

Claire T. O'Quin

Centre College, Department of Biology
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EDUCATION AND TRAINING

- 2014-15 Postdoctoral Research Scholar, University of Kentucky
Project: Investigating the genetic basis of pigment differences in sawfly larvae
Advisor: Dr. Catherine Linnen
- 2014 Ph.D., Biology, University of Maryland.
Dissertation: "The Genetic Basis of Pigment Pattern Differentiation in Lake Malawi African Cichlids"
Advisor: Dr. Thomas D. Kocher
- 2010 M.S., Biology, The George Washington University.
Thesis: "Ontogeny of the Cypriniform Pharyngeal Jaw Apparatus and its Associated Musculature"
Advisor: Dr. Patricia Hernandez
- 2006 B.S., Biology-concentration in secondary education,
Louisiana State University

TEACHING EXPERIENCE

- Present Laboratory Instructor and Coordinator, Evolution, Biodiversity, Ecology (Bio 110), Department of Biology, Centre College
- Fall 2015-
Spring 2020 Lecturer, Introductory Biology I & II (Bio 148 & 152);
Lab Coordinator, General Biology Laboratory (Bio 111);
Instructor, Seminar in Biology (Bio 425);
Instructor, Research and Writing in Biology (Bio 398)
Department of Biology, University of Kentucky
- Spring 2014 Adjunct Instructor, Cell Biology, St. Bonaventure University
- Fall 2013 Guest Lecturer, Genetics, St. Bonaventure University
- Fall 2010-12 Graduate Teaching Assistant, Principles of Genetics,
University of Maryland
- Spring 2012 Graduate Teaching Assistant, Special Topics in Biology: Genetic Research on Cichlid Fishes, University of Maryland
- Spring 2010-11 Graduate Teaching Assistant, Human Anatomy and Physiology II,
University of Maryland
- Summer 2007-09 Instructor, Howard Hughes Summer REU Program,
George Washington University
- Spring 2007-08 Graduate Teaching Assistant, Biology of Organisms II,
George Washington University
- Fall 2006-07 Graduate Teaching Assistant, Biology of Organisms I,
George Washington University
- Spring 2006 Student Teacher, 7th Grade Gifted and Talented Biology,
Louisiana State University

COMMUNITY INVOLVEMENT AND SERVICE

Fall 2021	Women in STEM Panelist, Centre Feminist sponsored event, Centre College
Fall 2021- Present	Sexual Misconduct Prevention and Response Committee, Centre College
Fall 2021- Present	Advisor of TriBeta, Centre College
Fall 2021	Biology Program Search Committee, Centre College
Fall 2021- Present	Greenhouse Committee, Centre College
Fall 2021	First Year advising, Centre College
Spring 2021- Present	Biology Program Majors advisor, Centre College
Spring 2019- Spring 2020	Biology Department Event Supervisor, Kentucky Science Olympiad State Tournament, University of Kentucky
Fall 2018- Spring 2020	Tutor Advisory Board member, University of Kentucky
Fall 2018- Spring 2020	Director of the Biology Learning Center, University of Kentucky
Fall 2018- Spring 2020	Assist with Department of Biology promotion and undergraduate recruitment events, University of Kentucky
Fall 2018	Faculty panel member for UK 101 class, University of Kentucky
Spring 2018	Member of the Wildcat Foundations Faculty Dimension Committee and chaired subcommittee on Importance of the First Year, University of Kentucky
Fall 2017- Spring 2020	Biology majors advisor, University of Kentucky
Fall 2017- Spring 2020	Undergraduate Affairs Committee, Department of Biology, University of Kentucky
Fall 2017- Fall 2018	Faculty Merit Evaluation Report Committee, Department of Biology, University of Kentucky
Fall 2016- Spring 2020	Co-Advisor of TriBeta, University of Kentucky
Fall 2016	Identified open source images for all BIO 148 instructors for the transition to becoming a textbook free course, University of Kentucky
August 2015-19	Participant in Biology Department TA orientation, University of Kentucky

