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## Vasileios Fotopoulos [BSc (Hons), MSc, DIC, PhD]

Date of Birth: 27/01/1978

Place of Birth: Thessaloniki, Greece

### Education

**1999-2003** University of Southampton (U.K.)

#### **PhD in Plant Molecular Biology**

PhD thesis title: Molecular analysis of nutrient transfer in the host/powdery mildew interaction

Supervisors: Prof. J. Hall & Dr. L. Williams

**1998-1999** Imperial College of Science, Technology and Medicine, University of London (U.K.)

#### **MSc in Pest Management (Plant Disease) with Distinction**

#### **DIC (Diploma of Imperial College) in Pest Management with Distinction**

MSc thesis title: Identification and characterisation of viruses infecting spinach in Northern Greece

Supervisor: Dr. S. Archer (in collaboration with Prof. N. Katis of the Plant Pathology Department, Faculty of Agriculture, Aristotle University of Thessaloniki)

**1995-1998** Wye College, University of London (U.K.)

#### **BSc (Hons) in Horticulture - Second Class Upper Division (2:1)**

BSc thesis title: Biological Control of *Botrytis cinerea* Pers.

Supervisor: Prof. J. Mansfield

### Awards/ Scholarships Received

- Final year Horticulture Project marked best amongst all Horticulture Projects, represented Wye College in 1998's annual Horticulture Research International (H.R.I.) competition for the Aberconway Medal.
- PhD scholarship of excellence awarded by the Alexander S. Onassis Public Benefit Foundation (Prot. Nr.: W117). Scholarship Duration: 24 months (2000-2002).
- Post-doctoral scholarship of academic excellence awarded by the Research Committee of the Aristotle University of Thessaloniki (Prot. Nr.: 34947/04). Scholarship Duration: 12 months (1/04-12/04).
- COST Action FA0605 fellowship awarded for participation in 2<sup>nd</sup> INPAS meeting in Tartu, Estonia, 14-17 May 2009.
- Erasmus Mobility Scholarship awarded by the Foreign Affairs Office of the Cyprus University of Technology for the participation in a training course on V.I.G.S. technology in the laboratory of Dr. E. Johansen at the University of Aarhus, Denmark. Scholarship Duration: 2 weeks (24/05/09-06/06/09).
- COST Action FA0605 fellowship awarded for participation as an invited speaker at the 3<sup>rd</sup> INPAS meeting in Valencia, Spain, 26-27 May 2010.
- Erasmus Mobility Scholarship awarded by the Foreign Affairs Office of the Cyprus University of Technology for carrying out a 5-hour series of lectures to doctoral candidates of the Department of Agricultural Sciences at the University of Florence, Italy. Scholarship Duration: 1 week (18/04/11-22/04/11).

**Work/  
Research  
Experience**

**6/2008-present** Cyprus University of Technology  
**Lecturer**  
I am currently a Lecturer in Plant Biology at the Department of Agricultural Sciences, Biotechnology and Food Science.

**3/2008-5/2008** Institute of Agrobiotechnology, CE.R.T.H. (Greece)  
**Post-Doctoral Research Scientist**  
'VIGS (Virus-Induced Gene Silencing) technology on pepper plants as a tool to silence host genes and examine the resulting phenotypic response' (Grant Code: INA-GENOME 12979/B1/4.5.1/4513 – DIA.044210).

**7/2007-2/2008** National Agricultural Research Centre, N.AG.R.E.F. (Greece)  
**Post-Doctoral Research Scientist**  
'The effect of salinity on the antioxidant gene response of the model legume plant *Medicago truncatula*' (Grant Code: 55/98 P.Y.S.).

**2/2004-4/2006** Aristotle University of Thessaloniki (Greece)  
**Post-Doctoral Research Scientist**  
- 'Isolation and characterization of glandular trichome-specific genes from the plant *Cistus creticus* spp. *Creticus*' (Grant Code: GR-GSRT-USA-2004).  
- 'The effect of ascorbate oxidase over-expression in transgenic tobacco plants on the response to abiotic and biotic stress factors' (Grant Code: GR-GSRT-UK-BC2002-Agrobiotech project).

