

Michelle Marie Jonika
Department of Genetics
Texas A&M University
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EDUCATION

Ph.D., Genetics

Texas A&M University
Research Adviser: Heath Blackmon

2018-present

College Station, TX

B.S., Forensic and Investigative Science (Genetics minor)

Texas A&M University Deans list 2016-2018
Thesis: *Genes as Markers of Sex for Forensic Entomology*
Research Adviser: Aaron M. Tarone

2014-2018

College Station, TX

GRADUATE COURSES TAKEN

Genetics

Model Organisms

Experimental Design

Ethics

* = taking this semester

Ecological Genomics

Ancient Genetics*

Population Genetics*

PEER-REVIEWED PUBLICATIONS

4. Johnathan Lo, **Michelle M Jonika**, Heath Blackmon. 2019. micRocounter: Microsatellite Characterization in Genome Assemblies. G3: Genes | Genomes | Genetics – *In Press*
3. Riddhi D Perkins, Julio Rincones Gamboa, **Michelle M Jonika**, Johnathan Lo, Amy Shum, Richard H Adams, Heath Blackmon. 2019. A Database of Amphibian Karyotypes. Chromosome Res – *In Press*
2. Guard, Blake, J. Honneffer, A. Jergens, **M. Jonika**, L. Toresson, Y. Lawrence, C. Webb, S. Hill, J. Lidbury, J. Steiner, J. Suchodolski. 2018. Longitudinal Assessment of Microbial Dysbiosis and Fecal Bile Acids Concentrations in Dogs with Chronic Inflammatory Enteropathy. J Vet Intern Med. 2018 33:1295-1305.
1. **Michelle M Jonika**, Carl E Hjelman, Ashleigh M Faris, Alex S McGuane, Aaron M Tarone. Genes as Markers of Sex for Forensic Entomology. Journal of Forensic Science – *Under Peer Review*

OTHER PUBLICATIONS

6. **Michelle M Jonika**, Ashleigh M Faris, Carl E Hjelman, Aaron M Tarone. 2019. Transcriptional Markers of Sex Determination for Forensic Entomology. Proceedings of the American Academy of Forensic Sciences. 2019 25 813
5. AB Blake, BC Guard, JB Honneffer, **MM Jonika**, J Chaitman, JA Lidbury, JM Steiner and JS Suchodolski. 2018. Altered Fecal Fatty Acid, Sterol and Bile Acid Metabolism in Dogs with Acute Diarrhea. J Vet Intern Med. 2018 32:2248.
4. **Jonika, M. M.**, A. M. Tarone. 2018. Genes as Markers of Sex for Forensic Entomology. Undergraduate Thesis, Texas A&M University, College Station, Texas.

3. BC Guard, **MM Jonika**, JB Honneffer, JA Lidbury, JM Steiner, AE Jergens, and JS Suchodolski. 2017. Longitudinal Characterization of the Fecal Metabolome in Dogs with Inflammatory Bowel Disease. *J Vet Intern Med.* 2017 31:1289.
2. BC Guard, **MM Jonika**, JB Honneffer, JA Lidbury, JM Steiner, and JS Suchodolski. 2017. Development and Analytical Validation of an Assay for the Quantification of Fecal Bile Acids. *J Vet Intern Med.* 2017 31:1289.
1. BC Guard, JB Honneffer, **MM Jonika**, JA Lidbury, JM Steiner, AE Jergens, and JS Suchodolski. 2017. Longitudinal Characterization of Dysbiosis and Unconjugated Bile Acid Profiles in the Feces of Dogs with Inflammatory Bowel Disease. *Gastroenterology* 152.5 (2017): S992.

PRESENTATIONS (T: talk, P: poster, † coauthored with a student/postdoc)

2019

Microsatellite Evolution in Hexapods; Southeast Texas Evolutionary Genetics and Genomics; College Station, Texas—P

Sixty percent of the time, it works every time: sex identification in immature Calliphoridae; Southeast Texas Evolutionary Genetics and Genomics; College Station, Texas— P† (co-author Alexander McGuane)

Mode and Tempo of Microsatellite Evolution Across 300 Million Years of Insect Divergence; Evolution; Providence, Rhode Island—T

micRocounter: Identification of Microsatellite Inference; Biology Undergraduate Research Symposium; College Station, Texas— P† (co-author Johnathan Lo)

Characterization of Microsatellite Evolution in Insects; Houston Regional Ecology and Evolution Student Symposium; Houston, Texas—T

micRocounter: Identification of Microsatellite Inference; Texas Genetics Society; College Station, Texas— P† (co-author Johnathan Lo)

Mode and Tempo of Microsatellite Evolution in Insects; Texas Genetics Society; College Station, Texas—T

Rapid Identification of Microsatellite Content; Student Research Week; College Station, Texas— P† (co-author Johnathan Lo)

Microsatellite Evolution in Hexapods; Student Research Week; College Station, Texas—P

Characterization of Microsatellite Evolution in Insects; Genetics Recruiting Symposium; College Station, Texas—P

Transcriptional Markers of Sex Determination for Forensic Entomology; American Academy of Forensic Science; Baltimore, Maryland—T

2018

Transcript-based Sex Determination for Forensic Entomology; Entomological Society of America; Vancouver, Canada—T

Markers of Sex Determination in Blow Flies; LAUNCH Research Conference; College Station, Texas—P

Transcript-Based Sex Determination for Forensic Entomology; International Association for Identification; San Antonio, Texas—P

Transcript-Based Sex Determination for Forensic Entomology; Southeast Texas Evolutionary Genetics & Genomics Symposium; Houston, Texas—P

