Curriculum Vitae

Patrícia C. F. Santos
Department of Biochemistry and Molecular Biology
University of Nevada, Reno, NV 89557
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Education

Bringing RNA-Seq into Undergraduate Education **2016**
Virtual Workshop, 6-17 June 2016
Organizer: Cold Spring Harbor Laboratory's DNA Learning Center
Supported by the NSF, DUE #1323522

Python Software for Beginners **2013**
Technology Training – Information Technology Services
Michigan State University, East Lansing, MI

Beginner Applied Bioinformatics Workshop **2013**
Michigan State University, East Lansing, MI
Organizers: Robin Buell, Elsa Gongora, Candy Hirsch, Cody Hirsch,
Peter Hamilton, Kevin Childs, John Johnston

Oomycete Bioinformatics Training Workshop, **2013**
Virginia Bioinformatics Institute
Virginia Polytechnic Institute and State University, Blacksburg, VA
Organizer: Brett Tyler

Ph.D. Cytogenetics and Molecular Biology **2005**
Madeira University, Madeira, Portugal
Dissertation: **"**Molecular Aspects of Orange Rust (*Hemileia Vastatrix* Berk & Br)
Resistance Responses in Coffee (*Coffea Arabica* L.)."
Supervisors: Ana Ribeiro, Diana Fernandez, Manuela Gouveia

Advanced training in Transcriptomics (Macroarrays) **2002-2003**
Laboratoire de Biologie Moléculaire, UR Résistance des Plantes
Institut de Recherche pour le Développement (IRD), Montpellier, France
Supervisor: Diana Fernandez

Advanced Training in Construction of Suppressive Subtractive cDNA Libraries **2002**
Laboratoire de Biologie Moléculaire, UR Résistance des Plantes
Institut de Recherche pour le Développement (IRD), Montpellier, France
Supervisor: Diana Fernandez

Cambridge English: First Certificate in English **1999**
Cambridge School, Lisbon, Portugal

B.A. + M.S. (Licenciatura) Applied Plant Biology **1996**
University of Lisbon, Lisbon, Portugal
Dissertation: "Acclimation of *Cynara cardunculus* L (cardoon) to Different Temperature Regimes."
Supervisors: Maria Manuela Chaves, João Santos Pereira

Professional Appointments

Research Assistant Professor **2015-Present**
University of Nevada Reno, Reno, NV

Senior Research Associate **2013-2014**
Michigan State University, East Lansing, MI
Supervisor: Martin Chilvers
(chilvers@msu.edu)

Research Associate **2011- 2013**
Michigan State University, East Lansing, MI
Supervisor: Brad Day
(bday@msu.edu)

Posdoctoral Fellowship **2008–2011**
Tropical Research Institute, Oeiras, Portugal/ Michigan State University, East Lansing, MI/ Stockholm University, Stockholm, Sweden
Supervisors: Ana Ribeiro, Katharina Pawlowski and Brad Day
(aribeiro@itqb.unl.pt, katharina.pawlowski@su.se, bday@msu.edu)

Posdoctoral Fellowship **2005-2008**
Universidade Nova de Lisboa, Oeiras, Portugal / Tropical Research Institute, Oeiras, Portugal / Stockholm University, Stockholm, Sweden
Supervisors: Ana Ribeiro and Katharina Pawlowski
(aribeiro@itqb.unl.pt, katharina.pawlowski@su.se)

Peer-Reviewed Publications

Current H-index: **10**

1. **Santos, P.** *, Yim, W.C. *, Zhuang, X.*, Rojas, A., Wang, J., Kosma, D., McPhee, K.E., Coram, T.E., Chilvers, M.I. (*In revision*). Transcriptome characterization and gene expression profiling analysis *of Pisum sativum* in response to infection by *Sclerotinia sclerotiorum*. *First and second authors contributed equally to this work.

2. Busta L, Yim WC, LaBrant EW, Wang P, Grimes L, Malyszka K, Cushman JC, **Santos P**, Kosma DK, Cahoon EB (2018). Identification of Genes Encoding Enzymes Catalyzing the Early Steps of Carrot Polyacetylene Biosynthesis. *Plant Physiology*. 178:1507-1521.

3. Delude, C, Fouillen, L, Bhar, P, Cardinal, M-J, Pascal, S, **Santos, P**, Kosma, DK, Joubès, J, Rowland, O, Domergue, F (2016). Primary fatty alcohols are major components of suberized root tissues of Arabidopsis in the form of alkyl hydroxycinnamates. *Plant Physiology*. 171:1934-1950.