PROFESSIONAL DEVELOPMENT

February 2022	Pedagogy Lunch: The Secret Sauce of Student Support: Strategies, Resources, & Best Practices for Faculty and Staff
November 2021	Workshop: Life as and Underrepresented STEM Student at Centre College, Building Bridges and Community Day, Centre College
November 2021	How Can We Support Our Student's Well-Being and Mental Health, Centre College
September 2021	Pedagogy Lunch: Finding Our Way (back) to the Joy of Teaching, Centre College
August 2021	Workshop: Crafting More Inclusive Learning-Centered Syllabi; Centre College
August 2021	Workshop: Sustainability in the Gen Ed, Centre College
August 2021	Workshop: Unteaching Racism, Centre College
May 2021	Workshop: Effective and Equitable Mentorship of Student Researchers, Centre College
February 2021	Workshop: Implementing Undergraduate Research in General Education and Major Courses, Centre College
December 2020	Workshop: Teaching Remote/Hybrid Labs, Centre College
October 2019	Workshop: Teaching ESL/ELL Writers Across the Curriculum, University of Kentucky
May 2019	Workshop/Conference: Pedagogicon: Transparency in Teaching and Learning, Eastern Kentucky University
April 2019	Workshop: Engaging Students and Making Classrooms Fair and Inclusive: Cross-Disciplinary Tools, Insights, and Strategies to Promote Student Success, University of Kentucky
April 2019	Workshop: Helping STEM Students Thrive, University of Kentucky
February 2019	Workshop: Science of Learning, University of Kentucky
September 2018	Workshop: STEM Successes: Sharing Teaching Ideas, University of Kentucky
July 2018	Gulf Coast Summer Institute on Scientific Teaching, Louisiana State University
May 2018	Workshop/Conference: Pedagogicon: Student Centered Teaching and Learning, Eastern Kentucky University
January 2018	Workshop: Promoting Cross-Disciplinary Self-Regulation, University of Kentucky
January 2018	Webinar: Working with Underprepared Students, HHMI Summer Institutes on Scientific Teaching
January 2018	Student Success Summit, University of Kentucky
February 2017	Workshop: Open Education Resources, University of Kentucky
Spring 2017	First Year Student Symposium, University of Kentucky
Fall 2016	Lunch and Learn Series: Department of Biology, University of Kentucky
April 2016	Workshop: UK-wide STEM Teaching Enhancement Workshop and Scholarly Forum, University of Kentucky
October 2015	Workshop: Writing Good Multiple-Choice Questions and Using the Item Analysis Information, University of Kentucky

GRANTS, AWARDS and FELLOWSHIPS

- 2021 Faculty Development Committee Summer Research Grant (\$5,367), Centre College
- 2020 Ken Freedman Outstanding Advisor Nominee, University of Kentucky
- 2019 Most Influential Faculty Member Award, Department of Biology, University of Kentucky
- 2019 Teaching Large Classes Award Nominee, Department of Biology, College of Arts and Sciences, University of Kentucky
- 2018 Teacher Who Made a Difference (Recognized by four students), University of Kentucky
- 2018 Most Influential Faculty Member Nominee, Department of Biology, University of Kentucky
- 2018 Teaching Large Classes Award Nominee, Department of Biology, College of Arts and Sciences, University of Kentucky
- 2017 Teacher Who Made a Difference (Recognized by one student), University of Kentucky
- 2016 Alternative Textbook Grant, University of Kentucky
- 2013 Ann G. Wylie Dissertation Fellowship (\$10,800), University of Maryland
- 2012 Department of Biology Teaching Assistant Award (\$500), University of Maryland
- 2012 Howard J. Brinkley Travel Award (\$250), University of Maryland
- 2012 International Conference Student Support Award (\$435), University of Maryland
- 2012 Graduate Student Summer Research Fellowship (\$2,500), University of Maryland
- 2011 Guy Jordan Research Fund Award (\$1,375), The American Cichlid Association
- 2007 Best Student Poster Award, Division of Evolutionary Developmental Biology, Annual Meeting of the Society for Integrative and Comparative Biology

PUBLICATIONS

- 2018 Linnen, CR, **O'Quin, CT**, Shackleford, T, Sears, C, Lindstedt, C. Genetic architecture underlying larval pigmentation and color pattern in the redheaded pine sawfly (*Neodiprion lecontei*). *Genetics* 209: 291-305.
- 2013 **O'Quin, CT**, Drilea AC, Conte MA, Kocher TD. Pigment QTL detection using a new *Metriaclima zebra* anchored assembly. *BMC Genomics* 14:287.
- 2012 **O'Quin CT**, Drilea AC, Roberts RB, Kocher TD. A small number of genes underlie male pigmentation traits in Lake Malawi cichlid fishes. *Journal of Experimental Zoology Part B: Molecular and Developmental Evolution* 318:199-208.

