

Sofia Foukaraki, PhD

FORTH-IMBB

Nikolaou Plastira 100, Vasilika Vouton

PC 70013, Heraklion, Crete, Greece

Phone: +30-2810391700

email: sofia_foukaraki@imbb.forth.gr

Date of birth: 6 August 1979, Greek Nationality

Orcid ID: orcid.org/0000-0002-3888-058X

Scopus Author ID: 35773167500



Education and Qualifications

2008 - 2012: PhD in Plant Biochemistry and Physiology

Cranfield University, Cranfield Health, Plant Science, Postharvest Laboratory, Bedfordshire, UK

PhD Thesis Title: ‘Storage of potatoes: Effect of ethylene and 1-MCP on potato tuber quality and biochemistry’. Supervisor: Prof. Leon Alexander Terry

2016-2019: MSc in Plant Molecular Biology and Biotechnology (2nd)

University of Crete, Faculty of Sciences, Department of Biology, Heraklion, Crete, Greece

MSc Thesis Title: ‘Functional Analysis of detoxification enzymes from major agricultural pests (olive fruit fly)’. Supervisor: Prof. Ioannis Vontas

2006 - 2008: MSc by Research in Plant Biochemistry and Physiology (1st)

Cranfield University, Cranfield Health, Plant Science, Postharvest Laboratory, Bedfordshire, UK

MSc Thesis Title: ‘Effect of methyl jasmonate and sucrose on vase life of Cretan-grown roses’. Supervisor: Prof. Leon Alexander Terry

2005 - 2009: BSc in Greenhouse Cultivation and Floriculture

Technological Educational Institute of Crete, Heraklion, Greece

School of Agriculture, Division of Organic Greenhouse Cultivation and Floriculture

2000 - 2005: BSc in Crop Science

Technological Educational Institute of Crete, Heraklion, Greece

School of Agriculture, Division of Crop Science

BSc Thesis Title: Variation of heavy metals concentrations in organic matter according to their placement in soil. Supervisor: Prof. Ploutarchos Tsikalas

Work Experience

June 2020 – now: Foundation for Research and Technology – FORTH, Institute of Molecular Biology and Biotechnology – IMBB, EU-LIFE IMBB Membership

Position: IMBB representative - main contact point for EU-LIFE

Responsibilities: Communication distribution between EU-LIFE IMBB members and partners

October 2018 – until now: Foundation for Research and Technology – FORTH, Institute of Molecular Biology and Biotechnology - IMBB, Administration Department & Molecular Entomology Lab

Position: Postdoctoral Research Associate – Project Manager

Responsibilities:

- Administrative support and assistance in business processes
- Planning and organization of relevant documentation and processes
- Take part / support projects related to areas of responsibilities within the Department/Lab

November 2017 – September 2018: Foundation for Research and Technology – FORTH, Institute of Molecular Biology and Biotechnology - IMBB, Molecular Entomology Lab

Position: Postdoctoral Research Associate

Responsibilities: Protein analysis of Lepidoptera species samples

November 2015 – November 2016: Cranfield University, Bio-medical Group

Position: Laboratory Manager – Health and Safety

Responsibilities:

- Control and monitoring of Bio medical activities in laboratories, including COSHH & legal compliance
- Assistance to the technical procurement team and manage the Bio medical centre procurement system including generating requisitions, receiving and signing for deliveries, providing goods received notifications, approving invoices, and approving stores vouchers. To assist in stock control management when required.
- Maintain easily accessible databases for chemical & biological materials and equipment.
- Inform and advise on current and impending Environmental, Health & Safety legislation affecting the school
- Advise on, and assist in, carrying out risk assessments in the laboratory. This will include making recommendations on suitable control measures for both teaching and research
- Manage and maintain a Safety, Health & Environment log for the laboratory. To monitor health & safety performance and produce reports for Head of Division and School H & S committee. To deal with statutory accident reporting procedures, maintain accident records and to ensure robust accident investigations are carried out
- Identify, advise and assist with health & safety training and competency for staff, students and visitors.