4. Kandel, YR, Haudenshield, J, Fakhoury, A, Chilvers, M, Wang, J, **Santos, P**, Hartman, G, Malvick, D, Mueller, D and Leandro, L. (2015). Multi-lab comparison of six qPCR assays for quatification of *Fusarium virguliforme* from soybean roots and soil samples. *Phytopathology*. 105:1601-1611.

5. Kosma DK*, Murmu J, Razeq FM, **Santos P**, Bourgault R, Molina I, Rowland O (2014) AtMYB41 Activates ectopic suberin synthesis and assembly in multiple plant species and cell types. *The Plant Journal*. 80:216-229.

6. Demina, I.V. *, Persson, T. *, **Santos, P.**, Plaszczyca, M., Pawlowski, K. (2013). Comparison of the nodule vs. root transcriptome of the actinorhizal plant *Datisca glomerata*: actinorhizal nodules contain a specific class of defensins. *PLOS One*. 8: e72442. *First and second authors contributed equally to this work.

7. Schubert, M., Koteyeva, N.K., Zdyb, A., **Santos, P.**, Voitsekhovskaja, O.V., Demchenko, K.N., Pawlowski, K. (2013). Lignification of cell walls of infected cells in *Casuarina glauca* nodules that depend on symplastic sugar supply, is accompanied by reduction of plasmodesmata number and narrowing plasmodesmata. *Physiologia Plantarum*. 147:524-540.

8. Ribeiro, A., Berry, A.M., Pawlowski, K., **Santos, P.** (2011). Actinorhizal plants. *Functional Plant Biology*. 38, v–vii.

9. Ribeiro, A., Graça, I., Pawlowski, K., **Santos, P.*** (2011). Actinorhizal plant defence-related genes in response to symbiotic *Frankia*. *Functional Plant Biology*. 38:639–644. ***Corresponding author.**

10. Schubert, M., Koteyeva, N.K., Wabnitz, P.W., **Santos, P.**, Büttner, M., Sauer, N., Demchenko, Kirill., Pawlowski, K. (2011). Plasmodesmata distribution and sugar partitioning in nitrogen-fixing root nodules of *Datisca glomerata*. *Planta*. 233:139–152.

11. **Santos, P.***, Fortunato, A.*, Graça, I., Martins, S.M., Gouveia, M.M., Auguy, F., Bogusz, D., Ricardo, C.P.P., Pawlowski, K., Ribeiro, A. (2010). Characterization of four defense-related genes up-regulated in root nodules of *Casuarina glauca*. *Symbiosis*. 50:27–35. ***First and second authors contributed equally to this work.**

12. **Santos, P.**, Fortunato, A., Ribeiro, A., Pawlowski, K. (2008). Chitinases in root nodules. *Plant Biotechnology*. 25: 299-307.

13. Sirrenberg A, Göbel C, Grond S, Czempinski N, Ratzinger A, Karlovsky P, **Santos P**, Feussner I, Pawlowski K. (2007). *Piriformospora indica* affects plant growth by auxin production. *Physiologia Plantarum*. 131: 581-589.

14. Fortunato, A.*, **Santos, P.***, Graça, I., Gouveia, M., Martins, S., Ricardo, C.P., Pawlowski, K., Ribeiro, A. (2007). Molecular characterization of *cgchi3*, a nodule-specific from *Casuarina glauca* encoding a class III chitinase. *Physiologia Plantarum*. 130: 418-426. ***First and second authors contributed equally to this work.**

15. Fernandez, D., **Santos, P.**, Agostini, C., Bon, M-C., Petitot, A-S., Silva, M.C., Guerra-Guimarães, L., Ribeiro, A., Nicole, M. (2004). Identification of coffee (*Coffea arabica*) genes upregulated during the hypersensitive response to the rust pathogen (*Hemileia vastatrix*). *Molecular Plant Pathology*. 5: 527-536.

16. Chen, Z.J., Ribeiro, A., Silva, M.C., **Santos, P.**, Guerra-Guimarães, L., Gouveia, M., Fernandez, D., Rodrigues Jr, C.J. (2003). Heat shock-induced susceptibility of green coffee leaves and berries to *Colletotrichum gloeosporioides* and its association to PR and hsp70 gene expression. *Physiological and Molecular Plant Pathology*. 63(4): 181-190.

Oral Presentations

1. L Grimes, L Busta, K Malyszka, Z Wahrenburg, C Lowe, DK Kosma, WC Yim, EB Cahoon, **P Santos** (2019). The role of polyacetylenic lipids in carrot defense against the necrotrophic fungus Sclerotinia sclerotiorum.The American Phytopathological Society: Plant Health 2019, August 3-7, Cleveland, OH, USA (**if selected, will be presented by last author**).