**Teaching/  
demonstrating  
Experience**

**6/2008-** Cyprus University of Technology Limassol  
**Lecturer**  
I am currently giving lectures and carrying laboratory practical classes for the courses of 'Plant Physiology', 'Molecular Biology & Biotechnology', 'Plant Anatomy-Morphology' and 'Plant Systematics' in the Department of Agricultural Sciences, Biotechnology and Food Science and Molecular Biology & Biotechnology for the academic year 2008-09, 2009-10 and 2010-11.

**4/2011** University of Florence Florence  
**Invited Lecturer**  
I carried out 5 hours of lectures under the subject of 'Abiotic Stress Physiology of Plants' to doctoral candidates of the Department of Agricultural Sciences following an invitation by the Department's Director Prof. S. Mancuso.

**5/2008** Aristotle University of Thessaloniki Thessaloniki  
**Invited Lecturer**  
I carried out a lecture titled 'Gene Silencing' to the students of the postgraduate course of 'Genetic Improvement' of the School of Agriculture following an invitation by the course tutor Prof. A. Tsaftaris.

**2007-2008** Democritus University of Thrace Alexandroupolis  
**Visiting Lecturer**  
I was assigned to carry out lectures for the courses of 'Plant Molecular Biology' and 'Genetics I' in the Democritus University of Thrace, Department of Molecular Biology & Genetics for the academic year 2007-2008. I was also responsible for carrying out the practical classes for the course of 'Techniques in Molecular Biology' in the same period (Guest Lecturer Position, P.D. 407/08).

**2005-2006** Aristotle University of Thessaloniki Thessaloniki

## Laboratory Assistant

During my post-doctoral research, I was in charge of organizing and carrying out the practical classes of the Pharmaceutical Department's 2005-2006 postgraduate course on 'Biotechnology of Pharmaceutical plants' (course tutor: Prof. A. Kanellis).

1999-2002

University of Southampton

Southampton

## Laboratory Assistant

I have also done extensive demonstrating in university practical (laboratory) classes throughout my PhD to a variety of students and courses:

- BIOL1005/BIOL1006: Cellular & Genetic Mechanisms
- BIOL2002: Cell Biology
- BIOL2007: Plant Development & Function
- BIOL3003: Plant Cell Physiology

## Research Grants Awarded

- 'Transcriptomic profiling of the plant *Medicago truncatula* under drought conditions using a DNA microarray approach'. Cyprus University of Technology Start-up Research Fund (2009-2011). Coordinator (awarded – 85.000€).
- 'Molecular analysis and biotechnological applications of olive plant enzymes involved in phenolic compounds with antioxidant activity'. HEALTH/FOOD/0609 (2009-2012). Partner (awarded – 140.000€).

## Publications

- 1) **Fotopoulos, V.**, Gilbert, M.J., Pittman, J.K., Marvier, A.C., Buchanan, A.J., Sauer, N., Hall, J. L. and Williams, L.E. (2003). The monosaccharide transporter gene, *AtSTP4*, and the cell-wall invertase, *Atβfruct1*, are induced in *Arabidopsis* during infection with the fungal biotroph *Erysiphe cichoracearum*. *Plant Physiology* 132, 821-829 (guest review article in biomednet.com).
- 2) **Fotopoulos, V.** (2005). Fungal diseases of cotton. *Cotton Grower* 27, 22-24.
- 3) **Fotopoulos, V.** (2005). Bacteriological and viral diseases of cotton. *Cotton Grower* 28, 16-17.
- 4) **Fotopoulos, V.** (2005). Plant Invertases: structure, function and regulation of a diverse enzyme family. *Journal of Biological Research* 4, 127-137.
- 5) **Fotopoulos, V.**, Holmes, R., Hall, J.L., and Williams, L.E. (2006). Isolation, cloning and expression analysis of *EcPMAI*, a putative plasma membrane H<sup>+</sup>-ATPase transporter gene from the biotrophic pathogenic fungus *Erysiphe cichoracearum*. *Mycological Research* 110, 28-37.
- 6) **Fotopoulos, V.**, Sanmartin, M., and Kanellis, A.K. (2006). Effect of ascorbate oxidase over-expression on ascorbate recycling gene expression in response to agents imposing oxidative stress. *Journal of Experimental Botany* 57, 3933-3943.
- 7) **Fotopoulos, V.**, De Tullio M.C., Barnes J., and Kanellis, A.K. (2008). Altered stomatal dynamics in ascorbate oxidase over-expressing tobacco plants suggest a role for dehydroascorbate signalling. *Journal of Experimental Botany* 59, 729-737.
- 8) **Fotopoulos, V.** (2008). Assessment of potential for biological control of *Botrytis cinerea* by an indigenous *Trichoderma harzianum* isolate with a detached leaf-droplet inoculation bioassay and induction of host resistance through increased phytoalexin production. *Pest Technology* 2, 109-113.
- 9) Falara, V., **Fotopoulos, V.**, Margaritis, T., Kafetzopoulos, D., C., Pichersky, E., and Kanellis, A.K. (2008). Transcriptome analysis approaches for the isolation of genes expressed exclusively in glandular trichomes of the medicinal plant *Cistus creticus* ssp. *creticus*. *Plant Molecular Biology* 68, 633-651.
- 10) Kalamaki, M.S., Alexandrou, D., Lazari, D., Merkouropoulos, G., **Fotopoulos, V.**, Pateraki, I., Carrillo, A.L., Cavetas, M.R., Aggelis, A., and Kanellis, A.K. (2009). Over-expression of a tomato N- acetyl-glutamate synthase gene (*SINAGS1*) in *Arabidopsis thaliana* results in high ornithine levels and increased tolerance in salt