PRESENTATIONS

- 2019 **O'Quin CT**. From Fish to Flies: Using QTL Analysis to Investigate the Genetic Basis of Pigment Patterns. *Talk*. Guest Speaker via Skype, BIOL 3676 Evolution Lab, University of Iowa.
- 2019 Woolfok M., Mattingly K., **O'Quin C.**, Linnen C. Environmental correlates of melanin spotting intensity in geographically variable redheaded pine-sawfly larvae. *Poster*. Annual Biomedical Research Conference for Minority Students, Anaheim, California.
- 2019 Linnen C., Bagley RK., **O'Quin CT.**, Lindstedt-Kareksela C. Genetics and ecology of warning coloration in pine sawfly larvae. *Talk*. Society for the Study of Evolution, Providence, Rhode Island.
- 2018 Woolfolk M., Mattingly K., **O'Quin C.**, Linnen C. Environmental correlates of melanin spotting intensity in geographically variable redheaded pine-sawfly larvae. *Poster*. University of Kentucky Showcase of Undergraduate Scholars, Lexington, KY
- 2016 **O'Quin CT**. Phenotypic Diversity and Adaptive Radiation: A Lesson from African Cichlids. *Talk*. Guest Speaker, BIO 770 Seminar, University of Kentucky.
- 2012 **O'Quin, CT**, Drilea, AC, Conte, MA, O'Quin, KE, and Kocher, TD. Identification of pigment QTL in African cichlids from Lake Malawi. *Poster*. Society for Molecular Biology and Evolution, Dublin, Ireland.
- 2009 **O'Quin, CT** and Hernandez, LP. Development of a functional complex: Ontogeny of the zebrafish pharyngeal jaw apparatus. *Talk*. Society for Integrative and Comparative Biology, Boston, MA.
- 2008 **O'Quin, CT**. Developing a basis for convergence: Ontogeny of the zebrafish pharyngeal jaw apparatus. *Poster*. American Society of Ichthyologists and Herpetologists, Montreal, Canada.
- 2008 **O'Quin, CT**, Oberg, FL, and Hernandez, LP. Ontogeny of the pharyngeal jaw apparatus in the zebrafish. *Poster*. Society for Integrative and Comparative Biology, San Antonio, TX.
- 2007 Hernandez, LP, Bird, NC., Staab, KL., and **O'Quin, CT**. Using zebrafish to investigate the origin and evolution of morphological novelty. *Talk*. International Congress of Vertebrate Morphology, Paris, France.
- 2007 **O'Quin, CT** and Hernández, LP. The role of hedgehog signaling during craniofacial development in larval zebrafish. *Poster*. Society for Integrative and Comparative Biology, Phoenix, AZ.

MENTORING

I have mentored the following undergraduates as paid undergraduate lab assistants:

Fall 2021-
Spring 2022 Margaret Butts, Emma Ridener, Sherice Sutherland, Emma Rose Vincent
Centre College, Undergraduate Lab Assistants for Bio 110 Lab

Spring 2021 Margaret Butts, Madison Donald, Emma Ridener, Emma Rose Vincent
Centre College, Undergraduate Lab Assistants for Bio 110 Lab

Fall 2020 Madison Donald, Amanda Flatt, Emma Ridener, Centre College,
Undergraduate Lab Assistants for Bio 110 Lab

I have mentored the following undergraduates as paid greenhouse assistants:

Fall 2020-Spring 2022 Judson Collins, Anna Impellitteri, Centre College,
Greenhouse care and maintenance

I have mentored the following undergraduates in research:

2022 Mary Gonzalez, Centre College
Project: Phenotypic and genotypic analysis of scleral ossicles in Mexican tetra

2021 Hanna Montalvo, Centre College
Project: Redesigning for Student Success: Updating the Bio 110 Labs

2020 Matthew Lemke, University of Kentucky
Project: Investigating pigment pattern re-establishment in the regenerating tails of
Melanochromis auratus, a sexually dimorphic African cichlid