2. Kosma, DK. **Santos, P**. Wahrenburg, Z. (2017). Joint Bioenergy Institute seminar series, Academic, Seminar, "Identification of Transcriptional Regulators of Wound Suberin Deposition", Invited, Joint Bioenergy Institute (UC Berkeley), December 13 (presented by first author).

3. Kosma DK, **Santos P,** Wahrenburg Z (2017) UMN Department of Plant and Microbial Biology Seminar Series, Academic, Seminar, "A Corky Predicament: Transcriptional Regulation of Suberin Deposition during Plant Wounding", University of Minnesota, November 14 (presented by first author).
4. Kosma DK, **Santos P,** Wahrenburg Z (2017) UNL Center for Plant Science Innovation, Academic, Seminar, "A Corky Predicament: Investigating the Regulated Deposition of the Lipid-Phenolic Plant Heteropolymer Suberin", Invited, University of Nebraska Lincoln, October 31 (presented by first author).
5. Kosma, DK. **Santos, P.** Wahrenburg, Z. (2017) Carnegie Institution for Science - Department of Plant Biology, Academic, Seminar, "Identification of Transcriptional Regulators of Wound Suberin Deposition", Invited, Carnegie Institution for Science, August 9 (presented by first author).
6. Kosma, DK. **Santos, P.** Wahrenburg, Z. (2017) WVU Department of Plant and Soil Sciences Seminar Series, Academic, Seminar, "Identification of Transcriptional Regulators of Wound Suberin Deposition", Invited, West Virginia University, February 2 (presented by first author).
7. Jimenez, J., Benesch, E., Rowland, O., Molina, I., **Santos, P.**, Kosma, D. (2016). Identification of Transcriptional Regulators of Wound Suberin Deposition. 22nd International Symposium on Plant Lipids, July 3-8, Goettingen, Germany (by selection; presented by last author).
8. Kosma DK, **Santos P,** Wahrenburg Z (2015) "Investigating the Regulated Deposition of the Lipid-Phenolic Heteropolymer Suberin", Instituto de Tecnologia Química e Biológica, Portugal, September 15 (presented by first author).
9. **P Santos,** X Zhuang, C Foster, J Wang, M Chilvers (2014). Expression profiling of the pea-*Sclerotinia sclerotiorum* interaction for genomics-assisted breeding. 12th Annual Sclerotinia Initiative Meeting, January 22-24, Minneapolis, MN, USA (**presented by first author**).
10. **Santos, P.**, Knepper, C., Yan, L., Savory, E.A., Carrillo, L.R., Fisher, N., Kramer, D., Day, B. (2012). *Arabidopsis Non-Race Specific Disease Resistance-1* (*NDR1*) is Required for Robust Activation of Drought Tolerance and PAMP Triggered Immunity *via* an Abscisic Acid Dependent Pathway. XV International Congress on Molecular Plant-Microbe Interactions, July 29-August 2, Kyoto, Japan (**by selection; presented by first author**).
11. Ribeiro A, Graça I, Pawlowski K, **Santos P** (2011). Actinorhizal plant defence-related genes in response to symbiotic *Frankia*. Meeting on Plant-Microbe Interactions, 12th-14th October, University of Minho, Braga, Portugal (**by selection; presented by last author**).
12. **P Santos**, I Graça, B Rashidi, J Liang, A Fortunato, A Melo, J C Ramalho, A Pereira, B Day, K Pawlowski and A Ribeiro (2010). Functional analysis of defense-related genes involved in *Casuarina glauca-Frankia* symbiosis. 16th International Frankia and Actinorhizal Plants Meeting, 5th-8th September. Porto. Portugal (presented by last author).
13. K Pawlowski, B Rashidi, S Mehrabi, M Plaszczyca, T Persson, I Demina, L Jingsi, **P Santos**, S Svistoonoff, C Franche, M Plaszczyca and A Ribeiro (2010). Activity of nodule-specific promoters in heterologous nodules: implications for the evolution of infection pathways. 16th International Frankia and Actinorhizal Plants Meeting, 5th-8th September. Porto. Portugal (presented by first author).
14. Graça I, Liang J, Fortunato A, **Santos P** et al (2009). Characterization of a chitinase III encoding gene from actinorhizal nodules of *Casuarina glauca*. XXXIV Jornadas Portuguesas de Genética, 28-30th April, Lisbon, Portugal (presented by first author).
15. **Santos P**, Fortunato A, Graça I, Martins SM, Gouveia MM, Auguy F, Bogusz D, Pinto Ricardo C, Pawlowski K, Ribeiro A (2008). Characterization of four defence-related genes expressed in root

nodules of *Casuarina glauca*. 15th International Frankia and Actinorhizal Plants Meeting, 19th-23rd October. Bariloche. Argentine (by selection; presented by last author)

16. **Santos P**, Graça I, Rashidi B, Söderholmn N, Wikmark Y, Fortunato A, Pawlowski K, Ribeiro A (2008). Novel insights about two defense-related genes, *CgChi3* and *CgHin1*, during nodulation of *Casuarina glauca*. 8th European Nitrogen Fixation Conference and 11th International Symposium on Nitrogen Fixation with Non-Legumes. August 30th – September 4th. Gent. Belgium (**by selection; presented by first author**).