and drought stresses. *Journal of Experimental Botany* 60, 1859-1871.

11) Mhadhbi, H., **Fotopoulos, V.**, Djebalin, N., Jebara, M., Polidoros, A.N., and Aouani, M.E. (2009). Behaviours of *Medicago truncatula-Sinorhizobium meliloti* symbioses under osmotic stress in relation with symbiotic partner input: effects on nodule functioning and protection. *Journal of Agronomy and Crop Science* 195, 225-231.

12) **Fotopoulos, V.**, Tanou, G., Ziogas, V., and Molassiotis, A. (2010). Involvement of AsA/DHA and GSH/GSSG ratios in gene and protein expression and in the activation of defense mechanisms under abiotic stress conditions. In: *Ascorbate-Glutathione Pathway and Stress Tolerance in Plants* (eds. Anjum, N.A., Chan, M-T., and Umar, S.). Springer-Verlag, The Netherlands, 265-302.

13) Mhadhbi, H., **Fotopoulos, V.**, Mylona, P.V., Jebara, M., Aouani, M.E., and Polidoros, A. (2011). Role of antioxidant gene-enzyme responses in *Medicago truncatula* genotypes with different degrees of sensitivity to high salinity. *Physiologia Plantarum* 141, 201-214.

14) Filippou, P., Antoniou, C., and **Fotopoulos, V.** (2011). Effect of drought and rewatering on the cellular status and antioxidant response of *Medicago truncatula* plants. *Plant Signaling and Behavior* 6, 270-277.

15) Molassiotis, A., and **Fotopoulos, V.** (2011). Oxidative and nitrosative signaling in plants: two branches in the same tree? *Plant Signaling and Behavior* 6, 210-214.

16) **Fotopoulos, V.**, Dovas, C.I., and Katis, N. (2011). Incidence of spinach viruses in Greece, highlighting the importance of weeds as reservoir hosts. *Journal of Plant Pathology* 93, 389-395.

17) Filippou, P., Tanou, G., Molassiotis, A., and **Fotopoulos, V.** (2011). Plant acclimation to environmental stress using priming agents. In: *Crop Improvement Under Adverse Conditions* (eds. Tuteja, N., and Gill, S.S.). Springer Science & Business Media, U.S.A., p xx-xx (submitted).

18) Tanou, G., Filippou, P., Belghazi, M., Job, D., Diamantidis, G., **Fotopoulos, V.**, and Molassiotis, A. (2011). Oxidative and nitrosative signaling wave along with post-translational modifications orchestrate the acclimation of citrus plants to salinity stress (under submission).

#### Conference Abstracts

1) Dovas, C.I., **Fotopoulos, V.**, Theoharopoulos, I., Loumpourdis, G., Diamantidis, G., Winter, S. and Katis, N.I. (2000). Identification of viruses infecting spinach (*Spinacea oleracea*) in Greece. *10<sup>th</sup> Panhellenic Phytopathology Conference*. 3-5 October 2000, Kalamata, Greece.