September 2011 – July 2014: Cranfield University, School of Applied Sciences, Plant Science, Postharvest Laboratory, Bedfordshire, UK

Position: Postdoctoral Research Fellow in Analytical Science

Responsibilities:

- Management and delivery of industrial contracts as part of the newly established industrial contract division (Cranfield Analytical Services) within the Food Security and Environmental Health Business Unit
- Undertaking a wide variety of analytical work applied to industrial-funded research
- Support of current government-funded projects and studentships within the Plant Science Laboratory

- On a day-to-day charge of experiments and analysis with Cranfield Analytical Services
- Logging in work schedules and ensuring delivery against milestones analytical work
- Planning over a matter of weeks/months that would contribute to longer term goals on ongoing research running in the Plant Science Laboratory
- Responsible for the written and oral presentation of the results to the Department, the School and the clients (Unilever, PepsiCo etc.)
- Responsible for contributing to papers and reports and where appropriate, to produce applications for external funding

Experience

- Extensive laboratory experience in using and developing methods for standard LC in plant biochemistry
- Knowledge of plant biochemical techniques including LC MS/MS and standard HPLC (HPLC-RID, HPLC-DAD, HPLC-ELSD, GC)
- Full and current understanding of function and analysis of plant secondary metabolites
- Knowledge of handling plant material and experimental design and analysis
- Experience in data analysis and interpretation; use of Microsoft office, Sigmaplot, Unscrambler, SPSS and Genstat
- Preparation and writing of standard operating procedures (SOP) and risk assessments
- Excellent written English for proposal and report writing; extensive experience in report writing, delivery of milestones and meeting of deadlines for client-funded projects and authorship of research reports
- Co-supervision of PhD and MSc students of the Plant Science Lab in Cranfield University

October 2006 – October 2007: Agricultural Union of Heraklion

Position: Agriculturist/Seminar Supervisor for farmers under the quality systems Agro 2.1 and Agro 2.2 for Integrated Olive Tree Cultivation

March 2004 – August 2004: Technological Education Institute of Crete, Heraklion, Greece

Position: Student placement in Plant Nutrition Laboratory

Responsibilities-Experience: Organic matter and plant analysis, usage of flame photometer, quantification of heavy metals

Teaching Experience

May 2015 - June 2015: Teaching a 25-hour course on ‘Home Apiculture’ at the Youth and Life Long Learning Foundation, Municipality of Archanes, Heraklion, Greece

October 2014 - June 2015: Research collaborator teaching “Postharvest physiology and technology of fruit and vegetables”, Technological Education Institute of Crete, School of Agriculture, Heraklion, Greece

January 2011 - January 2014: Teaching in modules ‘Postharvest technology’ and ‘Nutrition and Health’ of the ‘Food Chain Systems’ MSc Course, Cranfield University, UK

Lectures titles: ‘Ethylene exposure after dormancy break – effectiveness in controlling sprout growth compared to continuous ethylene exposure for some UK-grown potato cultivars’ ‘Health promoting properties in potatoes and other root vegetables’ and ‘Case study – Ethylene supplementation’

February 2013 & March 2014: Teaching in the short 2-day course ‘Agrifood Advanced Training Programme’ that took place in Cranfield University, UK. Lecture title: ‘Case study – Ethylene supplementation’

Languages

Greek (mother tongue), **English** (proficiency), **German** (conversational), **Spanish** (intermediate), **French** (preliminary)

Publications

Articles in peer-reviewed journals

- (12) Landahl S, **Foukaraki S**, McWilliam S, Terry LA. (2018) Optical coherence tomography imaging of potato skin to understand variability in response to pre- and postharvest factors. *Acta Horticulturae* 1201:331-338, DOI: 10.17660/ActaHortic.2018.1201.45
- (11) **Foukaraki SG**, Cook B, Papadimitriou MD, Terry LA. (2017) Effect of methyl jasmonate and sucrose on endogenous non-structural carbohydrates in petals and leaves of cut ‘First Red’ roses. *Journal of Ornamental Plants* 7:73-80
- (10) **Foukaraki SG**, Cools K, Gemma A, Chope GA, Terry LA. (2016b) Impact of ethylene and 1-MCP on physiology and sugar accumulation in processing potatoes. *Postharvest Biology and Technology* 114:95-103, DOI:10.1016/j.postharvbio.2015.11.013
- (9) **Foukaraki SG**, Cools K, Terry LA. (2016a) Differential effect of ethylene supplementation and inhibition on abscisic acid metabolism of potato (*Solanum tuberosum* L.) tubers during storage. *Postharvest Biology and Technology* 112:87-94, DOI:10.1016/j.postharvbio.2015.10.002
- (8) Ohashi TL, **Sofia Foukaraki S**, Souza Corrêa D, Ferreira MD, Leon Terry LA. (2016) Influence of 1-methylcyclopropene on the biochemical response and ripening of ‘Solo’ papayas. *Revista Brasileira de Fruticultura* (online) 2016, 38(2):e-791. DOI:10.1590/0100-29452016791.
- (7) Ordaz-Ortiz JJ, **Foukaraki S**, Terry LA. (2015) Assessing temporal flux of plant hormones in stored processing potatoes using high definition accurate mass spectrometry. *Horticulture Research (online)* 2:15002 DOI:10.1038/hortres.2015.2
- (6) Terry LA, Cools K, **Foukaraki S**. (2015) Understanding the underlying mechanisms by which ethylene supplementation extends storage life of onions and potatoes. *Acta Horticulturae* 1071:181-186 DOI:10.17660/ActaHortic.2015.1071.19