17. Ribeiro A, Graça I, **Santos P**, Fortunato A, Liang J, Gouveia M, Pawlowski K (2008). Genes de plantas envolvidos em simbioses actinorrízicas. I Congreso Luso-Espanõl de Fijación de Nitrógeno-XII Reunión National de Fijación de Nitrógeno. 1 – 4th June. Estoril. Portugal (by selection; presented by first author).

18. Ramalho JC, Leitão AE, Eichler P, **Santos P**, Pais IP, Campos PS, Lidon FC, Rodrigues AP, Chaves MM, Ribeiro AI (2006). An integrative approach to study environmental stress tolerance in *Coffea* sp.- from leaf to gene. 21st International Conference on Coffee Science, 11-15th September. Montpellier. France (by selection; presented by first author).

19. **Santos P**, Fortunato A, Graça I, Gouveia M, Auguy F, Ricardo CP, Franche C, Bogusz D Pawlowski K and Ribeiro A (2006). Identification of a NDR1 homologue from *Casuarina glauca* nodules. 14th International Conference on Frankia and Actinorhizal Plants. 15-18th July. Umea. Sweden (**by selection; presented by first author**).

20. Fortunato A, **Santos P**, Graça I, Gouveia M, Martins S, Ricardo CP, Pawlowski K, Ribeiro A (2006). Molecular characterization of *CgChi3*, a nodule-specific gene from *Casuarina glauca*. 14th International Conference on Frankia and Actinorhizal Plants. 15-18th July. Umea. Sweden (by selection; presented by last author).

21. **Santos P**, Machado E, Gouveia M, Silva MC, Guerra-Guimarães L, Ribeiro A, Fernandez D (2004). Identification of genes induced during the interaction of coffee (*Coffea arabica*) – orange rust (*Hemileia vastatrix*). 4º Congresso da Sociedade Portuguesa de Fitopatologia. Livro de resumos. Faro. Portugal (**by selection; presented by first author**).

22. Fernandez D, Silva M, **Santos P**, Petitot A-S, Guerra-Guimarães L, Ribeiro A, Nicole M (2004). La réaction hypersensible du caféier à Hemileia vastatrix, agent de la rouille orangée: caractérization cytologique et moléculaire. Communication aux Jounées J. Chevaugeon – Véme rencontres de Phytopathologie/ mycologie. Aussois. France (by selection; presented by first author).

23. Silva MC, Guerra-Guimarães L, Nicole MR, Loureiro A, Fernandez D, **Santos P**, Ribeiro A, Rodrigues Jr CJ (2003). Early defense responses in coffee – rust interactions. Workshop on Plant Stress Biology. 18-21st June. Livro de resumos. Braga. Portugal (by selection; presented by first author).

24. 3rd Meeting of the project UE/BIO4-CT96-0770, "Environmental conditions influence the growth response in potato plants transformed with *E. coli* polyphosphate kinase gene.", Grenoble, France. January 2000.

25. 2nd Meeting of the project UE/BIO4-CT96-0770, "Growth and photosynthesis of transgenic plants (*Solanum tuberosum* L.) grown under field and controlled environment.", Oeiras, Portugal. October 1998.

26. 1st Meeting of the project UE/BIO4-CT96-0770, "Effects of elevated CO_2 on growth and photosynthesis in *Solanum tuberosum* L. (cv. Désirée) lines - Preliminary results.", Madrid, Spain. November 1997.

