

SUSAN R. STRICKLER
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EDUCATION

Cornell University, Ithaca, NY, Fall 2002 - Spring 2010

Doctor of Philosophy, Genetics

Minors: Plant Breeding, Plant Genetics

Dissertation: Analysis of genes underlying mate selectivity in *Arabidopsis*: regulation of the S-locus receptor kinase and identification of novel candidate rapidly evolving reproductive genes.

Advisor: Dr. June Nasrallah

The Pennsylvania State University, University Park, PA, Fall 1997 - Spring 2002

Bachelor of Science, Horticulture

Advisor: Dr. Majid Foolad

WORK EXPERIENCE

Chicago Botanic Garden May 2023 - present

Associate Conservation Genomics Scientist

- Comparative and evolutionary genomics of *Asimina*
- Conservation and phylogenomics of *Aconitum*
- Plant adaptation to biotic and abiotic pressures
- Bioinformatic tool development for plants
- Use of native plants in landscaping and agriculture
- Connect people to nature through Community Science
- Mentor REU students

Northwestern University May 2023 - present

Adjunct Professor, Biological Sciences

- Co-instruction of PBC 450: Field and Lab Methods in Plant Biology and Conservation
- Train and mentor graduate students

Boyce Thompson Institute June 2010 - May 2023

Senior Research Associate 2017 - present

- Lead research initiatives focused on ecological genetics and genomics of wild, diverse, ecologically critical plant systems to gain an understanding of evolution and adaptation. (0.25 FTE support started 1/2022).
- Develop *Calochortus* as a model for understanding connections between ecology, evolution, and development
- Provide genomic tools, transcriptomics, metabolic, GWAS, and phylogenetic analysis in experiments aimed at understanding the mechanisms and evolution of plant defense against herbivory
- Explore genetics, genomics, and evolution of pathogen response in the Solanaceae

Director of BTI Computational Biology Center (BCBC) June 2017 - May 2023

- Founder of the center and lead scientist
- Develop computational tools to aid collaborating researchers
- Oversee bioinformatics consulting program with support from BCBC assistant director
- Work with BTI Education and Outreach to engage the public with BTI and BCBC and create awareness
- Mentor and train visiting scientists and interns. Have provided support (mentoring and courses) for BTI REU students since 2011
- Collaborate with researchers at BTI, Cornell, external universities, and industry to assist with bioinformatics projects involving a variety of model and non-model plant and non-plant species
- Organize BTI Bioinformatics Course for training graduate students, post-docs, and PIs in conjunction with the co-director
- Devise strategies for funding and strengthening bioinformatics resources at BTI

NSF Training Grant Program Manager Fall 2021 - May 2023

- Collaborate with faculty in Computer Science, Engineering, and Plant Sciences at Cornell University as part of the Digital Plant Science training grant led by Mike Scanlon to provide effective and efficient training for graduate students (NSF 1922551)
- Assist graduate students in the program, recognize and provide for their needs, develop programming, provide career development, give scientific project feedback, and receive input to improve the program.
- Aid in the evaluation of graduate student applications to select those to be funded by the training grant
- Arrange regular meetings with the program participants (faculty and graduate students)
- Engage with, select, and host under-represented undergraduates from partners at Minority Serving Institutions (MSIs) to inform them about graduate school and a career in STEM, connect them with peers, and provide an inclusive and friendly environment.
- Plan Digital Plant Science seminar courses with inter-institutional speakers and audiences in collaboration with CROPPS
- Co-teach PLSCI7202, Applications of machine learning to plant science.
- Prepare the Annual Report for the training grant, including arranging interviews with our external evaluators
- Work with program external evaluators to identify the needs of faculty and students at MSIs and develop inclusive, collaborative solutions

Bioinformatics Consultant June 2014 - June 2019

- Held weekly office hours at BTI to assist students, postdocs, and PIs with bioinformatics
- Provide a variety of bioinformatics support to clients to aid their research programs

Mueller Laboratory June 2010 - June 2017

Postdoctoral Researcher/Research Associate

- Comparative genomics of tetraploid *Coffea arabica* and its two diploid ancestral progenitors, *Coffea canephora* and *Coffea eugenioides*
- Assisted with genome assembly and/or annotation of plant genomes including *C. arabica*, *C. canephora*, *C. eugenioides*, *Cocos nucifera*, and *Malus x domestica*
- Organize international consortium of researchers for various genome projects