- (5) **Foukaraki SG**, Cools K, Chope GA, Terry LA. (2014) Effect of the transition between ethylene and air storage on the post-harvest quality in six UK-grown potato cultivars. *The Journal of Horticultural Science & Biotechnology* 89, 599-606
- (4) Ordaz-Ortiz JJ, **Foukaraki S**, Terry LA. (2013) A new liquid chromatography ultra high definition accurate mass spectrometry method for the simultaneous quantitation of nine plant hormones in fruits and vegetables. *Acta Horticulturae* 1012:821-827 DOI: 10.17660/ActaHortic.2013.1012.111
- (3) **Foukaraki S**, Chope GA, Terry LA. (2012) 1-MCP application before continuous ethylene storage suppresses sugar accumulation in the UK-grown potato cultivar 'Marfona'. *Acta Horticulturae* 945:291-296
DOI: 10.17660/ActaHortic.2012.945.38
- (2) **Foukaraki S**, Chope GA, Terry L.A. (2012) Ethylene exposure after dormancy break is as effective as continuous ethylene to control sprout growth in some UK-grown potato cultivars. *Acta Horticulturae* 934:1175-1181
DOI: 10.17660/ActaHortic.2012.934.158
- (1) **Foukaraki S**, Terry LA, Pompodakis NE, Papadimitriou MD, Lydakis DE. (2009) Effect of methyl jasmonate vapour treatment and sucrose solutions on vase life and non-structural carbohydrate concentration in petals of cut 'First Red' roses. *Acta Horticulturae* 847:179-184

Articles in international conference proceedings

- (11) Landahl S, **Foukaraki S**, McWilliam S, Terry LA. (2017) Optical Coherence Tomography imaging of potato skin to understand variability in response to preharvest and postharvest factors. 7th International Conference on Managing Quality in Chains (MQUIC2017), 4-7 September 2017, Stellenbosch (South Africa) (oral presentation)
- (10) **Foukaraki SG**, Cools K, Tosetti R, Terry LA. (2016) Alternatives to CIPC: A biochemical and physiological evaluation of ethylene and 1-MCP treatments. EAPR Postharvest, 28-30 June 2016 (oral presentation)
- (9) **Foukaraki S**, Cools K, Terry LA. (2016) Effect of ethylene supplementation on abscisic acid metabolism of potato (*Solanum tuberosum* L.) tubers during storage. 8th International Postharvest Symposium, 21-24 June 2016, Cartagena, Spain (oral presentation)
- (8) Ohashi TL, **Foukaraki S**, Souza Correa D, Ferreira MD, Terry LA. (2014) Controle do amadurecimento e redução do desperdício de mamões 'Solo' utilizando 1-metilciclopropeno. Anais da VI Jornada Científica – Embrapa São Carlos – 05 e 06 de Junho de 2014, Embrapa Instrumentação e Embrapa Pecuária Sudeste, São Carlos, SP, Brazil

