

Jerreme J. Jackson, Ph.D.

Department of Biology
University of Northern Iowa
Cedar Falls, IA 50614-0421
Phone: (319) 273-6880
Email: Jerreme.jackson@uni.edu

Education

- 2008-2015 **Doctor of Philosophy**, Life Sciences (Genome Science & Technology concentration)
University of Tennessee, Knoxville, TN
Dissertation Title: Characterization of the role of α -arylphorin in the *Heliothis virescens*
midgut response to Cry1Ac toxin from *Bacillus thuringiensis*
Mentor: Juan Luis Jurat-Fuentes, Ph.D.
- 1998-2002 **Bachelor of Science**, Biology (*genetics*)
University of Kansas, Lawrence, KS

Professional Experience

- 2019-Current **Assistant Professor**, Biology
University of Northern, Iowa, Cedar Falls, IA
- 2015-2019 **Postdoctoral fellow**, Microbiology & Molecular Genetics
Oklahoma State University, Stillwater, OK
Project: *Escherichia coli* nutrient acquisition in the mammalian intestine
Mentor: Tyrrell Conway, Ph.D.

Additional Training

- 2005-2008 Lab Technician, Nutrition Technology Department
Hill's Pet Nutrition, Topeka, KS
*Genomic and proteomic analysis of biological samples generated during non-invasive
canine and feline nutritional studies*
- 2003-2005 Scientist I, Product Department
Xenotech L.L.C., Lenexa, KS
*Characterization of cytochrome P450 (CYP) enzymatic activity in animal primary and
immortalized hepatocytes in vitro*

Awards and Honors

- 2021 University of Northern Iowa | Student Success and Retention | Second Year Student
Advocate
- 2020 University of Northern Iowa | Student Academic Ambassadors | Apple Polisher
- 2020 University of Northern Iowa | Student Success and Retention | New Student Advocate
- 2020 University of Northern Iowa | Student Success and Retention | Transfer Student
Advocate
- 2019 University of Northern Iowa | Graduate College | Summer Fellowship
- 2019 University of Northern Iowa | Student Success and Retention | New Student Advocate

2019	Roy J. Carver Charitable Trust Enhancing Hands-On Training in Genetics and Genomics
2019	American Society for Microbiology Minority Travel Award
2017-2020	NIH National Institute of General Medical Sciences Supplement to enhance diversity in the scientific research workforce (3R01GM117324-01A1S1)
2017-2018	Oklahoma State University College of Arts & Sciences Distinguished Teaching Award nominee
2017	University of Tennessee 7 th Annual Future Faculty Program
2015	University of Tennessee Graduate Hooding Ceremony Featured Speaker
2012	Entomological Society of America President's Award for Outstanding Display (Physiology, Biochemistry and Toxicology section)
2009-2011	University of Tennessee Program for Equity and Excellence in Research Fellowship

Teaching Experience

- Cell Structure and Function Laboratory, BIOL2052 | Instructor | Spring 2021 | University of Northern Iowa
- Cell Structure and Function Lecture, BIOL2052 | Instructor of record | Fall 2020 | University of Northern Iowa
- Cell Structure and Function Laboratory, BIOL2052 | Instructor | Fall 2020 | University of Northern Iowa
- Undergraduate Research in Biology, BIOL 3190 | Instructor | Fall 2020 | University of Northern Iowa
- Independent Study | BIOL 4198 | Instructor of record | Fall 2020 | University of Northern Iowa
- Directed Research | BIOL 629R | Instructor of record | Fall 2020 | University of Northern Iowa
- Cell Structure and Function Lecture, BIOL2052 | Instructor of record | Spring 2020 | University of Northern Iowa
- Cell Structure and Function Laboratory, BIOL 2052 | Instructor | Spring 2020 | University of Northern Iowa
- Readings in Biology BIOL3185 | Instructor of record | Spring 2020 | University of Northern Iowa
- Independent Study | BIOL 4198 | Instructor of record | Spring 2020 | University of Northern Iowa
- Cell Structure and Function Laboratory, BIOL 2052 | Instructor | Fall 2019 | University of Northern Iowa
- Introductory Biology Lecture | Instructor of record | Fall 2017 | Oklahoma State University
- Pathogenic Microbiology, MICR3103 | Guest instructor | Spring 2017, 2016 | Oklahoma State University
- Microbes, Friends or Foes, MICR4053 | Guest instructor | Spring 2016 | Oklahoma State University
- Thornton Athletics Student Life Center | Tutor | Spring & Summer 2014 | University of Tennessee
- Tennessee Louis Stokes Alliance for Minority Participation (TLSAMP), Biology short course | Instructor | Spring 2013 | University of Tennessee
- Organization and Function of the Cell Lab, BIOL140 | TA | Fall 2012 & 2014 | University of Tennessee
- Human Physiology Lab, BCMB230 | TA | Spring & Summer 2012 | University of Tennessee
- Biochemistry I Discussion, BCMB401 | TA | Fall 2011 | University of Tennessee