2) **Fotopoulos, V.**, Hall, J.L., and Williams, L.E. (2000). Molecular responses of host carbon metabolism to infection by powdery mildew. *2000 BSPP Plant Powdery Mildew Interactions Symposium*. 12 April 2000, John Innes Centre, Norwich, UK.

3) **Fotopoulos, V.**, Hall, J.L., and Williams, L.E. (2001). Nutrient transfer in the host/powdery mildew interaction. *2001 BSPP Plant Powdery Mildew Interactions Symposium*. 6 April 2001, Imperial College, London, UK.

4) **Fotopoulos, V.**, Gilbert, M.J., Hall, J.L., and Williams, L.E. (2001). Molecular and biochemical analysis of nutrient transfer involved in host/ powdery mildew interaction. *Geoffrey Taylor Postgraduate Symposium*. 14-16 May 2001, University of Southampton, Southampton, UK.

5) **Fotopoulos, V.**, Hall, J.L., and Williams, L.E. (2002). Molecular analysis of nutrient transfer in the host/powdery mildew interaction. *Geoffrey Taylor Postgraduate Symposium*. 8-10 May 2002, University of Southampton, Southampton, UK.

6) Holmes, R., Buchanan, A.J., Smith, A., **Fotopoulos, V.**, Hall, J.L., and Williams,

- L.E. (2004). Molecular analysis of nutrient transfer in the plant host/powdery mildew interaction. *13<sup>th</sup> International Workshop on Plant Membrane Biology*. 6-10 July 2004, Montpellier, France.
- 7) Holmes, R., Buchanan, A.J., Smith, A., **Fotopoulos, V.**, Hall, J.L., and Williams, L.E. (2004). Molecular analysis of nutrient transfer in the plant host/powdery mildew interaction. *5<sup>th</sup> GarNet Biology Meeting*. 12-15 August 2004, Leicester, UK.
- 8) Holmes, R., Buchanan, A.J., Smith, A., **Fotopoulos, V.**, Hall, J.L., and Williams, L.E. (2005). Molecular analysis of nutrient transfer in the plant host/powdery mildew interaction. *Geoffrey Taylor Postgraduate Symposium*. 11-13 May 2005, University of Southampton, Southampton, UK.
- 9) **Fotopoulos, V.**, and Kanellis, A.K. (2005). Altered stomatal movement and water loss in transgenic tobacco plants over-expressing ascorbate oxidase. *2<sup>nd</sup> Solanaceae Genome Workshop*. 25-28 September 2005, Ischia, Italy.
- 10) **Fotopoulos, V.**, and Kanellis, A.K. (2005). Effect of ascorbate oxidase over-expression on ascorbate recycling gene expression in response to abiotic and biotic stress. *Oxygen metabolism, ROS and redox signalling in plants*. 18-20 December 2005, Bristol, UK.
- 11) Kanellis, A.K., **Fotopoulos, V.**, Kalamaki, M.S., Pateraki, I., Ioannidi, E., Sanmartin, M., and Chatzopoulou, F. (2006). Plant ascorbic acid biosynthesis and metabolism. *Effects of pre- and post-harvest factors on health promoting components and quality of fruit and vegetables*. May 22 –23, 2006, Skierniewice, Poland.
- 12) Falara, V., **Fotopoulos, V.**, Margaritis, T., Anastasaki, T., Pateraki, I., Bozabalidis, A., Kafetzopoulos, D., Demetzos, C., Pichersky, E., and Kanellis, A.K. (2006). Transcriptome analysis approaches for the isolation of trichome-specific genes from the medicinal plant *Cistus creticus* ssp. *creticus*. *American Society of Plant Biologists 2006 Annual Meeting*, August 5-9, 2006, Boston, MA, USA.
- 13) Kanellis, A.K., Falara, V., Pateraki, I., Ioannidi, E., Yupsani, A., and **Fotopoulos, V.** (2006). Glandular trichomes of *Cistus creticus* ssp. *creticus*: initiation, terpenoid biosynthesis and trichome specific genes. *XI Conference of in vitro culture and Biotechnology*, 6-9 September 2006, Międzyzdroje, Poland.
- 14) Falara, V., **Fotopoulos, V.**, Margaritis, T., Pateraki, I., Kafetzopoulos, D., Pichersky, E., and Kanellis, A.K. (2006). Genes expressed exclusively in glandular trichomes of *Cistus creticus* ssp. *creticus*. *58<sup>th</sup> National Conference of the Hellenic Society of Biochemistry and Molecular Biology*, November 5-9, 2006, Patras, Greece.
- 15) Mylona, P.V., **Fotopoulos, V.**, Metzidakis, I., Lazovic, B., and Polidoros, A.N. (2008). Assessment of genetic diversity of olive in Greece and Montenegro and identification of possible molecular markers related to frost tolerance. *12<sup>o</sup> Panhellenic Conference of the Hellenic Scientific Society for Genetics and Plant Breeding*, 8-10 October 2008, Naoussa, Greece.
- 16) **Fotopoulos, V.**, and Kanellis, A.K. (2009). Altered ascorbate redox state in tobacco plants results in delayed dark-induced senescence in detached leaves. *Plant Abiotic Stress – From Signaling To Development*, 14-17 May 2009, Tartu, Estonia.
- 17) Mhadhbi, H., **Fotopoulos, V.**, Mylona, P.V., Aouani, M.E., and Polidoros, A.N. (2009). Antioxidant responses to salt stress in *Medicago truncatula* lines. *Plant Abiotic Stress – From Signaling To Development*, 14-17 May 2009, Tartu, Estonia.
- 18) **Fotopoulos, V.**, Mylona, P.V., and Polidoros, A.N. (2009). Transient and long-term antioxidant gene responses in *Medicago truncatula* following application of exogenous nitric oxide. *Oxygen metabolism, ROS and redox signalling in plants*. 8-

