical Chemistry, Regensburg University, Germany Budget 10.000,00 €

23. Program ΕΠΑΝ "Supporting research groups for exploiting research results. Finding and valorizing results through spin off company creation. Phase Α'. Preparation of the investment" (2002-3) 01 ΠΡΑΞΕ 18. Budget: 44.000,00 €
24. Program ΕΠΑΝ ΠΑΒΕΤ 2000 00ΒΕ58 (2001-3) "New systems for delivery of drugs and biologically active substances with repetitive and controlled release" Contract with: Pharmathen SA. Budget: 83.436.000 Grd. (NHRF 3.350.000 Grd.) Coordinator NHRF: A. Xenakis.
25. Program of Greek-Spanish Collaboration (2000-2001) "Application of new immobilized enzymic systems for the synthesis of pharmaceuticals" Coordinator NHRF: A. Xenakis. Collaboration with the research group of Prof. J.V. Sinistera Cago, Dept Organic & Pharmaceutical Chemistry, Faculty of Pharmacy Universidad Complutense de Madrid» Budget: 4.200.000 Grd Coordinator NHRF: A. Xenakis.
26. Program TEI Athens, Cosmetology Dept. School of health professions (1999-2001) "Lipolytic substances in microemulsions". Coordinator: Prof.E. Protopapa. Budget: 5.000.000 Grd Coordinator NHRF: A. Xenakis
27. Program ΕΠΕΤ II - Subprogram 2, Action 2.1, ΠΑΒΕ-99ΒΕ5 (1999-2001) "Virgin olive oil: Characterization of the effect of pigments and tocopherols on the oxidative stability and development of a method for the estimation of the oxidative condition", Contract with: ELAIS SA. Budget: 62.105.000 Grd (NHRF 8.200.000 Grd.) Coordinator NHRF: A. Xenakis
28. Program ΕΠΕΤ II - Subprogram 1, Action 2.3, Nutrition Program 97ΔΙΑΤΡΟ-29 (1999-2001) "Study of the presence and bioavailability of phenolic antioxidants in foods of the Mediterranean diet" Contract with: Univ. of Thessaloniki Budget: 95.000.000 Grd (NHRF 17.450.000 Grd.) Coordinator NHRF: A. Xenakis; Collaboration with the research groups of: 1. ELAIS SA. Oleaginous Company; 2. Prof.A.Kaffatos, Clinic of preventive medicine & nutrition, Medical School, Univ.of Crete; 3. Prof. D. Boskou, Food Chem. & Technol. Lab., Univ. of Thessaloniki; 4. Prof. I.Gerothanassis, Org.Chem & Biochem. Lab., Chemistry dept., Univ.of Ioannina
29. Program ΕΠΕΤ II - Subprogram 4, Action 4.1, ΠΕΝΕΔ 99ΕΔ74 (1999-2001) "Biotechnological applications of lipolytic enzymes for the synthesis of high added value products" Contract with: NTUA. Budget: 52.000.000 Grd (NHRF 15.800.000 Grd) Coordinator NHRF: C.Cazianis; Collaboration with the research groups of: 1. Assoc.Prof.D.Kekos, Biotechnology lab., Chem.Eng. dept. NTUA; 2. Assis.Prof. J.Smonou, Organ.Chem. lab. Chemistry dept., Univ.of Crete.
30. Program ΕΠΕΤ II - Subprogram 4, Action 4.1, ΠΕΝΕΔ 99ΕΔ98 (1999-2001) "New materials based on hydrosoluble polymers as carriers of biologically active substances". Budget: 57.000.000 Grd (NHRF 18.500.000 Grd) Coordinator: A. Xenakis; Collaboration with the research groups of: 1. Assoc.Prof. G. Staikos, Inst.Chem.Eng/FORTH, Patras; 2. Dr. A. Malliaris Inst of Physical Chemistry NRC "Demokritos"
31. Program ΕΠΕΤ II - Subprogram 2, Action 2.1, ΠΑΒΕ-97ΒΕ93 (1998-2000) "New technology for transdermal drug delivery. Application of microemulsions and organogels", Contract with Pharmathen Ltd. ΕΠΕ. Budget: 67.649.087 Grd. (NHRF 14.000.000 Grd.) Coordinator NHRF: A. Xenakis

