

**Nicholas Morffy**  
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#### **CURRENT POSITION**

2018 – Postdoctoral Scientist. Mentor: Lucia C. Strader. Department of Biology.  
Duke University, Durham, NC.

#### **EDUCATION**

2013 – 2018 Ph.D. in Genetics. Major Professor: David C. Nelson. Department of Genetics.  
University of Georgia, Athens, GA.  
2007 – 2011 B.S. in Biology. University of Florida, Gainesville, FL.

#### **CURRENT FUNDING**

2019 NSF Postdoctoral Research Fellowship in Biology (3 years)

#### **AWARDS AND HONORS**

2019 Danforth Seed Grant – Washington University in St. Louis  
2017 Department of Genetics Travel Award – University of Georgia  
2016 Mote Fellowship – Department of Genetics, University of Georgia  
2016 Poster Award – International Plant Growth Substances Association Conference  
2015 NIH T32 Training Grant – Department of Genetics, University of Georgia  
2015 Honorable Mention – NSF Graduate Research Fellowship Program  
2015 Honorable Mention – National Academies Ford Fellowship Program  
2014 Graduate Research Opportunity Fellowship – University of Georgia

#### **PUBLICATIONS**

**Morffy N**, Strader LC. Structural Aspects of Auxin Signaling. *Cold Spring Harb Perspect Biol.* 2021; a039883. doi:10.1101/cshperspect.a039883.

Khosla A, **Morffy N**, Li Q et al. Structure-Function Analysis of SMAX1 Reveals Domains That Mediate Its Karrikin-Induced Proteolysis and Interaction with the Receptor KAI2. *Plant Cell.* 2020; 32(8) 2639-2659. doi:10.1105/tpc.19.00752.

**Morffy N**, Strader LC. Old Town Roads: routes of auxin biosynthesis across kingdoms. *Curr Opin Plant Biol.* 2020; 55 21-27. doi:10.1016/j.pbi.2020.02.002.

**Morffy NJ**, Strader LC. Locally Sourced: Auxin Biosynthesis and Transport in the Root Meristem. *Developmental Cell.* 2018; 47(3) 262-264. doi:10.1016/j.devcel.2018.10.018.

**Morffy N**, Faure L, Nelson DC. Smoke and Hormone Mirrors: Action and Evolution of Karrikin and Strigolactone Signaling. *Trends Genet.* 2016; 32(3) 176-188. doi:10.1016/j.tig.2016.01.002.

Stanga JP, **Morffy N**, Nelson DC. Functional redundancy in the control of seedling growth by the karrikin signaling pathway. *Planta.* 2016; 243(6) 1397-1406. doi:10.1007/s00425-015-2458-2.

Soundappan I, Bennett T, **Morffy N** et al. SMAX1-LIKE/D53 Family Members Enable Distinct MAX2-Dependent Responses to Strigolactones and Karrikins in Arabidopsis. *Plant Cell.* 2015; 27(11) 3143-3159. doi:10.1105/tpc.15.00562.

Cukras S, **Morffy N**, Ohn T, Kee Y. Inactivating UBE2M impacts the DNA damage response and genome integrity involving multiple cullin ligases. *PLoS One*. 2014; 9(7) e101844. doi:10.1371/journal.pone.0101844.

Washington PM, **Morffy N**, Parsadanian M, Zapple DN, Burns MP. Experimental traumatic brain injury induces rapid aggregation and oligomerization of amyloid-beta in an Alzheimer's disease mouse model. *J Neurotrauma*. 2014; 31(1) 125-134. doi:10.1089/neu.2013.3017.

## **PRESENTATIONS**

A High-Throughput Screen for Identifying ARF Transcriptional Activation Domains. IDPSIG and Friends Seminar Series **Invited Speaker**. June 2021.

A High-Throughput Screen for Identifying ARF Transcriptional Activation Domains. Washington University in St. Louis Department of Biochemistry and Biophysics Science Friday Seminar Series **Invited Speaker**. May 2021.

The Effects of ARF Stability and Localization on Auxin Signaling. Max Planck Institute of Molecular Plant Physiology Summer Series **Invited Speaker**. July 2020.