Honors Thesis Advisees

2021 Olivia Crouse | A Review of the Molecular Mediators of Host-Baculovirus Interactions in Lepidoptera

Mentorship/Student Supervision

University of Northern Iowa – Undergraduate Research Assistants

Miranda Devries	Biology	2020
Katelyn Moore	Biology	2019-Present
Ella Whitham	Biology	2019
Garrett Barloon	Athletic training	2019
Blasi Whitehead	Biology	2019
Alex Johnson	Biology	2019-Present
Tyler Huff	Biology	2019

Oklahoma State University - Undergraduate Research Assistant(s) – 24 total

Brooklyn Mossier	Microbiology/Cell & Molec. Biology	2018-2019
Danielle Sedgwick	Microbiology/Cell & Molec. Biology	2018-2019
Aaron Veenis	Biochemistry and Molecular Biology	2017-2019
Abbie Hoehner	Nutritional Science (Allied Health)	2017-2019
Savannah Martin**	Microbiology/Cell & Molec. Biology	2017-2019
Moses Betru	Microbiology/Cell & Molec. Biology	2017-2019
Nicholas Claassen	Microbiology/Cell & Molec. Biology	2017-2019
Matthew Corley§	Microbiology/Cell & Molec. Biology	2016-2019
Ferris Kalidy	Microbiology/Cell & Molec. Biology	2016-2019
Kassidy Ford*	Microbiology/Cell & Molec. Biology	2016-2019
Alisha Beckford§	Biochemistry and Molecular Biology	2015-2019

*Niblack Research Scholar, **Wentz Research Scholar, §HHMI Life Science Freshman Research Scholar, §Freshman Research Scholar

Conference Presentations and Proceedings

2019 **Jackson, J.**, Creecy, J., Conway, T. High-Resolution View of Transcriptional Architecture and Promoter Mapping in *Escherichia coli*. | Poster | American Society of Microbiology | San Francisco, CA

2018 **Jackson, J.**, Creecy, J., Conway, T. High-Resolution Promoter Mapping in *Escherichia coli* | Poster | American Society of Microbiology | Atlanta, GA

2018 Bowen, J., **Jackson, J.**, Conway, T. Characterization of the nitrogen assimilation regulator (*glnG*) role in *Escherichia coli* colonization of the mammalian intestines | Poster | Missouri Valley Branch of the American Society of Microbiology | Kansas City, KS

2016 Hietala, L., **Jackson, J.**, Staton, M., Banerjee, R., Stewart, C.N., Jurat-Fuentes, J.L. Development of insecticidal gene silencing for control of kudzu bug, *Megacopta cribraria* | Poster | XXV International Congress of Entomology | Orlando, FL

2015 Hietala, L., **Jackson, J.**, Staton, M., Banerjee, R., Stewart, C.N., Jurat-Fuentes, J.L. Development of gene silencing for control of kudzu bug in soybeans | Poster | Entomological Society of America | Minneapolis, MN

- 2013 Jackson, J., Jurat-Fuentes, J.L. Analysis of the role of α -arylphorin in the *Heliothis virescens* midgut response to Cry1Ac toxin from *Bacillus thuringiensis* | Poster | Entomological Society of America | Austin, TX
- 2013 **Jackson, J.**, Jurat-Fuentes, J.L. Testing the role of arylphorin in midgut healing after Cry1Ac intoxication in *Heliothis virescens* larvae | Society for Invertebrate Pathology | Poster | Pittsburgh, PA
- 2012 **Jackson, J.**, Jurat-Fuentes, J.L. Testing the role of arylphorin during midgut healing in response to Cry1Ac intoxication | Poster | Entomological Society of America | Knoxville, TN
- 2012 Knight, V.R., **Jackson, J.J.**, Jurat-Fuentes, J.L. Is nuclease activity limiting successful RNAi gene silencing in *Heliothis virescens* | Poster | Entomological Society of America | Knoxville, TN
- 2010 **Jackson, J.**, Jurat-Fuentes, J.L. Testing alkaline phosphatase from *Heliothis virescens* as a functional Cry toxin receptor | Poster | Society for Invertebrate Pathology | Trabzon, Turkey