- Comparative and phylogenetic studies of wild and cultivated tomato species, including diversity studies to select accessions for pathogen response screening
- Identification of candidate genes involved in coffee humidity stress response
- Identification of conserved non-coding sequences in legumes as a method of studying nodulation
- Assist undergraduates and visiting researchers with projects
- Programming in a variety of languages, including Python, Perl, R, C++, and SQL.
- Performed various database maintenance tasks at Sol Genomics Network (solgenomics.net)

Nasrallah Laboratory, Cornell University Fall 2003 - Spring 2010

Graduate Student, Genetics and Development

- Mapped and characterized a gene involved in epigenetic regulation of the self-incompatibility response in *Arabidopsis thaliana* and looked at natural variation in the expression of this gene.
- Screened reproductive tract-expressed genes in *Arabidopsis* to find evidence of positive selection and define candidates that may be involved in speciation

Foolad Laboratory, The Pennsylvania State University Fall 1999 - Spring 2001

Undergraduate Researcher, Horticulture

- Screened tomato germplasm for resistance to abiotic and biotic stresses.

TEACHING AND OUTREACH

Mentees (since 2012): BTIREU: Andrew Dunford, Amelia Lovelace, Ivana Rodriguez, David Lyon, Celine Manigbas, Connor Lane, Mohamed Elgallad, Inti Quinchiguango Archuleta, Olive LoGrasso

Visiting PhD candidates: El Hadje Thioune, Darlon Lantican, Julianne Vilela, Rubab Naqvi, Syed Shan e Ali Zaidi, Viviane Baba, Gabriela Torres, Rose Catiempo, James Friel

Postdoctoral scientists - Adrian Powell, Jacob Landis, Emma Jobson, Aditi Rambani

NSF REPS - Gisel De La Cerda

Undergraduate staff - Ryan Preble

High school students - Filip Jander, John Debbie, Asha Duhan, Rohit Lal, Alice Hu, Tony Kinchen, Bowen Zheng, Lily Yang

KMUTT Bioinformatics Workshop Instructor Sept 2022

KMUTT, Thailand

PLSCI7202 Applications of Machine Learning to Plant Science Fall 2020 - current

Cornell University

PLSCI6440 Digital Plant Science: Frontiers and Challenges Fall 2021 - current

Cornell University

Art of Ag April 2022

Cornell University

Career Fair at Girl's Day Out "Jobs in Plant Biology" Spring 2016 - 2020, 2022
Cortland YWCA

BTI Bioinformatics Course Instructor Spring, 2012 - present
Boyce Thompson Institute for Plant Research

Summer Intern Bioinformatics Course Instructor Summer, 2010 - present
Boyce Thompson Institute for Plant Research

Tech Savvy "Is Cauliflower the New Kale? What Bioinformatics Tells Us." Mar 2017
Cortland YWCA

UPLB Bioinformatics Workshop Instructor Oct 2014
University of Philippines Los Banos

**AGA2013: Speciation Continuum and Non-model Population Genomics Workshop
Teaching Assistant** July 2013
Cornell University

Hughes Scholars Graduate Student Leader Summer 2009
Cornell University

Population Genetics Teaching Assistant Fall 2008
Cornell University

Introductory Genetics Teaching Assistant Fall 2003-Fall 2007
Cornell University

APPOINTMENTS

Faculty Fellow, Cornell Atkinson Center for Sustainability Spring 2021 - present
Cornell University

Adjunct Faculty at UPLB Tropical Species Research Program August 2018 - present
University of the Philippines Los Baños

GRANT PROPOSALS AWARDED

TRIAD Foundation June 2022
Improving fundamental understanding of stress-resilience by sequencing Nigerian cowpea diversity panel
M. Julkowska (PI), A. Nelson (co-PI), S. Strickler (co-PI).

