

Jerreme J. Jackson, Ph.D.

Department of Biology
University of Northern Iowa
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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, Honors, and Funding

- 2024 Graduate Research Award for Student Projects (GRASP) Award to Joseph Lawrence,
\$723 | Evaluating the physiological response of *Enterococcus faecalis* to hemolymph |
University of Northern Iowa
- 2023 Intercollegiate Academics Fund (IAF) Travel Award, \$939.30 | Jackson Lab to 83rd Annual
Meeting of the American Society of Microbiology (North Central Branch) | University of
Wisconsin-LaCrosse | LaCrosse, Wisconsin
- 2023 University of Northern Iowa | Faculty Appreciation Night (host: Men's Wrestling)
- 2023 University of Northern Iowa | Student Success and Retention | First Year Student

	Advocate
2023	University of Northern Iowa Student Success and Retention Second Year Student
2023	University of Northern Iowa Faculty Appreciation Night (host: Women's Basketball)
2022	University of Northern Iowa Pre-Tenure Faculty Grant (\$1,480)
2022	University of Northern Iowa Faculty Appreciation Night (host: Women's Soccer)
2022	University of Northern Iowa Student Success and Retention First Year Student Advocate
2022	University of Northern Iowa Student Success and Retention Second Year Student Advocate
2021	University of Northern Iowa Student Success and Retention Second Year Student Advocate
2021	University of Northern Iowa Faculty Appreciation Night (host: Panther Wrestling)
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 Lecture, BIOL2052 | Instructor of record | Spring 2024 | University of Northern Iowa
- Cell Structure and Function Laboratory, BIOL2052 | Instructor of record | Spring 2024 | University of Northern Iowa
- Independent Study, BIOL4198 | Instructor of record | Spring 2024 | University of Northern Iowa
- Research in Biology, BIOL3190 | Instructor of record | Spring 2024 | University of Northern Iowa
- Readings in Biology, BIOL3185 | Instructor of record | Spring 2024 | University of Northern Iowa
- Research, BIOL6299 | Instructor of record | Spring 2024 | University of Northern Iowa
- Directed Research, BIOL629R | Instructor of record | Spring 2024 | University of Northern Iowa
- Cell Structure and Function Lecture, BIOL2052 | Instructor of record | Spring 2023 | University of Northern Iowa
- Cell Structure and Function Laboratory, BIOL2052 | Instructor of record | Spring 2023 | University of Northern Iowa
- Independent Study, BIOL4198 | Instructor of record | Spring 2023 | University of Northern Iowa
- Research in Biology, BIOL3190 | Instructor of record | Spring 2023 | University of Northern Iowa

- Readings in Biology, BIOL3185 |Instructor of record | Spring 2023 | University of Northern Iowa
- Special Problems in Biology, BIOL6230 |Instructor of record | Spring 2023 | University of Northern Iowa
- Research, BIOL6299 |Instructor of record | Spring 2023 | University of Northern Iowa
- Cell Structure and Function Lecture, BIOL2052 |Instructor of record | Fall 2022 | University of Northern Iowa
- Cell Structure and Function Laboratory, BIOL2052 |Instructor of record | Fall 2022 | University of Northern Iowa
- Research, BIOL6299 |Instructor of record | Fall 2022 | University of Northern Iowa
- Special Problems in Biology, BIOL6230 |Instructor of record | Fall 2022 | University of Northern Iowa
- Independent Study, BIOL4198 |Instructor of record | Fall 2022 | University of Northern Iowa
- Undergraduate Research In Biology, BIOL3190 |Instructor of record | Fall 2022 | University of Northern Iowa
- Cell Structure and Function Lecture, BIOL2052 |Instructor of record | Spring 2022 | University of Northern Iowa
- Cell Structure and Function Laboratory, BIOL2052 |Instructor of record | Spring 2022 | University of Northern Iowa
- Undergraduate Research In Biology, BIOL629 |Instructor of record | Spring 2022 | University of Northern Iowa
- Independent Study, BIOL4198 |Instructor of record | Spring 2022 | University of Northern Iowa
- Research, BIOL6299 |Instructor of record | Spring 2022 | University of Northern Iowa
- Cell Structure and Function Lecture, BIOL2052 |Instructor of record | Fall 2021 | University of Northern Iowa
- Cell Structure and Function Laboratory, BIOL2052 |Instructor of record | Fall 2021 | University of Northern Iowa
- Undergraduate Research In Biology, BIOL3190 |Instructor of record | Fall 2021 | University of Northern Iowa
- Undergraduate Research In Biology, BIOL3190 |Instructor of record | Fall 2021 | University of Northern Iowa
- Research Methods, BIOL6292 |Instructor of record | Fall 2021 | University of Northern Iowa
- Research, BIOL6299 |Instructor of record | Fall 2021 | University of Northern Iowa
- Readings In Biology, BIOL3185 |Instructor of record | Summer 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

