**Dominique Pincot**

B.S., M.S., Ph.D.

Postdoctoral Researcher

Department of Plant Sciences, University of California, Davis

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**Education   
University of California, Davis**, Davis, CA  
 Ph.D. Degree in Horticulture and Agronomy (Awarded: November 2020)

GPA: 3.977/4.0

Dissertation: *‘The Genealogy of Strawberry and Host resistance in Strawberry-Vascular Wilt*

*Pathosystems’*

Research Advisor: Dr. Steven Knapp

**University of California, Davis**, Davis, CA  
 M.S. Degree in Horticulture and Agronomy (Awarded: September 2017)  
 GPA: 3.954/4.0  
 Thesis: *‘Genetics of Resistance to Fusarium in Strawberry’*  
 Research Advisor: Dr. Steven Knapp

**Tufts University**, Medford, MA  
 B.S. in Biology

GPA: 3.59/4.0

**Professional Experience**

**Postdoctoral Researcher,** Dr. Steve Knapp, UC Davis, January 2021 – Present

**Graduate Student Researcher,** Dr. Steve Knapp, UC Davis, September 2015 – December 2020

* Isolated *Fusarium oxysporum* f.sp*. fragariae*, *Verticillium dahliae*, *Macrophomina phaseolina,* and *Phytophthora cactorum* inoculum from plants and prepared inoculum to inoculate *Fragaria* plants, and phenotyped symptoms in field-, greenhouse-, and growth-chamber-based experiments.
* Generated experimental designs and oversaw the implementation of experiments in field.
* Crossed strawberry plants to obtain seed, scarified seed, and forced germination of seedlings.
* Extracted DNA from strawberry tissue.
* Performed linkage mapping, genome-wide association analyses, and genomic prediction.
* Investigated population and pedigree structure through genome-/network-based analyses.
* Designed Kompetive allele specific primers (KASP) markers for targeting important loci.
* Aided in the preparation of manuscripts, grants, and reports (e.g. copy-editing in LaTeX/Word, performing analyses in R, figure editing/generation in R and other softwares).
* Presented on behalf of the program at field days, commodity board meetings, and conferences.

**Undergraduate Research Assistant,** Dr. Colin Orians, Tufts University, Summer 2014

* + - Inoculated eastern Hemlock (*T. canadensis)* with Hemlock Wooly Adelgid (*A. tsugae)*.
    - Isolated endo-/ecto-phytic bacterial, fungal, and yeast samples from Hemlock samples.
    - Planted, reared, and measured tea plants (*C. sinensis)* for drought-tolerance assessment.

**Analyst at Primus Laboratories,** Salinas, CA, Summer 2013

* + Prepared media and conducted microbiological tests (FDA-approved) for *Salmonella, E. coli, Listeria*, and other pathogen species in commercial crops and products as well as soil samples.

**Student Intern with Seminis, Primus Laboratories, and Santa Maria Seeds,** Santa Maria, CA,   
July - August 2012

* + Seminis: Observed and aided in in-field crop analyses and ratings.
  + Primus Laboratories: Analyzed pesticide and fungicide residues on commercial crops.
  + Santa Maria Seeds: Rated new cultivars for their potential in the market.

**Analyst at Betteravia Farms Soil/Crop Analyses Laboratory,** Santa Maria, CA, Summers 2006, 2008, 2010

* + Defined nutritional content in soil and crop tissue samples via flame-testing and plasma-based spectrophotometry, quantified nematode numbers and nutrient content in field soil, and performed soil texture analysis.