NRT-HDR & ROL Sept 2021
Team Training to Develop new hardware and software applications for digital plant science across multiple scales

M. Scanlon (PI), M. Wu, A. Stroock (co-PI), H. Weatherspoon (co-PI), Y. Sun (co-PI), S. Strickler (program coordinator). Award number 1922551

TRIAD Foundation Jan 2021

Exploring Diversity and Cold Adaptation in America's Forgotten Fruit, *Asimina triloba* (Common Pawpaw)

S. Strickler (PI), A. Skiryicz (co-PI), C. Specht (co-PI), A. Bombarely (co-PI), J. Friel (PhD Candidate)

BSF Oct 2020

The architecture of metabolic pathways in polyploidy genomes. Basil aroma and color as a case study. I. Gonda (Israel PI), S. Strickler (US PI), and Dudai (co-PI). Award number 2019125

BARD Oct 2020

Understanding the interplay between TYLCV resistance and heat tolerance in tomato. Czosnek (Israel PI), Gorovits (co-PI), Strickler (US PI), Menda (co-PI). Award number IS-5283-20

NSF DEB Program Sept 2019

Phylogeography, historical biogeography, and floral eco-evo-devo in *Calochortus* (Liliaceae). T. Givnish (PI), C. Specht (co-PI), S. Strickler (co-PI). Award number 1929318

TRIAD Foundation Jan 2018

Exploring native plant diversity: what can a threatened *Aconitum* teach us about changing species distributions and medicinal compounds? S. Strickler (PI), C. Specht (co-PI), G. Jander (co-PI), F. Li (co-PI).

Arnold Arboretum Genomics Initiative and Sequencing Award Feb 2017

Developing Genomic Resources for North American Beech. E. Richards (PI), S.R. Strickler (co-PI) and F. Li (co-PI) .

TRIAD Foundation Jan 2017

Rapid metabolic pathway evolution in *Erysimum*, a cardiac glycoside-producing crucifer genus. G. Jander (PI), S.R. Strickler (co-PI), and L.A. Mueller (co-PI)

NSF Plant Genome Research Program Sept 2016

Leveraging genomics resources and wild species of tomato to identify new sources of disease resistance. G. B. Martin (PI), A. Collmer (co-PI), Z. Fei (co-PI), S. F. Hutton (co-PI), D. Panthee (co-PI), M. Lindeberg (co-PI), S. R. Strickler (co-PI). Award number 1025642.

TRIAD Foundation Jan 2016

Development of *Solanum lycopersicoides* as a model for investigating genome evolution, nutritional quality, and plant immunity. L. A. Mueller (PI), S. R. Strickler (co-PI), S. Hind (co-PI), A. Fedder (co-PI), J. Giovannoni (co-PI), G. B. Martin (co-PI) .

PATENT APPLICATIONS

U.S. Patent No. 10,557,145: “FLGII-28 sensitivity 3 (FLS3) protein and methods of use”.
Inventors: G. B. Martin, S. Hind, S. Strickler. Filed 2014 by the Boyce Thompson Institute, Ithaca, NY. Converted to PCT Application No.PCT/US15/39520, filed July 8, 2015.

U.S. Provisional Application (62/213,409): “Isolated nucleic acids and quantitative trait loci (QTL) from *S. habrochaites* and methods of use thereof for increasing resistance to bacterial speck disease in tomato and other plants”. Inventors: G. B. Martin, S. Hind, S. Strickler, B. Zhilong. Filed 2015 by the Boyce Thompson Institute, Ithaca, NY.

CONFERENCES

Botany July 2022

Workshop: *De novo* genome assembly and annotation with an emphasis on phylogenetic and population genetic studies

Botany July 2021

Workshop: *De novo* genome assembly and annotation with an emphasis on phylogenetic and population genetic studies

Virtual Sol Meeting Oct 2020

Organizer

Botany July 2020

Oral presentation: Genome sequence of the purple-flowered Andean shrub, *Lochroma cyaneum* (Solanaceae)

Workshop: *De novo* genome assembly and annotation with an emphasis on phylogenetic and population genetic studies

Applying nanopore sequencing technology in biological research Sept 2019

Oral presentation: Reference genomes for non-model plant species using ONT

Eastern University Forest Managers meeting June 2019

Oral presentation: How can sequencing technologies impact woodlot management?

Sol Meeting Oct 2018

Oral presentation: The genome of *Solanum lycopersicoides*

Plant and Animal Genome Conference Jan 2017

Oral presentation: The genome of the tetraploid Arabica coffee and its diploid ancestors.

