

CV FRYNI DRIZOU

EDUCATION

PhD in Plant Sciences under BBSRC-DTP at Nottingham University and Rothamsted Research (October 2013- September 2017)

- Thesis: Elucidating the interaction between *Brassica napus* and *Rhizoctonia solani* AG 2-1
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MSc in Plant Sciences, specialization in Plant Pathology and Entomology, Wageningen University and Research Centre (February 2011- January 2013) (ISCED 5A)

- Major thesis: Mechanisms and ecological function of volatiles induced by *Pieris brassicae* egg deposition in the annual crucifer *Brassica nigra*
 - Minor thesis: Impact of root herbivory on aboveground plant volatiles and attraction of egg parasitoids: a case study
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5 year Diploma of Crop Science, specialization in Plant Protection and Environment in the Agricultural University of Athens (A.U.A) (September 2004- June 2010) (ISCED 5A)

- Thesis: Preference and rapacity of *Iphiseius degenerans* (Berlese) (Acari: Phytoseiidae) on *Tetranychus urticae* Koch and *Eutetranychus orientalis* (Klein)
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WORKING EXPERIENCE

Forest Pathology Researcher at the Institute of Mediterranean Forest Ecosystems (ELGO-Dimitra), Athens, Greece

- Research for the protection of forests and urban environments from plant diseases
- Diagnosis of forest pathogens
- Project management

Plant Health Scientist at the RHS (Biosecurity-Plant health team) – RHS Gardens Biosecurity Lead: Division of Science and Collections, Department of Plant Health, Royal Horticultural Society (UK) (June 2018- 2024)

- Surveillance of pests/diseases, development and provision of expert advice and pest management plans for the 5 RHS gardens
- Provide diagnostic and advisory service in entomology and phytopathology to the RHS members
- Development of plant health policies and standard operating procedures to support biosecurity practices in the RHS gardens, shows and events
- Providing training on pest and diseases and biosecurity for RHS curatorial teams, the public and horticultural growers, designers and judges
- Partaking in plant health and biosecurity days for the public and school events
- Carrying out biosecurity policy compliance inspections at events and shows.
- Development of research project proposals
- Representation of the RHS in national and international groups
- Student supervision
- Collaboration with internal teams and external organisations (national and international level)

Postdoctoral Position under “*Xylella fastidiosa* Active Containment Through a multidisciplinary-Oriented Research Strategy” (XF-ACTORS), at Benaki Phytopathological Institute (Athens) (February 2018- May 2018)

- Planning and carry out research work for the allocated work package

- Contributing to new research proposals
- Collaboratively work with departments to achieve the project milestones

Professional Internship (PIP) in Benaki Phytopathological Institute (Athens): Department of Entomology, Laboratory of Biological Control (January 2016 – April 2016)

- Designing and carrying out research work to determine the oviposition choice of *Tuta absoluta* on infested tomato plants
- Writing of research papers
- Development of new technical skills in chemical ecology techniques and data analysis

Volunteer Trainee Researcher in Agricultural University of Athens (A.U.A.): Laboratory of Agricultural Zoology & Entomology (September 2010-November 2010)

- Acarology project to understand the efficacy of the predatory mite *Iphiseius degenerans* to control *Eutetranychus orientalis*, an invasive species to Greece
- Maintain acari rearing, design and carry out research work (feeding preference experiments) and data analysis
- Contribute to scientific publications

Internship in Agricultural University of Athens (A.U.A.): Laboratory of Agricultural Zoology & Entomology (July 2008 – August 2008; April 2009- May 2009; July 2009)

- Leading the maintenance of insect rearing
- Assisting on a diversity of research projects of the laboratory

KEY RESEARCH PROJECTS

- Understanding and managing Phytophthora diseases in horticulture, Euphresco project A-399 2022- successful grant application (project co-ordinator role)
- Diversity and distribution of *Phytophthora* spp. in gardens (2019- present). Project lead since 2021
- CA20132 - Urban Tree Guard - Safeguarding European urban trees and forests through improved biosecurity (UB3Guard) (2021- present)
- Holistic Management of Emerging Forest Pests and Diseases (HOMED), EU Horizon 2020 (2018-2021).
- Host plant colonisation by the model pest aphid, *Myzus persicae* (During the PhD -February –April 2014).
- Elucidating the biosynthesis of the aphid sex pheromone (During the PhD -January-February 2014).
- An examination of targets of organophosphorus pesticides in honey bee and human brains (During the PhD October-December 2013)

