

Daniel Scott Jones

Curriculum Vitae

Education

The University of Oklahoma.	Botany	B.S., 2011
The University of Oklahoma.	Plant Biology	M.S., 2014
The University of Oklahoma	Plant Biology	Ph.D., 2017

Professional Appointments

Graduate Research Assistant	University of Oklahoma – Dr. Scott Russell	2012-2014
Graduate Research Assistant	University of Oklahoma – Dr. Sharon Kessler	2014-2017
Postdoctoral Associate	University of N. Carolina – Dr. Zack Nimchuk	2018-2019
NSF Postdoctoral Fellow	University of N. Carolina – Dr. Zack Nimchuk	2019-2021
Assistant Professor	Auburn University – Dept. of Biological Sciences	Current

Publications

Jones, D.S., John, A., VanDerMolen, K.R., Nimchuk, Z.L. 2020. CLAVATA signaling ensures reproductive development in plants across thermal environments. *Current Biology*.

Yuan, J., Ju, Y., **Jones, D. S.**, Zhang, W., Lucca, N., Staiger, C. J., & Kessler, S. A. (2020). Pollen tube-triggered accumulation of NORTIA at the filiform apparatus facilitates fertilization in *Arabidopsis thaliana*. *BioRxiv*, 621599.

Rodriguez-Leal, D., Xu, C., Kwon, C.T., Soyars, C., Demesa-Arevalo, E., Man, J., Liu, L., Lemmon, Z.H., **Jones, D.S.**, Van Eck, J. and Jackson, D.P., 2019. Evolution of buffering in a genetic circuit controlling plant stem cell proliferation. *Nature genetics*, 51(5), p.786.

Jones, D.S., Liu, X., Willoughby, A.C., Smith, B.E., Palanivelu, R. and Kessler, S.A., 2018. Cellular distribution of secretory pathway markers in the haploid synergid cells of *Arabidopsis thaliana*. *The Plant Journal*. 94.1 (2018): 192-202.

Anderson, S.N., Johnson, C.S., Chesnut, J., **Jones, D.S.**, Khanday, I., Woodhouse, M., Li, C., Conrad, L.J., Russell, S.D. and Sundaresan, V., 2017. The Zygotic Transition Is Initiated in Unicellular Plant Zygotes with Asymmetric Activation of Parental Genomes. *Developmental cell*, 43(3), pp.349-358.

*Davis, T.C., ***Jones, D.S.**, Dino, A.J., Cejda, N.I., Yuan, J., Willoughby, A.C. and Kessler, S.A., 2017. *Arabidopsis thaliana* MLO genes are expressed in discrete domains during reproductive development. *Plant reproduction*, 30(4), pp.185- 195. *Co-First Author

Jones, D.S. and Kessler, S.A., 2017. Cell type-dependent localization of MLO proteins. *Plant signaling & behavior*, 12(11), pp.172-185.

Russell, S. D., **Jones, D. S.**, Anderson, S., Wang, X., Sundaresan, V., & Gou, X. (2017). Isolation of Rice Sperm Cells for Transcriptional Profiling. In *Plant Germline Development* (pp. 211-219). Humana Press, New York, NY

Jones, D. S., Yuan, J., Smith, B. E., Willoughby, A. C., Kumimoto, E. L., Kessler, S. A. (2017). MILDEW RESISTANCE LOCUS O Function in Pollen Tube Reception Is Linked to Its Oligomerization and Subcellular Distribution. *Plant Physiology*. doi:10.1104/pp.17.00523

Siriwardana, C. L., Gnesutta, N., Kumimoto, R. W., **Jones, D. S.**, Myers, Z. A., Mantovani, R., & Holt III, B. F. (2016). NUCLEAR FACTOR Y, Subunit A (NF-YA) Proteins Positively Regulate Flowering and Act Through FLOWERING LOCUS T. *PLoS Genetics*, 12(12), e1006496.

Kessler, S. A., Lindner, H., **Jones, D. S.**, & Grossniklaus, U. (2015). Functional analysis of related CrRLK 1 L receptor-like kinases in pollen tube reception. *EMBO Reports*, 16(1), 107-116

Russell, S. D., & **Jones, D. S.** (2015). The male germline of angiosperms: repertoire of an inconspicuous but important cell lineage. *Frontiers in Plant Science*, 6 (March).

Siriwardana, C. L., Kumimoto, R. W., **Jones, D. S.**, & Holt, B. F. (2014). Gene Family Analysis of the Arabidopsis NF-YA Transcription Factors Reveals Opposing Abscisic Acid Responses During Seed Germination. *Plant Molecular Biology Reporter*. <http://doi.org/10.1007/s11105-014-0704-6>

*Anderson, S. N., *Johnson, C. S., ***Jones, D. S.**, Conrad, L. J., Gou, X., Russell, S. D., & Sundaresan, V. (2013). Transcriptomes of isolated *Oryza sativa* gametes characterized by deep sequencing: evidence for distinct sex-dependent chromatin and epigenetic states before fertilization. *The Plant Journal*, 76(5), 1–13. <http://doi.org/10.1111/tpj.12336>

*Co-First Author; produced micrograph used for journal issue cover

Oral Presentations

2020 – Plant and Animal Genome Meeting (PAG) – San Diego, CA

CLE-Family Peptide Signaling Regulates Diverse Floral Morphologies across Plant Taxa

Daniel S. Jones, Amala John, Zachary L. Nimchuk

2017 – International Congress on Arabidopsis Research (ICAR) – St. Louis, MO

Molecular requirements for MLO-mediated communication during pollen tube reception

Daniel S. Jones, Jing Yuan, Benjamin Smith, Andrew Willoughby, Sharon A. Kessler

2017 – Purdue Plant Science Symposium – West Lafayette, IN

Analysis of MLO function during pollen tube reception

Daniel S. Jones, Jing Yuan, Benjamin Smith, Sharon A. Kessler

2016 - American Society of Plant Biologists Meeting – Austin, TX

Analysis of MLO function during pollen tube reception

Daniel S. Jones, Jing Yuan, Patrick B. Day, Sharon A. Kessler

2013 - Botanical Society of America Meeting – New Orleans, LA

Differential gene expression in the male and female germ lineage of *Oryza sativa ssp. japonica*.