10 July 2009, Helsinki, Finland.

19) Tanou, G., Ziogas, V., Galanis, K., Diamantidis, G., **Fotopoulos, V.**, and Molassiotis, A. (2009). Effects of polyamines on the expression of antioxidant genes and proteins in citrus plants exposed to salt stress. *8<sup>th</sup> Plant Genomics European Meeting*, 7-10 October 2009, Lisbon, Portugal.

20) Galanis, K., Ziogas, V., Tanou, G., **Fotopoulos, V.**, and Molassiotis, A. (2009). The effect of polyamines on the physiology and oxidative metabolism in citrus plants exposed to salt stress. *24<sup>th</sup> Panhellenic Conference of the Hellenic Society of Vegetable Science*, 20-23 October 2009, Veria, Greece.

21) Tanou, G., Molassiotis, A., **Fotopoulos, V.**, and Diamantidis, G. (2010). Hydrogen peroxide and nitric oxide reprograms signal transduction in leaves of citrus plants under natural and salt stress conditions. *Plant Abiotic Stress - from signaling to crop improvement*, 26 – 27 May 2010, Valencia, Spain.

22) Tanou, G., Molassiotis, A., **Fotopoulos, V.**, Belghazi, M., Job, D., and Diamantidis, G. (2010). Characterization of carbonylated and nitrated proteins in response to hydrogen peroxide and nitric oxide in salt-stressed citrus plants. *Gordon Research Conference - Salt & Water Stress In Plants*, 13-18 June 2010, Les Diablerets, Switzerland.

23) Ziogas, V., Tanou, G., **Fotopoulos, V.**, Vasilakakis, M., Diamantidis, G., and Molassiotis, A. (2010). Nitrosative responses are a general feature of citrus plants exposed to abiotic stress conditions. *3rd International Plant NO Club*, 15-16 July 2010, Olomouc, Czech Republic.

24) Tanou, G., Molassiotis, A., **Fotopoulos, V.**, and Diamantidis, G. (2010). The role of roots as modulators of nitric oxide and hydrogen peroxide defence signalling in citrus. *3rd International Plant NO Club*, 15-16 July 2010, Olomouc, Czech Republic.

25) Antoniou, C., Filippou, P., and **Fotopoulos, V.** (2010). Developmental stage and dose-dependent effect of exogenous nitric oxide application in the antioxidant response of *Medicago truncatula* plants. *3rd International Plant NO Club*, 15-16 July 2010, Olomouc, Czech Republic.

