

Vera Mónica Piegas Valadas

Coming from a solid background and able to face any challenges, I´m a responsible, highly motivated and experienced scientist in molecular biology and biological sciences, with 12 years working on research focused on agricultural, forest and crop cultures related to organisms that affect beneficially or negatively the relevant ecosystems. During my research I worked with nematodes, insects, bacteria, plants and microalgae, developing a set of skills ranging from various methodologies related to DNA and RNA work, Genomics, probe design, Library Preparation, Microbiology, metabolite extraction, cell line maintenance, nematode, fungi and bacteria cultivation, flow cytometry, microdissection, RT-PCR, time management and organization. I attended several courses, trainings, seminars that improved all my achieved skills. I made several internships in international laboratories to improve my skills and collaborate in research with other international researchers from Germany, Ireland and Check Republic.

From January 2016- March 2020 I moved to United Kingdom. Until August 2019, I worked for Pharmaceutical industry where I develop a new set of skills working in Grade A environment compounding medicines following SOP, GMP, Quality Events and CAPA. From August 2019 to March 2020, I worked as a Molecular Biology Scientist at Novogene Ltd, a Sequencing Company world renowned, leading provider of genomic services and solutions with cutting edge NGS and bioinformatics expertise, and more advanced sequencing capacity in the world.

From January 2013 to November 2015, I´ worked at the EU Marie Curie Chair (Évora University). Here, I focus on plants - *Daucus carota* (carrot) and *Hypericum perforatum*. Since May 2013 I work as a post-doc in the project "FEED-CODE - Animal feed certification instrument and procedure to guarantee the quality of meat and dairy products through automatic, simple and rapid DNA barcode method based on tubulin-based polymorphism (TBP)". The main goal was to use AOX as a marker to identify plant species that are present in animal feed to certificate it. Simultaneously I initiated studies with green microalgae. Using a commercial strain of green microalgae that exist in the lab, I developed some work to identify the microalgae species using AOX. During microalgae identification, I observe that there were some microorganisms associated. I made a screening of this symbionts and I have identify several groups of bacteria. The main goal for a future research was be to manipulate the symbionts and culture conditions to increase biomass production, identifying and quantifying the produced metabolites.

During eight years (2004-2012) I worked with nematodes, entomopathogenic nematodes (EPN) and the pinewood nematode *Bursaphelenchus xylophilus*. I have surveyed EPN throughout continental Portugal, aiming to find endemic species with the potential for becoming biocontrol agents of truth agricultural pests. In this frame, I have look for correlations between EPN distribution and abiotic factors. With this work, I have pioneered the study on EPN in Portugal, which allow me to develop a network of experts with whom I have collaborated: Dr. Zdenek Mráček (Check Republic); Professor Dr. Richard Sikora, Professor Dr. Alexander Schouten and Dr Ralph Ehlers (all from Germany), Dr Thomae Kakouli –Duarte (Ireland) and Dr Nelson Simões (Portugal). In parallel, I have also studied a particular phytoparasitic nematode– *B. xylophilus*. What makes this nematode special is the serious damage that its populations cause in pinewood forests in continental Portugal. Since 2008, the disease has been spreading in the north and center part of the country and, more recently, was found in Madeira island. I was interested in studying the genetic diversity of *B. xylophilus* populations together with the possible new outbreaks of the disease.

Identification

Personal identification

Full name

Vera Mónica Piegas Valadas

Gender

Female

Birth date

1980/05/24

Citation names

Valadas, Vera

Author identifiers

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Addresses

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Rua Guerra Junqueiro, 7B, 7080-127 Vendas Novas, Vendas Novas, Portugal (Personal)

Websites

<https://www.linkedin.com/in/vera-valadas-304100a3/> (Professional)

<https://orcid.org/0000-0002-7317-3901> (Professional)

Languages

Language	Speaking	Reading	Writing	Listening	Peer-review
Portuguese (Mother tongue)					
English	Proficiency (C2)	Proficiency (C2)	Advanced (C1)	Proficiency (C2)	Advanced (C1)
Spanish; Castilian		Elementary (A2)	Beginner (A1)	Intermediate (B1)	
Italian		Elementary (A2)		Intermediate (B1)	

