

Rishi R. Masalia, PhD

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Leadership, Teaching, and Service Awards and Honors:

2018 Mass Media Fellowship (awarded, declined to accept) | American Assoc. for the Advancement of Sciences

2018 Pillar of the Community Award | Univ. Georgia

2018 UGA Amazing Student [Honor] | Univ. Georgia

2018 National Patricia K Cross Future Leaders Award | American Assoc. Colleges and Universities

2017 Wilbur Duncan Award (recognizing outstanding outreach, teaching, and research) | Univ. Georgia

2017 1 of 7 finalists for the SOAR: Pillar of the Community Award | Univ. Georgia

2017 Inducted into the University of Georgia Blue Key National Honor Society | Univ. Georgia

2016 Community Engagement Award | American Society of Plant Biologists

2016 Best of: 3 Minute Thesis [Honor] | Univ. System Georgia Board of Regents

2016 3 Minute Thesis finalist (of 72 participants) | Univ. of Georgia

2015 Feature article [Honor] | UGA Graduate Student Magazine

2014 Outstanding Teaching Assistant Award in Biological Sciences | Univ. Georgia

University Science Outreach:

Co-founder | Athens Science Observer | <https://athensscienceobserver.com/>

2017—Current Contributing Author | Grant writer

2016 Editor-in-Chief

2015 Associate Editor

ASO aims to (1) train students to effectively communicate their science to a lay audience and (2) provide a platform for students to post their work and engage the community through a website and social media advertising. Further we sponsor workshops and science communication career Q&As for our students. Since its creation in fall 2015, ASO has trained over 90 students across 18 UGA disciplines and has grown to become one of the largest student science organizations on campus. I am a co-founder of the Athens Science Observer and served as the Editor-in-Chief for 2016. Currently I contribute my own blogs, podcasts, and infographics based on my research interests.

STEMzone

2017 Co-founding member | Science Communication Lead

STEMzone was a campus wide science booth fair event held in Nov. 2017 before a UGA home football game as a way for the science community to interact with tailgaters. As science communication lead, I organized workshops to train graduate students and develop materials that would highlight research conducted on campus.

2017 Co-founder | UGA Science Policy, Education, Advocacy & Research (SPEAR) org.

2017 Lead Animator | NSF BioTAP 2.0 program

Integrative Research and Ideas Symposium (IRIS) | Univ. Georgia:

2016—2017 Programming Committee

2016—2017 Marketing Committee, Twitter (@UGA_IRIS) manager

Dept. of Plant Biology | Univ. Georgia:

2017—2018 Peer Development Mentor | Plant Biology Graduate Student Association

2015—2016 Secretary | Plant Biology Graduate Student Association

2013—2014 Vice President | Plant Biology Graduate Student Association

Community Science Outreach:

American Society of Plant Biologists (ASPB)

2018—2022 Membership Committee | American Society of Plant Biologists

2018–Current Postdoctoral Ambassador | American Society of Plant Biologists
2016–2017 Planning Committee | Annual Plant Biology Conference (PB17)
2015–2018 Graduate Student Ambassador | American Society of Plant Biologists

The Plantae Network | <https://plantae.org/>

2017–Current Member | Plantae Steering Committee

What started as a partnership between ASPB and the Global Plant Council, Plantae is an online global community and knowledge hub housing content, discussions, and resources created by plant scientists for plant scientists. I served as the sole postdoctoral (previously graduate student) representative on the steering committee, which includes university faculty, industry partners, and multiple plant society governance representatives. The committee is responsible for guiding the development and expansion of this platform.

Co-founder | Athens Science Café | <https://athenssciencecafe.com/>

2013–Current Programming Board | Grant writer

2013–2015 Organizer | Grant writer

Aimed to improve public engagement and dialogue in basic science, this local organization facilitates monthly presentations between scientists and a general audience. Free to its patrons, the Athens Science Café has hosted a diversity of topics, speakers, and audience members from across northeast Georgia. As of May 2018, we have had 47 events, with attendance ranging from 100-150 people depending on topic. Further, the Athens Science Café has partnered with numerous groups across Athens, including Clarke County School District and Athens Climate Coalition. We have also received two large grants from UGA.