Poster Presentations

1. Wahrenburg, Z. D., Busta, L., Grimes, L., Yim, W. C., Cahoon, E., **Santos, P.**, Kosma, D.K. (2018) "Bioactivity, structure, and biosynthesis of polyacetylenes from Carrot." Keystone Symposia on Molecular and Cellular Biology. Squaw Valley, CA.
2. Busta, L., LaBrant, E., Grimes, L., **Santos, P.**, Kosma, D.K., Cahoon, E. (2017) "Bioactivity, structure, and biosynthesis of polyacetylenes." 56th Annual Meeting of the Phytochemical Society of North America, UM, Colombia, MO.
3. Wahrenburg, Z.D., Benesch, E., Hammerschmidt, R., Douches, D., **Santos, P.**, Kosma, D.K. (2017) "Identification and Characterization of Transcriptional Factors that Regulate Wound Periderm Formation in Potato Tubers", Bierkamper Symposium, UNR, Reno, NV.
4. Wahrenburg, Z.D., Benesch, E., Hammerschmidt, R., Douches, D., **Santos, P.**, Kosma, D.K. (2017) "Identification and Characterization of Transcriptional Factors that Regulate Wound Periderm Formation in Potato Tubers." American Society of Plant Biologists Annual Meeting, Hawaii, HI.
5. Busta, L., LaBrant, E., Grimes, L., **Santos, P.**, Kosma, D.K., Cahoon, E. (2017) "Structure and biosynthesis of bioactive polyacetylenes." NEBRASKA RESEARCH & INNOVATION CONFERENCE: PREDICTIVE CROP DESIGN: GENOME TO PHENOME. UNL, Lincoln, NE.
6. Busta, L., LaBrant, E., Grimes, L., **Santos, P.**, Kosma, D.K., Cahoon, E. (2017) "Structure and biosynthesis of bioactive polyacetylenes." NEBRASKA SYMPOSIUM ON PLANT BREEDING, UNL, Lincoln, NE.
7. Church, BF, Doyen, M, **Santos, P**, Kosma, DK. (2015) “Probing Intermolecular Linkages of a Plant Heteropolymer, Suberin, with a Molecular-Genetic Approach.” Sierra Systems and Synbio Symposium. UNR, Reno, NV.
8. **Santos P**, Rice A, Church B, Doyen M, Kosma DK (2015). Probing the Intermolecular Linkages of Suberin with a Molecular-Genetic Approach. International Symposium on Plant Apoplastic Diffusion Barriers: PADIBA, September 2-4, Nantes, France.
9. **P Santos**, X Zhuang, A Rojas, J Wang, C Foster, M Chilvers (2014). Molecular strategies employed by pea cultivars during the interaction with white mold, *Sclerotinia sclerotiorum*. The American Phytopathological Society: 2014 APS-CPS Joint Meeting, August 9-13, Mineapollis, MN, USA.
10. **P Santos**, X Zhuang, C Foster, J Wang, M Chilvers (2014). Expression profilling of the pea-*Sclerotinia sclerotiorum* interaction for genomics-assisted breeding. 12th Annual Sclerotinia Initiative Meeting, January 22-24, Mineapollis, MN, USA.
11. I Graça, **P Santos**, J Liang, A Fortunato, I Palos, A Pereira, B Day, K Pawlowski, A Ribeiro. Functional analysis of two defense related genes, *CgChi3* and *CgHin1* from nitrogen-fixing nodules of *Casuarina glauca* (2009). 8th Plant GEM, October 7-10, Lisbon, Portugal.
12. **P Santos**, J Liang, I Graça, B Rashidi, A Fortunato, B Day, K Pawlowski, A Ribeiro (2009). Functional analysis of defense-related genes involved in the *Casuarina glauca-Frankia* symbiosis. XIV International Congress on Molecular Plant-Microbe Interactions, July 19-23, Québec, Canada.
13. **Santos P**, Graça I, Rashidi B, Söderholmn N, Wikmark Y, Fortunato A, Pawlowski K, Ribeiro A (2008). Novel insights about two defense-related genes, *CgChi3* and *CgHin1*, during nodulation of *Casuarina glauca*. 8th European Nitrogen Fixation Conference and 11th International Symposium on Nitrogen Fixation with Non-Legumes. August 30th – September 4th, Gent, Belgium.
14. Graça I., Fortunato A., **Santos P.**, Liang J., Ricardo C.P., Tavares P., Pereira A. and Ribeiro A. (2007). Production of *Casuarina glauca* recombinant proteins involved in root nodulation by *Frankia*

bacteria. National Congress of MICRO-BIOTEC and XXXIII *Jornadas Portuguesas de Genética*. November 30th – December 2nd, Lisbon, Portugal.

15. Fortunato, A, **Santos, P**, Graça, I, Gouveia, M, Auguy, F, Franche, C, Bogusz, D, Pinto Ricardo, C, Pawlowski, K, Ribeiro, A (2007). Defense-related genes during nodulation of *Casuarina glauca* by *Frankia*. XIII International Congress on Molecular Plant-Microbe Interactions. July 21-27, Sorrento, Italy.

16. Eichler P, **Santos P**, Gouveia MM, Lidon FC, Chaves MM, Ribeiro A, Ramalho JC (2006). Cold tolerance evaluation in *Coffea sp*. Impact on the photosynthetic apparatus and the control of oxidative stress assessed by gene expression analysis. 21st International Conference on Coffee Science, Montpellier, France.