Conferences Attended

- 2021 IINSPIRE Louis Stokes Alliances for Minority Participation (LSAMP) Annual Conference - *virtual* | February 19

Invited Talks

- 2020 Lepidopteran Models of Intestinal Regeneration and Colonization | Vanderbilt University | Department of Biological Sciences | November 30

Professional Development

- 2020 Teaching Online-An Introduction to Online Delivery (TOL) | Quality Matters

University Service

- 2021 Biology Department lab clean out and purging of old and/or unused equipment and non-functioning instruments
- 2020 Louis Stokes Alliances for Minority Participation (LSAMP) | Faculty Mentor
- 2020 Tour of the Biology Department promotional video
- 2020 Protecting our Panthers: Covid-19 Training | Video participant
- 2018 24th Annual Research Symposium for the Oklahoma Louis Stokes Alliance for Minority Participation (OK-LSAMP) | Judge
- 2018 OSU Microbiology & Molecular Genetics Annual Poster Symposium | Judge
- 2016 OSU Microbiology & Molecular Genetics Annual Poster Symposium | Judge
- 2014 UTK Undergraduate Research/Graduate School Retreat | Judge & Panelist

Community Service

Scientific mentor for Morrison High School student participants in the Oklahoma Regional and State Science and Engineering Fair

- 2018 Carly Wilbourn | Microbiology Div. | 1st place, Regionals | 1st place, State
- 2018 Taelur Obure | Biomedical & Health Sciences Div. | 1st place, Regionals
- 2017 Bethany Hatter | Microbiology & Biochemistry Div. | 1st place, Regionals | 2nd place, State

Peer Review

Frontiers in Cellular and Infection Microbiology
Environmental Entomology

Professional Memberships

2016-present American Society for Microbiology
2012-2013 Entomological Society of America
2010-2013 Society for Invertebrate Pathology

Publications

Jackson, J., Creecy, J., T. Conway. 2021. High resolution promoter map of *Escherichia coli*.
Manuscript in preparation.

Jackson, J., Miller, D.L., Perera, O.P., Jurat-Fuentes, J. L. 2021. Mitogenic α -arylphorin in circulating hemolymph activates *Heliothis virescens* intestinal stem cell proliferation. *Manuscript in preparation.*

Castagnola, A., **Jackson, J.**, Perera, O. P., Oppert, C., Eda, S. & Jurat-Fuentes, J. L. 2017. Alpha-arylphorin is a mitogen in the *Heliothis virescens* midgut cell secretome upon Cry1Ac intoxication. *PeerJ*, 5, e3886. PMC5629956

Jurat-Fuentes, J. L., Karumbaiah, L., Jakka, S. R., Ning, C., Liu, C., Wu, K., **Jackson, J.**, Gould, F., Blanco, C., Portilla, M., Perera, O. & Adang, M. 2011. Reduced levels of membrane-bound alkaline phosphatase are common to lepidopteran strains resistant to Cry toxins from *Bacillus thuringiensis*. *PLoS One*, 6, e17606. PMC3046977

References

Tyrrell Conway, Ph.D.
Regents Professor and Head, Department of Microbiology and Molecular Genetics
Oklahoma State University
307 Life Science East
Stillwater, OK 74078
Tel: 405-744-6243
Email: tconway@okstate.edu

Juan Luis Jurat-Fuentes, Ph.D.
Professor, Department of Entomology and Plant Pathology
University of Tennessee
370 Plant Biotechnology Building
2505 E. J. Chapman Drive
Knoxville, TN 37996-4560
Tel: 865-974-5931
Fax: 865-974-4744
Email: jurat@utk.edu

Albrecht von Arnim, Ph.D.
Professor, Department of Biochemistry, Cellular and Molecular Biology

Director, Genome Science and Technology
University of Tennessee
M407 Walters Life Science
Knoxville, TN 37996-0840
Tel: 865-974-6206
Fax: 865-974-6205
Email: vonarnim@utk.edu

O.P. Perera, Ph.D.
Research Entomologist
USDA-ARS
Southern Insect Management Research Unit
141 Experiment Station Road
Stoneville, MS 38776
Tel: 662-686-5248
Fax: 662-686-5421
Email: op.perera@ars.usda.gov

Additional references available upon request