Co-founder | Science Athens | <https://www.scienceathens.org/>

2017–Current Executive Board

Science Athens is a community science hub with two major goals: (1) connect Athens scientists across various levels of university, K-12, industry, and more to facilitate collaborations and exchange ideas. (2) Enhance the city profile of Athens, GA as a science and biotechnology hub. This organization is still in development.

2017 Graphic Design Artist | Athens March for Science

2015—2016 Contributing Author | PLoS Early Career Research Blog

2014—Current Judge | Georgia Science & Engineering Fair

Teaching and Curriculum Development:

2012–2017 Principles of Biology I Laboratory | Univ. Georgia

Teaching. Instructor of record for an introductory level biology laboratory class at the University of Georgia. I have taught this course for six semesters, with an average overall TA evaluation of 4.8 / 5. I was awarded an Outstanding Teaching Assistant Award for this work.

Guest Lectures | Univ. Georgia

2017 Translating your science to a lay audience | Intro communication course; Dept. Infectious Disease

2016 Sci. Comm. & social media | Communicating science to the public; Dept. Plant Biology

2013–2016 Principles of Biology I Laboratory | Univ. Georgia

Curriculum Development. In coordination with Dr. Kristen Miller, and Vallery Flint I helped develop a bioinformatics laboratory module to teach modern biological techniques. Further, I designed a science in the media lab, which taught students to compare scientific articles with corresponding press releases, to understand the differences between the article types, as well as learn valuable skills critically reading and searching for scientific literature. Finally, in collaboration with Nick Batora and Drs. Kristen Miller and Andrea Sweigart I created animation videos explaining core evolutionary concepts. All materials are still in use as of fall 2017.

2015 Plant Based Solutions | Univ. Georgia

Curriculum Development. As a collaboration, I helped design a food security module for an undergraduate seminar course titled: “Plant Based Solutions,” which introduces students to plant sciences with a focus on plant-based careers.

Science Outreach Projects:

2017–Current Co-creator & Host | the Exceed Podcast

In collaboration with the American Society of Plant Biologists, I am launching the Exceed podcast, which will highlight outreach projects beyond the bench and teach other scientists how they can start engaging their communities.

2017–Current Co-creator & Illustrator | Maya McClintock children's book series

In collaboration with another graduate student, I am currently illustrating a children's book series aimed at 5-6 year olds. The book centers around an inquisitive young Indian girl named Maya McClintock who is determined to understand the world around her. To help provide more information for parents we will also have a companion blog.

2017–Current Co-creator & Co-host | SciPod, a science podcast series

A collaboration between myself and four other scientists in different fields, SciPod is a topic driven podcast series geared towards the lay audience. In addition to covering the science related to a topic, we have recurring segments such as "LitSearch" and "Contemporary Scientist" to introduce listeners to two underdeveloped facets of scientific literacy. This series is currently recording episodes.

2017 Creator & Host | Between the Palms Interview Series, with Rishi Masalia

A collaboration with the American Society of Plant Biologists, this interview series was created and hosted by myself, to showcase different career paths of successful plant biologists, and to share advice for younger students.

Education:

2018 Ph.D., Plant Biology: Plant Evolutionary Genetics | University of Georgia
2012 B.S., Double Major: Biology and Molecular Cellular Biology | University of Arizona

Research Experience:

2018–Current Postdoctoral researcher | Burke Lab | Dept. Plant Biology | Univ. Georgia
2012–2018 PhD Candidate | Dept. Plant Biology | Univ. Georgia
Thesis: understanding the genetic mechanisms that govern how plants use water. Specifically, identifying genes that convey an increase in drought resistance without sacrificing yield using cultivated sunflower as a model.
2011–2012 Undergrad. Research | Dept. Ecol. & Evol. Bio. | Univ. Arizona

Peer-Reviewed Publications:

Mandel JR, Dikow RB, Funk VA, **Masalia RR**, Staton SE, Kozik A, Michelmore RW, Rieseberg LH, Burke JM. (2014). A Target Enrichment Method for Gathering Phylogenetic Information from Hundreds of Loci: An Example from the Compositae. *App. in Plant Sci.*

Masalia RR, Bewick AJ, Burke JM. (2017) Connectivity in gene coexpression networks negatively correlates with rates of molecular evolution in flowering plants. *PLoS One*.