PEER-REVIEWED PUBLICATIONS

1. **Drizou F**, Hubbuck K, Barry C & Beal E.J (2024) First report of *Phytophthora occultans* infecting *Euphorbia amygdaloides* in the United Kingdom. New Disease Reports, 49, e12242. <https://doi.org/10.1002/ndr2.12242>
2. **Drizou F**, Redstone S & Salisbury A (2023) Impact and management of *Opogona sacchari* (Bojer, 1856) (Lepidoptera: Tineidae) in a display glasshouse in the United Kingdom. *EPPO Bulletin*, 53, 624–631. Available from: <https://doi.org/10.1111/epp.12958>
3. **Drizou F**. EPPO (2022) *Opogona sacchari*. EPPO datasheets on pests recommended for regulation. <https://gd.eppo.int>
4. Jactel H, Desprez-Loustau ML, Battisti A, Brockerhoff E, Santini A, Stenlid J, Bjorkman C, Branco M, Dehnen-Schmutz K, Douma JC, Drakulic J, **Drizou F**, Eschen R, Franco JC, Gossner MM, Green S, Kenis M, Klappwijk MJ, Liebhold AM, Orazio C, Prospero S, Robinet C, Schroeder M, Slippers B, Stoev P, Sun J, van den Dool R, Wingfield MJ, Zalucki MP (2020) Pathologists and

entomologists must join forces against forest pest and pathogen invasions. *NeoBiota* 58: 107127.

<https://doi.org/10.3897/neobiota.58.54389>

5. **Drizou F**, Bruce T, Ray R, Graham N. (2018) [Infestation by *Myzus persicae* increases susceptibility of *Brassica napus* cv. 'Canard' to *Rhizoctonia solani* AG 2-1](#). *Frontiers in Plant Science*. 9, 1903
6. Labisso W, Raulin A, Nwidu L, Kocon A, Wayne D, Erdozain A, Morentin B, Schwendener D, Allen G, Enticott J, Gerdes H, Johnson L, Grzeskowiak J, **Drizou F**, Tarbox R, Osna N, Kharbanda K, Callado L, Carter W. (2018) [The Loss of \$\alpha\$ - and \$\beta\$ tubulin proteins are a pathological hallmark of chronic alcohol consumption and natural brain ageing](#). *Brain Sciences*. 8 (9), 175
7. Anastasaki E., **Drizou F.** & Milonas P. G. 2018. Electrophysiological and Oviposition Responses of *Tuta absoluta* Females to Herbivore-Induced Volatiles in Tomato Plants. *Journal of Chemical Ecology*. (DOI: <https://doi.org/10.1007/s10886-018-0929-1>)
8. **Drizou, F.**, Graham, N. S., Bruce, T. J. A. & Ray, R. V. 2017. Development of high-throughput methods to screen disease caused by *Rhizoctonia solani* AG 2-1 in oilseed rape. *Plant Methods*, 13, 45. (DOI: <https://doi.org/10.1186/s13007-017-0195-1>)
9. Fatouros, N. E., Paniagua Voirol, L. R., **Drizou, F.**, Doan, Q. T., Pineda, A., Frago, E. & van Loon, J. J. A. 2015. Role of Large Cabbage White butterfly male-derived compounds in elicitation of direct and indirect egg-killing defenses in the black mustard. *Frontiers in Plant Science*, 6, 794. (DOI: <https://doi.org/10.3389/fpls.2015.00794>)
10. Fantinou, A. A., Baxevani, A., **Drizou, F.**, Labropoulos, P., Perdakis, D. & Papadoulis, G. 2012. Consumption rate, functional response and preference of the predaceous mite *Iphiseius degenerans* to *Tetranychus urticae* and *Eutetranychus orientalis*. *Experimental and Applied Acarology*, 58, 133-144. (DOI: <https://doi.org/10.1007/s10493-012-9557-6>)

OTHER PUBLICATIONS

Short articles

1. Meet red velvet mites. *The Garden magazine*, issue December 2021, p.37
2. Seek out stink-bug stowaways. *The Garden magazine*, issue November 2021, p.32
3. Manage red spider mite naturally. *The Garden magazine*, issue August 2021, p.32
4. What are flatworms? *The Garden magazine*, issue April 2020, p.30
5. Froghoppers in froth. *The Garden magazine*, issue May 2019, p.12

Policies and guides

1. RHS workshops plant health policy, March 2021
2. RHS events plant health policy, February 2021
3. RHS Code of practice for non-native flatworms, October 2020
4. RHS guide on non-native flatworms, October 2020

Leaflets

1. RHS Code of practice for non-native flatworms, May 2021
2. RHS *Xylella* leaflet, August 2018

Media

1. Interviews on national television (BBC) in relation to the surveillance of *Halyomorpha halys* in the RHS.
2. Antennae Magazine interview (RHS Entomology team)

SKILLS

Languages

Greek (native), English (fluent), Spanish (basic communication)

