The Faculty Candidate CV

This handout is meant to compliment, <u>not replace</u>, the promotion and tenure guidelines about the faculty CV provided by the department, college, and university. Furthermore, candidates are encouraged to be intentional about how the CV supports the 3-page impact statement. In many cases, those who read a dossier are expected to read more than one, thus, keep in mind any-and-all documents should be well integrated and not overly repetitive.

Faculty Candidate CVs

- Candidates must use the vita template provided.
- Candidates should not alter the order or structure of items in the template.
- The template includes an annotation to specify authorship protocols within the discipline regarding order of authorship and contributions if not lead author.
- The grants section of the template should be used as is, without alteration and including all the indicated information.
- The template includes a 200-word biography of the candidate, which will be published in the recognition booklet featuring newly promoted and/or tenured faculty.

Faculty CV best practices

- Be accurate and truthful (e.g. dates, authorship, publication or funding status, title/role as editor, memberships, depicting contribution)
- Clearly delineated sections (e.g. spacing, headings, lines)
    - Separate peer-reviewed vs. non-peer-reviewed publications
    - Separate published/in press vs. submitted publications
    - Separate pending vs. funded vs. submitted (as appropriate) grants
    - Separating invited vs. submitted presentations
    - Separating presentations by type (seminar, talk, poster, etc).
- List entries in reverse chronological order within sections and subsections
- Format dates, locations, and publication information clearly and consistently
- Be kind to the reader with your formatting choices, allowing ease of both reading and finding information

- Font size no smaller than 12pt, clear, appropriate, and consistent use of white space, bullets, outlining, and font effects for emphasis

Faculty CV practices to AVOID

- Avoid including biographical or personal data (e.g. SSN, UIN, DoB, citizenship, etc.).
- Avoid long blocks of narrative text occurring too often throughout the document. The CV should not resemble a white paper or a grant proposal.
- Avoid exaggerations or misleading presentations of data, roles, or contributions

*Note, a CV for a promotion or tenure dossier serves to inform a variety of readers about the quality and impact of a candidate's accomplishments in assigned areas of responsibility. Annotations **can be** an effective way to convey disciplinary norms, clarifying details, and other important contextualizing information about impact and quality, however**, annotations are <u>not required.</u>***

The following recommendations are not exhaustive, and each individual bullet is not applicable to all disciplines.

Effective use of annotations for a faculty CV

- Annotations should be concise, informative, and used sparingly
- Use of annotations should not take away from the ease of scanning the CV for information
- Annotations can indicate how faculty contribute to **department, college, and university missions and strategic initiatives.**
- Annotations can serve as effective flags for information in the CV that supports (but does not precisely repeat) the narrative in the impact statement
- Appropriate use of annotations for **<u>publications</u>:**
    - Authorship conventions for your discipline
    - Indicating which authors are undergraduate or graduate students, postdocs, staff from your research program, etc.
    - Publication type conventions for discipline (abstracts, monographs, edited books, papers, technical reports, peer reviewed conference proceedings)
    - Disciplinary specific timelines associated with publications
    - Note when a publication resulted in new lines of inquiry within the discipline
    - Describe contributions to a multi authored or interdisciplinary publication, especially in instances where you are not a lead or senior author
    - Describe contributions, and the timing of publications relative to starting position at TAMU, for publications in which a research mentor (graduate or postdoctoral advisor) is also an author
    - Indicate whether the publication received any sort of honor, award, or other recognition (e.g. national media attention, journal cover page, best paper award, citation classic, etc.)
- Appropriate use of annotations for **<u>grants</u>:**
    - Role in the project (e.g. PI, Co-PI, Co-I, sub-contracted)

    - Project start and end dates
    - Funding source
    - Funding amount, total and to the candidate
        - It may be useful to contextualize why contribution, while essential, requires fewer funds
    - Contribution(s) to the grant writing and the project
        - Unique and rare skills and/or skill combinations provided
        - Leadership
        - Mentoring
    - Any broader impacts for society
    - Any relationship to teaching or service responsibilities that are not obvious
    - Grant-type rarely received at TAMU
    - Highlighting any public outreach associated with the work
- Appropriate use of annotations for **presentations:**
    - Invited vs. submitted to a call
    - Audience characteristics and size
    - Relevant format information (e.g. keynote address, plenary session, panel discussion, poster session, round table, etc.)
    - Any awards or honors for the presentation
- Appropriate use of annotations for **teaching:**