Hübner S, Bercovich N, Mandel JR [and 19 others including **Masalia RR**] (2017). The cultivated sunflower pan-genome provides insights on the contribution of introgression to the breeding of modern varieties. *Nature Plants*. *In Review*.

Research Awards and Grants:

2017 3rd Place graduate talk, Plant Biology Symposium | Univ. Georgia
2017 Plant Bio. Grad. Student Assoc. Travel Grant (\$400) | Univ. Georgia
2016 Graduate School Travel Award (\$220) | Univ. of Georgia
2016 1st Place graduate talk, Plant Biology Symposium | Univ. Georgia
2015 Plant Bio. Grad. Student Assoc. Research Grant (\$750) | Univ. Georgia
2015 3rd Place Poster Presentation, Plant Center Symp. | Univ. Georgia
2015 3rd Place Poster Presentation, Plant Biology Symp. | Univ. Georgia
2015 3rd Place Poster Presentation, undergraduate symp. | Univ. Arizona
2014 Rosemary Grant (\$2,450) | Society for the Study of Evolution
2014 Plant Biology Palfrey Research Grant (\$1,250) | Univ. of Georgia
2007 Wildcat Scholarship, 4 year full college scholarship | Univ. of Arizona

Mentor for undergraduate research | Burke Lab:

2016—Current	Liana J. Mosley undergraduate research on <i>H. annuus</i>
2017	1 st place undergraduate poster Plant Biology Symposium
2017	Poster presentation Center Undergrad. Research Opp. (CURO) spring symposium
2017	CURO Assistantship Award
2016	Poster presentation Plant Center fall retreat
2016	UGA Plant Center Undergraduate Research Award
2016	1 st place undergraduate poster Plant Biology Symposium
2015—2016	Nicole D.L. Torralba undergraduate research on <i>H. annuus</i>
2016	Poster presentation CURO spring symposium

Selected Oral Presentations (* lay audience presentation; ^ award winning):

- Masalia RR**, Mosley LJ, Burke JM. Shared transcriptomic response to three water limitation stresses. International Consortium for Sunflower Genomics Resources. January 2018, San Diego, CA.
- Masalia RR**, Temme AA, Burke JM. Candidate gene identification under varying abiotic stresses following GWAS. International Consortium for Sunflower Genomics Resources. January 2018, San Diego, CA.
- ^**Masalia RR**, Temme AA, Torralba NL, Burke JM. It's not Helianth-you or Helianth-me but *Helianthus* and how much water we use to grow our food. Dept. Plant Biology Symposium. August 2017. Athens, GA.
- ***Masalia RR**. How to craft an online persona. American Society of Plant Biologists Annual Conference. Invited talk. June 2017. Honolulu, HI.
- Masalia RR**, Mosley LJ, Burke JM. Using transcriptomics to assess drought methodology in cultivated sunflower. Integrative Research and Ideas Symposium. March 2017. Athens, GA.
- Masalia RR**, Mosley LJ, Burke JM. Transcriptomic analysis of abiotic stresses. International Consortium for Sunflower Genomics Resources. January 2017, San Diego, CA.
- Masalia RR**, Hubner S, Calic I, Rieseberg LH, Burke JM. Linkage disequilibrium and candidate gene identification following GWAS. International Consortium for Sunflower Genomics Resources. January 2017, San Diego, CA.
- ***Masalia RR**. Water, water everywhere...so why are we running out? Dahlonge Science Café. December 2016. Invited talk. Dahlonge, GA.
- ***Masalia RR**. The Ripple Effect. University System of Georgia Board of Regents Annual August Board Meeting. Invited talk. August 2016. Atlanta, GA.
- ^**Masalia RR**, Mosley LJ, Torralba NDL, Burke JM. What is water limitation? Plant Biology Annual Symposium. August 2016. Athens, GA.
- Masalia RR**, Torralba NDL, Mosley LJ, Burke JM. A look at transcriptomic variation across water limitation scenarios. Botany Conference. August 2016. Savannah, GA.
- *^**Masalia RR**. Elevator Pitch. American Society of Plant Biologists Annual Meeting. July 2016. Austin, TX.
- ***Masalia RR**. The Ripple Effect. Three Minute Thesis Finals Competition. April 2016. Athens, GA.
- Masalia RR**, Torralba NDL, Hubner S, Mandel JR, Rieseberg LH, Burke JM. Genome wide association analysis of osmotic stress. International Consortium for Sunflower Genomics Resources. January 2016, San Diego, CA.
- Masalia RR**, Barker MS. The Genomic Nature of Linnaean Genera. Society for the Study of Evolution Conference. June 2013, Salt Lake City, UT.

