

Eric Stanley Hamilton

2016

Graduate Student, Plant Biology Program
Laboratory of Dr. Elizabeth Haswell
Washington University in St. Louis
St. Louis, MO
One Brookings Drive
63130

eric.hamilton@wustl.edu
website: hamiltonerics.com
cell: (913) 424-8331

Education

Washington University in St. Louis, St. Louis, MO Ph.D. Candidate, expected graduation Dec. 2016 GPA: 3.95	2012-Present
Case Western Reserve University, Cleveland, OH B.S., Biology; B.A., Chemistry, <i>summa cum laude</i>	2008-2012

Awards and Honors

ASPB/AAAS Mass Media Fellow, Milwaukee <i>Journal Sentinel</i>	2015
Monsanto Excellence Fund Fellowship	2014-Present
Morris B. Rettner Scholarship in Arts & Sciences	2014-Present
National Science Foundation Graduate Fellowship Honorable Mention	2013
Third Place, NSF Innovation in Graduate Education Challenge	2013
Summer Program in Undergraduate Research Fellowship	2011
Merck Index Award for Outstanding Organic Chemistry Student	2010
Helen Weil Ross Scholar Summer Intern in Diabetes Research	2010
Case Western Reserve University Trustee's Scholarship	2008-2012
National Merit Foundation Scholarship	2008-2012
Kansas Idea Network of Biomedical Research Excellence Scholar	2008, 2009

Peer-Reviewed Publications

-
1. Hamilton ES, Jensen GS, Maksaev G, Katims A, Sherp AM, Haswell ES. Mechanosensitive channel MSL8 regulates osmotic forces during pollen hydration and germination. **Science**. 2015 Oct 23;350(6259):438-41
 2. Brady SM, Burow M, Busch W, Carlborg O, Denby KJ, Glazebrook J, Hamilton ES, Harmer S, Haswell ES, Maloof JN, Kliebenstein D. Reassess the t-test: Interact with all your data via ANOVA. **Plant Cell**. 2015. Aug;27(8):2088-94.
 3. Hamilton ES, Schlegel AM, Haswell ES. 2014. United in diversity: Mechanosensitive ion channels in plants. **Ann. Rev. Plant Biol.** 2015. 66:113-137.
 4. Li Q, Sadhukan S, Bertiaume JM, Ibarra RA, Tang H, Deng S, Hamilton ES, Nagy LE, Tochtrop GP, Zhang GF. 4-Hydroxy-2(E)-nonenal (HNE) catabolism and formation of HNE adducts are modulated by β oxidation of fatty acids in the isolated rat heart. **Free Radic. Biol. Med.** 2013. 58C:35-44.

5. Stucky NL, Gregory E, Winter MK, He Y, Hamilton ES, McCarson KE, Berman NEJ. Sex differences in behavior and expression of CGRP-related genes in a rodent model of chronic migraine. *Headache*. 2011. 51(5):674-92.
6. Anderson J, Sandhir R, Hamilton ES, Berman NEJ. Impaired expression of neuroprotective molecules in the HIF-1 alpha pathway following traumatic brain injury in aged mice. *J. Neurotrauma*. 2009. 26:1557-66.

Presentations

Oral Presentations

1. Preparing for the Inevitable: Lessons on Stress Management from Pollen. Monsanto Graduate Fellows Symposium, Washington University in St. Louis. Nov. 2015
2. Preparing for the Inevitable: Lessons on Stress Management from Pollen. Plant and Microbial Biosciences Program Retreat, Washington University in St. Louis. Oct. 2015
3. MSL8 Regulates Osmotic Challenges in Pollen Hydration and Germination. 2015 ASPB Midwestern Section Meeting, Donald Danforth Plant Science Center, St. Louis, MO. Mar. 2015.
4. Synthesis and Evaluation of the Role of 4-HNE Enantiomers in Diabetes. Dietrich Diabetes Research Institute Quarterly Meeting. Cleveland, OH. Aug. 2010.

Posters

1. Hamilton ES, Jensen GS, Maksaev G, Katims A, Meuhler A, Haswell ES. Mechanosensitive Ion Channels and the Desiccation and Rehydration of Pollen. July 12-16, 2014. Plant Biology 2014, Portland, OR
2. Hamilton ES, Jensen GS, Katims A, Haswell ES. A role for mechanosensitive ion channels in regulating tip growth in *Arabidopsis thaliana* and *Physcomitrella patens*. July 20-24, 2013. Plant Biology 2013, Providence, RI
3. Sandhir R, Hamilton ES, Onyszchuk G, Berman NEJ. Enhanced Matrix Metalloproteinases Expression is Associated with Greater Blood Brain Barrier Disruption Following Traumatic Brain Injury. 26th Annual National Neurotrauma Society Symposium