> *Note, in instances where units require a separate teaching portfolio it is reasonable to expect teaching would not be detailed in the CV. The following bullets indicate a non-exhaustive list of annotations for instances where the CV provides details about teaching.*

    - Details about unique and substantial contributions to design of courses and curriculum
    - Indicating where teaching professional development efforts contributed to innovations and improvements in teaching performance
    - Detailing how student course evaluations or other feedback led to course or teaching approach improvements
    - Student mentoring (formal and informal)
    - Relevant subsequent employment for completed students and postdocs
    - Awards for graduate students or postdocs (for work that you mentored)
- Appropriate use of annotations for **service:**
    - Indicate recognition by discipline (e.g. elected or invited)
    - Responsibilities and time commitment involved
    - Benefits or impacts that may be unappreciated

The following pages are examples of annotated CVs provided with permission from the owner. Note, these provide examples of how some faculty have used annotations, NONE of these examples use the REQUIRED template, so use them to inspire annotation but NOT CV format.

NICHOLAS D. PEREZ
Assistant Professor
Department of Geology and Geophysics, Texas A&M University
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ndperez@tamu.edu | 979-458-1271
ResearcherID: E-9986-2016 ORCiD: 0000-0001-5502-6791

ACADEMIC APPOINTMENTS

2015–present Assistant Professor, Department of Geology and Geophysics, Texas A&M University
2010–2015 Graduate Research and Teaching Assistant, Department of Geological Sciences, University of Texas at Austin
2007–2009 Undergraduate research assistant, Department of Geological Sciences and Institute for Geophysics, University of Texas at Austin

EDUCATIONAL HISTORY

2015 Ph.D., Geological Sciences, The University of Texas at Austin
Dissertation: "Cenozoic deformation history of the northern Altiplano: Stratigraphic, structural, and geochronologic constraints from the Andes of southern Peru". Committee: Brian K. Horton, Sean Gulick, Nadine McQuarrie, Ron Steel, Daniel Stockli

2009 B.S., Geological Sciences (Special Honors), The University of Texas at Austin. Thesis: "Late Miocene sedimentation in the central Andean foreland basin, southern Bolivia: Constraints from Magnetostratigraphy".

RESEARCH

Grants – Funded

2021 – How does the frictional behavior of subducted sediment evolve along the subduction interface and impact seismicity and hazard? European Plate Observing System – Netherlands. **Funded, $7,000.** PIs **Nicholas Perez**, Alissa Kotowski.
Project idea conceived by Perez, and represents new collaborations with co-PI A. Kotowski, the EPOS, and University of Utrecht researchers. This is a seed grant in support of future directions for subduction zone hazard research in the Andes.

2019 – 2025 CAREER (sole PI): Merging geoscience research and education to investigate convergent margin deformation and improve spatio-temporal problem solving in STEM education. *NSF EAR Tectonics*. **Funded, $657,383 (sole PI).**
Perez was awarded this on first submission. The research goals of the proposal are to assess how the earth's crust in the Peruvian Andes has deformed over the last 70–80 million years. This area is located over a long-lived subduction zone, and has implications for understanding subduction zones globally, and in the past. The education component will develop innovated, active learning teaching modules that can be deployed at high school, undergraduate, and graduate course levels. They will be based on 3D virtual outcrop models created from drone imagery.

2019 – 2022 EarthCube Data Capabilities: Collaborative Proposal: Broadening Community Use and Adoption of StraboSpot. *NSF EarthCube.* **Funded, (Total:**

$661,494; Amount to Perez: $30,038). PIs: J. Douglas Walker, Julie Newman, Basil Tikoff. Co-PIs: Andrew Davidson, William Lamb, **Nicholas Perez.**
Project conceived by Walker, Newman, and Tikoff. Perez helped develop the plan to expand the capabilities of StraboSpot software to an additional discipline, sedimentology. Previously, StraboSpot was only used for structural geology.