**Refereed Publications**

* Feldmann, M.J., **Pincot D.D.A.**, Cole, G.S., and Knapp, S.J. Genetic Gains Underpinning a   
   Strawberry Green Revolution. Nature Communications, *in review*.
* Jiménez, N.P., Feldmann, M.J., Famula, R.A., **Pincot, D.D.A.,** Bjornson, M., Cole, G.S., &   
   Knapp, S.J. 2022. Harnessing Underutilized Gene Bank Diversity and Genomic Prediction   
   of Cross Usefulness to Enhance Resistance to *Phytophthora cactorum* in Strawberry. The   
   Plant Genome 16, e20275.
* **Pincot, D.D.A**., Feldmann, M.J., Hardigan, M.A., Vachev, M.V., Henry, P.M., Gordon, T.R.,   
   Bjornson, *et al*. 2022. Novel Fusarium wilt resistance genes uncovered in natural and   
   cultivated strawberry populations are found on three non-homoeologous chromosomes.   
   Theoretical and Applied Genetics 135, 2121–2145.
* Petrasch, S., Mesquida-Pesci, S.D., **Pincot, D.D.A.,** Feldmann, M.J., Ramirez, C.M.L., Famula,   
   R.A., Hardigan, M.A., *et al*. 2021. Genomic Prediction of Strawberry Resistance to   
   Postharvest Fruit Decay Caused by the Fungal Pathogen *Botrytis cinerea*. G3: Genes,   
   Genomes, Genetics jkab378*.*
* Hardigan, M.A., Lorant, A., **Pincot, D.D.A.**, Feldmann, M.J., Famula, R.A., Acharya, C.B., Lee,   
   S., *et al*. 2021. Unraveling the complex hybrid ancestry and domestication history of   
   cultivated strawberry. Molecular Biology and Evolution 38(6): 2285-2305*.*
* Henry, P.M., **Pincot, D.D.A**., Jenner, B., Borrero, C., Aviles, M., Nam, M., Epstein, L., Knapp, S.J.   
   & Gordon, T.R. 2021. Horizontal chromosome transfer and independent evolution drive   
   diversification in *Fusarium oxysproum* f. sp. *fragariae.* New Phytologist 230: 327–340.
* **Pincot**, **D.D.A.**, Ledda, M., Feldmann, M.J., Hardigan, M.A., Poorten, T.J., Runcie, D.E.,   
   Heffelfinger, C., Dellaporta, S.L., Cole, G.S., & Knapp, S.J. 2021. Social network analysis of   
   the genealogy of strawberry: retracing the wild roots of heirloom and modern cultivars.   
   G3: Genes, Genomes, Genetics jkab015.
* **Pincot**, **D.D.A.**, Hardigan, M.A., Cole, G.S., Famula, R.A., Henry, P.M., Gordon, T.R., & Knapp,   
   S.J. 2020. Accuracy of Genomic Selection and Long-Term Genetic Gain for Resistance to

Verticillium Wilt in a Genetically Diverse Strawberry Population. The Plant Genome   
 e20054.

* **Pincot**, **D.D.A.**, Poorten, T.J., Hardigan, M.A., Harshman, J.M., Acharya, C.B., Cole, G.S.,   
   Gordon, T.R., Stueven, M., Edger, P.P., & Knapp, S.J. 2018. Genome-Wide Association   
   Mapping Uncovers Fw1, a Dominant Gene Conferring Resistance to Fusarium Wilt in   
   Strawberry. G3: Genes, Genomes, Genetics 8(5):1817-1828.