Science Communication

1. Presenter, *The Power of Movement in Plants*. Gateway Greening “Pints ‘N’ Plants” seminar Apr. 20, 2016.
2. Writer and presenter, *Why don't plants grow upside down?*, video on plant gravity research upcoming at ultracondensedscience.wustl.edu
3. ASPB-sponsored AAAS Mass Media Fellow, Milwaukee *Journal Sentinel*. June-August, 2015. Articles at hamiltonerics.com/clips/

4. Producer, *Mechanosensitive Channel MSL8 Regulates Osmotic Forces During Pollen Hydration and Germination*. Animated video on mechanosensation in pollen. hamiltonerics.com/multimedia/
5. Panelist, Standing Up for Science Media Workshop. Plant Biology 2015, Minneapolis, MN. July 30, 2015.
6. Presenter, *Beer in the Garden*. Gateway Greening “Pints ‘N’ Plants” seminar Feb. 18, 2015.
7. Presenter, *From Darwin to the International Space Station: How Plants Respond to the Forces in the World Around Them*. 2014. FameLab Science Communication Competition hosted by NASA and National Geographic. Washington University in St. Louis. Feb. 22, 2014. hamiltonerics.com/multimedia/
8. Eric Hamilton and Melanie Bauer. *Teaching STEM Graduate Students to Communicate with the Public: A New Graduate Course and Practicum*. Invited talk at American Society for Biochemistry and Molecular Biology “Science Outreach and Communication” Career Symposium. University of Missouri, Columbia, MO. Sept. 21, 2013.
9. Eric Hamilton and Melanie Bauer. *Communicating Science to the Public: A New Graduate Course and Practicum*. Third place, National Science Foundation Innovation in Graduate Education competition.
10. Assistant organizer, “Science on Tap” Science Café seminar series, 2013-Present scienceontap.wustl.edu
11. Presenter, *Plant Genetics and Breeding*. Gateway Greening “Pints ‘N’ Plants” seminar June 19, 2013.
12. Presenter, *Science in the Garden*. Presentation of plant domestication, evolution and GMOs at local community garden with Dr. Barbara Kunkel and Dr. Toni Kutchan. May 11, 2013.
13. *Plant Science and Urban Agriculture Collaboration*. Clinton Global Initiative University Conference Commitment to Action. Washington University in St. Louis. Apr. 5, 2013.
14. Presenter, *Plant Genetics and GMOs*. Lesson at Lindbergh High School, Lindbergh, MO. Mar. 12, 2013.
15. Presenter, *Plant Genetics and Breeding*. Gateway Greening Community Garden Summit with Dr. Terry Woodford-Thomas. Feb. 16, 2013.

Professional Experience

1. Staff Writer, Case Western Reserve University Observer (Student Newspaper), 2011-2012.
2. Summer Program in Undergraduate Research Scholar, Summer 2011, sponsored by a grant from the Howard Hughes Medical Institute

Case Western Reserve University, Department of Biology, Dr. Ana Locci and Dr. Joseph Koonce

3. Undergraduate Teaching Assistant for Cognitive Science 101, 2010, 2011
Case Western Reserve University, Department of Cognitive Science, Dr. Fey Parrill, Dr. Todd Oakley
4. Dietrich Diabetes Research Institute Helen Weil Ross Scholar Summer Intern in Diabetes Research, Summer 2010
Case Western Reserve University, Department of Chemistry, Dr. Gregory Tochtrop
5. Kansas Idea Network of Biomedical Research Excellence Scholar, Summers 2008, 2009, sponsored by NIH grant from National Center for Research Resources
University of Kansas Medical Center, Department of Anatomy and Cell Biology, Dr. Nancy Berman
6. Laboratory Assistant, Summers 2007, 2006
University of Kansas Medical Center, Department of Anatomy and Cell Biology, Dr. Nancy Berman

Leadership and Activities

1. Plant and Microbial Biosciences Program Student Representative. Washington University in St. Louis. 2014-Present
2. Assistant organizer, "Science on Tap" Science Café seminar series, Washington University in St. Louis. 2013-Present
3. Member and volunteer, Gateway Greening, community gardening organization in St. Louis. 2012-Present
4. Student Sustainability Council Treasurer. Case Western Reserve University. 2011-2012
5. Organizer, Farm Harvest Festival. Case Western Reserve University. 2010, 2011
6. Case Democrats Treasurer. Case Western Reserve University. 2008-2011

Society Memberships

1. American Society of Plant Biologists, 2013-Present
2. National Association of Science Writers, 2015-Present
3. International Association of Sexual Plant Reproduction Research, 2015-Present