17. **Santos P.**, Machado E., Gouveia M., Fernandez D., Chen Z., Rodrigues Jr C.J., Lidon F.C., Ramalho J., Ribeiro A. (2004). Gene expression analysis of *Coffea* spp. exposed to biotic and abiotic stresses. XIV Congresso Nacional de Bioquímica. Vilamoura, Portugal.

18. **Santos P.**, Bon-MC, Agostini C, Petitot A-S, Silva, MC, Guerra-Guimarães, Ribeiro, A Fernadez, D (2004). Novel insights about coffee leaf rust: identification of genes involved in the resistance process. 14th Federation of European Societies of Plant Biology. Cracow, Poland.

19. Fernandez D., **Santos P.**, Agostini C., Bon M-C., Petitot A-S., Silva MC, Guerra-Guimarães L., Ribeiro A. and Nicole M. (2003). Early expressed coffee genes in the hypersensitive reaction to the rust fungus *Hemileia vastatrix*. 11th International Congress on Molecular Plant-Microbe Interactions. St Petersburg. Russia.

20. Silva, MC., Guerra-Guimarães, L., Nicole, MR., Loureiro, A., Fernandez, D., Ribeiro, A., **Santos, P.** and Rodriges Jr., CJ. (2003). Involvement of peroxidases in the hypersensitive reaction of coffee (*Coffea arabica*) plants to orange rust (*Hemileia vastatrix*). 8th International Congress of Plant Pathology. Chirstchurch. New Zeland.

21. **Santos, P.**, Chaves, M.M. and Pinto Ricardo, C. (2000). Photosynthesis and growth are not improved by the introduction of polyphosphate kinase gene in potato plants, under ambient or elevated CO_2. XII Congresso Nacional de Bioquímica. Livro de Resumos. Póvoa de Varzim. Portugal.

22. **Santos, P.**, Chaves, M.M., Pinto Ricardo, C. (1999). Are photosynthesis and growth of *Solanum tuberosum* L. improved by the expression of polyphosphate kinase genes? XIII Reunión de la Sociedad Española de Fisiología Vegetal y VI Congreso Hispano- Luso. Sevilha. Espanha.

23. **Santos, P.**, Osório, M.L., Chaves, M., Pinto Ricardo, C. (1998). Effects of elevated CO_2 on growth and photosynthesis in *Solanum tuberosum* L. (cv. Désirée) lines transformed with an E. coli polyphosphate kinase. XI Congresso Nacional de Bioquímica. Livro de Resumos. Tomar. Portugal.

24. **Santos, P.**, Chaves, M.M. e Pereira, J.S. (1997). Aclimatação a dois regimes de temperatura em *Cynara cardunculus* L. XII Reunión de la Sociedad Española de Fisiología Vegetal y V Congreso Hispano-Luso de Fisiologia Vegetal. Livro de Resumos. Córdoba. Espanha.

25. Faria T., Canta N., **Santos P.F.**, Chaves M.M., Pereira J.S. (1997). Responses of cork oak (*Quercus suber* L.) to elevated CO_2 under a Mediterranean type of climate. MEDECOS VIII, San Diego, USA.

26. Talhinhas, P., Cerasoli, S., **Santos**, **P.,** Neves Martins, J., Pacheco, C.A., Chaves, M.M., Pereira, J.S. (1995). Características Agronómicas e Fisiológicas de Variedades de Tremoceiro (*Lupinus albus* L.) face ao Stress Hídrico." "IV Congresso Luso-Espanhol de Fisiologia Vegetal". Livro de Resumos. Estoril. Portugal.

Grants and Other Awards

PI: Nevada Agricultural Foundation **2019-2020**
Exploring Natural Sources of Disease Resistance in Carrots –*second year*
University of Nevada, Reno, NV
Awarded $2,945

PI: Nevada INBRE Core Application **2019**
Understanding the Functional Role of the Polyacetylenic Lipids Falcarinol and Falcarindiol in Plant Resistance to Necrotrophic Pathogens
University of Nevada, Reno, NV
Awarded $5,000

PI: Nevada Agricultural Foundation **2018-2019**
Exploring Natural Sources of Disease Resistance in Carrots
University of Nevada, Reno, NV
Awarded $3,000

Co-PI: University of Nevada/USDA Formula Funds **2018-2021**
Understanding the Functional Role of the Polyacetylenic Lipids Falcarinol and Falcarindiol in Plant Resistance to Necrotrophic Pathogens
University of Nevada, Reno, NV
Awarded $176,285

Co-PI: NSF Plant Genome Grant **2016-2020**
ECA-PGR: Dissecting the Transcriptional Networks Underlying Plant Wound Suberin Biosynthesis
University of Nevada, Reno, NV
Awarded $1.37 million

