

Katelyn J. Butler

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Education

UNIVERSITY OF WISCONSIN-MADISON - MADISON, WI AUGUST 2013 - PRESENT
Ph.D. Plant Pathology. Minor Plant Breeding/Plant Genetics. GPA 3.962/4.0

JUDSON UNIVERSITY - ELGIN, IL AUGUST 2010 - MAY 2013
B.A. Biology from The Honors Program. Minor Chemistry. *Summa cum laude*. GPA: 3.95/4.0.

Teaching Experience

WISCI TEACHING FELLOW JANUARY 2017 - PRESENT

- ▶ Member of a selected 10 instructor cohort gaining knowledge and experience in science-based teaching and how to most effectively teach biology to undergraduate students
- ▶ One-semester intensive training on scientific teaching exploring curriculum development, active learning, assessment techniques, teaching as research, and more culminating in the development and execution of a course

CO-INSTRUCTOR: SECRETS OF SCIENCE (INTEGSCI375) FALL 2017

- ▶ As part of the WISCI Teaching Fellows program, co-developed course materials for this first year biology major course focused on teaching scientific processing skills
- ▶ Developed curriculum emphasizing active learning, including extensive use of the CREATE method of scientific teaching
- ▶ Will teach the course of approximately 20 students as one of two primary instructors in the fall of 2017

TEACHING ASSISTANT: PLANTS PARASITES AND PEOPLE (PLPATH123) FALL 2016

- ▶ Independently taught two sections of inquiry-based laboratories of 18-20 students
- ▶ Graded assignments and provided feedback to improve lab report writing and scientific processing
- ▶ Counseled students individually on how to improve assignments and test grades
- ▶ Guest lecture to class of 140 students on plant disease control

TEACHING ASSISTANT AND TUTOR, JUDSON UNIVERSITY AUGUST 2011-MAY 2013

- ▶ Prepared lab materials for General Chemistry and Organic Chemistry classes
- ▶ Graded assignments for General Chemistry and Chemistry for Poets
- ▶ Tutored individuals in General Chemistry and Zoology, helping one student raise their grade from a D to a B
- ▶ General assistant to the Department of Science and Mathematics

Service & Leadership Experience

APS IDEA CAFE TABLE HOST AUGUST 2017

- ▶ Will co-host an "Idea Cafe" table at the APS annual meeting where we will lead a group discussion on imposter syndrome in academia with interested meeting attendees.

PLANT PATHOLOGY OUTREACH COMMITTEE JANUARY 2014 - PRESENT

- ▶ Interact with students (K-12) one on one and in groups in various venues to teach them about plant pathology
- ▶ Events include: Boy Scouts Plant Science Merit Badge Workshop, Wisconsin Youth Institute – World Food Prize, Expanding Your Horizons, Family Science Nights

PLANT PATHOLOGY GRADUATE COLLOQUIUM - UW-MADISON JULY 2014 - JULY 2016

Colloquium Chair (2015-2016)

- ▶ Oversaw activities of the colloquium, organizing meetings and facilitating communication
- ▶ Developed, administered, and reported a Student Body Survey to report to the faculty current thoughts and opinions of the student body, received positively by students, faculty and staff
- ▶ Main student representative contact for department faculty and staff
- ▶ Mentored incoming graduate students

Curriculum Committee and "Student and Post Doc Seminar" Representative (2014-2015)

- ▶ Initiated and led department-wide fundraising efforts
- ▶ Co-organized weekly student-focused seminar series for professional development
- ▶ Member of the Plant Pathology Department Curriculum Committee as a student voice for curriculum concerns. Helped in developing effective course evaluations

BLACKHAWK CHURCH MIDDLE SCHOOL MINISTRY AUGUST 2014-MAY 2017

- ▶ Co-lead a group of 10-20 middle school girls at weekly ministry nights at a local home, including an individual small group of 4-6 students. Mentor students in faith, life, school, and friendships.
- ▶ Participate in yearly retreats, including planning weekend events, leading large group activities, and facilitating student discussions

JUDSON STUDENT ORGANIZATION- JUDSON UNIVERSITY AUGUST 2011-MAY 2013

Executive Assistant (2012-2013)

- ▶ Distributed campus-wide monthly calendar of events
- ▶ Facilitated communication between all members of the student organization
- ▶ Member of the executive committee which had primary contact with University officials

Ohio Hall Dormitory Representative (2011-2012)