International Conference on Biotechnology, Pakistan Feb 2017

Virtual presentation: The genome of the tetraploid Arabica coffee and its diploid ancestors

Sol Meeting Oct 2016

Oral presentation: Sol Genomics Network Workshop

Sol Meeting Oct 2015

Oral presentation: Improving *Coffea* genome assemblies with long-read data.
Oral presentation: Sol Genomics Network Workshop

Plant and Animal Genome Conference Jan 2015

Oral presentation: Genome assembly strategies of *Coffea arabica*.
Oral presentation:: SGN Workshop

ASIC Conference Sept 2014

Oral presentation: Towards a better understanding of the *Coffea arabica* genome structure.

Plant and Animal Genome Conference Jan 2014

Oral presentation: International Coffee Genomics Network.
Oral presentation:: SGN Workshop

Plant and Animal Genome Conference Jan 2013

Oral presentation: Allele mining in wild tomato species.
Oral presentation:: SGN Workshop

Applying Next-Generation Sequencing Meeting August 2012

Oral presentation: Using NGS transcriptomic tools in non-model organisms

Sol Meeting Aug 2012

Oral presentation: Sol Genomics Network Workshop
Poster presentation: Comparative genomics of *Solanum galapagense*, a wild relative of tomato, endemic to the Galápagos Islands.

Plant and Animal Genome Conference Jan 2011

Poster presentation: Comparative genomics of *Solanum galapagense*, a wild tomato relative.

Ithaca Arabidopsis Meeting Spring 2009

Oral presentation: Regulation of the S-locus receptor kinase.

PUBLICATIONS

Citations: 4,953; h-index: 24

My name and my mentees' names are in **bold** below

1. A. Dangol, R. Shavit, B. Yaakov, **S. R. Strickler**, G. Jander, V. Tzin, Characterizing serotonin biosynthesis in *Setaria viridis* leaves and its effect on aphids. *Plant Mol. Biol.* **109**, 533–549 (2022).
2. **A. F. Powell**, **J. Zhang**, D. Hauser, **J. A. Vilela**, **A. Hu**, D. J. Gates, L. A. Mueller, F.-W. Li, **S. R. Strickler**, S. D. Smith, Genome sequence for the blue-flowered Andean shrub *Lochroma cyaneum* reveals extensive discordance across the berry clade of Solanaceae. *Plant Genome*, e20223 (2022).
3. **A. F. Powell**, A. Feder, J. Li, M. H.-W. Schmidt, L. Courtney, S. Alseekh, **E. M. Jobson**, A. Vogel, Y. Xu, **D. Lyon**, K. Dumschott, M. McHale, R. Sulpice, K. Bao, **R. Lal**, **A. Duhon**, A. Hallab, A. K. Denton, M. E. Bolger, A. R. Fernie, S. R. Hind, L. A. Mueller, G. B. Martin, Z. Fei, C. Martin, J. J. Giovannoni, **S. R. Strickler**, B. Usadel, A *Solanum*

lycopersicoides reference genome facilitates insights into tomato specialized metabolism and immunity. *Plant J.* (2022), doi:10.1111/tpj.15770.