26) Filippou, P., Antoniou, C., and **Fotopoulos, V.** (2010). Effect of drought and rewatering on the antioxidant response of *Medicago truncatula* plants. *1<sup>st</sup> International Conference on Advances in Biotechnology-Industrial Microbial Biotechnology*, 2-5 November, Thessaloniki, Greece.

27) Antoniou, C., Filippou, P., Ioannides, I., Polidoros, A., and **Fotopoulos, V.** (2010). Exogenous nitric oxide application results in the modification of the antioxidant status of *Medicago truncatula* plants. *1<sup>st</sup> International Conference on Advances in Biotechnology-Industrial Microbial Biotechnology*, 2-5 November, Thessaloniki, Greece.

28) Christou, A., Manganaris, G., Papadopoulos, I., and **Fotopoulos, V.** (2011). The mitigating effects of nitric oxide and hydrogen peroxide pre-treatments to salt-stressed strawberry plants. *9<sup>th</sup> Plant Genomics European Meeting*, 4-7 May 2011, Istanbul, Turkey.

29) Ziogas, V., Tanou, G., Filippou, P., Diamantidis, Gr., **Fotopoulos, V.**, and Molassiotis, A. (2011). Characterization of the nitrosative status of citrus plants under various abiotic stress conditions. *9<sup>th</sup> Plant Genomics European Meeting*, 4-7 May 2011, Istanbul, Turkey.

30) Tanou, G., Ziogas, V., Christou, A., Diamantidis, Gr., **Fotopoulos, V.**, and Molassiotis, A. (2011). Polyamines modify the nitrosative status of salt-stressed plants. *10<sup>th</sup> International Conference on Reactive Oxygen and Nitrogen Species in Plants*, 5-8 July 2011, Budapest, Hungary.

- 31) Tanou, G., Gianousis, K., Konstantinidis, M., Ziogas, V., Filippou, P., **Fotopoulos, V.**, and Molassiotis, A. (2011). A novel interaction between nitric oxide and ozone controls kiwifruit ripening. *10<sup>th</sup> International Conference on Reactive Oxygen and Nitrogen Species in Plants*, 5-8 July 2011, Budapest, Hungary.
- 32) Christou, A., Manganaris, G., Papadopoulos, I., and **Fotopoulos, V.** (2011). Hydrogen sulfide confers systemic tolerance to salt and polyethylene glycol stress in strawberry plants. *10<sup>th</sup> International Conference on Reactive Oxygen and Nitrogen Species in Plants*, 5-8 July 2011, Budapest, Hungary.
- 33) Antoniou, C., Filippou, P., and **Fotopoulos, V.** (2011). Nitric oxide regulates proline and polyamine biosynthesis in *Medicago truncatula* plants. *10<sup>th</sup> International Conference on Reactive Oxygen and Nitrogen Species in Plants*, 5-8 July 2011, Budapest, Hungary.

#### Other Qualifications

- MC Member [FA0605 CY] in COST Action FA0605 (Signaling Control of Abiotic Stress Tolerance and Production of Stress Protective Compounds in Plants).
- Associate Editor in ‘Plant Signaling & Behavior’ and ‘Journal of Horticultural Science & Biotechnology’.
- Reviewer for GSRT doctoral research proposals ‘Heracletus II’.
- Reviewer: *Planta*, *Postharvest Biology & Technology*, *Annals of Applied Biology*, *Plant Science*, *Plant Growth Regulation*, *Plant Physiology & Biochemistry*, *Plant Cell Reports*, *Plant Signaling & Behavior*, *Journal of Horticultural Science & Biotechnology*, *OMICS: A Journal of Integrative Biology*, *Australian Journal of Crop Science*, *Acta Physiologiae Plantarum*, *Environmental & Experimental Botany*, *Biologia Plantarum & Transgenic Research*.
- ERASMUS coordinator for Department of Agricultural Sciences, Biotechnology & Food Science, Cyprus University of Technology.
- Certified to work with radioactive isotopes (University of Southampton, November 1999).
- Submission of clone sequences with acc. no. AJ871085, FF403916-405771, FG347095-347260 at EMBL Database.
- Beta testing of Sigma kit for RNA extraction (Spectrum Plant Total RNA).