Education

	Degree	Classification
2005/08/05 - 2012/10/12 Concluded	Biological Sciences (Doutoramento) Major in Sem especialidade Universidade de Évora Instituto de Investigação e Formação Avançada, Portugal <i>"Genetic diversity of entomopathogenic nematodes (Nematoda: Steinernematidae and Heterorhabditiae) and the pinewood nematode Bursaphelenchus xylophilus (Nematoda: Aphelenchoididae) from Continental Portugal" (THESIS/DISSERTATION)</i>	18
1998/09/15 - 2004/04/24 Concluded	Biology (Licenciatura) Evora University, Portugal, Portugal <i>"Identifcation by ITS-RFLP of species from Bursaphelenchus genus" (THESIS/DISSERTATION)</i>	

Affiliation

Teaching in Higher Education

2010/03/01 - 2010/07/31	Assistant Professor (University Teacher) Evora University, Portugal, Portugal
2009/03/01 - 2009/07/31	Assistant Professor (University Teacher) Evora University, Portugal, Portugal
2008 - 2009	Assistant Professor (University Teacher) Evora University, Portugal, Portugal
2007 - 2008	Assistant Professor (University Teacher) Evora University, Portugal, Portugal

2006 - 2007	Assistant Professor (University Teacher) Evora University, Portugal, Portugal
2004 - 2005	Assistant Professor (University Teacher) Evora University, Portugal, Portugal
2004/04/01 - 2004/06/30	Assistant Professor (University Teacher) Evora University, Portugal, Portugal

Others

2010/05/12 - 2010/05/21	Training Evora University, Portugal, Portugal
2006 - 2009	Training Evora University, Portugal, Portugal
2004 - 2004	Training Evora University, Portugal, Portugal
2003 - 2004	Training Evora University, Portugal, Portugal

Projects

Grant

	Designation	Funders
2013/05/01 - 2015/11/30	<p>“FEED-CODE - Animal feed certification instrument and procedure to guarantee the quality of meat and dairy products through automatic, simple and rapid DNA barcode method based on tubulin-based polymorphism (TBP)”</p> <p>FP7-SME-2012-315464</p> <p>Pos-doctoral Fellow</p> <p>Universidade de Évora, Portugal</p>	
2010/01 - 2010/12	<p>Desktop I: Detection, identification and quantification of PWN</p> <p>SFRH/BD/22086/2005</p> <p>PhD Student Fellow</p> <p>Instituto do Mar - Centro Interdisciplinar de Coimbra (IMAR-CIC), Portugal</p>	National Forest Authority, Portugal

2003 - 2003	Prospecção de espécies de Bursaphelenchus em exemplares de Pinus sp. no Algarve PRODEP Other	Instituto de Emprego e Formação Profissional, IEFP, Évora, Portugal
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Contract

	Designation	Funders
2013 - 2014	Characterization of alternative oxidase (AOX) polymorphisms in <i>Hypericum perforatum</i> L. – A novel approach to advance breeding on yield stability in a medicinal plant PTDC/AGR-GPL/099263/2008	Universidade do Algarve Faculdade de Ciências e Tecnologia, Portugal
2010/07 - 2010/11	National Program to Pinewood Nematode Control” (“Programa de acção Nacional para controlo do Nemátode da Madeira do Pinheiro- AFN”) AFN Research Technician Fellow Evora University, Portugal, Portugal	National Forest Authority, Portugal

Other

	Designation	Funders
2014 - 2014	Applying a novel screening tool (calorespirometry) for efficient identification of genetic variability towards yield stability in wheat and other genetic resources related to temperature responsiveness and/or drought ICAAM – Call 2014 Other Evora University, Portugal, Portugal	
2007 - 2009	Pinewood nematode (PWN) <i>Bursaphelenchus xylophilus</i> “, Desktop I: Detection, identification and quantification of PWN AFN Other Instituto do Mar - Centro Interdisciplinar de Coimbra (IMAR-CIC), Portugal	National Forest Authority, Portugal
2004 - 2006	Development of generic ‘on site’ molecular diagnostics for EU quarantine pests and pathogens PORTCHECK 6th FW- EU Other Evora University, Portugal, Portugal	

