**Scientific**

**Curriculum vitae Ana Pineda**

### **Formal education**

1998-2003- MSc Biology (***with distinction***). University of Alicante (Spain).

2004-2008- PhD in Biology (***Cum laude****)*. University of Alicante (Spain).

**Research experience**

*My career reflects a fascination for how ecological concepts can be applied to more sustainable agriculture, and my scientific niche is in the field of chemical and molecular ecology of microbe-plant-insect* *interactions*.

After my PhD in Spain, awarded with the national prize of the Entomological Society of Spain, I obtained a personal Marie Curie IEF fellowship to start a project at the highly-recognized Wageningen University (ranked #59 in the World University Ranking, and #1 in The Netherlands). Then I moved to the NIOO-KNAW, a world-leading institute on soil ecology and microbiome research, to introduce these topics into my research.

* 2018- currently- **Guest researcher at the Research Institute CIBIO**, (University of Alicante, Spain), where I collaborate in different projects remotely.
* 2016- 2018- Post-doctoral project “*Linking aboveground-belowground interactions and plant-soil feedback to improve pest control and sustainability in greenhouse cut-flowers*”. Supervisor: Prof. Martijn Bezemer. Netherlands Institute of Ecology (NIOO-KNAW), Wageningen (The Netherlands)
* 2012- 2016- Post-doctoral project “*Effect of drought on interactions of plants with friends and foes: a plant-insect perspective*”. Supervisor: Prof. Marcel Dicke. Laboratory of Entomology, Wageningen University (The Netherlands).
* 2009-2011- Post-doctoral project “*Multidisciplinary approach to study effects of beneficial rhizobacteria on induced plant defences to aboveground herbivorous insects*”. Supervisor: Prof. Marcel Dicke. Laboratory of Entomology, Wageningen University (The Netherlands).
* 2003-2008- PhD project “*Syrphids (Diptera, Syrphidae) in Integrated Pest Management of aphids in sweet pepper greenhouses*”. Promotor: Prof. Dr. Mª Ángeles Marcos-García. Research Institute CIBIO, University of Alicante (Spain).

**Editorial activities**

* Associate editor of the international journals “***Journal of Ecology***” (since 2018) and “*Plant Biology*” (2014-2019).
* Editor the special issue *“As Above so Below? Below-ground Interactions in Ecological Processes”*, in “*Frontiers in Ecology and Evolution*” (2018).
* Leading editor of the special issue *“*[*Above-belowground interactions involving plants, microbes and insects*](http://www.frontiersin.org/Journal/SpecialTopicDetail.aspx?s=1218&name=Plant-Microbe%20Interaction&st=1023&sname=Above-belowground_interactions)*”* (2014), in the international journal “*Frontiers in Plant Science*”.
* Reviewer for more than 20 international journals in the areas of Entomology, Ecology, and Plant Sciences, including “Nature Ecology and Evolution”, “Functional Ecology”, “New Phytologist”, “Journal of Experimental Botany”, “Molecular Ecology”, “Scientific Reports”.

**Summary of publication record**

My research has led to 37 publications in international, peer-review scientific journals and 1 book chapter. From those, in 14 I am the first and corresponding author, and in 4 of them I am the senior author. In Google Scholar, my H-index is 19 with 1420 citations.

**Selected publications** (see [google scholar](https://scholar.google.com/citations?user=VCSHj-UAAAAJ&hl=en&authuser=2) for a full list)

1. **Pineda**, A., Kaplan I., Hannula, S.E., Ghanem, W. & Bezemer, T.M. 2020. Conditioning the soil microbiome through plant–soil feedbacks suppresses an aboveground insect pest. *New phytologist* 226: 595–608
2. Vaello, T., Sarde, S. J., Marcos-García, M. Á., de Boer, J. G. & **Pineda**, A. 2018. Modulation of plant-mediated interactions between herbivores of different feeding guilds: Effects of parasitism and belowground interactions. *Scientific Reports,* 8**,** 14424.
3. **Pineda**, A., Kaplan, I., Bezemer, T.M. 2017. Steering soil microbiomes to suppress aboveground insect pests. 2017. *Trends in Plant Science*, 22: 770-778.
4. Pangesti, N., Weldegergis, Langendorf, B., van Loon, J.J.A., Dicke, M. & **Pineda**, A. 2015. Rhizobacterial colonization of roots modulates plant volatile emission and enhances attraction of a parasitoid wasp to host-infested plants. *Oecologia*, 178 (4): 1169-1180
5. **Pineda**, A., Soler, R., Weldegergis, B., Shimwela, M., van Loon, J.J.A. & Dicke, M. 2013. Non-pathogenic rhizobacteria interfere with the attraction of parasitoids to aphid-induced plant volatiles via jasmonic acid signaling. *Plant, Cell & Environment* 36: 393-404

**Teaching experience**

**Supervision of students**

I have supervised a total of **15 Master** students during their theses (4-6 months full time). 12 of them are enrolled in (or have finished) a PhD program. I have participated in the supervision of **4 PhD-students**.

**Teaching activities**

Since 2012: **Invited lecturer** at Purdue University (1h seminar, USA), Leiden University (2h lecture: 2016, 2017, The Netherlands), University of Alicante (4 h lecture: 2012, 2014, 2015, Spain), and Brunei University (1h seminar, to be held in Feb 2019, Brunei).

2014-2019: **Online Teaching** in the program “Integrated Pest Management and Biological Control”, University of Alicante (Spain), 8 h lectures during 6 editions.