Co-PI: University of Nevada/USDA Formula Funds **2015-2018**
Understanding the Role of Root Hydraulics and Mycorrhizal Symbiosis to Improve Nutrient Capture and Drought Resistance Through Field Management In Tomato
University of Nevada, Reno, NV
Awarded $119,791

Poster Award **2007**
Related Genes during Nodulation of *Casuarina glauca* by *Frankia*
Japan Society for the Promotion of Sciences Colloquium
Frontiers of Plant Biotechnology Meeting
Stockholm University, Stockholm, Sweden

Other Collaborations

Collaborator: NSI, National Sclerotinia Initiative **2016-2017**
ARS-NIFA: Expression profiling of the pea-*Sclerotinia sclerotiorum* interaction for genomics-assisted breeding
Michigan State University, MI

Collaborator: Stockholm University, Sweden **2016-Present**
The role of suberin in root nodules from actinorhizal *Datisca glomerata* and *Casuarina glauca* plants
Stockholm University, Sweden

Teaching Experience

Organizer and Lecturer – Introduction to Basic and **(Spring) 2020**
Applied Plant Pathology (ANV/BCH, TBD)
Field and wet labs, with the collaboration of Dr Shouhua Wang,
Nevada Department of Agriculture
Ungraduate and Graduate Programs
University of Nevada Reno, Reno, Nevada

Guest Lecturer – Biotechnology Symposium (BIOT 777) **(Spring) 2017, 2018, 2019**
Master Graduate Program
University of Nevada Reno, Reno, Nevada

Lecturer – Ethics and Economics of Biotechnology (AGSC 415/615-1001) **(Fall) 2018**
Ungraduate and Graduate Programs
University of Nevada Reno, Reno, Nevada

Guest Lecturer – Plant Molecular Biology and Biotechnology (BCH 718) **(Fall) 2016**
Plant Defenses to Pathogens, PhD Graduate Program
University of Nevada Reno, Reno, Nevada

Guest Lecturer – Plant Molecular Biology and Biotechnology (BCH 718) **(Fall) 2016**
Senescence and Cell Death in Plants, PhD Graduate Program
University of Nevada Reno, Reno, Nevada

Guest Lecturer – Plant Genetics and Biotechnology (AGSC 450/650) **(Spring) 2016**
Plant Transformation – Part I and Part II
Senior Ungraduate and PhD Graduate Programs
University of Nevada Reno, Reno, Nevada

Guest Lecturer - Plant Pathology (PLP/PLB 884) **(Fall) 2012**
Plant Root Symbioses, PhD Graduate Program
Michigan State University, East Lansing, Michigan

Guest Lecturer - Plant Pathology (PLP/PLB 884) **(Fall) 2010**
Plant Root Symbioses, PhD graduate Program,
Michigan State University, East Lansing, Michigan

Teaching Assistant **(Summer) 2010**
Genetic Engineering and GMOs; Summer course for high school students
Tropical Research Institute, Oeiras, Portugal

Guest Lecturer **(Fall) 2006**
Molecular Responses of Plants to Abiotic Stresses,
M.Sc. Graduate Program in Tropical Crop Production,
Instituto Superior de Agronomia, Technical University of Lisbon, Portugal

Teaching Assistant **(Summer) 2006**
Biotechnology and GMOs, Advanced Training Course for High School Teachers
Centro de Formação de Formadores, “Learning to Teach” Program
Linda-a-Velha, Portugal & Tropical Research Institute, Oeiras, Portugal

Supervisory Activities

Student Advisee Honors and Awards

NSF EPSCoR UROP award - Matthew Palmer 2017

NSF EPSCoR UROP award - Lindsey Grimes 2016

Nevada INBRE - Lindsey Grimes 2016
National Institute of General Medical Sciences (P20GM103440)
from the National Institutes of Health

Student, Technicians, and Postdoctoral Researchers Supervised

Undergraduate Students

1. Danielle Sasada (BCH, 1/2015 – 3/2015)
2. Jazmin Jimenez – (BIOT, 3/2015 - 7/2015)
3. Catherine Lowe (CHEM, 4/2015 – 5/2018)
4. Lindsey Grimes (MMI, 8/2015 – 5/2018)
5. Jasmine Trinh (BCH, 7/2015 – 5/2016)
6. Josh Lee (BCH, 4/2016 – 5/2017)
7. Barbara Church (BCH, 7/2015 – 5/2016)
8. Matthew Palmer (BCH, 1/2017 – 9/2017)
9. Logan Smith (BCH, 6/2017 – 12/2017)
10. Jayme Angelo (BCH, 4/2016 – 10/2016)
11. Molly Doyen (BCH, 6/2015 – 11/2015)
12. Austin Esparza (MMI, 1/2017 – 10/2017)
13. Gabriel Golez (BIOT, 6/2017 – 5/2018)
14. Kiah Malyszka (BIOT, 9/2017 – present)
15. Matthew Paulsen (BIOL, 1/2018 – 7/2018)
16. John Kilonzo (BCH, 8/2017 – present)
17. Sara Kennedy (BIOT, 8/2018 – present)
18. Catherine Ung (BIOT, 7/2018 – present)
19. Katarina Stashyn (BIOT, 8/2018 - present)
20. Harold Antonio Murga (BCH, 1/2019 – present)