2004 - 2004	Inter-changeability of anti-meningococcal vaccines for human use INFARMED Other Infarmed Autoridade Nacional do Medicamento e Produtos de Saúde IP Centro de Documentação Técnica e Científica, Portugal	
2003 - 2004	Development of Improved Pest Risk analysis techniques for quarantine pests, using pinewood nematode, <i>Bursaphelenchus xylophilus</i> , in Portugal as a model system QLKS – CT – 2002 – 00672 Other Evora University, Portugal, Portugal	PHRAME, Portugal

Outputs

Publications

Book chapter	1	Gupta KJ, Mur LAJ, Neelwarne B. 2015. "AOX in parasitic nematodes – a matter of lifestyle?". John Wiley & Sons, Inc. Oxford.. http://hdl.handle.net/10174/18060 .
	2	Valadas, Vera. 2015. "AOX diversity to functional marker development". In <i>Alternative respiratory pathways in higher plants</i> . John Wiley & Sons, Ltd. http://dx.doi.org/10.5772/26645 . 10.5772/26645
Conference poster	1	Valadas, Vera. 2009. "Entomopathogenic nematodes from Continental Portugal". Paper presented in <i>Forty-eighth Annual Meeting of the Society of Nematologists and the Twelfth Biennial Meeting of the Soil Ecology Society</i> .
	2	Valadas, Vera. 2006. "Survey of <i>Bursaphelenchus</i> species (Nematoda: Parasitaphelenchidae) in north regions of Turkey.". Paper presented in <i>XL Meeting of the Portuguese Society of Electron Microscopy and Cell Biology</i> .
	3	Valadas, Vera. 2006. "Survey of <i>Bursaphelenchus</i> species (Nematoda: Parasitaphelenchidae) in north regions of Turkey". Paper presented in <i>XXVIII International Symposium</i> .
	4	Valadas, Vera. 2005. "New interesting records of the species of the plant parasitic genus <i>Bursaphelenchus</i> in China and the use of morphological and molecular approaches for the species identification". Paper presented in <i>1st Symposium of the Scandinavian-Baltic Society for Parasitology</i> .
	5	Valadas, Vera. 2005. "Bursaphelenchus xylophilus: uma séria ameaça aos ecossistemas florestais em Portugal e na Europa". Paper presented in <i>II Congresso Nacional da Ordem dos Biólogos</i> .

- 6 Valadas, Vera. 2004. "First report of *Bursaphelenchus mucronatus* from Turkey, associated with *Pinus nigra*". Paper presented in *XXVII ESN International Symposium*.
- 7 Valadas, Vera. 2004. "). Identificação e diferenciação molecular de espécies próximas de nemátodes por PCR-RFLP's". Paper presented in *IV Congresso da Sociedade Portuguesa de Fitopatologia*.
- 8 Valadas, Vera. 2003. "First report of *Bursaphelenchus* sp. from Turkey, associated with *Pinus nigra*". Paper presented in *42th Annual Meeting of the Society of Nematologists*.

