SHORT CURICULLUM VITAE

Milton A. Typas

2015

POSITIONS H	ELD
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1975-1977	Post-Doctoral and Temporar Lecturer, University of London (Queen Elizabeth College)
1978-1980	Lecturer, Athens University 1978-1980
1980-1986	Tenured Lecturer at Athens University
1986-1992	Senior Lecturer
1992-2000	Reader
Ian2001_	Professor, Head of the Department 1997-98, 1999-2000, 2002-2015

VISITING PROFESSOR		
1989-1990	Visiting Professor, King's College, London University 1989-1990 (one year, sabbatical	
	leave of absence).	
1990	Visiting Researcher, Julich, Kernforschungsanlage, Germany 1990 (3 months)	
2000	Visiting Professor, Novartis Research Centre (NIMRI) – U.C. San Diego (4 months, sabbatical leave of absence).	
2001-2002	Visiting Professor, Cornell University, NY, 2001-2002 (14 months; sabbatical leave of absence).	
1981-2000	Visiting-collaborating researcher with various Universities-Institutes in Europe	
	(Belgium, France, Germany, Netherlands and UK) for short periods at summers	
	(total around 6 months).	

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SCHOLARSHIPS		
1970-1971	Research Centre Democritus 1970-71 (undergraduate research assistantship), Athens, GR	
1972-1975	London University, QEC, UK, 1972-1975 (Ph.D. demonstratorship)	
1975-1977	London University and Agricultural Research Council, UK, Postdoctoral and Temporar	
	Lecturer	
1977	Royal Society of Britain	
1978, 1980,		
1981, 1982	Junior Researcher, British Council, QEC, UK, (summer 3 month grants)	
1983, 1985	EMBO, and EU mobility grants, London University, KQC, UK and Julich, Germany	
	(summer 3 month grants)	
1990, 1994	British Council, KOC, UK (9 months and 2 months; Senior Researcher)	

FUNDED RESEARCH PROJECTS

1984-1986	Biotechnology Engineering Programme [BEP-DGXII-EC].
1986-1989	Biotechnology Action Programme [BAP-DGXII-EC].
1990-1993	Biotechnology [BIOTECH- DGXII-EC].
1994-1996	Human Capital Mobility. Insect pathogenic fungi for economic, environmentally friendly
	pest control in the glasshouse (AIR3-CT94-1352)
1995-1998	AIR3-CT94-1352. Biocontrol of important soil dwelling pests by improving the efficacy
	of insect pathogenic Fungi [BIPESCO].
1998-2001	FAIR6-CT98-4105. Determining molecular markers for the genetic analysis of
	recombinant strains of entomopathogenic fungi used for biological control.
2002-2005	QLK-CT-2001-01391: Risk Assessment of Biological Control Agents [RAFBCA].
2005-2008	FP6-2004-SSP-4: Specific Support Action, Regulation of Biocontrol Agents [REBECA]
2010-2012	Molecular identification nd characterization of Beauveria bassiana strains INRA 147,
	ATCC4040, BELCHIM BB1, NPP-111B005 and Laverlam.