4. G. Moghe, **S. Strickler**, metaPathwayMap: A tool to predict metabolic pathway neighborhoods from structural classes of untargeted metabolomics peaks. *bioRxiv* (2022), p. 2022.03.15.484337.
5. J. H. Boyle, **S. Strickler**, A. Twyford, A. Ricono, **A. Powell**, **J. Zhang**, H. Xu, H. J. Dalgleish, G. Jander, A. A. Agrawal, J. R. Puzey, Temporal matches and mismatches between monarch butterfly and milkweed population changes over the past 12,000 years. *bioRxiv* (2022), p. 2022.02.25.481796.
6. **G. Torres-Silva**, L. N. F. Correia, D. S. Batista, A. D. Koehler, S. V. Resende, E. Romanel, D. Cassol, A. M. R. Almeida, **S. R. Strickler**, C. D. Specht, W. C. Otoni, Transcriptome Analysis of *Melocactus glaucescens* (Cactaceae) Reveals Metabolic Changes During in vitro Shoot Organogenesis Induction. *Front. Plant Sci.* **12**, 697556 (2021).
7. **G. Torres-Silva**, L. N. F. Correia, A. D. Koehler, D. S. Batista, D. V. Faria, S. V. Resende, **S. R. Strickler**, J. Fouracre, E. Romanel, C. D. Specht, W. C. Otoni, Expression of *Melocactus glaucescens* SERK1 sheds new light on the mechanism of areolar activation in cacti. *Plant Cell Tissue Organ Cult.* (2021), doi:10.1007/s11240-021-02137-9.
8. L. Feiz, Y. Asakura, L. Mao, **S. R. Strickler**, Z. Fei, M. Rojas, A. Barkan, D. B. Stern, CFM1, a member of the CRM-domain protein family, functions in chloroplast group II intron splicing in *Setaria viridis*. *Plant J.* **105**, 639–648 (2021).
9. X. Wang, L. Gao, C. Jiao, S. Stravoravdis, P. S. Hosmani, S. Saha, **J. Zhang**, S. Mainiero, **S. R. Strickler**, C. Catala, G. B. Martin, L. A. Mueller, J. Vrebalov, J. J. Giovannoni, S. Wu, Z. Fei, Genome of *Solanum pimpinellifolium* provides insights into structural variants during tomato breeding. *Nat. Commun.* **11**, 5817 (2020).
10. L. Feiz, **S. R. Strickler**, J. van Eck, L. Mao, N. Movahed, C. Taylor, P. Gourabathini, Z. Fei, D. B. Stern, *Setaria viridis* chlorotic and seedling-lethal mutants define critical functions for chloroplast gene expression. *Plant J.* **104**, 917–931 (2020).
11. **E.-H. Thioune**, **S. Strickler**, T. Gallagher, A. Charpagne, P. Decombes, B. Osborne, J. McCarthy, Temperature Impacts the Response of *Coffea canephora* to Decreasing Soil Water Availability. *Trop. Plant Biol.* **13**, 236–250 (2020).
12. **V. Y. Baba**, **A. F. Powell**, S. T. Ivamoto-Suzuki, L. F. P. Pereira, A. L. L. Vanzela, R. M. Giacomini, **S. R. Strickler**, L. A. Mueller, R. Rodrigues, L. S. A. Gonçalves, Capsidiol-related genes are highly expressed in response to *Colletotrichum scovillei* during *Capsicum annuum* fruit development stages. *Sci. Rep.* **10**, 12048 (2020).
13. J. S. Ramsey, E. L. Chin, J. D. Chavez, S. Saha, D. Mischuk, J. Mahoney, J. Mohr, F. M. Robison, E. Mitrovic, Y. Xu, **S. R. Strickler**, N. Fernandez, X. Zhong, M. Polek, K. E. Godfrey, J. J. Giovannoni, L. A. Mueller, C. M. Slupsky, J. E. Bruce, M. Heck, Longitudinal Transcriptomic, Proteomic, and Metabolomic Analysis of *Citrus limon* Response to Graft Inoculation by *Candidatus Liberibacter asiaticus*. *J. Proteome Res.* **19**, 2247–2263 (2020).
14. T. Züst, **S. R. Strickler**, **A. F. Powell**, M. E. Mabry, H. An, M. Mirzaei, T. York, C. K. Holland, P. Kumar, M. Erb, G. Petschenka, J.-M. Gómez, F. Perfectti, C. Müller, J. C. Pires, L. A. Mueller, G. Jander, Independent evolution of ancestral and novel defenses in a genus of toxic plants (*Erysimum*, Brassicaceae). *Elife.* **9** (2020), doi:10.7554/Elife.51712.