2019 – 2020 Radiogenic Trace-Element Isotope "Fingerprinting" Of Solid Samples By LA-ICP-MS. *Texas A&M University T3 Triads for Transformation.* **Funded, $30,000.** PIs: Brent Miller, **Nicholas Perez,** Shankar Chellam.
Project conceived by Miller, and developed with Perez and Chellam. This is a cross-college collaboration between Miller, Perez in Geosciences, and Chellam in Engineering (Civil).

2016 – 2017 Tectonic basin evolution of the Permian basin: implications for reservoir characterization and geomechanics. Berg-Hughes Center for Petroleum and Sedimentary Systems, Texas A&M University. **Funded, $30,000.**
Project conceived by Perez, and support first M.S. advisee T. Manos.

Publications
Citations: 235; h-index: 6 (Google Scholar)
Peer reviewed:
* - Graduate student; ** - Undergraduate student

*Manos, T., and **Perez, N.D.,** (accepted April 2021), Spatial and vertical patterns of peak temperature in the Delaware Basin from Raman spectroscopy of carbonaceous material. Accepted with minor revisions at *American Association of Petroleum Geologists Bulletin. This represents a new direction I developed after starting at TAMU. Supported by seed grant from the Berg-Hughes Center for Petroleum and Sedimentary Systems. M.S. advisee T. Manos conducted all research and wrote the manuscript with my guidance. Impact factor: 2.952*

Perez, N. D., Anderson, R. B., Horton, B. K., **Ohlson, B. A., and Calle, A. Z., (accepted March 2021), Reconciling spatial and temporal patterns of Cenozoic shortening, exhumation, and subsidence in the southern Bolivian Andes. *Frontiers in Earth Science*
This is a new research direction developed since beginning at TAMU with new collaborator R. B. Anderson. Undergraduate advisee B. A. Ohlson conducted geomorphologic analyses that were key contribution to this work. I was lead author and research supervisor for this team, and all others participated in writing and editing. This is an open access journal. I am proud of leading the integration of different datasets in this study.
Impact factor: 2.689

*Pesek, M. E., **Perez, N. D.,** Meigs, A., **Rowden, C. C., & **Giles, S. M. (2020). Exhumation timing in the Oregon Cascade Range decoupled from deformation, magmatic, and climate patterns. *Tectonics*, 39, e2020TC006078. https://doi.org/10.1029/2020TC006078

I conceived of this project idea along with Meigs, a new collaborator. M.S. advisee Pesek conducted the field and laboratory analyses, with undergraduate advisees Rowden and Giles conducting smaller sub-projects. I acted as overall research supervisor for this team. Impact factor: 4.813

*Estep, J., Reece, R., *Kardell, D. A., **Perez, N. D.,** Christeson, G. L., and Carlson, R. L. (2020) Intraplate deformation of oceanic crust near the Rio Grande Rise in the South Atlantic. *Tectonophysics*, v. 790, https://doi.org/10.1016/j.tecto.2020.228543
Estep and Reece conceived of this work. I provided intellectual input on fault geometry and stratigraphic interpretation, and editing on the manuscript. Estep was a student in my graduate course GEOP 628 Basin Architecture.
Impact Factor: 3.326

Perez, N. D., and **Levine, K.G., (2020) Diagnosing an ancient shallow subduction event from Cenozoic depositional and deformational records in the central Andes of southern Peru. *Earth and Planetary Science Letters.* v. 541, https://doi.org/10.1016/j.epsl.2020.116263.
I conceived of this concept, and collected the rock samples included in this manuscript. Undergraduate research advisee K. Levine conducted all of the sample preparation and the majority of analyses, except for select techniques that could not be conducted at Texas A&M University, under the guidance and mentoring of Perez. This work represents the inspiration for future investigation of the links between subduction angle and seismic hazard.
Impact factor: 5.164