National-EU

1986-1988 TPOTE The genetics and physiology of <i>Zymomonos mobilis</i>

- **1989-1992** ΠΕΝΕΔ Production of bioethanol by the entanologenic bacterium *Zymomonas mobilis*.
- 1995-1998 EITET II An integrated and novel approach of producing added value products (amino acids and oligosaccharides from by-products of sugar producing factories.
- 1996-1998 ΠΕΝΕΔ II Genetic fingerprinting and phylogenetic relationships of plant pathogenic and non-pathogenic species of the genus Verticillium based on molecular, genetic and immunogenetic techniques.
- 1997-1998 ΠABE Reduction of losses in sugar production by controlling microbial activities in the line Industrial production.
- Joint Research and Technology Projects: Franco-Greek binational Collaboration on «Determining molecular markers for the genetic identification and analysis of genetic recombinant strains of the entomopathogenic fungi *Verticillium lecanii* and *Beauveria bassiana* that are used as biocontrol agents».
- GREEK-RUSSIAN BINATIONAL COLLABORATION: An integrated approach to the identification of species and subspecies grouping in the genus Verticillium.
- 1998-2001 EIIET II The alcoholic fermentation during wine production: Screening and assessment of τ yeasts, study of fermentation parameters and quality improvement of wines produced.
- 1999-2002 ΠΕΝΕΔ 99 "Molecular mechanisms of bacterial resistance to variable sugar concentrations –industrial lines- in microorganisms of industrial interest.
- 1999-2002 EΠΕΤΙΙ- BIOPRO- 98GE2, "Improved technologies to increase resistance of plants to bacterial and fungal pathogens by genetic engineering, non invasive genetic approaches and other –non chemical- strategies. Construction and development of a comprehensive interactive database for the analysis of fungal mitochondrial genomes"
- 2002-2004 HUMAN NETWORKS, 'Biotechnological and bio-ethical approaches towards employing microorganisms for industrial, clinical, agricultural and environmental applications'.
- 2003-2006 EKBAN-EFIETII-TP5: 'An integrated strategy for the safety of Dairy Product Industry fron microbial contamination: use of fast, modern and accurate methods for the detection and genetic identification of spoiling or pathogenic microorganisms development of model examination plan for the everyday handling in the production lines'.
- **2004-2007** EKBAN-ΕΠΕΤΙΙ- ΦΠ66 'Biological treatment and exploitation of Olive oil Mill Wastewater: Mechanisms and integrated applicatios'.
- 2011-2014 HERAKLEITOS II: Genetic and molecular study of heterokaryosis in the plant pathogenic fungi of the genus Verticillium.
- 2013-2015 THALIS MIS 63.0001 'Biological Investigation Of the Forces that Influence the Life of Pathogens having as Mission to Survive in various Lifestyles [BIOFILMS]
- 2013-2015 THALIS MIS 377062 "Metagenomics of ligninolytic microorganisms Bioconversion of plant by-products into high-added value products" [LIGNOMET]. Coordinator
- 2013-2015 COOPERATION 2011 "The Sustainable Integrated Method for the Production of Lignocellulosic Ethanol" [SIMPLE].

ADMINISTRATIVE ACTIVITIES

- 1982-1996 Executive member of the National Hellenic Research Foundation 1982-1996 (6 consecutive terms).
- 1982-1988 Director of the National Documentation Centre, National Hellenic Research Foundation (EKT),
 - Executive member and Vice-Chairman of its Scientific Committee 1989-1999.
- 1982-1987 National Delegate for Science and Technology, U.N.
- 1983-1986 National Representative for the Committee for Science and Technology Programme, EC.
- 1986-2005 Member of Advisory Committees for Science and Technology (CCE) in EU, and Expert of National Delegations in Science & Research, Biotechnology, Agriculture

1986-2010	and Energy DG's VI, XII and XIII, EU. Independent expert/evaluator of research proposals and grant applications of young investigators in the EU (more than 200 proposals and 300 applications, respectively, in subjects of Biotechnology, Molecular-Microbial Genetics, Biodiversity, Biosafety, Plant Pathology, Plant-microbe interactions, Biocontrol, Biomass, Bioethanol etc) for various Programmes [e.g. BIOTECH, FAIR, COST, INTAS, COPERNICUS, THIRD COUNTRIES, STP, MARIE-CURRIE, FP5, FP6, FP7].
1996-1998	Member of the National Advisory Committee for Research ($E\Gamma\Sigma E$).
2001-2004	Member of the National Council for Research and Technology (E Σ ET).
1996-2004	Chairman Special Advisory Committee in Biotechnology.
1982-2014	Reviewer of research manuscripts for more than 50 International ICI-Indexed
	Journals and member of the editorial board in three Journals. Has reviewed more than
	600 manuscripts. Also, the reviewer of 14 book chapters.
2007-2010	Executive Member of the Research Committee of the National and Kapodistrian Universi Athens.
2010-2014	Full member of the Executive Research Committee of the National and Kapodistrian
	University of AthensΤακτικό μέλος της Επταμελούς Επιτροπής Ερευνών Ε.Κ.Π.Α.
1997-2004	Member of the National Competent Authority for the control of genetically engineered organisms and products.
1996-2010	Ad hoc expert-advisor for GMO organisms/products in EU Committees.
1995-1997	Vice-Chairman of the Faculty of Biology, University of Athens
2003-2015	Head of the Department of Genetics and Biotechnology
	Member of electoral bodies for Faculty member evaluations in all Greek Universities (more than 70 elections during the past decade)

RESEARCH ACTIVITIES/EXPERIENCE

Head of the Microbial-Molecular Genetics and Biotechnology group. Research interests are divided into two major lines:

directors and researchers of Institutes during the past years).