- (7) **Foukaraki S**, Cools K, Terry LA. (2013) Does the transient change in sugars matter for potato storage? 6th International Conference in Managing Quality in Chains, MQUIC2013, 2-5 September 2013, Cranfield University, UK (oral presentation)
- (6) Terry LA, Cools K, **Foukaraki S**. (2013) Understanding the underlying mechanisms by which ethylene supplementation extends storage life of onions and potatoes. 11th International Controlled & Modified Atmosphere Research Conference, CaMa2013, 3-7 June 2013, Trani, Italy (oral presentation)
- (5) Ordaz-Ortiz JJ, **Foukaraki S**, Terry LA. (2013) A new liquid chromatography ultra high definition accurate mass spectrometry method for the simultaneous quantitation of nine plant hormones in fruits and vegetables. 7th International Postharvest Symposium, 25-29 June 2012, Kuala Lumpur, Malaysia (oral presentation)
- (4) **Foukaraki S**, Chope GA, Terry LA. (2012) Differential effect of ethylene treatments on non-structural carbohydrate composition in flesh and peel in six UK-grown potato cultivars. 7th International Postharvest Symposium, 25-29 June 2012, Kuala Lumpur, Malaysia (oral presentation)
- (3) **Foukaraki S**, Chope GA, Terry LA. (2009) Effect of ethylene treatments on the postharvest quality of different UK-grown potato cultivars. SCI Conference: From Field to Fork: How to improve the quality of fruits and vegetables, 17 November 2009, Cranfield Health, Cranfield University, UK (oral presentation)
- (2) **Foukaraki S**, Chope GA, Terry LA. (2009) Effect of the transition between ethylene and air storage on two potato varieties. 8th International Symposium on the Plant Hormone Ethylene, 21-25 June 2009, Ithaca, New York, USA (oral presentation)
- (1) **Foukaraki S**, Chope GA, Terry LA. Differential effect of ethylene on sugars in UK-grown potato cultivars during storage. 6th International Postharvest Symposium, 8-12 April 2009, Antalya, Turkey (poster presentation)

Articles in greek conference proceedings

- (3) Παπαδάκη ΑΑ, **Φουκαράκη ΣΓ**, Magan N, Τσικαλάς Π. (2009) Επίδραση του αζώτου στην ανάπτυξη του περονόσπορου (*Pseudoperonospora cubensis*) σε φυτά αγγουριάς (*Cucumis sativus* var. Knossos). 24^ο Πανελλήνιο Συνέδριο Ελληνικής Εταιρείας Επιστήμης Οπωροκηπευτικών, 20-23 Οκτωβρίου 2009, Βέροια (γραπτή ανακοίνωση)
- (2) **Φουκαράκη ΣΓ**, Πομποδάκης Ν, Παπαδημητρίου Μ. (2007) Επίδραση του μεθυλίου του ιασμονικού οξέος (MeJA) και της σακχαρόζης στην διάρκεια ζωής στο ανθοδοχείο δρεπτών τριανταφύλλων. 23^ο Επιστημονικό Συνέδριο της Ελληνικής Εταιρείας της Επιστήμης των Οπωροκηπευτικών, 23-26 Οκτωβρίου 2007, Χανιά (προφορική ανακοίνωση)
- (1) **Φουκαράκη ΣΓ**, Παπαδάκη Α, Τσικαλάς Π. (2006) Επίδραση του υποκειμένου στη συγκέντρωση διαφόρων στοιχείων στα φύλλα της σουλτανίνας και του ραζακί (*Vitis*

vinifera L.) 22^ο Επιστημονικό Συνέδριο της Ελληνικής Εταιρίας της Επιστήμης των Οπωροκηπευτικών, 19-21 Οκτωβρίου 2006, Πάτρα (γραπτή ανακοίνωση)

Learning and development courses

March-June 2016: NEBOSH Certificate; National Examination Board for the Safety and Health at Workplace; 13 weeks (Cranfield University, UK)

February 2016: Time Management, First Aid Course (Cranfield University, UK)

January 2016: Stress management, Risk Assessment, Control of Substances Hazardous to Health (COSHH) (Cranfield University, UK)

November 2015: Cryogenic gases handling (Cranfield University, UK)

August 2015: Pepsico School – “From the Field to the Shelves”, Athens 28th August 2015, Pepsico Headquarters

July 2015: ‘Scientific Writing Workshop’, University of Crete, Department of Chemistry, 21st July 2015

January 2014: Project Management and Delivery (at Cranfield University, UK)

December 2013: Technology Enhanced Learning (TEL; (PGCert in Academic Practice) (Cranfield University, UK)

December 2013: Supervising PhD students (Cranfield University, UK)

November 2013: Philosophy of Higher Education (PGCert in Academic Practice) (Cranfield University, UK)

November 2013: Developing Practice in HE (PGCert in Academic Practice) - 2 day course (Cranfield University, UK)

September 2013: Introduction to Learning & Teaching (PGCert in Academic Practice) - 2 day course (Cranfield University, UK)

April 2013: Supervising MSc students (Cranfield University, UK)