* Gao, Z., **Perez, N. D.,** Miller, B., and Pope, M. C. (2019). Competing sediment sources during Paleozoic closure of the Marathon-Ouachita remnant ocean basin. *Geological Society of America Bulletin*. *132*(1-2), 3-16. https://doi.org/10.1130/B35201.1
I conceived of the general concept, but M.S advisee Gao conducted the majority of sample collection and processing, and all sample analyses, with Perez acting as sole research supervisor. Miller and Pope provided key data from previous theses of their advisees, which strengthened the manuscript. This is a new research area for me, representing growth of my research program, and new departmental collaborations.
Impact factor: 4.708

Perez, N. D., Teixell, A., Gómez-Gras, D., and Stockli, D. F. (2019). Reconstructing extensional basin architecture and provenance in the Marrakech High Atlas of Morocco: Implications for rift basins and inversion tectonics. *Tectonics*, 38, 1584–1608. https://doi.org/10.1029/2018TC005413
I conceived this project and established new international collaborations with Teixell and Gómez-Gras (U. Autonoma Barcelona) to accomplish this field- and laboratory-based project. This is one of the very first manuscripts that implements newly developed statistical approaches for enhanced analysis and interpretation of the key data type (U-Pb detrital zircon geochronology) used in the manuscript. As such, I consider this an important step forward for the technique, applied to this problem in the Marrakech High Atlas.

Impact factor: 4.813

Eichelberger, N., Nunns, A., **Perez, N. D.,** Ball, S., Claroni, D. J., and D. He, 2018, Incorporating Simple Erosion into Structural Forward Models: The Effects of Regional Erosion on Growth Strata Geometry, *Journal of Structural Geology,* 116, 146-158, doi.org/10.1016/j.jsg.2018.08.011.
Eichelberger and Nunns were employees of StructureSolver, a software tool for solving structural geology problems. They conceived of the project and asked me to enhance interpretation and discussion of their results. This demonstrates industry collaboration.
Impact factor: 3.201

Garzione, C. N., McQuarrie, N., **Perez, N. D.,** Ehlers, T. A., Beck, S. L., Kar, N., Eichelberger, N., Chapman, A. D., Ward, K. M., Ducea, M. N., Lease, R. O., Poulsen, C. J., Wagner, L. S., Horton, B. K., Saylor, J. E., and Zandt, G., 2017, The Tectonic Evolution of the Central Andean Plateau and Geodynamic Implications for the Growth of Plateaus, *Annual Reviews in Earth and Planetary Sciences,* 45:1, doi.org/10.1146/annurev-earth-063016-020612.
Garzione was the lead PI on a large NSF-funded collaborative proposal that was highly interdisciplinary. This manuscript synthesizes the work of multiple PIs, and numerous graduate students' theses, including mine. As 3rd author, I am behind only the two leading PIs, and ahead of the rest, demonstrating my contributions and leadership in this large collaborative effort.
Impact Factor: 11.721

Perez, N. D., Horton, B. K., McQuarrie, N., Stübner, K., and Ehlers, T. A., 2016b, Andean shortening, inversion and exhumation associated with thin- and thick-skinned deformation in southern Peru, *Geological Magazine,* 153, p. 1013-1041, doi:10.1017/S0016756816000121.
Impact Factor: 2.353

Perez, N. D., Horton, B. K., and Carlotto, V., 2016a, Structural inheritance and selective reactivation in the northern Altiplano: Andean deformation guided by Triassic extensional structures, *Tectonophysics*, v. 671, p. 264-280, doi:10.1016/ j.tecto.2015.12.031.
Impact Factor: 3.326

Horton, B. K., **Perez, N. D.,** Fitch, J. D., and Saylor, J. E., 2015, Punctuated shortening and subsidence in the Altiplano plateau of southern Peru: Implications for early Andean mountain building: *Lithosphere*, v. 7, p. 117–137, doi:10.1130/L397.1.
Impact factor: 2.961

Perez, N.D., and Horton, B.K., 2014, Oligocene-Miocene deformational and depositional history of the Andean hinterland basin in the northern Altiplano plateau, southern Peru: *Tectonics*, v. 33, p. 1819-1847, doi:10.1002/2014TC003647.
Impact factor: 4.813

In preparation:

*Findlay, C.P., Ewing, R.C., and **Perez, N.D.,** Identifying fractionation of detrital zircon age populations in ancient fluvial deposits, Part I: Methods for paleohydraulic reconstruction of ancient fluvial channels. In preparation.