Member of electoral bodies for all the Research Institutes of Greece (over 20 elections of

a) Fungal Genetics / Biotechnology: Molecular typing/genetic fingerprinting of fungi with economic importance (phytopathogenic, entomopathogenic, yeasts), based on standard molecular techniques (RFLPs, RAPD, AFLP, DGGE, PFGE, PCR, RT-PCR, DNA/DNA, DNA/RNA hybridizations, immunolabelling, etc). Analysis of completed fungal mitochondrial genomes, gene structure-function, and phylogenetic relationships (an interactive database –MitoFun- to appear shortly at the net). Host-parasite relationships with model entomopathogens and phytopathogens. Study of the molecular mechanisms of heterokaryosis in mitosporic fungi. Phylogenetic analysis/implications, biodiversity and biosafety. Isolation, cloning and characterization of basidiomycetes genes involved in wood decomposition and assessment of their potential in ethanol production. Genomic and metagenomic approaches for the discovery and isolation of novel genes/gene products involved in cellulose and ligninocellulose degradation.

More classical approaches like mutagenesis, mutant production/characterization, mitotic recombination analyses, protoplast regeneration, protoplast fusion, transformation of cloning/expression vectors, gene isolation/characterization, gene-overexpression and the exploitation of parasexual cycle are also routinely used. Construction of knock-out mutants by gene-replacement/gene-inactivation methods are in use for fungi of interest.

b) Bacterial Genetics / Biotechnology: Various bacteria are used for the production of enzymes, fine chemicals and polysaccharides of industrial importance. Chemical and transposon mutagenesis, isolation and characterization of plasmids, transposable elements, isolation-cloning-characterization of genes, strain construction, construction of suitable cloning and expression vectors etc. are common lab practices. Particular emphasis is placed on the genetics if the ethanol producing bacterium *Zymomonas mobilis*, which is used as a model organism. Collaborations with the JGI/DOE of USA (PI, Dr K-M.Pappas) resulted in the complete sequencing and annotation of the genomes of 6 different

Zymomonas strains and the transcriptome analysis of the most important strain for ethanol production under various conditions is pending. Genetic engineering of strains of the bacterium for the production of bioethanol from cellulosic-ligninocellulosic residues as well as of value added chemicals is under the way in collaboration with Ass.Prof. K-M.Pappas.

The lab is equipped with all necessary instruments to contact experiments in Molecular-Microbial Genetics and Biotechnology.

Apart from the collaboration with the Assistant Professor Dr.K-M.Pappas and her research group, collaboration includes the Lecturer Dr.V.N.Kouvelis, the PostDocs Dr.I.Papaioannou, Dr.G.Efthymiou, and the Ph.D. students- researchers M.Kalntremtziou, V.Diakogiannaki, V.Vaggalis.

TEACHING AND Ph.D. SUPERVISOR/EXAMINER

The co-ordinator of three under-graduate courses: (a) Basic Genetics (compulsory), (b) Advance Genetics (choice course), (c) Biotechnology (choice course), and one post-graduate course for Ph.D. students, in Advanced Molecular Genetics. Also teaching –lectures- in 3 different M.Sc. courses. Supervisor of 40 Ph.D. theses (22 directly his own students who have graduated, and 18 from Research Institutes, as acting supervisor according to Greek, all of whom have graduated).

Member of the examination board for more than 200 Ph.D. theses in Greece and 16 abroad (U.K.4, France 3, Spain 2, USA 2, and 1 in each of Germany, Canada, India and Pakistan).

CONFERENCES, MEETINGS AND SYMPOSIA

President of Organizing Committees in 3 International and 12 National Conferences/Symposia. Organizing Committee Member and Chair in 51 occasions, invited speaker (50 International and 40 National Conferences/Meetings), with more than 220 published presentations, abstracts and posters. Invited speaker on 'popularized Biology science' at Town Halls and Open Universities. Speaker on GMOs and participation at round table discussions in tens of cases during the period 1995-2008.