Technical skills

- Behavioural analysis (bioassays) (Y-tube and four arm olfactometer)
- Volatile collection (air entrainment, solvent washing)
- Gas Chromatography and Mass Spectrometry (GC MS)
- Electroantennography (EAG)
- Insect rearing
- Field work: surveys, inspections and pest and disease diagnostics, field experiments
- RNA, DNA extraction
- Gel electrophoresis (protein, RNA, DNA)
- Western Blotting
- Polymerase Chain Reaction (RT-PCR, qPCR, Nested PCR)
- Sequencing
- Radiolabelling and quantification of radioactivity
- Microsoft office, Genstat, various software related to laboratory techniques

Teaching and Supervision Experience

- Supervision of PhD project: Assessing the risk of viruses from niche tuber crops of Andean origin (since November 2021)
- Supervision of MRes project: Understanding the prevalence and risks of *P. ramorum* in a public garden.
- Supervision of BSPP funded summer student projects:
 - Identifying the diversity and the spread-pattern of *Phytophthora* spp. in a public garden (2019)
 - Investigating plant parasitic nematodes in RHS Wisley garden (2021)
- Supervision of BSc thesis (2015-2016): Screening *Brassica napus* for resistance to *Rhizoctonia solani* AG2-1
- Supervision of RHS Specialist Horticulturalist student: Occurrence of non-native flatworms in RHS Harlow Carr (2020-2021)
- Plant health training to the RHS Garden Staff, for the public (annually since 2018) and for horticultural growers, designers and judges (2018-2020)
- Biosecurity/ Plant health Lecture in the School of Horticulture- Level 4 students (2021)

PRESENTATIONS IN INTERNATIONAL SCIENTIFIC CONFERENCES

1. **DRIZOU F.**, WARD L., BEAL E J, POWELL G. Understanding and managing the impact of Phytophthora diseases in horticulture, 10th Meeting IUFRO Phytophthora in forests and natural ecosystems (Berkley- San Francisco, California) (**Presentation**)

2. **DRIZOU F**, BEAL E J, WAGHORN I A G ,PERRY J N , CLOVER G R G , CROMEY M G Phytophthora root rot: susceptibility of garden plants. 10th Meeting IUFRO Phytophthora in forests and natural ecosystems (Berkley- San Francisco, California) (**Presentation**)

3. BEAL L., **Drizou F.** CLOVER G. Diversity of Phytophthora species in a public garden in Essex, UK (**Presentation**). 9th Meeting IUFRO Phytophthora in forests and natural ecosystems (La Maddalena, Sardinia, Italy)

4. **DRIZOU, F.** BRUCE, T.J.A. & GRAHAM, N.S. Aphid infestation increases susceptibility of *Brassica napus* to *Rhizoctonia solani* AG 2-1. (**Scientific poster**) BSPP/BMS Presidential Conference, 2017.

5. **DRIZOU, F.** BRUCE, T.J.A. & GRAHAM, N.S. Insect-pathogen interaction in oilseed rape (OSR): *Myzus persicae* increases susceptibility of *Brassica napus* to *Rhizoctonia solani* AG 2-1. (**Scientific poster**) 16th International Symposium of Plant-insect Interactions, 2017.

6. **DRIZOU, F.** GRZESKOWIAK, J. MELLOR, I. ERDOZIAN, A.M. MORETIN, B. CALLADO, L. F. & CARTER, W G. An examination of protein targets of organophosphorus pesticides in honey bee and human brains. (**Scientific Poster**) The Impact of Pesticides on Bee Health conference, 2013

7. **DRIZOU, F.** PARTRIDGE, S.J. SMART, L.E. MARTIN, J., BASS, C. RAY, R. & BRUCE T.J.A. Aphid resistance in *Solanum stoloniferum*, a wild species of potato. (**Scientific Poster**) 15th International Symposium on Insect-Plant Interactions, 2014.

8. BAXEVANI, A. **DRIZOU, F.** LABROPOULOS, P. PERDIKIS, D., FANTINO, A. & PAPADOULIS, G. Functional response and preference of *Iphiseius degenerans* Acari: Phytoseiidae) with prey the mites *Tetranychus urticae* and *Eutetranychus orientalis* (Acari: Tetranychidae). (**Scientific Poster**) 13th Hellenic Entomological Congress, 2011.

PUBLIC ENGAGEMENT & OUTREACH

- RHS Biosecurity day, RHS Garden Wisley, November 2021
- Plant health public training days, RHS gardens, annually since 2018
- National Science week, RHS Garden Wisley, March 2019 and 2020
- Brigit Project stand, RHS Tatton Flower Show, July 2019
- National Insect Week, RHS Garden Wisely, June 2019
- Mayfest open day, University of Nottingham, May 2014
- The Biotechnology YES (Young Entrepreneurs Scheme) Edinburgh, October 2014