General Project Information	
Project Title	**Molecular Analysis and Biotechnological Applications of Olive Plant Enzymes involved in Phenolic Compounds with Antioxidant Activity**
Project Code	ΥΓΕΙΑ/TROF/0609(BE)/03

Summary	The main objective of this research project is the isolation and expression of genes encoding key enzymes that regulate the biosynthesis of antioxidant in the olive fruit and olive oil. The specific aims of the project are: a) The isolation, characterization and the study of the expression profile during fruit ripening of the β-glycosidase gene involved in the biosynthesis of potent olive antioxidants (i.e. conversion of oleuropein to the antioxidant derivative hydroxytyrosol), normally found in the olive oil and fruit b) The isolation and characterization of the cytochrome CYP-450 gene involved in the regulation of the biosynthesis of oeuropein, and the study of its expression profile during olive fruit ripening. c) The expression of these two enzymes into bacteria or yeast systems and the study of the biotechnological production of antioxidants. d) Transcription profile analysis of *Olea europaea* genes involved in antioxidant synthesis by the use of ESTs, (Expressed Sequence Tags) library from olive leaf trichomes (rich in antioxidants) and proteomics for the profiling of key enzymes involved in antioxidant production. This project will be developed with the cooperation of the group of Professor P. Hadjopoulos (Agricultural University of Athens), Dr. D. Tsaltas (the Cyprus University of Technology), the company Aegis and Professor C. Demoliou (Life and Health Sci. Dept., University of Nicosia) as the project coordinator.

Funding	
Funding Agency	Research Promotion Foundation
Framework	2009-2010
Programme	Health and Biological Sciences
Action	Food Science and Biotechnology

Internal Coordination						
Project Submitted Under	University of Nicosia Research Foundation (UNRF)					
Role in Project	Host Organisation					
Partner Research Coordinator (PRC)	Dr. Catherine Demoliou					
Department & School	Department of Life & Health Sciences, School of Sciences					
Contact Details	**Tel:**	+357 22841697	**Fax:**	+357 22355116	**E-mail:**	demoliou.c@unic.ac.cy

Partners				
Partner No.	**Organisation**	**Country**	**Contact Person**	**Contact Details**
1	Agricultural University of Athens	Greece	Dr. Polydefkis Hadjopoulos	
2	Cyprus University of Technology	Cyprus	Dr. Dimitris Tsaltas	
3	AEGIS Ltd	Cyprus	Dr Nicolas Stylianides	aegis@cytanet.com

Schedule			
Year Awarded	**Duration (in months)**	**Start Date**	**Expected End Date**
2011	36	30/04/2011	29/04/2014

Budget			
	%	**Euro**	
Funding Agency Contribution to UNRF	73	82,370	
Total Project Budget		**225,742**	

Dissemination	
Funding Website	www.research.org.cy
Project Website	

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