OTHER ACTIVITIES

Has deposited more than 1,000 different sequences/packets of sequences in public domains like the NCIB Gene Bank. Some of the most important are: (a) the complete genomes of 6 bacteria, 12 fungal mitochondrial DNAs and 18 large plasmids, and (b) packets in population studies, *Verticillium* (252); *Metarhizium* (234); *Lecanicillium* (230); *Beauveria* (190); *Candida zemplinina* (28); *Zymomonas mobilis* (50); the yet unreleased *Aspergillus* (224); *Penicillium* (360), *Pleurotus* (416) and many single entries

Author of books (2) and booklets (6) for University underground students, 22 chapters in books ans collective volumes [some of the more recent: "Verticillium". In "Molecular detection of human fungal pathogens", ed. Liu D, JF Taylor & Francis CRC Press, Chapter 63, p.527-540 (2011); "Phylogenetic analysis of entomopathogenic fungi". In "Microbial Insecticides: Principles and applications" ed. Borgio JF, Schavaraj H & Susurluk A, NOVA Science Publishers, (2011); "Assessing genotoxic effects of microbial products", in "Microbes and the Law - Safety Assessment and Regulation of Beneficial Microorganisms", Chapter 7, Editors: Ingvar Sundh, Andrea Wilcks & Mark S. Goettel, CABI Publishing (2012); "A Phylogenetic analysis of Greek isolates of Aspergillus species based on morphology, nuclear and mitochondrial gene sequences" in Microbial Diversity for Biotechnology, ed. Hindawi Publications (2013)].

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MOST RECENT PUBLICATIONS (LAST 10 YEARS)

- 1. Wang C, Typas MA and Butt TM (2005). Phylogenetic and exon-intron structure analysis of fungal subtilisins: Support for a mixed model of intron evolution. *Journal of Molecular Evolution* **60**: 238-246.
- 2. Pantou M and Typas MA (2005). Electrophoretic karyotype and gene mapping of the vascular wilt fungus *Verticillium dahliae*. *FEMS Microbiology Letters* **245**: 213-220.
- 3. Pantou MP, Strunnikova OK, Shakhnazarova VYu, Cishnevskaya NA, Papalouka VG and Typas MA (2005). Molecular and immunochemical phylogeny of *Verticillium* species. *Mycological Research* **109**: 889-902.
- 4. Pramateftaki P, Lanaridis P, Kouvelis VN and Typas MA (2006). The mitochondrial genome of the wine yeast *Hanseniaspora uvarum*: a unique genome organization among yeast/fungal counterparts. *FEMS Yeast Research* **6:** 77-90.
- 5. Ghikas D, Kouvelis VN and Typas (2006). The complete mitochondrial genome of the entomopathogenic fungus *Metarhizium anisopliae* var. *anisopliae*: gene order and *trn* clusters revealed a common evolutionary course for all Sordariomycetes. *Archives for Microbiology* **185**: 393-401
- 6. Pantou MP, Kouvelis VN and Typas (2006). The complete mitochondrial genome of the vascular wilt fungus *Verticillium dahliae*: a novel gene order for Verticillium and a diagnostic tool for species identification. *Current Genetics* **50**: 125-136.
- 7. Pramateftaki P, Kouvelis VN, Lanaridis P and Typas MA (2008). The complete mitochondrial genome sequence of the wine yeast *Candida zemplinina*: intra-species distribution of a novel group-IIB1 intron with eubacterial affiliations. *FEMS Yeast Research*. **8:** 311-327.
- 8. Kouvelis VN, Ghikas D, Edgington S, Typas MA and Moore D (2008). Molecular characterisation of isolates of *Beauveria bassiana* obtained from over-wintering and summer populations of Sunn Pests (*Eurygaster integriceps*). *Letters in Applied Microbiology* **46**: 414-420.
- 9. Georgopoulos A, Typas MA and Demetzos K (2008). The use of liposomes as biosensors. An overview. *Pharmakeftiki* **21**: 22-29.
- 10. Kouvelis VN, Sialakouma A and Typas MA (2008). Mitochondrial gene sequences alone or combined with ITS region sequences provide firm molecular criteria for the classification of *Lecanicillium* species. *Mycological Research* **112**: 829-844.
- 11. Pantou MP, Kouvelis VN and Typas MA (2008). The complete mitochondrial genome of *Fusarium oxysporum*: insights into fungal mitochondrial evolution. *Gene* **419**: 7-15.
- 12. Kouvelis VN, Saunders E, Brettin TS, Bruce D, Detter C, Han C, Typas MA and Pappas KM (2009). Complete genome sequence of ethanol producer *Zymomonas mobilis* NCIMB 11163. *Journal of Bacteriology* **191**: 7140-7041. Epub 2009 Sep 18.
- 13. Yang S, Pappas KM, Hauser LJ, Land ML, Chen G-L, Hurst GB, Pan C, Kouvelis V, Typas MA, Pelletier DA, Klingeman DM, Chang Y-J, Samatova NF and Brown SD (2009). Improved genome annotation for *Zymomonas mobilis*. *Nature Biotechnology* **27**: 893-894 (+additional material).
- 14. Ghikas DV, Kouvelis VN and Typas MA (2010). Phylogenetic and biogeographic implications inferred by mitochondrial intergenic region analyses and ITS1-5.8S-ITS2 of the entomopathogenic fungi *Beauveria bassiana* and *B. brongniartii*. *BMC Microbiology* **10**:174 doi:10.1186/1471-2180-10-174.
- 15. Goudopoulou A, Krimitzas A and Typas MA (2010). Differential gene expression of ligninocellulolytic enzymes in *Pleurotus ostreatus* grown on olive-oil mill wastewater. *Applied Microbiology and Biotechnology* **88**: 541-551. Doi:10.1007/s00253-010-2750-9.
- 16. Kouvelis VN, Pappas K-M, Wang C, Skrobek A, Typas MA and Butt TM (2011). Assessing the cytotoxic and mutagenic effects of secondary metabolites produced by several fungal biological control agents with the Ames assay and the VITOTOX test. *Mutation Research Genetic Toxicology and Environmental Mutagenesis* 722: 1-6.

