

Courtney M. Clark-Hachtel

EDUCATION

- Miami University**, Ph.D. Candidate, Department of Biology, Expected Graduation: May 2018
Dissertation: “Exploring the origin of insect wings through functional analysis of *vestigial* in various arthropods”
(Advisor: Dr. Yoshinori Tomoyasu)
- Miami University**, B.S. Secondary Education 2012

APPOINTMENTS

- NSF Graduate Research Fellow**, Department of Biology, Miami University 2014-present
(Advisor: Yoshinori Tomoyasu)
- Teaching Assistant**, Department of Biology, Miami University 2013-2014
- Research Assistant**, Department of Biology, Miami University 2009-present

GRANTS AND FELLOWSHIPS

EXTERNAL (Total: \$141,000)

- Evo-Devo-Eco Network**, Research Exchange Grant, *Finding wings in a non-winged arthropod through a CRISPR/Cas9-based knock-in approach*, Exchange to Nipam Patel’s lab, University of California, Berkeley, Principle Investigator, \$3,000 2014
- National Science Foundation**, Graduate Research Fellowship, *Do Insect Wings have a Dual Evolutionary Origin?*, Principle Investigator, \$138,000 2014

INTERNAL (Total: \$5,000)

- Miami University**, Academic Challenge Grant, *Finding wings in a non-winged arthropod*, Graduate Researcher, \$1,900 2016
- Miami University**, Academic Challenge Grant, *Finding wings in a non-winged arthropod*, Graduate Researcher, \$1,600 2015
- Miami University**, Academic Challenge Grant, *Do Insect Wings have a Dual Evolutionary Origin?*, Graduate Researcher, \$1,500 2014

AWARDS

- Dissertation Scholarship Award**, Department of Biology, Miami University, Oxford, OH. 2017
- Best Student Talk Award**, Midwest Society for Developmental Biology Regional Meeting University of Michigan, Ann Arbor, MI. 2015
- Selected Attendee**, Okinawa Institute of Science and Technology (OIST) Winter Course OIST, Okinawa, Japan 2013
- Poster Presentation Award**, Miami University Graduate Research Forum Miami University, Oxford, OH. 2013
- Honorable Mention**, National Science Foundation Graduate Research Fellowship 2013
- Howard Hughes Undergraduate Summer Research Award**, Miami University, Oxford, OH. 2011

PUBLICATIONS

* authors contributed equally

PEER REVIEWED

Tomoyasu, Y.* , Ohde, T.* & **Clark-Hachtel, C. M.*** What serial homologs can tell us about the origin of insect wings. *F1000Res.* 6, 1-11 (2017)

Clark-Hachtel, C. M. & Tomoyasu, Y. Exploring the origin of insect wings from an evo-devo perspective. *Curr. Opin. Insect Sci.* 13, 77–85 (2016)

Linz, D. M.* , **Clark-Hachtel, C. M.***, Borràs-Castells, F.* & Tomoyasu, Y.* Larval RNA Interference in the Red Flour Beetle, *Tribolium castaneum*. *J. Vis. Exp.* 1–8 (2014)

Clark-Hachtel, C. M., Linz, D. M. & Tomoyasu, Y. Insights into insect wing origin provided by functional analysis of *vestigial* in the red flour beetle, *Tribolium castaneum*. *PNAS* 110, 16951-16956 (2013)

OTHER

Contribution to F1000 Recommendations associated with *F1000Res* review article (2017)

NATIONAL AND INTERNATIONAL PRESENTATIONS

ORAL PRESENTATIONS

Exploring the origin of insect wings through functional analysis of vestigial in various arthropod species
Midwest Ecology and Evolution Conference, Oxford, OH. March 2016

Exploring the origin of insect wings through functional analysis of vestigial in various arthropod species
Midwest Society for Developmental Biology Regional Meeting, Ann Arbor, MI. October 2015

* Best Student Talk Award Received

Lobes or Gills: Insights into Insect Wing Origin Provided by Functional Analysis of vestigial in Tribolium

Midwest Ecology and Evolution Conference, Dayton, OH. March 2014

Lobes or Gills: Insights into Insect Wing Origin Provided by Functional Analysis of vestigial in Tribolium

Okinawa Institute of Science and Technology (OIST) Winter Course “Evolution of Complex Systems” (OWECS), Okinawa, Japan, December 2013

POSTER PRESENTATIONS

Finding wings in a non-winged arthropod

Pan-American Society for Evolutionary Developmental Biology 2nd Biennial Meeting, Calgary, Alberta, Canada, August 2017

Finding wings in a non-winged arthropod

Society for Developmental Biology 75th Annual Meeting, Boston, MA. August 2016

Exploring the origin of insect wings through functional analysis of vestigial in various arthropod species