Journal article

- 1 Valadas, Vera. 2018. "A TaqMan real-time PCR method based on alternative oxidase genes for detection of plant species in animal feed samples". *PLOS ONE*. <http://dx.doi.org/10.1371/journal.pone.0190668>.
10.1371/journal.pone.0190668
- 2 Valadas, Vera. 2018. "Interlaboratory Comparison of Methods Determining the Botanical Composition of Animal Feed". *Journal of AOAC INTERNATIONAL*. <http://dx.doi.org/10.5740/jaoacint.17-0150>.
10.5740/jaoacint.17-0150
- 3 Valadas, Vera. 2016. "Alternative Oxidase Gene Family in *Hypericum perforatum* L.: Characterization and Expression at the Post-germinative Phase". *Frontiers in Plant Science*. <http://dx.doi.org/10.3389/fpls.2016.01043>.
10.3389/fpls.2016.01043
- 4 Valadas, Vera. 2016. "Allelic variation on DcAOX1 gene in carrot (*Daucus carota* L.): An interesting simple sequence repeat in a highly variable intron". *Plant Gene*. <http://dx.doi.org/10.1016/j.plgene.2015.11.001>.
10.1016/j.plgene.2015.11.001
- 5 Velada, Isabel; Cardoso, Hélia G.; Ragonezi, Carla; Nogales, Amala; Ferreira, Alexandra; Valadas, Vera; Arnholdt-Schmitt, Birgit. 2016. "Alternative oxidase gene family in *Hypericum perforatum* L.: characterization and expression at the post-germinative phase". <http://hdl.handle.net/10400.5/13768>.
10.3389/fpls.2016.01043
- 6 Velada, Isabel; Cardoso, Hélia G.; Ragonezi, Carla; Nogales, Amaia; Ferreira, Alexandre; Valadas, Vera; Arnholdt-Schmitt, Birgit. 2016. "Alternative Oxidase Gene Family in *Hypericum perforatum* L.: Characterization and Expression at the Post-germinative Phase". <http://hdl.handle.net/10174/21942>.
- 7 Nogales, Amaia; Nobre, Tânia; Valadas, Vera; Ragonezi, Carla; Döring, Matthias; Polidoros, Alexios; Arnholdt-Schmitt, Birgit. 2015. "Can functional hologenomics aid tackling current challenges in plant breeding?". *Briefings in Functional Genomics* 15 (4): 288-297. <http://dx.doi.org/10.1093/bfpg/elv030>.
10.1093/bfpg/elv030
- 8 Valadas, Vera. 2014. "Functional marker development is challenged by the ubiquity of endophytes – a practical perspective". *Briefing on Functional Genomics*.
1093/bfpg/elu049

- 9 Valadas, Vera; Laranjo, Marta; Mota, Manuel; Oliveira, Solange. 2014. "A survey of entomopathogenic nematode species in continental Portugal". <http://hdl.handle.net/10174/10443>.
- 10 Valadas, Vera; Laranjo, Marta; Mota, Manuel; Oliveira, Solange. 2013. "Molecular characterization of Portuguese populations of the pinewood nematode *Bursaphelenchus xylophilus* using cytochrome b and cellulase genes". <http://hdl.handle.net/10174/6865>.
- 11 Valadas, V.; Laranjo, M.; Barbosa, P.; Espada, M.; Mota, M.; Oliveira, S.. 2012. "The pine wood nematode, *Bursaphelenchus xylophilus*, in Portugal: Possible introductions and spread routes of a serious biological invasion revealed by molecular methods". *Nematology* 14 (8): 899-911. <http://www.scopus.com/inward/record.url?eid=2-s2.0-84873693260&partnerID=MN8TOARS>.
10.1163/156854112X632673
- 12 Valadas, Vera; Mracek, Z; Oliveira, Solange; Mota, Manuel. 2011. "Three species of entomopathogenic nematodes of the family Steinernematidae (Nematoda: Rhabditida) new to continental Portugal". <http://hdl.handle.net/10174/3679>.
- 13 Valadas, V.; Vieira, P.; Oliveira, S.; Mota, M.. 2009. "First report of the genus *Heterorhabditis* (Nematoda: Heterorhabditidae) from continental Portugal". *Helminthologia* 46 (1): 45-48. <http://www.scopus.com/inward/record.url?eid=2-s2.0-65349100507&partnerID=MN8TOARS>.
10.2478/s11687-009-0009-8
- 14 Akbulut, S.; Vieira, P.; Ryss, A.; Valadas, V.; Keten, A.; Mota, M.. 2008. "*Bursaphelenchus Fuchs*, 1937 (Nematoda: Parasitaphelenchidae) species associated with *Pinus* species in northern Turkey". *Helminthologia* 45 (2): 89-95. <http://www.scopus.com/inward/record.url?eid=2-s2.0-44949240463&partnerID=MN8TOARS>.
10.2478/s11687-008-0017-0
- 15 Valadas, V.; Boyle, S.; Vieira, P.; Kakouli-Duarte, T.; Mota, M.. 2007. "First report of an entomopathogenic nematode from continental Portugal". *Helminthologia* 44 (4): 226-229. <http://www.scopus.com/inward/record.url?eid=2-s2.0-35448953693&partnerID=MN8TOARS>.
10.2478/s11687-007-0037-1
- 16 Penas, Ana Catarina; Bravo, Maria Antónia; Valadas, Vera; Mota, Manuel. 2007. "Detailed morphobiometric studies of *Bursaphelenchus xylophilus* and characterisation of other *Bursaphelenchus* species (Nematoda: Parasitaphelenchidae) associated with *Pinus pinaster* in Portugal". <http://hdl.handle.net/10174/6703>.
- 17 Akbulut, S.; Vieira, P.; Ryss, A.; Yuksel, B.; Keten, A.; Mota, M.; Valadas, V.. 2006. "Preliminary survey of the pinewood nematode in Turkey". *EPPO Bulletin* 36 (3): 538-542. <http://www.scopus.com/inward/record.url?eid=2-s2.0-33845777044&partnerID=MN8TOARS>.
10.1111/j.1365-2338.2006.01056.x
- 18 Penas, A.C.; Metge, K.; Mota, M.; Valadas, V.. 2006. "*Bursaphelenchus antoniae* sp. n. (Nematoda: Parasitaphelenchidae) associated with *Hylobius* sp. from *Pinus pinaster* in Portugal". *Nematology* 8 (5): 659-669. <http://www.scopus.com/inward/record.url?eid=2-s2.0-33845275822&partnerID=MN8TOARS>.
10.1163/156854106778877947