Mentorship/Student Supervision

University of Northern Iowa – Undergraduate Research Assistants

Mandi Warren	Biology	2024
Mia Schulte	Biology	2024
Nneoma Nnaji	Biology	2024
Olivia Oehlert	Biology	2023-Present
Hayley Welbes	Biology	2023-Present
Kayla Minor ^H	Biology	2023-Present
Geneva Bell	Biology	2023-Present
Pat Hurd ^{H, F}	Biology	2023-Present
Joseph Lawrence ^G	Biology	2023-Present
Eleanor Graves ^G	Biology	2021-Present
Abby Riley	Biology	2022-2023
Gabby Champion	Biology	2022
Samantha Heyer	Biology	2021-2023
Emma Carr	Biology	2021
Miranda Devries	Biology	2020-2023
Katelyn Moore	Biology	2019-2020
Ella Whitham	Biology	2019
Garrett Barloon	Athletic training	2019
Blasi Whitehead	Biology	2019
Alex Johnson	Biology	2019-2020
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

^FFloyd Scholar, ^GGraduate student, ^HHonors thesis, *Niblack Research Scholar, **Wentz Research Scholar, §HHMI Life Science Freshman Research Scholar, §Freshman Research Scholar

Conference Proceedings

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- 2023 Lawrence, J., Oehlert, O., Welbes, H., **Jackson, J.** Evaluating the physiological response of *Enterococcus faecalis* to hemolymph. | Poster | 83rd Annual Meeting of the American Society of Microbiology (North Central Branch) | University of Wisconsin-La Crosse | LaCrosse, Wisconsin
- 2023 **Jackson, J.**, Heyer, S., Bell, G. Sortase-encoding proteins, SrtA and Bps, mediate *Enterococcus faecalis* persistence in the *Helicoverpa zea* gastrointestinal tract. | Poster | 83rd Annual Meeting of the American Society of Microbiology (North Central Branch) | University of Wisconsin-La Crosse | LaCrosse, Wisconsin
- 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

Professional Development

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- 2024 Getting Started/Communicating with Students in Bb Learn ULTRA | University of Northern Iowa

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

University Service

2023 University of Northern Iowa Legacy Scholars Program | Invited Panelist

2022 University of Tennessee-Oak Ridge Innovation Institute Bredesen Center Featured Alumni

2022 University of Northern Iowa Our Tomorrow Campaign

2022 University of Northern Iowa Legacy Scholars Program | Invited Panelist

2022 University of Northern Iowa Men Of Color Dinner

2022 University of Northern Iowa Jump Start Program | Invited Panelist

2022 University of Northern Iowa Faculty of Color Climate Study

2022 Louis Stokes Alliances for Minority Participation (LSAMP) | Faculty Mentor

2021 University of Northern Iowa Legacy Scholars Program | Invited Panelist

2021 University of Northern Iowa Men Of Color Dinner

2021 University of Northern Iowa Jump Start Program | Invited Panelist

2021 Louis Stokes Alliances for Minority Participation (LSAMP) | Faculty Mentor

2021 Inside UNI (STEM) | Feature faculty written by Andrew Creasey

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

2021 present Cedar Valley Preschool & Child Care Center (CVPCCC) Board of Directors, Member at large

2018 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
Journal of Insect Science

Professional Memberships

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

Publications

Jackson, J.J., Heyer S, Bell G. Sortase-encoding genes, *srtA* and *srtC*, mediate *Enterococcus faecalis* OG1RF persistence in the *Helicoverpa zea* gastrointestinal tract. *Front Microbiol.* 2024 Mar 18;15:1322303. doi: 10.3389/fmicb.2024.1322303. PMID: 38562482; PMCID: PMC10982312.

Johnson, E., Heyer, S., Riley, A., Devries, M., **Jackson, J.** 2023. The stability of *Enterococcus faecalis* OG1RF colonized in the *Helicoverpa zea* midgut epithelium. *Manuscript in preparation*

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

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University of Tennessee
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2505 E. J. Chapman Drive
Knoxville, TN 37996-4560
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Director, Genome Science and Technology

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Additional references available upon request