Poster Presentations (^ award winning):

- Masalia RR**, Mosley LJ, Burke JM. Stressful situation? Find some common ground. Dept. Plant Biology Symposium. August 2017, Athens, GA.
- ^Mosley LJ, **Masalia RR**, Burke JM. Comparing apples and oranges. Plant Biology Symposium. August 2017, Athens, GA.

- Mosley LJ, **Masalia RR**, Burke JM. Phenotypic assessment of varying water limitation methodologies in cultivated sunflower. Integrative Research and Ideas Symposium. March 2017. Athens, GA; CURO Symposium. April 2017, Athens, GA.
- Masalia RR**, Mosley LJ, Burke JM. What is water limitation? Plant and Animal Genome. January 2017, San Diego, CA; UGA Plant Center Symposium. October 2016. Helen, GA
- Mosley LJ, **Masalia RR**, Burke JM. Does cultivated sunflower exhibit a shared or stress specific response when exposed to low nutrient, osmotic, and salt conditions? UGA Plant Center Symposium. October 2016. Helen, GA
- ^Mosley LJ, **Masalia RR**, Burke JM. Assessing transcriptomic variation in leaf and root tissue under nutrient stress in cultivated sunflower. Plant Biology Annual Symposium. August 2016. Athens, GA.
- Masalia RR**, Torralba NDL, Mosley LJ, Burke JM. Differential Expression across Five Abiotic Stresses in Cultivated Sunflower. American Society of Plant Biologists Conference. July 2016. Austin, TX
- Torralba NDL, **Masalia RR**, Burke JM. Phenotypic variation of cultivated sunflower seedlings to an osmotic stress, polyethylene glycol. CURO Symposium. April 2016. Athens, GA
- Masalia RR**, Torralba NDL, Mandel JR, Rieseberg LH, Burke JM. Story of Stress: A Look at Genome-Wide Association Studies in Cultivated Sunflower Seedlings under Osmotic Stress. Plant and Animal Genome. January 2016, San Diego, CA.
- ^**Masalia RR**, Hubner S, Mandel JR, Rieseberg LH, Burke JM. GWAS of drought resistance traits in cultivated sunflower. UGA Plant Center Symposium, October 2015, Helen, GA.
- ^**Masalia RR**, Hubner S, Mandel JR, Rieseberg LH, Burke JM. Genome-wide association of drought resistance in cultivated sunflower seedlings. Dept. Plant Biology Annual Symposium, August 2015, Athens, GA
- Masalia RR**, Hubner S, Mandel JR, Rieseberg LH, Burke JM. Blueprint for Drought Genomics: A Methodological Overview of Genome-wide Association Studies in Cultivated Sunflower Seedlings. American Society of Plant Biologists Annual Conference, July 2015, Minneapolis, MN
- Masalia RR**, Brindley KG, Burke JM. Genome-Wide Association Study of Drought Resistance in Cultivated Sunflower (*Helianthus annuus* L.). Society for the Study of Evolution Conference, June 2014, Raleigh, NC; Dept. Plant Biology Annual Symposium, August 2014, Athens, GA; UGA Plant Center Symposium, October 2014, Helen, GA.
- ^**Masalia RR**, Barker MS. The Genomic Nature of Linnaean Genera. Dept. Ecology and Evolutionary Biology Undergraduate Symposium, March 2012, Tucson, AZ