Thesis /
Dissertation

- 1 Valadas, Vera Mónica Piegas. 2012. "Genetic diversity of entomopathogenic nematodes (Nematoda: Steinernematidae and Heterorhabditidae) and the nematode *Bursaphelenchus xylophilus* (Nematoda: Aphelenchoididae) from continental Portugal". PhD. <http://hdl.handle.net/10174/15718>.
- 2 Valadas, Vera. 2004. "Caracterização Molecular por PCR ITS-RFLP de espécies do género *Bursaphelenchus*". Degree, Evora University, Portugal.
- 3 Valadas, Vera. 2004. "Caracterização Molecular por PCR ITS-RFLP de espécies do género *Bursaphelenchus*". Degree, Universidade de Évora Departamento de Biologia.
- 4 Valadas, Vera. 2003. "Prospecção de espécies de *Bursaphelenchus* em exemplares de *Pinus* sp. no Algarve". Degree.

Activities

Event participation

	Activity description Type of event	Event name Institution / Organization
2014/09/14 - 2014/09/18	Valadas, V. Ragonezi, C. and Arnholdt-Schmitt, B.(2014).Invited as Meeting Participant to COST Action: Joint Meeting of COST FA1206 (WP3) and FA1103 Exo- and Endogenous Signalling, 14-18th September, Kraków, Poland (available http://katarzynaturnau.wix.com/streamkrakow) "Endophytes in biotechnology and agriculture" with the presentation "Studying <i>Chlorella vulgaris</i> and its associated consortium"	Endophytes in biotechnology and agriculture
	Meeting	
2011/09/04 - 2011/09/09	Valadas, V., Barbosa, P., Espada, M., Oliveira, S., and Mota, M. (2011). The pinewood nematode, <i>Bursaphelenchus xylophilus</i> , in Portugal: possible introductions and spread routes of a serious biological invasion revealed by molecular methods. XLIII ONTA Annual Meeting, 4-9th September, Coimbra, Portugal. (available in http://hdl.handle.net/10174/4656)	XLIII ONTA Annual Meeting Coimbra University, Portugal, Portugal
	Meeting	
2007/11/22 - 2007/11/23	Valadas, V., Boyle, S., Vieira, P., Kakouli-Duarte, T., Figo, F. and Mota, M. (2007). First report of an entomopathogenic nematode from continental Portugal. V	V Congresso da Sociedade Portuguesa de Fitopatologia Coimbra University, Portugal, Portugal

Congresso da Sociedade Portuguesa de
Fitopatologia, 22-23th November,
Coimbra, Portugal.