**Posters, Presentations, and Extension Work**

* Poster. Cole, G.S., Lopez, C., Gonzalez-Benitez, O., Pincot, D.D.A., *et al*. 2023. Five High-Yielding,   
   Fusarium Wilt-Resistant Cultivars for Short-Day, Day-Neutral, and Summer-Plant Markets.   
   (National Association of Plant Breeders, Clemson University, Greenville, South Carolina, July 16-  
   20, 2023).
* Poster. Pincot, D.D.A *et al*. 2023. Linkage Mapping as a Classical Approach to Validate and Correct   
   Genomic Metadata. (National Association of Plant Breeders, Clemson University, Greenville,   
   South Carolina, July 16-20, 2023).
* Poster. Pincot, D.D.A. *et al*. 2023. Linkage Mapping as a Classical Approach to Validate and Correct   
   Genomic Metadata. (North American Strawberry Growers Association Meeting, San Luis Obispo,   
   California, March 7-10, 2023).
* Presentation. Pincot, D.D.A. *et al.* 2023. 100 Genetic Maps Validate the Platinum Quality `Royal   
   Royce` Phased Genome Assembly and Correct Genomic Metadata. (Plant and Animal Genome   
   XXX, San Diego, California, January 13-18, 2023).
* Poster. Pincot, D.D.A., *et al.* 2022. Using Linkage Maps to Explore the Strawberry Genome.   
   (University of California, Davis Plant Sciences Symposium 2022, May 27, 2022).
* Poster. Pincot, D.D.A., *et al*. 2021. Accuracy of Genomic Selection for Resistance to Verticillium   
   Wilt in a Strawberry Population Spanning 150 Years of Breeding. (9th ISHS International   
   Strawberry Virtual Symposium, May 1-5, 2021).
* Poster. Pincot, D.D.A., *et al*. 2021. Mining Genetic Diversity in a Global Population of Elite and   
   Exotic Germplasm to Identify Novel Race-Specific Fusarium Wilt Resistance Genes in   
   Strawberry. (9th ISHS International Strawberry Virtual Symposium, May 1-5, 2021).
* Presentation given at ‘Grower Meeting on Management of Fusarium Wilt’, California Strawberry   
   Commission – Webinar, October 8, 2020. Co-presented by Steven J. Knapp.
* Presentation given at ‘Annual UCCE Strawberry Production Research Meeting’ – Salinas,   
   California, February 5, 2020.
* Poster. Pincot, D.D.A., *et al*. 2019. Genomic Prediction for Increasing Resistance to Verticillium Wilt   
   in Heirloom and Modern Populations of Strawberry. (American Society for Horticultural   
   Science (ASHS) Conference, Las Vegas, Nevada, July 21, 2019 – 4th place Poster Competition.)
* Poster. Cobo, N., D.D.A Pincot, *et al.* 2019. Fine-scale genetic and physical mapping of genes   
   conferring resistance to Fusarium wilt in strawberry. (North American Strawberry Growers   
   Association Meeting 2018 in Orlando, Florida.)
* Poster. Feldmann, M.J., D.D.A Pincot, *et al*. 2019. Highly accurate forensic approaches for   
   authenticating pedigrees and protecting intellectual property in octoploid strawberry using   
   high-density SNP genotyping arrays. (North American Strawberry Growers Association   
   Meeting 2018 in Orlando, Florida; University of California, Davis Plant Sciences Symposium   
   2019 – 2nd place Poster Award)
* Presentation given to USDA SCRI Grant Collaborators – Davis, California, August 22-23, 2018.
* Presentation given at ‘2nd Annual Strawberry Field Day’ – Cal Poly Strawberry Center Event – San   
   Luis Obispo, California, July 18, 2018.
* Presentation given at ‘Strawberry Field Day to Demonstrate Pest Management Research’ –   
   California Strawberry Commission Event – Salinas, California, June 6, 2018.
* Poster. Pincot, D.D.A., *et al.* 2017. Genome-Wide Association Mapping Uncovers a Dominant Gene   
   Conferring Resistance to Fusarium Wilt in Strawberry. (Plant and Animal Genome XXVI, San   
   Diego, California, January 13 – 17, 2018.)
* Presentation. *‘FoR2U-1,* a Dominant Gene Conferring Resistance to Fusarium Wilt in Strawberry.’   
   (National Association of Plant Breeder Conference in Davis, California. August 7-10, 2017.)
* Presentation given at ‘Farming without Fumigants’ Field Day – California Strawberry Commission   
   Event – Watsonville, California. June 21, 2017.
* Presentation at Monterey Bay Academy ‘Farming without Fumigants’ Field Day – California   
   Strawberry Commission Event – Watsonville, California, July 8, 2016.

**Other Academic Service & Professional Development:**

* University of California, Davis Field Days – Santa Maria, CA (May 24, 2023) & Watsonville, CA   
   (June 14, 2023).
* Community Strawberry Taste Testing Days – 2022-2023.
* Guest Lecturer for HRT 200B ‘Horticulture & Agronomy: Practices’ – May 16, 2023.
* ‘Cal Poly Strawberry Center Annual Field Day 2022’ – Cal Poly Strawberry Center Event – San Luis   
   Obispo, California, July 28, 2022.
* University of California, Davis Field Day – Watsonville, California, June 1, 2022.
* University of California, Davis Field Day – Watsonville, California, April 27, 2022.
* Teaching Assistant for ‘Quantitative Genetics and Selection Theory in Plant Breeding’ at   
   California, Davis – 2018-2022.
* ‘Cal Poly Strawberry Center Annual Field Day 2021’ – Cal Poly Strawberry Center Event – San Luis   
   Obispo, California, July 29, 2021.
* Guest Lecturer for HRT 290 ‘Introductory Seminar’ – 2020 .
* Member of the Horticulture and Agronomy Graduate Group Admissions Committee – 2019-2023.
* Peer Mentor for Horticulture and Agronomy Graduate Group, UC Davis – 2019-2021.
* Guest Lecturer for ‘The Student Collaborative Organic Plant Breeding Education (SCOPE) Student   
   Seminar’ – University of California, Davis, September 3, 2019.
* Member of/Consultant to the Plant Sciences Symposium planning committee – 2017-2018, 2022
* International Strawberry Symposium – Quebec, Canada, August 13-15, 2016.
* “Grant Writing: One Step at a Time” – GradPathways Workshop, UC Davis, November 16, 2016.
* Seminis-Monsanto Immersion Event – Woodland, California, August 8-10, 2016.
* Seminis-Monsanto Immersion Event – Woodland, California, August 11-14, 2015.
* Representative (Alternate) for the Horticulture and Agronomy Graduate Group to the Graduate   
   Student Association – 2015-2016.