- ▶ Effectively used an allotted budget to improve common dorm spaces
- ▶ Served as an elected representative of dorm residents to the student organization

Research Experience

THESIS RESEARCH, UNIVERSITY OF WISCONSIN-MADISON AUGUST 2013-PRESENT

- ▶ In the lab of Dr. Andrew Bent, currently investigating novel soybean cyst nematode resistance genes from *Glycine soja* the wild relative of soybean and other aspects of cyst nematode resistance
- ▶ Mentored 2 undergraduate research assistants reporting directly to me as well as other undergraduates in the lab
- ▶ Extensive experience with modern plant and molecular bioscience techniques, including but not limited to: tissue culture, plant transformation, CRISPR/Cas9, gene silencing, recombinant DNA, protein analysis, and nematode propagation
- ▶ Peer-reviewed a manuscript submission with Dr. Bent for the journal *Frontiers in Plant Science*

DONALD DANFORTH PLANT SCIENCE CENTER REU, ST. LOUIS, MO MAY 2012-AUGUST 2012

- ▶ NSF funded competitive Research Experience for Undergraduates intern
- ▶ Cooperatively researched engineering *Camelina sativa* for enhanced biofuel production
- ▶ Wrote and presented comprehensive report on research

Additional Experience

NORMAN BORLAUG SUMMER INSTITUTE FOR GLOBAL FOOD SECURITY JUNE 2015

- ▶ Selected individual in two-week intensive learning experience on global food security at Purdue University
- ▶ Developed and presented a mock USAID proposal with a team of other participants aimed to combat malnutrition, poverty and environmental degradation in Uganda.
- ▶ Communicated experience with the Plant Pathology student body through a presentation at our Student and Post Doc Seminar series.

Awards & Honors

William T. Dible Terra International, Inc. Scholarship, UW-Madison	Fall 2016
President's Scholar, Judson University	May 2013
<i>Awarded to highest academic achieving graduate upholding Judson values</i>	
Deans List, Judson University	December 2010-May 2013
NSF Research Experience for Undergraduates Experience	May 2012-August 2012
Academic Scholarship, Judson University	August 2010-May 2013
Athletic Scholarship, Women's Golf, Judson University	August 2010-May 2011

Oral & Poster Presentations

Butler, K., Soybean resistance locus *Rhg1* confers resistance to cyst nematodes in diverse plant families. Oral presentation. American Phytopathological Society Annual Meeting. San Antonio, TX. August 2017.

Horgan, K., Towards the identification of novel soybean cyst nematode resistance genes. Oral presentation. University of Wisconsin-Madison, Department of Plant Pathology. Madison, WI. February 2016.

Horgan, K., 7 Grand Challenges of Global Food Security. Students and Post Doc Seminar. Oral presentation. University of Wisconsin-Madison. Madison, WI. October 2015.

Horgan, K., et. al. Towards the identification of novel soybean cyst nematode resistance genes. Poster presentations.

International Society of Plant-Microbe Interactions. Portland, OR. July 2017

Norman Borlaug Summer Institute for Global Food Security. West Lafayette, IN. June 2015.

Cook, D.E., Horgan, K., et. al. Distinct copy number, coding sequence and locus methylation patterns underlie *Rhg1* mediated soybean resistance to soybean cyst nematode. Poster presentations.

International Society for Molecular Plant Microbe Interactions. Rhodes, Greece. July 2014

Molecular and Cellular Biology of the Soybean Conference. Minneapolis, MN. August 2014

Horgan, K., Creation of a geranyl pyrophosphate synthase-limonene synthase self-processing polyprotein to improve limonene production in *Camelina sativa*. Oral presentations.
National Conference for Undergraduate Research. LaCrosse, WI. April 2013.
Danforth Plant Science REU Symposium. St. Louis, MO. August 2012
Judson University Student Research Symposium. Elgin, IL. April 2013.

Publications

Horgan, K. & Henderson, J. (2015). Resistance genes of *Oryza sativa* for protection against *Xanthomonas oryzae* pv. *oryzae*, the causative agent of bacterial leaf blight. Journal of Student Research, 4(1), 12-17.

Horgan, K. & Henderson J. (2015). miRNA mediated post-transcriptional gene regulation in response to abiotic stress in plants. Journal of Student Research. 4(1), 21-28.

Professional Associations

American Phytopathological Society	2017- Present
International Society of Molecular Plant-Microbe Interactions	2016 - Present