

Amanda Schrager Lavelle, Ph.D.

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EDUCATION

- 2008 - 2016 *Doctor of Philosophy*, Plant Biology
University of California, Davis
Dissertation: "Unraveling the Genetics of Internode Elongation."
- 2001 - 2005 *Bachelor of Science*, Biological Science
University of California, Davis

RESEARCH EXPERIENCE

- 2016 - 2018 *USDA-NIFA Postdoctoral Fellow* (2018).
Postdoctoral Fellow (2016-2018),
Biology Department, University of Massachusetts Amherst
Research on the evolution of gene regulation through a project on protein dimerization within the B-class MADS box transcription factors in the grasses.
Advisor: Dr. Madelaine Bartlett
- 2009 - 2015 *Graduate Student Researcher*, Department of Plant Biology, University of California, Davis
Dissertation research utilizing forward and reverse genetic approaches to understand the molecular and genetic basis of internode elongation and competition for light resources in tomato.
Advisor: Dr. Julin Maloof
- 2006 - 2008 *QA/R&D/Manufacturing Associate*, Expression Systems, Woodland, CA
Responsibilities spanned all departments in the company including manufacturing, research and development, and writing and approval of controlled documents for a GMP manufacturing facility.
- 2005 - 2006 *Senior Lab Technician*, Dade Behring, West Sacramento, CA
Assisted with failure investigation of Dade Microscan microbial diagnostic panels, microbial testing, and general microbiology lab chores.

TEACHING EXPERIENCE

- Fall 2018 - present *Assistant Professor*, Colorado Mesa University, Grand Junction CO.
Lecture and lab classes for biology majors including introductory biology, genetics and developmental biology.
- Fall 2017 *Associate Instructor*, University of Massachusetts Amherst
Mechanisms in Plant Development, Biology 791D. A graduate level seminar course covering recent literature in plant evolutionary development.
- Fall 2016 *Guest Lecturer*, University of Massachusetts Amherst.
Developmental Biology, Biology 580. An upper division course for biology majors.

Fall 2015 – Summer 2016	<i>Adjunct Assistant Professor</i> , American River College, Sacramento, CA General Biology, BIOL 310. A transfer level lab and lecture course for non-science majors. The class covers evolution, ecology, biochemistry, cell biology, human physiology, genetics, biotechnology, and the scientific method.
Spring 2016	<i>Adjunct Assistant Professor</i> , Yuba College, Marysville, CA Bioscience, BIOL 15. An introductory lab and lecture course for pre-health science majors and non-majors. Topics include biochemistry, cell biology, human physiology, genetics, molecular biology, and the scientific method.
Spring 2015	<i>Associate Instructor</i> , University of California, Davis Plant Molecular Biology, PLB 113. An upper division course for biology majors. The class covers the molecular and genetic basis of differential gene expression and how gene expression underlies cellular and organismal function.
2013 - 2014	<i>Guest Lecturer</i> , University of California, Davis. Plant Molecular Biology, PLB113, Spring 2013 and Spring 2014. Plant Development, PLB112, Winter 2014 PLB 112 and PLB 113 are upper division classes for biology majors.
2010 - 2014	<i>Graduate Teaching Assistant</i> , University of California, Davis. Plant Molecular Biology, PLB113, Spring 2014, 2013, 2012, and 2010. Plant Development, PLB112, Winter 2014. Genes and Gene Expression, BIS101, Fall 2013 and Fall 2014 Led several discussion sections a week, held office hours, and graded homework and exams. Upper division classes for biology majors.