2010 – 2016: **Supervision of practical work** at Wageningen University. Groups of 2-6 students, doing a full project of 3-4 weeks – Courses: Behavioral Ecology (2013, 6 ECTS, 4 students), Molecular Aspects of Biointeractions (2014-2015, 6 ECTS, 4+5 students), Molecular and Evolutionary Ecology (2010, 2013, 2014, 6 ECTS, 2+2+3 students), Ecological Aspects of Biointeractions (2010, 6 ECTS, 3 students), Biology and Management of Plant Pathogens and Weeds (2010, 6 ECTS, 2 students), Research Master Cluster (2016, 20h, 1 student). The course Plant Quality and IPM was with big groups of 40 students (2011, 2014, 20 h each year)

2004 – 2007: **Lecturer and teaching assistant** at the University of Alicante (Spain) – The structure was 30 min of theory followed by 1.5h of practical work with groups of ~20 students. Courses: Zoology, Biology and Conservation of Arthropods, Biology and Control of Pests. Total: 180 h

**Prizes and other tokens of esteem**

**Prizes**

2009 Entomological Society of Spain: To the best young entomologist for my PhD work.

2004 University of Alicante: To the best Master students in Biology (only to the top 2%, “Premio extraordinario de licenciatura”).

**Commissions of trust**

**Vice-leader** of one out of three working groups of the **COST Action FA1405** “Using three-way interactions between plants, microbes and arthropods to enhance crop protection and production”. This group is about “Utilization” (2016-2019).

**Reviewer of grant proposals** for the National Science Foundation (USA), BBSRC (UK), INRA (France), Agreenskills (France), Agence Nationale de la Reserche (France), Czech Science Foundation (Czech Republic). Since 2016.

**Reviewer of research proposals and PhD Thesis** for the Graduate Schools of Experimental Plant Sciences and PE&RC (The Netherlands), and for the University of Alicante (Spain) and University of Naples (Italy).

Member of the **PhD defense committee** of R. Amorós, University of Alicante (Spain, 2013), and of Daniel Bastias, University of Buenos Aires, (Argentina, 2018).

Member of the **PhD advisory board** of M. Ourry, University of Rennes (France), and of M. Fernandez de Bobadilla, Wageningen University (The Netherlands).

**Organization of scientific meetings**

- Member of the **scientific committee** of the Annual Meeting of the COST Action FA1405 (Malta, 24-26th January 2018)

- Organization of the **international workshop** “Plant-soil-microbe interactions for crop and pest management”. 30th June 2016 Wageningen (The Netherlands). Organized together with Prof. Ian Kaplan and Prof. Martijn Bezemer.

- Member the organizing **committee** of the international meeting XII Congreso Ibérico de Entomología, Alicante, 11-14 September, 2006.

**Utilization and outreach**

1- Co-invention of the **patent** “*Rearing method of the predator Sphaerophoria rueppellii*”, no. ES2376097, 2013.

****2- Co-founder and member of the scientific committee of the biocontrol company **Bionostrum** ([www.bionostrum.com](http://www.bionostrum.com)), producer of the hoverfly *Sphaerophoria rueppellii* that is being released as a biocontrol agent in hundreds of greenhouses around Europe.

3- Several presentation and advisor activities for companies such as the breeding company Limagrain, the biocontrol companies Biobest and Koppert, and the dutch board of Chysanthemum growers and breeders.

###### 4- Design and distribution of 4000 illustrated leaflets entitled “Los sírfidos: control biológico de pulgón en invernaderos de pimiento” (2008). The leaflet contained the main applied results from my PhD. The distribution was done in the main areas of sweet pepper production in Spain, through agricultural cooperatives and supplies shops.

# Communications as Invited or Keynote speakers

I have been Invited speakerin 13 international meetings (Keynote talk in 3 of them). Here there is a selection:

* 1. Soil microbiomes in plant-insect interactions and their application for pest control. ESA, ESC, and ESBC Joint Annual Meeting. 11-14 November 2018, Vancouver (Canada).
  2. Career Insights and Professional Development Advice. 3rd Gordon Research Seminar on Plant Volatiles. 3-4 February 2018, Barga (Italy).
  3. **Keynote speaker**. Microbes for pest control in greenhouses: merging ecological, agronomic, and molecular aspects. IOBC International Conference, 4-8 June 2017, Niagara Falls (Canada).
  4. Impact of rhizosphere microbes in plant-insect interactions. Keystone Symposia Phytobiomes: from microbes to plant ecosystems. 8-12 November 2016, Santa Fe (USA).
  5. Beneficial soil microbes effects on aboveground herbivores: Mechanisms in the plant and interactions with carnivorous insects. Joint 2014 Annual Meeting British Ecological Society and Société Française d’Ecologie, 9-12 December 2014, Lille (France).

**ACQUISITION RECORD**

In total I have acquired more than 1M€ (~500K€ as PI, and ~528K€ as co-PI). As **PI**, in:

2009– 2011: Postdoctoral personal Marie Curie IEF (Intra European Fellowship, FP7). ~161K€. Laboratory of Entomology, Wageningen University (and 53K€ from the Spanish Ministry of Science and Innovation that I resigned)

2004– 2007: PhD personal grant from the Generalitat Valenciana (regional government). ~145K€. CIBIO, University of Alicante, Spain. (and 139K from the University of Alicante that I resigned to)

2007– 2014: Various personal grants to attend international conferences (e.g. Uyttenboogaart-Eliasen Stichting). Total ~10K€

I have also participated in two projects **as Co-PI** in **:**

2016– 2019- Spanish Ministry of Science, with M.A. Marcos-Garcia ~122K€

2012– 2016: Open competition program from NWO (ALW). Project that I wrote and initially submitted as a Veni grant (not funded as such), then submitted by M. Dicke. ~240K€. Laboratory of Entomology, Wageningen University.

2005– 2008- Spanish Ministry of Science, with Prof. V. Rubio Susan~166K€