Daniel Jones, Sarah Anderson, Cameron Johnson, Meiling Chen, Liza Conrad, Xiaoping Gou, Scott D. Russell, V. Sundaresan

Poster Presentations

2019 – Federation of American Societies for Experimental Biology (FASEB): Mechanisms in Plant Development- Olean, NY

The Regulation of Inflorescence Architecture Through a Novel CLE-Signaling Pathway.

Daniel S. Jones, Amala John, Zachary L. Nimchuk

2017 – Federation of American Societies for Experimental Biology (FASEB): Mechanisms in Plant Development- Saxtons River, VT

MLO-mediated pollen tube reception requires localization to a Golgi-associated compartment in synergid cells. **Daniel S. Jones**, Jing Yuan, Benjamin Smith, Sharon A. Kessler

-Winner of FASEB Best Student Poster Award

2017 - American Society of Plant Biologists - Midwest Regional Meeting - West Lafayette, IN

MLO-mediated pollen tube reception requires localization to a Golgi-associated compartment in synergid cells. **Daniel S. Jones**, Jing Yuan, Benjamin Smith, Sharon A. Kessler

-Winner of ASPBMW Best Student Poster Award

2016 - Plant Reproduction (IASPR and Frontiers in Plant Reproduction combined meeting) – Tucson, AZ

MLO function in plant reproduction: comparing their potential roles in signaling and development. **Daniel S. Jones**, Patrick B. Day, Jing Yuan, Emily L. Kumimoto, Sharon A. Kessler -*Winner of Frontiers in Plant Reproduction Best Student Poster Award*

2015 - Pollen Research Coordination Network (Pollen RCN) and ASPB Plant Biology – Minneapolis, MN

MLO-mediated pollen tube reception: localization, distribution and functional analysis of MLO proteins within the synergid cell of *Arabidopsis thaliana*. **Daniel S. Jones**, Sharon A. Kessler

2014 - International Congress on Sexual Plant Reproduction – Porto, Portugal

Three-dimensional visualization of the female gametophytes of *Oryza sativa* and *Arabidopsis thaliana* using multiphoton microscopy. **Daniel S. Jones**, Benjamin E. Smith, Joshua M. Chesnut, Greg Strout, Scott D. Russell

2013 - Botanical Society of America Meeting – New Orleans, LA

Three-dimensional visualization of the embryo sac of *Oryza sativa* during fertilization. **Daniel S. Jones**, Joshua M. Chesnut, Scott D. Russell

Teaching Experience

The University of North Carolina in Chapel Hill - Department of Biology

Instructor of Record

- Fall 2020 (Rescheduled to Fall 2021 due to COVID) – Molecular Lab Fundamentals
 - Course designed but not yet implemented

Guest Lecturer

- Spring 2020 – BIOL639-1 Plant Cell Biology
- Fall 2018 – BIOL639 Plant Hormone Signaling
- Fall 2018 – BIOL425 Human Genetics

Research Consultant

- Fall 2018 – BIOL425 Human Genetics

The University of Oklahoma - Department of Microbiology and Plant Biology

Instructor of Record

- Spring 2017 – General Botany – Inquiry-based

Graduate Teaching Assistant

- Spring 2016 - Principles of Plant Physiology
- Fall 2011 - General Botany

Distinguished Awards and Accolades

2019 – National Science Foundation PGRP Postdoctoral Research Fellowship in Biology
Deciphering CLE peptide signaling pathways in sunflower (*Helianthus annuus*)

2017 - FASEB Best Student Poster Award- FASEB: Mechanisms in Plant Development
MLO-mediated pollen tube reception requires localization to a Golgi-associated compartment in synergid cells. **Daniel S. Jones**, Jing Yuan, Benjamin Smith, Sharon A. Kessler

2016 - Frontiers in Plant Reproduction Best Student Poster Award - IASPR and Frontiers in Plant Reproduction MLO function in plant reproduction: comparing their potential roles in signaling and development. **Daniel S. Jones**, Patrick B. Day, Jing Yuan, Emily L. Kumimoto, Sharon A. Kessler

2016 - Provost's Certificate of Distinction in Teaching, University of Oklahoma

2014 - Predoctoral Fellowship Honorable Mention, Ford Foundation

Outreach

2020 – Botanical Society of America's PlantingScience Master Plant Science Team Member

- Liaison to multiple classes from Griffin High School in Georgia

2018-2020 – Carolina Firsts Advocate – UNC's first-generation student program

- Get to use this platform to speak to a first-gen first-year student symposium each semester about undergraduate research opportunities at UNC

2018 – UNC Science Expo – Plant Developmental Biology Booth

2013-2015 – Botanical Society of America's PlantingScience Mentor

2012-2014 –Summer REU with Langston University

- Mentored undergraduate students from Langston each summer for 2-weeks