RESEARCH MENTORSHIP

2017 – 2018	<i>High School Student Research Mentor</i> , University of Massachusetts, Amherst <i>Amanda Dee</i> , Pioneer Valley Chinese Immersion School.
2017 - 2018	<i>Undergraduate Research Mentor</i> , University of Massachusetts, Amherst <i>Michelle Heeney</i> , January 2018 – June 2018. Honors thesis in progress. <i>Maya Wantanabe</i> , January 2018 – May 2018. <i>Jeffery Heithmar</i> , January 2017- May 2018. <i>Grace Pisano</i> , January 2017- May 2018.
2011 - 2015	<i>Undergraduate Research Mentor</i> , University of California, Davis <i>Leslie Herrera*</i> , December 2013- June 2015. Honors thesis submitted June 2015. <i>Natalie Gath*</i> , March 2011- June 2013. Honors thesis submitted June 2013.
Summer 2011	<i>High School Student Research Mentor</i> , Young Scholars Program, University of California, Davis. The Young Scholars Program is designed to engage high achieving high school students in university coursework and research.
Summer 2010	<i>Laboratory Course Assistant</i> , Frontiers and Techniques in Plant Science, Cold Spring Harbor, NY

OUTREACH

Fall 2017 - current	<i>Science Mentor</i> , Planting Science Planting Science is an online platform providing inquiry based learning in plant biology for middle and high school students.
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Summers 2009 - 2013 *Community College Student Teaching and Research Mentor*, Tomato Genome Internship Program, University of California, Davis.
Designed and led lectures and lab sessions on DNA fundamentals and lab techniques as part of a ten-week internship for underrepresented community college students.

PROFESSIONAL DEVELOPMENT

2017 - 2018 *Co-chair*, Gordon Research Seminar
A two-day meeting for early career scientists associated with the 2018 Gordon Research Conference on Plant Molecular Biology.

2014 - 2015 *Faculty Diversity Internship Program*, Los Rios Community College District, CA
Internship program included a course on curriculum, assessment, teaching methods, classroom strategies, and learning styles along with hands-on experience in a biology class with a faculty mentor for a semester.

2012-2013 *Graduate Teaching Community*, University of California, Davis.
An interdisciplinary group of graduate students and postdocs interested in teaching.

2012 *Teaching Assistant Training Practicum*, University of California, Davis.
A seminar style course on effective teaching strategies for graduate teaching assistants.

2010 *Instructor Development Series*, University of California, Davis.
A six-week workshop series on active learning, course design, and teaching methods to prepare students and postdocs to teach their own courses.

RESEARCH PRESENTATIONS AND POSTERS

* Undergraduate author

2018 *Poster: Variable dimerization of maize B-class MADS box transcription factors and the evolution of gene regulation.*
Amanda Schrager Lavelle, Jazmín Abraham, Pubudu Handakumbura, Jarrett Man, Grace Pisano*, Courtney Babbitt, Madelaine Bartlett.
Gordon Conference on Plant Molecular Biology, Holderness, VT.

2017 *Poster: "Variable dimerization of maize B-Class MADS box transcription factors and the evolution of gene regulation.*
Amanda Schrager Lavelle, Pubudu Handakumbura, Jarrett Man, Grace Pisano*, Edgar Demesa Arevalo, David Jackson, Courtney Babbitt, Madelaine Bartlett.
FASEB conference on Mechanisms in Plant Development, Saxons River, VT.

2017 *Poster: "Variable dimerization of maize B-class MADS box transcription factors."*
Amanda Schrager Lavelle, Pubudu Handakumbura, Jarrett Man, Edgar Demesa Arevalo, Dilay Ayhan, David Jackson, Courtney Babbitt, Madelaine Bartlett.
Northeast American Society for Plant Biology regional meeting, New Haven, CT.