Pan-American Society for Evolutionary Developmental Biology Inaugural Meeting, Berkeley, CA. August 2015

Exploring the origin of insect wings through functional analysis of vestigial in various insect species

56th Annual *Drosophila* Conference, Chicago, IL. March 2015

Lobes or Gills: Insights into Insect Wing Origin Provided by Functional Analysis of vestigial in Tribolium

Society for Developmental Biology 73rd Annual Meeting, Seattle, WA. July 2014

INTERNAL PRESENTATIONS:

ORAL PRESENTATIONS

Lobes or Gills: Insights into Insect Wing Origin Provided by Functional Analysis of vestigial in Tribolium

CMSB symposium, Oxford, OH. May 2014

POSTER PRESENTATIONS

Finding wings in a non-winged arthropod

Miami University Graduate Research Forum, Oxford, OH. November 2016

Exploring the origin of insect wings through functional analysis of vestigial in various arthropod species

Miami University Graduate Research Forum, Oxford, OH. October 2015

Exploring the origin of insect wings through functional analysis of vestigial in various insect species

CMSB symposium, Oxford, OH. June 2015

Lobes or Gills: Insights into Insect Wing Origin Provided by Functional Analysis of vestigial in Tribolium

Miami University Graduate Research Forum, Oxford, OH. November 2014

Lobes or Gills: Insights into wing origin provided by functional analysis of vestigial in the red flour beetle, Tribolium castaneum

Miami University Graduate Research Forum, Oxford, OH. November 2013

* Poster Presentation Award Received

SERVICE

Panel member, NSF GRFP application Q&A panel discussion, Miami University, Oxford, OH. 2017

Trainee Representative, Pan-American Society for Evolutionary Developmental Biology executive council 2016-2018

Organizational committee member, Midwest Ecology and Evolution Conference, Miami University, Oxford, OH. 2015-2016

Social committee member, Department of Biology, Miami University, Oxford, OH. 2015-2016

Panel member, NSF GRFP application Q&A panel discussion, Miami University, Oxford, OH. 2015

Advisory council member, Women in Science Disciplines Engineering and Mathematics (WiSDem) living learning community, Miami University, Oxford, OH. 2012-2015

Panel member, NSF GRFP application Q&A panel discussion, Miami University, Oxford, OH. 2014

TEACHING EXPERIENCE

Undergraduate Mentor, Miami University, Oxford, OH. 2012-present

Graduate Student Teaching Enhancement Program (GSTEP), Miami University, Oxford, OH. 2015

Teaching Assistant, Human Physiology for non-majors, Department of Biology, Miami University, Oxford, OH. 2013-2014

OUTREACH

Insects: Development and Science, Berne Union High School, Sugar Grove, OH. 2016

Insects!, Loveland Middle School, Loveland, OH. 2014

UNDERGRADUATES MENTORED

PAST STUDENTS

Julius Higiroy (B.S. 2013), Grace Miner (B.S. 2013), Lillian Sedacca (B.S. 2014), Mike Strayer (B.S. 2014), Jennifer Kennedy (B.S. 2015), John Dougherty (B.S. 2016), Alan Hu (B.S. 2016), Kathleen Queenan (B.S. 2016), McKenna Kaser (B.S. 2017), Ryan Rinn (B.S. 2017), Sam James (B.S. 2017)

CURRENT STUDENTS

Dongqi Yang (B.S. 2018), Maddy Moe (B.S. 2018), Jacob Schultz (B.S. 2019), Monica Fernandez (B.S. 2019), Sean Boyles (B.S. 2019)

GRANTS AWARDED TO UNDERGRADUATES THAT I MENTORED (Total: \$3,282.50)

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| Miami University , Undergraduate Summer Scholars, <i>Establishing the giant mayfly, Hexagenia, as a model to study the origin of insect wings</i> . Jacob Schultz, \$1,000 | 2017 |
| Miami University , Undergraduate Research Award, <i>Are the Knirps Family Genes Essential for the Formation of the RA Wing Vein in Beetles?</i> , Kathleen Queenan, \$463 | 2015 |
| Miami University , Biology Undergraduate Research Awards, <i>Are the Knirps Family Genes Essential for the Formation of the RA Wing Vein in Beetles?</i> , Kathleen Queenan, \$800 | 2015 |
| Miami University , Undergraduate Research Award, <i>Locating the anterior-posterior compartmental boundary of the beetle wing</i> , Jennifer Kennedy, \$401 | 2014 |
| Miami University , Undergraduate Research Award, <i>The role of achaete scute homolog in development of neural precursors in the red flour beetle Tribolium castaneum</i> , Grace Miner, \$618.5 | 2013 |