Congress

Course / Discipline taught

	Academic session	Degree Subject (Type)	Institution / Organization
2015/03 - 2015/07	2015 – From March until July 2015 – participation in COHITEC, Portuguese stakeholder industrial association for innovation, as member of the Predict4Growth team - https://www.actbycotec.com/pt/cohitec.127.html and https://www.youtube.com/watch?v=jljX09A7CRI Video Final Presentation – Pavilhão do Conhecimento: https://www.youtube.com/watch?v=GNm0JcrnjyE	(Outros)	COHITEC, Portugal
2014/10/20 - 2014/10/24	2014 – Course on “Experimental Design and Statistical Data Analysis: applications in R-software for endophyte-related data”, in University of Évora, Portugal, between 20th – 24th October 2014, organized by “EU COST FA1103 Training School 2014.	(Outros)	
2014/07/21 - 2014/07/25	2014 – Course on “Bioinformatics, microbial genomes and mobile elements: New perspectives and applications”, in Aveiro University between 21th - 25th July 2014, under the coordination of Dr. Denise Carvalho-Silva, Dr. Tom Hancocks and Dr. Sandra Orchard from EMBL-EBI, UK; Dr. Cláudia Oliveira, Dr. Ana Sofia Duarte and Dr. António Correia from DeBio & CESAM, Aveiro University, Portugal; Dr. Fernando Tavares and Dr. Pedro Albuquerque from CIBIO, Porto University, Portugal; Dr. Pedro Alberto and Dr. Pedro Almeida from Laboratory of Advanced Computing.	(Outros)	Aveiro University, Portugal, Portugal

2013/04/29 - 2013/05/03	2013 – Short Course on “Molecular Biotechnology”, in University of Évora between 29th April – 3rd May 2013, under the coordination of Professor of Molecular Biotechnology at the University of Waterloo, Canada, Prof. Bernard Glick. The course was prepared by ICAAM (“Instituto de Ciências Agrárias e Ambientais Mediterrâneas”).	(Outros)	Evora University, Portugal, Portugal
2007/09/10 - 2007/09/14	2007 - “Molecular Phylogeny: Principles, techniques, and problem solving” course, in Aveiro University between 10-14 September 2007, under the coordination of Dr. Gonzalo Giribet and Dr. Ward Wheeler.	(Outros)	Aveiro University, Portugal, Portugal
2004 - 2004	2004 – Initial teacher training of trainer’s course, in Montemor, with the final classification of Very Good.	(Outros)	Instituto de Emprego e Formação Profissional, IEFP, Montemor-o-Novo, Portugal
2003/06 - 2003/07	2003 – Molecular Biology course: “Molecular Biological Techniques and Practical Applications in Plant Sciences”, under the coordination of Dr. Birgit Arnholdt-Schmitt from Biocenter Klein Flottbek, Botanical Institute – University of Hamburg. The course was prepared by ICAAM (“Instituto de Ciências Agrárias e Ambientais Mediterrâneas”).	(Outros)	Evora University, Portugal, Portugal

Legal proceeding

	Activity description	Case
2015/03 - 2015/07	During COHITEC and following our project Predict4Growth for a spin off, a provisional patent has been applied (Register number: 20151000033192. Deposit date 21/04/2015. Number of deposit PCT: 20151000033192. Deposit date PCT: 21/04/2015. Grant date).	Patent - Number of deposit PCT: 20151000033192. Deposit date PCT: 21/04/2015

Mentoring / Tutoring

	Topic	Student name
2014 - 2014	Isolamento, clonagem e caracterização	Jéssica Canário

de um gene da família da Oxidase
Alternativa (AOX) na espécie Cucurbita
maxima

Distinctions

Award

2015 Short Term Scientific Mission grant from the European COST Action: COST-STSM-FA1103-Endophytes in Biotechnology and Agriculture