15. **S. S.-E.-A. Zaidi, R. Z. Naqvi**, M. Asif, **S. Strickler**, S. Shakir, M. Shafiq, A. M. Khan, I. Amin, B. Mishra, M. S. Mukhtar, B. E. Scheffler, J. A. Scheffler, L. A. Mueller, S. Mansoor, Molecular insight into cotton leaf curl geminivirus disease resistance in cultivated cotton (*Gossypium hirsutum*). *Plant Biotechnol. J.* **18**, 691–706 (2020).
16. C. Mazo-Molina, S. Mainiero, B. J. Haefner, R. Bednarek, J. Zhang, A. Feder, K. Shi, **S. R. Strickler**, G. B. Martin, Ptr1 evolved convergently with RPS2 and Mr5 to mediate recognition of AvrRpt2 in diverse solanaceous species. *Plant J.* **103**, 1433–1445 (2020).
17. H. W. Choi, L. Wang, **A. F. Powell, S. R. Strickler**, D. Wang, D. A. Dempsey, F. C. Schroeder, D. F. Klessig, A genome-wide screen for human salicylic acid (SA)-binding proteins reveals targets through which SA may influence development of various diseases. *Sci. Rep.* **9**, 13084 (2019).
18. **D. V. Lantican, S. R. Strickler**, A. O. Canama, R. R. Gardoce, L. A. Mueller, H. F. Galvez, De Novo Genome Sequence Assembly of Dwarf Coconut (*Cocos nucifera* L. “Catigan Green Dwarf”) Provides Insights into Genomic Variation Between Coconut Types and Related Palm Species. *G3* . **9**, 2377–2393 (2019).
19. J. Choi, **S. R. Strickler**, E. J. Richards, Loss of CRWN Nuclear Proteins Induces Cell Death and Salicylic Acid Defense Signaling. *Plant Physiol.* **179**, 1315–1329 (2019).
20. R. Roberts, S. Mainiero, **A. F. Powell**, A. E. Liu, K. Shi, S. R. Hind, **S. R. Strickler**, A. Collmer, G. B. Martin, Natural variation for unusual host responses and flagellin-mediated immunity against *Pseudomonas syringae* in genetically diverse tomato accessions. *New Phytol.* (2019), doi:10.1111/nph.15788.
21. I. Gonda, H. Ashrafi, **D. A. Lyon, S. R. Strickler**, A. M. Hulse-Kemp, Q. Ma, H. Sun, K. Stoffel, **A. F. Powell**, S. Futrell, T. W. Thannhauser, Z. Fei, A. E. Van Deynze, L. A. Mueller, J. J. Giovannoni, M. R. Foolad, Sequencing-Based Bin Map Construction of a Tomato Mapping Population, Facilitating High-Resolution Quantitative Trait Loci Detection. *Plant Genome.* **12** (2019), doi:10.3835/plantgenome2018.02.0010.
22. C. Mazo-Molina, S. Mainiero, S. R. Hind, C. M. Kraus, M. Vachev, F. Maviane-Macia, M. Lindeberg, S. Saha, **S. Strickler**, A. Feder, J. Giovannoni, C. Smart, N. Peeters, G. Martin, The Ptr1 locus of *Solanum lycopersicoides* confers resistance to race 1 strains of *Pseudomonas syringae* pv. tomato and to *Ralstonia pseudosolanacearum* by recognizing the type III effectors AvrRpt2/RipBN. *Mol. Plant. Microbe. Interact.* (2019), doi:10.1094/MPMI-01-19-0018-R.
23. **R. Z. Naqvi, S. S.-E.-A. Zaidi**, M. S. Mukhtar, I. Amin, B. Mishra, **S. Strickler**, L. A. Mueller, M. Asif, S. Mansoor, Transcriptomic analysis of cultivated cotton *Gossypium hirsutum* provides insights into host responses upon whitefly-mediated transmission of cotton leaf curl disease. *PLoS One.* **14**, e0210011 (2019).
24. L. Kovar, M. Nageswara-Rao, S. Ortega-Rodriguez, D. V. Dugas, S. Straub, R. Cronn, **S. R. Strickler**, C. E. Hughes, K. A. Hanley, D. N. Rodriguez, B. W. Langhorst, E. T. Dimalanta, C. D. Bailey, PacBio-Based Mitochondrial Genome Assembly of *Leucaena trichandra* (Leguminosae) and an Intrageneric Assessment of Mitochondrial RNA Editing. *Genome Biol. Evol.* **10**, 2501–2517 (2018).
25. R. de Castro Nunes, S. Orozco-Arias, D. Crouzillat, L. A. Mueller, **S. R. Strickler**, P. Descombes, C. Fournier, D. Moine, A. de Kochko, P. M. Yuyama, A. L. L. Vanzela, R. Guyot, Structure and Distribution of Centromeric Retrotransposons at Diploid and Allotetraploid *Coffea* Centromeric and Pericentromeric Regions. *Front. Plant Sci.* **9**, 175 (2018).