April 2012: Leading projects, 2-day course (Cranfield University, UK)

Distinctions – Awards – Travel grants

2014: Invited Lecturer in TEC de Monterrey, Mexico City, 6-9 May 2014: 1st Workshop: Trends in modern biotechnology for agriculture, food industry and health: a bio-national perspective. Organised by British Council Ltd. Title of Lecture “Ethylene and 1-MCP supplementation on potato tuber quality and biochemistry”

2008 & 2013: Tindall Trophy awarded from Cranfield Health for the best MSc (2008) and PhD (2013) thesis in postharvest technology

2010: Travel grant (£500) awarded from SCI (Society of Chemical Industry, 14/15 Belgrave Square, London SW1X 8PS, UK) for participation in the 28th International Horticultural Congress, 22-27 August 2010, Lisbon, Portugal (oral presentation)

2009: Travel grant (£400) awarded from Douglas Bomford Trust (The Bullock Building Bldg 53, University Way, Cranfield, Bedford, MK43 0GH, UK) for participation in the 8th International Symposium on the Plant Hormone Ethylene, 21-25 June 2009, Ithaca, New York, USA (oral presentation)

Membership in Scientific Societies since 2009

- International Society for Horticultural Science (ISHS)
- European Society for Potato Research (EAPR)
- Australian Society for Horticultural Science (AuSHS)
- Society of Chemical Industry (SCI)
- Biochemical Society

Skills/Aptitudes

- High level of skills in contacting plant biochemical analysis
- High level analytical capability in plant metabolomics analysis
- Excellent written English for proposals and report writing
- Ability to manage multiple responsibilities in a fast-paced environment with critical deadlines
- Ability to collect and analyse information and quickly grasp what needs to be done
- Capable of working in a team or independently
- Excellent communication and problem solving skills and a proven ability to manage and complete projects to the highest standard
- Very well organised with attention to detail
- Analytical, innovative, proactive and goal orientated

Interests and other skills

- I like travelling and learning about other cultures. I have been in many countries in Europe, USA and Asia during the past 6 years for business and leisure
- I love photography and I was given the opportunity to express my skills acting as the professional photographer at the MQUIC 2013 Conference organized by Cranfield University, UK in September 2013
- I have a Computer knowledge certificate ECDL Core Certificate (ECDL Hellas)
- I have a full EU driving license

REFEREES

Professor Iannis Talianidis

Professor of Epigenetics
Foundation for Research and Technology-
FORTH
Director of Institute of Molecular Biology
and Biotechnology-IMBB
Nikolaou Plastira 100, PC 70013
Heraklion, Crete, Greece
tel: +30-2810-391162
email: talianid@imbb.forth.gr

Professor Leon Alexander Terry

BSc (Hons) ARCS MSc PhD PGCert
FIAgrE FRSB FHEA
Director of Environment and Agrifood
Professor of Plant Science
Cranfield Soil and Agrifood Institute
Cranfield University
Cranfield, Bedfordshire, UK
MK43 0AL
tel.: +44(0)7500766490
email: l.a.terry@cranfield.ac.uk

Professor Ibtisam Tothill

Professor of Biosensors in Health
Head of Advanced Diagnostics and Sensors
Group
Institute for Aerospace Sciences
School of Aerospace, Transport and
Manufacturing (SATM)
Cranfield University
Cranfield, Bedfordshire, UK
tel: +44(0)7500755487
email: i.tothill@cranfield.ac.uk

Professor Ioannis Vontas

Professor of Molecular Entomology
Foundation for Research and Technology-
FORTH
Institute of Molecular Biology and
Biotechnology-IMBB
Nikolaou Plastira 100, PC 70013
Heraklion, Crete, Greece
tel: +30-2810-391136
email: vontas@imbb.forth.gr

Professor Andrew J. Thompson

Professor of Molecular Plant Science
Head of Cranfield Soil and Agrifood
Institute
Cranfield Soil and Agrifood Institute
Cranfield University
Cranfield, Bedfordshire, UK
MK43 0AL
tel: +44(0)1234750111 ext5012
email: a.j.thompson@cranfield.ac.uk

Professor Michalis Papadimitriou

Professor in Floriculture
Faculty of Agriculture Food & Nutrition
Department of Agriculture
Laboratory of Floriculture
Technological Educational Institute of
Crete Heraklion, Greece PO Box 1939,
GR 71004
tel.: +30 2810 379413
email: micpap@staff.teicrete.gr