32. Program ΕΠΕΤ II - Action 2.4 R & D Networks, Data Bases, (1998-2000) "Enzymes in clinical diagnosis and therapy", Coordinator: T. Sotiroudis. Budget: 26.000.000 Grd  
 Collaboration with National Drug Organization and the Medical school of the Univ.of Athens
33. Program financed by Pharmathen Ltd. ΕΠΕ (1997) " Microemulsions for face cleansers"  
 Budget: 1.000.000 Grd. Coordinator NHRF: A. Xenakis
34. Program ΕΠΕΤ II- subprogram 1, ΥΠΕΡ- 55 (1996-9) "Development of a new enzymatic immunoassay for the production of clinical laboratory kits". Budget: 13.500.000 Grd.  
 Coordinator NHRF: A. Xenakis
35. Program ΕΠΕΤ II - subprogram 1, ΠΕΝΕΔ -185 (1996-8) "Study of the enzymatic activity of hydrolytic enzymes hosted in water in oil microemulsions" Budget: 10.000.000 Grd.  
 Coordinator NHRF: A. Xenakis
36. Program ΕΠΕΤ II - subprogram 2, Action 2.3. Liaison Offices of Universities and Research Centers. (1996-9) "Development of a Liaison office at the NHRF". Budget: 72.000.000 Grd. Coordinator NHRF: A. Xenakis
37. Program BIOTECH of the European Union (1994-6) (in collaboration with Prof. Kolisis): "Structure-function lipase relationships in low water media". Budget: 55.000 ECU.  
 Collaboration with the research groups of: 1. Prof.C.Cambillau, Lab. Cristallographie des Macromolecules Biolog., CNRS, Marseille, France. 2. Dr. M.R.Egmond, Unilever Research Laboratory, Vlaardingen, The Netherlands. 3. Prof. S.B.Petersen, SINTEF, MR-Center, Trondheim, Norway. 4. Prof. M.D.Legoy, Lab. de Génie Protéique, Université de La Rochelle, France. 5. Prof.P.Halling, Dept.Bioscience & Biotechnology, Univer.of Strathclyde, Glasgow, UK. 6. Prof. J.M.S.Cabral, Lab. de Engenharia Bioquimica, IST, Lisboa, Portugal.
38. Program ΕΠΕΤ II, subprogram 1, ΕΚΒΑΝ-691, (1994-7): "Greek Virgin Olive Oil: Origin Productio Technology & Quality". Budget NHRF: 60.000.000 Grd. Coordinator NHRF: A. Xenakis. Collaboration with the research groups of: 1. ELAIS SA. Oleaginous Company; 2. Dr.E.Chamalidis, Food Department, General State Lab.; 3. Prof. D. Boskou, Food Chem. & Technol. Lab., Univ. of Thessaloniki; 4. Prof. M. Komaitis, Dept of Agricultural Industries, Athens Agricultural Univ.; 5. Dr.A. Koutsaftakis, Inst. of subtropics & olives, Chania, NAGREF.
39. Program PLATON 1993. "Enzymic studies in microemulsions. Structural aspects" (16th Collaboration protocol). Budget: 2.000.000 Grd. Collaboration with the research groups of: 1. Prof. M.P.Pileni Structure and Activity on interfaces lab., Univ. Paris VI, France; 2. Dr C. Petit CEA Saclay, Paris, France.
40. Program PLATON 1992. "Enzymic studies in microemulsions. Structural aspects"(Contract N 02001910092- 15th Collaboration protocol). Budget: 2.000.000Grd. Collaboration with the research groups: 1. Prof. M.P.Pileni Structure and Activity on interfaces lab., Univ. Paris VI, France; 2. Dr C. Petit CEA Saclay, Paris, France.
41. Program BRIDGE of the European Community Commission (1991-94): New ways of Biotransformation in non-aqueous systems for the synthesis of pharmaceuticals. Application of supercritical gases, organic solvents, liquid membranes and microemulsions. (Contract N BIOT - CT90 - 0176 (TSTS)). Budget: 900.000 ECU.

- Collaboration with the research groups of: 1. Dr T.Scheper, Inst. of Chemical Technology, Univ. Hannover, Germany; 2. Prof. A.Ballesteros, Biocatalysis lab. Univ. of Madrid, Spain; 3. Dr U.Menge, Enzymatic Technology lab, GBF, Braunschweig, Germany; 4. Dr D.Combes, Biochemical Engineering lab., INSA Toulouse, France.
42. Program SCIENCE of the European Community Commission (1988) (Contract No.SC1-0084). Collaboration with the research groups of: 1. Dr C.Tondre, Organic Physical Chemistry lab, LESOC, Univ. Nancy I, France; 2. Dr J.C.Ravey, Colloidal Physical Chemistry lab, LESOC, Univ. Nancy I, France.
43. Biotechnology Action Program (BAP) of the European Community Commission (1986-89). (Contract No BAP 0051-GR). Budget: 12.500.000 Grd.; Collaboration within the project Bioreactors with the research groups of: 1. Prof. M.Rossi, Organic & Biological Chemistry lab., Univ. of Napoli, Italy; 2. Dr M.Legoy, Enzymatic Technology lab., Technol.Univ. of Compiegne, France; 3. Prof. K.Schugerl, Inst. of Chemical Technology, Univ. Hannover, Germany; 4. Prof. A. Ballesteros, Biocatalysis lab. Univ. Madrid, Spain.