26. E. J. S. Michel, A. M. Hotto, **S. R. Strickler**, D. B. Stern, B. Castandet, A Guide to the Chloroplast Transcriptome Analysis Using RNA-Seq. *Methods Mol. Biol.* **1829**, 295–313 (2018).
27. **R. Z. Naqvi**, **S. S.-E.-A. Zaidi**, K. P. Akhtar, **S. Strickler**, M. Woldemariam, B. Mishra, M. S. Mukhtar, B. E. Scheffler, J. A. Scheffler, G. Jander, L. A. Mueller, M. Asif, S. Mansoor, Transcriptomics reveals multiple resistance mechanisms against cotton leaf curl disease in a naturally immune cotton species, *Gossypium arboreum*. *Sci. Rep.* **7**, 15880 (2017).
28. V. Tzin, Y. Hojo, **S. R. Strickler**, L. J. Bartsch, C. M. Archer, K. R. Ahern, S. Zhou, S. A. Christensen, I. Galis, L. A. Mueller, G. Jander, Rapid defense responses in maize leaves induced by *Spodoptera exigua* caterpillar feeding. *J. Exp. Bot.* **68**, 4709–4723 (2017).
29. L. E. Wyatt, **S. R. Strickler**, L. A. Mueller, M. Mazourek, Comparative analysis of *Cucurbita pepo* metabolism throughout fruit development in acorn squash and oilseed pumpkin. *Hortic Res.* **3**, 16045 (2016).
30. B. Castandet, A. M. Hotto, **S. R. Strickler**, D. B. Stern, ChloroSeq, an Optimized Chloroplast RNA-Seq Bioinformatic Pipeline, Reveals Remodeling of the Organellar Transcriptome Under Heat Stress. *G3* . **6**, 2817–2827 (2016).
31. S. R. Hind, **S. R. Strickler**, P. C. Boyle, D. M. Dunham, Z. Bao, I. M. O'Doherty, J. A. Baccile, J. S. Hoki, E. G. Viox, C. R. Clarke, B. A. Vinatzer, F. C. Schroeder, G. B. Martin, Tomato receptor FLAGELLIN-SENSING 3 binds flgII-28 and activates the plant immune system. *Nat Plants*. **2**, 16128 (2016).
32. D. J. Gates, **S. R. Strickler**, L. A. Mueller, B. J. S. C. Olson, S. D. Smith, Diversification of R2R3-MYB Transcription Factors in the Tomato Family Solanaceae. *J. Mol. Evol.* **83**, 26–37 (2016).
33. J. Yan, T. Aboshi, M. Teraishi, **S. R. Strickler**, J. E. Spindel, C.-W. Tung, R. Takata, F. Matsumoto, Y. Maesaka, S. R. McCouch, Y. Okumoto, N. Mori, G. Jander, The Tyrosine Aminomutase TAM1 Is Required for β -Tyrosine Biosynthesis in Rice. *Plant Cell*. **27**, 1265–1278 (2015).
34. **S. R. Strickler**, A. Bombarely, J. D. Munkvold, T. York, N. Menda, G. B. Martin, L. A. Mueller, Comparative genomics and phylogenetic discordance of cultivated tomato and close wild relatives. *PeerJ*. **3**, e793 (2015).
35. L. E. Wyatt, **S. R. Strickler**, L. A. Mueller, M. Mazourek, An acorn squash (*Cucurbita pepo* ssp. ovifera) fruit and seed transcriptome as a resource for the study of fruit traits in Cucurbita. *Hortic Res.* **2**, 14070 (2015).
36. N. Fernandez-Pozo, N. Menda, J. D. Edwards, S. Saha, I. Y. Tecle, **S. R. Strickler**, A. Bombarely, T. Fisher-York, A. Pujar, H. Foerster, A. Yan, L. A. Mueller, The Sol Genomics Network (SGN)—from genotype to phenotype to breeding. *Nucleic Acids Res.* **43**, D1036–41 (2015).
37. Z. Bao, F. Meng, **S. R. Strickler**, D. M. Dunham, K. R. Munkvold, G. B. Martin, Identification of a Candidate Gene in *Solanum habrochaites* for Resistance to a Race 1 Strain of *Pseudomonas syringae* pv. tomato. *Plant Genome*. **8** (2015), doi:10.3835/plantgenome2015.02.0006.
38. C. Perrois, **S. R. Strickler**, G. Mathieu, **M. Lepelley**, L. Bedon, S. Michaux, J. Husson, L. Mueller, I. Privat, Differential regulation of caffeine metabolism in *Coffea arabica* (Arabica) and *Coffea canephora* (Robusta). *Planta*. **241**, 179–191 (2015).
39. N. Menda, **S. R. Strickler**, J. D. Edwards, A. Bombarely, D. M. Dunham, G. B. Martin, L. Mejia, S. F. Hutton, M. J. Havey, D. P. Maxwell, L. A. Mueller, Analysis of wild-species

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