Graduate Students

1. Alexander Selvey (CMB, 1/2017 – 5/2017)
2. Kiah Malyszka (BIOT, 9/2017 – present)

Post-Doctoral Research Associates Supervised

1. Sebastien Hayoz (11/2016 - 12/2016)

Technicians Supervised

1. Elizabeth Benesch (07/2016 - 07/2017)
2. Jazmin Jimenez (06/2016 – present)

High School Students Supervised

1. Karan Mehtaji (6/2015 – 8/2016)

Undergraduate Student Jury

Thesis Defense Committee Member (*Jury*) - degree in Chemical and 2006
Environmental Sciences - first opponent
Inês Castelhano Graça,

Instituto Piaget, Almada, Portugal

Graduate Student Committees

1. Jennifer Schoener – Master candidate, Department of Biochemistry and Molecular Biology
2. John Baggett - Ph.D. pre-candidate, Department of Biochemistry and Molecular Biology
3. Chrystal Weigand - Ph.D. pre-candidate, Department of Biochemistry and Molecular Biology
4. Tori Speicher - Ph.D. pre-candidate, Department of Biochemistry and Molecular Biology

Professional Service & Administrative Activities

Department Service

1. Search committee member for BMB faculty position in Abiotic Stress Signaling **2016**
2. Search committee member for BMB Bioinformatics position **2018**

College Service

1. Member of CABNR/NAES Greenhouse Committee **April 2019 – present**

Professional Organizations

American Phytopathology Society **2014-present**

Ad hoc Manuscript Reviewer

Reviewer for plant science journals including JoVE, Plant Science, Physiological and Molecular Plant Pathology, Folia Microbiology, Symbiosis, Functional Plant Biology.

Outreach & Engagement

Nevada Farms Conference organizing committee **2018-present**
Member

Hosted and conducted workshop on **March 2019**
"Semi-quantitative Polymerase Chain Reaction (sqPCR)"
with the Nevada Future Farmers of America (16 students)

2nd Drug Discovery Networking Event **March 2019**
Participation

Nevada Farms Conference **February 2018, 2019**
Presenter of Kosma & Santos Lab research on post-harvest
Storage disorders

1st Drug Discovery Networking Event **March 2018**
Presenter on 'Exploring the biosynthesis and antimicrobial
activities of polyacetylenic natural products'

WASERRR Meeting **February 2018**
Invited to share visions of education and research (GMOs and agriculture)
related to UNR and their possible impact in the public in our future.

Nevada Agricultural Foundation **May 2017, 2018, 2019**

Annual Banquet at the Sparks Nugget

CABNR annual field day **September 2015, 2017, 2018**
Presentations on Kosma & Santos lab research

Hosted and conducted workshop on "Understanding GMOs" **July 2017**
with the Nevada Agriculture Teacher's association (7 teachers)

Events Coordinator
Michigan State University Postdoc Association (MSU-PDA) **2010-2014**

Co-chair **2010-2014**
Michigan State University Postdoc Association (MSU-PDA)
Travel Award Committee

Guest Editor **2011**
Special issue of ***Functional Plant Biology*** – "Actinorhizal Plants"
Volume 38 Numbers 8 & 9

Lab Manager **2001**
Molecular Biology and Biotechnology Lab
Plant Ecophysiology, Biochemistry and Biotechnology Center
Tropical Research Institute (IICT), Oeiras, Portugal
Supervisor: Ana Ribeiro

Grant-Writing & Outreach Activities with Developing Nations **2001 - 2011**
Capacity Building in Biotechnology – Collaborative Project
Tropical Research Institute (IICT) Oeiras, Portugal &
Universidade Eduardo Mondlane (UEM), Maputo, Mozambique
Funded by Instituto Português de Apoio ao Desenvolvimento (IPAD)

Patents

Day B, **Santos P**, Knepper C **2012**
"METHOD OF ENHANCING PLANT DROUGHT TOLERANCE BY EXPRESSION OF NDR1"
Application for U.S. Letters Patent on March 9
Michigan State University, East Lansing, MI

Foreign Languages

Language	**Reading, Writing, Conversation**
Portuguese	Excellent, Excellent, Excellent
English	Excellent, Excellent, Excellent
French	Good, Basic, Basic
Spanish	Good, Basic, Good