Invited Workshops:

- Masalia RR**. Professional Development Series: Making scientific figures. Dept. Plant Biology. September 2017. Athens, GA.
- Masalia RR**. Exploring and Communicating Your Research Interests. September 2017. Athens, GA.
- Masalia RR**, Batora NL. How to craft an elevator pitch and engage the lay audience. Integrative Research and Ideas Symposium. March 2017. Athens, GA.
- Masalia RR**. How can a science blog enhance a science café? American Association of Physics Teachers. Invited panelist. February 2017. Atlanta, GA.
- Masalia RR**. The power of the Three Minute Thesis. American Society of Plant Biologists. November 2016. Athens, GA.
- Masalia RR**. Professional development: how to deliver an elevator pitch. Athens Science Observer. October 2016. Athens, GA.

Plant Science Interviews Conducted:

- Jennifer Clarke. Interviewed by **Rishi Masalia**. Phenome. Audio Podcast. 2018.
- Ivan Baxter. Interviewed by **Rishi Masalia**. Phenome. Audio Podcast. 2018.

Chris Topp. Interviewed by **Rishi Masalia**. Phenome. Audio Podcast. 2018.

Carolyn Lawrence-Dill. Interviewed by **Rishi Masalia**. Phenome. Audio Podcast. 2018.

Guillaume Lobet. Interviewed by **Rishi Masalia**. Phenome. Audio Podcast. 2018.

Alex Bucksch. Interviewed by **Rishi Masalia**. Phenome. Audio Podcast. 2018.

Ross Sozzani. Interviewed by **Rishi Masalia**. Phenome. Audio Podcast. 2018.

Andrew Leakey. Interviewed by **Rishi Masalia**. Phenome. Audio Podcast. 2018.

Karina Morales. Interviewed by **Rishi Masalia**. Phenome. Audio Podcast. 2018.

Molly Edwards. Interviewed by **Rishi Masalia**. Plantae Seminar Series. Audio Podcast. 2017.

Chamovitz, Daniel. Interviewed by **Rishi Masalia**. Plantae Seminar Series. Audio Podcast. 2017.

Dinneny, José. Interviewed by: **Rishi Masalia**. Plantae, ASPB. Video. 2017.

Delmer, Debbie. Interviewed by: **Rishi Masalia**. Plantae, ASPB. Video. 2017.

Boyer, John. Interviewed by: **Rishi Masalia**. Plantae, ASPB. Video. 2017.

Folta, Kevin. Interviewed by: **Rishi Masalia**. Plantae, ASPB. Video. 2017.

Taylor, Phil. Interviewed by: **Rishi Masalia**. Plantae, ASPB. Video. 2017.

Timmerman, Marja. Interviewed by: **Rishi Masalia**. Plantae, ASPB. Video. 2017.

Wyatt, Sarah and Anne Sternberger. Interviewed by: **Rishi Masalia**. Plantae, ASPB. Video. 2017.

Spady, Tyronne. Interviewed by: **Rishi Masalia**. Plantae, ASPB. Video. 2017.

Kalluri, Udaya. Interviewed by: **Rishi Masalia**. Plantae, ASPB. Video. 2017.

Last, Rob. Interviewed by: **Rishi Masalia**. Plantae, ASPB. Video. 2017.

Vega-Sanchez, Miguel. Interviewed by: **Rishi Masalia**. Plantae, ASPB. Video. 2017.

Varshney, Rajeev. Interviewed by: **Rishi Masalia**. ASPB Luminaries. Magazine. 2017.