- Pappas KM, Kouvelis VN, Saunders E, Brettin TS, Bruce D, Detter C, Balakireva M, Han C, Savvakis J, Kyrpides NC and Typas MA (2011). Genome sequence of the ethanol-producing *Zymomonas mobilis* subsp. *mobilis* lectotype ATCC 10988. *Journal of Bacteriology* 193: 5051-5052, doi:10.1128/JB.05395-11.
- 18. Kouvelis VN, Davenport KW, Brettin TS, Bruce D, Detter C, Han C, Nolan M, Tapia R, Damoulaki A, Kyrpides NC, Typas MA and Pappas KM (2011). Genome sequence of the ethanol-producing *Zymomonas mobilis* subsp. *pomaceae* lectotype ATCC 29192. *Journal of Bacteriology* **193**: 5049-5050, doi:10.1128/JB.05273-11.
- 19. Typas MA and Kouvelis VN (2011). Phylogenetic analysis of entomopathogenic fungi. In "Microbial Insecticides: Principles and applications". ed. Borgio JF, Sahayaraj K and Susurluk IA, NOVA Science Publications, Inc., NY., chapter 7, p.121-148.
- 20. Pantou MP and Typas MA (2011). Verticillium, In "Molecular detection of human fungal pathogens". ed. Liu D, JF Taylor & Francis CRC Press, chapter 63, p.527-540.
- 21. Typas MA, Pantou MP and Kouvelis VN (2011). MtDNA and rDNA: Two different evolutionary lines combined for genetic differentiation, taxonomy and phylogenesis in ascomycetes. XVI Congress of European Mycologists, Chalkidiki, 19--23 Sept. 2011, pp.170-188.
- 22. Desiniotis A., Kouvelis VN, Davenport K, Bruce D, Detter C, Tapia R, Han C, Goodwin LA, Woyke T, Kyrpides NC, Typas MA and Pappas KM (2012). The complete sequence of the ethanol-producing *Zymomonas mobilis* subsp. *mobilis* centrotype ATCC 29191. *Journal of Bacteriology* **194**: 5966-67, DOI: 10.1128/JB.01398-12.
- 23. Typas MA and Kouvelis VN (2012). Assessing genotoxic effects of microbial products. In "Beneficial microorganisms in agriculture, food and the environment: safety assessment and regulation", ed. Sundh I, Wilcks A & Goettel M, CABI Publ., chapter 18, pp. 256-274, **DOI** 10.1079/9781845938109.0256.
- 24. Ligoxigakis EK, Papaioannou IA, Markakis EA and Typas MA (2013). First report of pink rot of Phoenix and Washingtonia palm species caused by *Nalanthamala vermoesenii* in Greece. *Plant Disease* **97** (2): 285. (dx.doi.org/10.1094/PDIS-08-12-0725-PDN)
- 25. Ligoxigakis EK, Markakis EA, Papaioannou IA and Typas MA (2013). First report of palm rot disease of Phoenix spp. caused by *Neodeightonia phoenicum* in Greece. *Plant Disease* **97** (2): 286. (dx.doi.org/10.1094/PDIS-08-12-0727-PDN)
- 26. Papaioannou IA, Ligoxigakis EK, Vakalounakis DJ, Markakis EA and Typas MA (2013) Phytopathogenic, morphological, genetic and molecular characterization of a *Verticillium dahliae* population from Crete, Greece. *European Journal of Plant Pathology* **136**: 577-596, (DOI: 10.1007/s10658-013-0189-4).
- 27. Ligoxigakis EK, Papaioannou IA, Markakis EA and Typas MA (2013). First report of leaf spot of *Phoenix theophrasti* caused by *Paraconiothyrium variabile* in Greece. *Plant Disease* **97** (9): 1250. (doi: dx.doi.org/10.1094/PDIS-01-13-0114-PDN)
- 28. Krimitzas A, Pyrri I, Kouvelis VN, Kapsanaki-Gotsi E and Typas MA (2013). A Phylogenetic analysis of Greek isolates of Aspergillus species based on morphology, nuclear and mitochondrial gene sequences. *Journal of Biomedicine and Biotechnology* Article ID 260395, 18 pages. (in Microbial Diversity for Bioetchnology, ed. Tsiamis G, Karpouzas D, Scherif A, Mavrommatis K, Hindawi Publ.)
- 29. Papaioannou IA, Dimopoulou Ch. and Typas MA (2013). Analysis of the intergenic region of the nuclear ribosomal complex of *Verticillium dahliae*: a molecular tool for discrimination and phylogenetic study of vegetative incompatibility groups. *FEMS Microbiology Letters* **347** (1): 23-32.
- 30. Ligoxigakis EK, Markakis EA, Papaioannou IA and Typas MA (2013). First Report of Petiole (Rachis) Blight of *Washingtonia filifera* Caused by *Phoma glomerata* in Greece. *Plant Disease* **97** (11): 1509-1510. (doi.org/10.1094/PDIS-04-13-0383-PDN)