2013 *Talk: "Unraveling the Genetics of Internode Elongation."*
Plant Cell Retreat, Asilomar, CA

2012 *Poster: "Tomato Shade Avoidance: A Forward and Reverse Genetic Approach."*
Amanda V. Schrager and Julin N. Maloof.
Gordon Research Conference on Plant Molecular Biology, Holderness, NH

- 2012 *Talk: “Tomato Shade Avoidance: A Forward and Reverse Genetic Approach.”*
Tuesday Seminar Series in Plant Biology, University of California, Davis
- 2011 *Poster: “Methods for Studying the Phytochrome Signaling Network in Solanum lycopersicum,”* **Amanda V. Schrager** and Julin N. Maloof.
- 2010 *Talk: “Characterizing Shade Avoidance in Solanum lycopersicum.”*
Plant Cell Retreat, Asilomar, CA

ACADEMIC SERVICE

- 2016 - current *Reviewer*
Frontiers in Plant Science
Journal of Integrative Plant Biology
- 2013 - 2014 *Member*, Plant Biology Seminar Committee
- 2010 - 2013 *Treasurer/Secretary*, Plant Biology Graduate Group Executive Committee
University of California, Davis

FELLOWSHIPS AND AWARDS

- 2018 *USDA-NIFA Postdoctoral Fellowship*. Research award, \$160,000.
- 2013 *Elsie Taylor Stocking Memorial Fellowship*. Research award, \$3,500.
- 2012 *Gordon Research Conference Travel Award*. Travel award, \$1,000.
- 2011 *Elsie Taylor Stocking Memorial Fellowship*. Travel award, \$1,200.

PUBLICATIONS

* Undergraduate author **Undergraduate honors thesis

Amanda Schrager-Lavelle, Natalie N. Gath*, Upendra Kumar Devisetty, Esther Carrera, Isabel López-Díaz, Miguel A. Blazquez, and Julin N. Maloof. The role of a class III GA2 OXIDASE in tomato internode elongation. Accepted. The Plant Journal.

Amanda Schrager-Lavelle, Harry Klein, Amanda Fisher, Madelaine Bartlett (2017). Grass flowers: an untapped resource for floral evo-devo. Journal of Systematics and Evolution. doi:10.1111/jse.12251.

Amanda Schrager-Lavelle, Leslie A. Herrera*, and Julin N. Maloof (2016). Tomato phyE is required for shade avoidance in the absence of phyB1 and phyB2. Frontiers in Plant Science 7:1275. doi:10.3389/fpls.2016.01275

Leslie A. Herrera**, **Amanda Schrager Lavelle**, and Julin N. Maloof (2015). Candidate genes necessary for shade avoidance in *Solanum lycopersicum* revealed by forward genetic mutant screen. University of California, Davis Undergraduate Honors Thesis.

Rubén Rellán-Álvarez, Guillaume Lobet, Heike Lindner, Pierre-Luc Pradier, Muh-Ching Yee, Jose Sebastian, Yu Geng, Charlotte Trontin, Therese LaRue, **Amanda Schrager-Lavelle**, Cara Haney, Rita Nieu, Julin Maloof, John P. Vogel, José R. Dinneny (2015). Multidimensional mapping of root responses to soil environmental cues using a luminescence-based imaging system. eLife 2015;4:e07597

Natalie N. Gath**, **Amanda V. Schrager**, and Julin N. Maloof (2013). Uncovering Novel Genes Related to Internode Elongation and Heightened Shade Avoidance Response in *Solanum lycopersicum*. University of California, Davis Undergraduate Honors Thesis.

Chitwood, D.H., Headland, L.R., Filiault, D.L., Kumar, R., Jimenez-Gomez, J.M., **Schrager, A.V.**, Park, D.S., Peng, J., Sinha, N.R., and Maloof, J.N. (2012). Native environment modulates leaf size and response to simulated foliar shade across wild tomato species. PLoS One **7**, e29570.

A. Carrera, V. Echenique, W. Zhang, M. Helguera, F. Manthey, **A. Schrager***, A. Picca, G. Cervigni and J. Dubcovsky (2007). A deletion at the Lpx-B1 locus is associated with low lipoxygenase activity and improved pasta color in durum wheat (*Triticum turgidum* ssp. durum). Journal of Cereal Science **45**(1):67-77.