2019 Marcus Barnett, Joscelyn Fennelly, Ebtisam Mohammad A Hakami,
Stephanie Inimgba-Olunwa, Meredith Krebs, Matthew Lemke,
Larkin Mann, Carter Prewitt, Ashley Rauch, Spencer Russell,
Shreeya Shresta, Aditya Sriram, Evelyn Turnbaugh, University of Kentucky,
Project: Investigating pigment pattern re-establishment in the regenerating
tails of African cichlids

2018 Kayla Mattingly and Maya Woolfolk, University of Kentucky,
Project: Investigating environmental factors and color variation in red headed
pine sawfly larvae (This was a minor supervisory role where I attended weekly
meetings with the students and Dr. Catherine Linnen)

2014-15 Connor Sears, University of Kentucky,
Project: Phenotypic and genotypic analysis of pigmentation traits in Neodiprion
sawflies *Included on one publication

2012-14 Sarah Robbins, University of Maryland,
Project: QTL fine mapping of pigmentation traits in African cichlid fishes

2012-13 Ginni LaRosa, University of Maryland
Project: Genotypic analysis of preliminary QTL regions associated with
pigmentation traits and genotype analysis of a sex determining region in
African cichlid fishes

2010-12 Alexi Drilea, University of Maryland,
Project: Phenotypic and genotypic analysis of pigmentation traits in
African cichlid fishes *Included on two publications

I have mentored or have served as the faculty sponsor for the following undergraduates participating in credit based experiential learning experiences:

- Spring 2020 Biology Learning Center Tutors, University of Kentucky (Supervisor):
Zachary Beckner, Emily Butler, Emad Chishti, Emma Fitzgerald,
Victoria Johnson, Bahar Katanbaf, Victoria Kupper, Addison Lander,
Mirindi Kabangu, John Marcum, Graham Meek, Olivia Morini, Emily Parker,
Miranda Rein, Rafael Roberts, Cameron Rostron, Amanda Shaw, Maddie,
Stanback, Vaaragie Subramaniam, Ivan Vela, Anika Yadav
Bio 111 Undergraduate Instructional Assistants, University of Kentucky
(Supervisor): Makayla Bush, Emily Jones, Nicholas, Prather, Lauren Tranthem
Experiential Learning Experience, Anesthesia Technician Program UK Medical
School (Faculty Sponsor): Addison Jennings & Matthew Lemke
- Fall 2019 Biology Learning Center Tutors, University of Kentucky (Supervisor):
Zachary Beckner, Leah Blair, Emily Butler, Emad Chishti, Ayla Deck,
Victoria Johnson, Bahar Katanbaf, Victoria Kupper, Addison Lander,
Sarah Lau, Matthew Lemke, Mirindi Kabangu, John Marcum, Graham Meek,
Emily Parker, Dalton Riley, Rafael Roberts, Cameron Rostron, Amanda Shaw,
Vaaragie Subramaniam, Ivan Vela
Experiential Learning Experience, Anesthesia Technician Program UK Medical
School (Faculty Sponsor): Attaas Alvi
- Spring 2019 Biology Learning Center Tutors, University of Kentucky (Supervisor):
Ellora Amrit, Emily Butler, BiWei Chen, Emad Chishti, Ayla Deck, Victoria
Johnson, Mirindi Kabangu, John Marcum, Dalton Riley, Cameron Rostron,
Ivan Vela
Bio 111 Undergraduate Instructional Assistants, University of Kentucky
(Supervisor): Lisa Miller, Lauren Tranthem
Experiential Learning Experience, Governor's Office (Faculty Sponsor):
Katherine Goble
- Fall 2018 Biology Learning Center Tutors, University of Kentucky (Supervisor):
Umair Bhutto, BiWei Chen, Emad, Chishti, Victoria Johnson, Haley Jones,
Mirindi Kabangu, Sophia Mounce, Hunter Prince, Dalton Riley, Ivan Vela
- Spring 2018 Biology Learning Center Tutors, University of Kentucky (Supervisor):
BiWei Chen, Shane D'Souza, Mary Gibbs, Rebika Khanal,
Meghana Kudrimoti, Alexandra Pendery, Hunter Prince, Monisha Rekhraj,
Kathryn Sandum, Wenxin Zhuo
- Fall 2017 Biology Learning Center Tutors, University of Kentucky (Supervisor):
Lawrence Butros, Meghana Kudrimoti, Hannah Went, Sylvia Wilson
- Summer 2016 Experiential Learning Experience, ScribeAmerica (Faculty Sponsor): Neha
Patel