- 31. Eboigbe L, Tzima AK, Paplomatas EJ and Typas MA (2014). Investigating the role of a β-endoglucanase gene, *veg*B, in physiology and virulence of *Verticillium dahliae*. *Phytopathologia Mediterrenea* **53** (1): 94-107. (http://dx.doi.org/10.14601/Phytopathol_Mediterr-13235).
- 32. Kouvelis VN, Teshima H, Bruce D, Detter C, Tapia R, Han C, Tampakopoulou V-O, Goodwin T, Woyke T, Kyrpides N, Typas MA, Pappas KM (2014). Finished genome of *Zymomonas mobilis* subsp. *mobilis* strain CP4, an applied ethanol producer. *Journal of Bacteriology* January/February 2014 vol. 2, no. 1, e00845-13.
- 33. Papaioannou IA and Typas MA (2014). 'Cryptic' group-I introns in the nuclear SSU-rRNA gene of *Verticillium dahliae. Current Genetics* **60:** 135-148. DOI 10.1007/s00294-013-0417-7.
- 34. Zervakis, GI, Ntougias S, Gargano ML, Besi MI, Polemis E, Typas MA and Venturella G (2014). A new *Pleurotus* species from Europe and reappraisal of the *P. eryngii* species-complex based on a polyphasic approach, with a key to taxa associated to Apiaceae host-plants. *Fungal Biology* **118**: 814-834. doi: 10.1016/j.funbio.2014.07.001.
- 35. Ligoxigakis EK, Markakis EA, Papaioannou IA and Typas MA (2015). First Report of Powdery Mildew of *Platanus* × *acerifolia* and *P. occidentalis* Caused by *Erysiphe platani* in Greece. *Plant Disease* **99** (2). 286 (dx.doi.org/10.1094/PDIS-07-14-0713-PDN).
- 36. Papaioannou IA and Typas MA (2015). Barrage zone formation is independent from vegetative incompatibility in *Verticillium dahliae*. *European Journal of Plant Pathology* **141**: 71-82. doi: 10.1007/s10658-014-0525-3.
- 37. Papaioannou IA and Typas MA (2015). Vegetative compatibility in *Verticillium dahliae*: high-throughput assessment and genetic aspects. *Journal of Phytopathology* **163**: 475-485. DOI: 10.1111/jph.12345.