Let's Talk About Sex: Identifying Female and Male Markers in Blow Flies; Ecological Integration Symposium; College Station, Texas—T

Let's Talk About Sex: Identifying Female and Male Markers in Blow Flies; Undergraduate Student Research Conference; College Station, Texas—T

Development of Mass Spectral Database Using Direct Analysis in Real Time (DART); American Academy of Forensic Science; Seattle, Washington—P

Let's Talk About Sex: Identifying Female and Male Markers in Blow Flies; Entomology Department Seminar; College Station, Texas—T

2017

Development of Mass Spectral Database Using Direct Analysis in Real Time (DART); USR Conference; College Station, Texas—T

Development of Mass Spectral Database Using Direct Analysis in Real Time (DART); U.S. Customs and Border Protection—T

Development and Analytical Validation of an Assay for the Quantification of Fecal Bile Acids; USR Conference; College Station, Texas—P

TEACHING EXPERIENCE

(U- undergraduate) Average student Evaluation: 4.7/5.0

Laboratory Instructor

2019 Introduction to Genetics

U-64 Students

WORK EXPERIENCE

Supplemental Instructor-Organic Chemistry II, Texas A&M University January–May 2018
Helped facilitate understanding and teach concepts for organic chemistry II.

U.S. Department of Homeland Security, Newark, New Jersey June–August 2017
Created a direct analysis in real-time mass spectral database of drug standards for use in a forensic chemistry laboratory at U.S. Customs and Border Protection.

AWARDS AND MINOR GRANTS

1st Place Genetics Graduate Student Science Art Competition (\$200), Texas A&M University. 2019
Genetics Graduate Student Travel Award (\$600), Texas A&M University. 2019
STEM Fellowship (\$215,000), Texas A&M University. 2018
Undergraduate Research Scholar, Texas A&M University. 2018
Texas A&M Senior Merit Award, Texas A&M University. 2018
1st place Poster Presentation (\$250), Texas A&M University Student Research Week. 2018
Sigma Xi STEM Award (\$250), Texas A&M University Student Research Week. 2018
1st place Department of Entomology Mentorship Symposium (\$500), Texas A&M University. 2018
George Bush Presidential Library Foundation Undergraduate Travel Grant (\$750). 2017
Carolyn J. and Robert J. Allison Jr. Scholarship (\$3,000), Anadarko Petroleum Corporation, 2017
2nd place Poster Presentation (\$150), Texas A&M University Student Research Week. 2017
Distinguished Student Award, Texas A&M University. 2016–2018

OUTREACH AND COMMUNITY SERVICE

Southeast Texas Evolutionary Genetics and Genomics Planning Committee, Texas A&M University. 2019.
Mentoring Undergraduate Research invited Panelist, Texas A&M University. 2019.
R Workshop Facilitator Texas Genetics Society Annual Meeting, Texas A&M University. 2019.
Student Research Week Judge, Texas A&M University. 2019.
Undergraduate Research Symposium Judge, Texas A&M University. 2019.
Science Bowl, Texas A&M University. 2019.

Junior Science Bowl, Texas A&M University. 2019.
 Texas Junior Academy of Science Judge, Texas A&M University. 2019.
 Internship Opportunities Presentation, Aggie Forensic Science Org. 2018.
 College Education Outreach (Aggies Reaching Out), Texas A&M University. 2018.
 American Academy of Forensic Science Annual Meeting. 2017–2019.
 Chemistry Open House Outreach, Texas A&M University. 2016–2017
 Forensic Science Outreach, Magnolia High School. 2015–2016
 Aggieland Saturday Outreach, Texas A&M University. 2015–2018
 Big Event, Texas A&M University. 2015–2018.
 Aggie Relay for Life, Texas A&M University. 2015–2018.
 Special Olympics, Texas A&M University. 2015–2018.
 Freshmen Orientation Program Leader, Texas A&M University. 2015–2016.

MENTORED STUDENTS (U: Undergraduate, G: Graduate)

Alexander McGuane- U	Joseph Ward- U
Anika Sharma- G	Johnathan Lo- U

PROFESSIONAL ORGANIZATIONS

American Academy of Forensic Science	Women in Science and Engineering
International Association for Identification	National Society of Leadership and Success
North American Forensic Entomology Assoc.	Sigma Alpha Lambda
Genetics Graduate Student Organization	Entomological Society of America
Golden Key International Honor Society	Society for the Study of Evolution
Kappa Theta Epsilon Co-Op Honor Society	

ADDITIONAL TRAINING

Texas A&M TEEX Forensic Science Academy	Crime Scene Investigation
Foundations of Courtroom Testimony	Cyber Law and White Collar Crime
Forensic Technician I	Foundations of Forensic Photography
Latent Print Processing	Fingerprint Processing on Difficult Surfaces
Foundations of Fingerprint Comparison	Investigative Tools and Equipment
Digital Forensics Basics	National Institute of Justice
Cyber Ethics	Familial DNA Searching

REFERENCES

Heath Blackmon Assistant Professor Texas A&M University coleoguy@gmail.com	Aaron Tarone Associate Professor Texas A&M University tamlucilia@tamu.edu
Blake Guard, MS, PhD DVM Candidate Texas A&M University BGuard@cvm.tamu.edu	Carl Hjelman Postdoctoral Research Scholar Texas A&M University Cehjelman09@tamu.edu

Ashleigh Faris
Postdoctoral Research Scholar
Texas A&M Corpus Christi
ashmfaris@gmail.com