The Contribution of AUXIN RESPONSE FACTOR Dimerization to DNA-Binding. National Plant Genome Initiative Award Meeting. Washington, DC. September 2019.

The Effects of ARF Stability and Localization on Auxin Signaling. Washington University in St. Louis Plant and Microbial Bioscience Seminar. September 2019.

Investigating the Contribution of the ARF PB1 Domain to DNA-binding Specificity. Washington University in St. Louis Bioforum. October 2018.

Understanding the Function of SMAX1 in Karrikin Signaling. Washington University in St. Louis Postdoctoral Interview Seminar. October 2017.

Investigating Karrikin Signaling Specificity. University of Georgia Plant Functional Genomics Group. February 2017.

## **POSTER PRESENTATIONS**

**Morffy N** & Strader L. The Contribution of AUXIN RESPONSE FACTOR Dimerization to DNA-Binding. National Plant Genome Initiative Award Meeting. Washington, DC. September 2019

**Morffy N.**, Jing H., Korasick D. & Strader L. A Mutant Screen for Identifying Factors that Regulate AUXIN RESPONSE FACTOR 19 Stability. International Plant Growth Substances Conference. Paris, France. June 2019

**Morffy N.**, Faure L., Khosala A., Kapoor S. & Nelson D. C. Investigating SMAX1 Degradation in the Karrikin Signaling Pathway. International Conference of Arabidopsis Research. St. Louis, MO. June 2017.

**Morffy N.**, Kapoor S. & Nelson D. C. Investigating Signal Transduction Specificity in Karrikin and Strigolactone Signaling. International Plant Growth Substances Conference. Toronto, Canada. June 2016.

**Morffy N.,** Stanga J. P. & Nelson D. C. Investigating the Role of TOPLESS Protein Interactions in Karrikin Signaling and Seed Germination in *Arabidopsis thaliana*. American Society of Plant Biologists National Meeting. Portland, OR. July 2014.

### **TEACHING**

- 2021 Guest Lecture on Applied Technologies in Genetic Research – Berry College BIO304 (Genetics)
- 2019 Guest Lecture on Protein Structure for Protein Function in Model Cellular System – WUSTL
- 2018 Guest Lecture on Plant Tissue Mechanics for Integrative Plant and Animal Mechanobiology – WUSTL
- 2017 Teaching Assistant for GENE3200 (Genetics) – UGA

### **MENTORING**

- 2021 Grace Chow – Duke – Undergraduate Research Mentor
- 2019 Cydne Ratliff – WUSTL – NSF Center for Engineering and Mechanobiology REU Mentor
- 2017 – 2018 Tiffany Yee – UGA – Undergraduate Research Mentor
- 2017 Kitra Cates – UGA – Undergraduate Thesis Mentor
- 2016 Suraj Kapoor – UGA – Undergraduate Research Mentor
- 2016 Aakash Patel – UGA – Undergraduate Plant Center Retreat Poster Mentor
- 2014 Jeremy Ray – UGA – Undergraduate Plant Center Retreat Poster Mentor

### **SERVICE AND OUTREACH**

- 2020 – Duke Post-doctoral Biology Department Seminar Series Founding Committee Member
- 2013 – 2016 UGA LSAMP Board Member for careers in STEM (Research Representative)
- 2013 – 2016 UGA LSAMP Student Mentor UGA
- 2014 – 2015 UGA Genetics Graduate Student Association Co-President

### **OTHER RESEARCH EXPERIENCE**

- 2012 – 2013 Laboratory Technician. PI: Dr. Younghoon Kee. Department of Cell Biology, Microbiology, and Molecular Biology. University of South Florida. Tampa, FL.
- 2011 – 2012 Laboratory Technician. PI: Dr. Mark P. Burns. Department of Neuroscience. Georgetown University. Washington, DC.

### **FURTHER TRAINING**

- 2021 Best Practices in Mentoring – Duke Winter Graduate Academy
- 2014 Confocal Microscopy Training – UGA Biomedical Microscopy Core
- 2014 Galaxy Workshop – UGA Institute of Bioinformatics
- 2014 Biostatistics – UGA Department of Epidemiology and Biostatistics
- 2013 Introduction to Bioinformatics – UGA Institute of Bioinformatics
- 2012 Flow Cytometry Training – USF Medical Core Facility