*Findlay, C.P., Ewing, R.C., and **Perez, N.D.,** Identifying fractionation of detrital zircon age groups in ancient fluvial deposits, Part II: Detrital zircon size and U-Pb geochronology of the Permian Cutler Group – Paradox Basin, UT and CO. In preparation.

*Findlay, C.P., Ewing, R.C., and **Perez, N.D.,** Investigating sediment recycling between fluvial and aeolian environments in the Permian Cutler Group, Paradox Basin, UT and CO. In preparation.
The above three manuscripts are from C. P. Findlay, my first Ph.D. advisee. This project was initially conceived of by Ewing, with co-developed with Perez. The general framework for this concept was further developed by advisee Findlay, who conducted all field and laboratory analyses and manuscript writing. These manuscripts represent a new integration of the two disciplines inhabited by Perez (Basin Analysis/Tectonics) and Ewing (morphodynamics/sedimentology) and will be an important advancement.

*Buford Parks, V. M., McQuarrie, N., and **Perez, N.D.,** Kinematic and topographic evolution of the central Andes of southern Peru. In preparation.

Perez, N. D., Seismicity, surface rupturing normal faults, and anomalous topography reflect flat slab subduction. In preparation.

Awards

2021	Dean's Distinguished Achievement Faculty Teaching Award
2019	CAREER award, National Science Foundation
2017	Student Success Faculty Fellow, Center for Teaching Excellence, Texas A&M University
2011–2015	Graduate Research Fellowship, National Science Foundation
2015	Best student paper, Jackson School of Geosciences, UT-Austin
2014	Grants-in-Aid, American Association of Petroleum Geologists
2013	Research Grant, Geological Society of America
2013	Off Campus Research Grant, Jackson School of Geosciences, UT-Austin
2012	Research Grant, Geological Society of America
2012	Geoscience Grant, ExxonMobil
2011–2014	University of Texas at Austin Bruton Fellowship
2011	Texas Parks and Wildlife Conservation Scholarship
2011	Off Campus Research Grant, Jackson School of Geosciences, UT-Austin
2009	Texas Parks and Wildlife Conservation Scholarship
2009	Houston Geological Society Outstanding Student Scholarship
2008	Shell Incentive Fund Scholarship
2008	Undergraduate Petrography Competition winner, UT-Austin
2007–2009	Undergraduate Honors Program, The University of Texas at Austin

Invited Presentations

Stanford University	2020
University of Houston	2020
University of Texas at Arlington	2020
Geological Society of America Annual Meeting	2019
State University of New York at Brockport	2019
American Geophysical Union Annual Meeting	2019
University of Houston	2019
Austin Geological Society	2018
Geological Society of America Annual meeting	2017
University of Houston	2016
San Antonio Petroleum Club	2016
Texas A&M University	2016
Texas A&M University	2015
University of Texas at Dallas	2015
Slippery Rock University	2013

Field Research Experience

Central Andes, Peru, 2 weeks, chief scientist	2021
Southern Bolivian Andes, 2 weeks, co-chief scientist	2018
Paradox Basin, Utah, 1 week, chief scientist	2017
Central Andes, Peru, 2 weeks, co-chief scientist	2017
Cascade Range, Oregon, 2 weeks, co-chief scientist	2017
Atlas Mountains, Morocco 2 weeks, co-chief scientist	2016
Central Andes, southern Peru, 10 days, chief scientist	2016
Central Andes, southern Peru, ca. 9 months total, doctoral research	2010–2015
Neuquén, Argentina, Andes, 1 month, field assistant	2013
Canadian Cordillera, 2 weeks, field assistant	2012
Wyoming, 1 week, field assistant	2012
Central Andes, southern Bolivia, 2 weeks, Undergraduate Research Assistant	2008–2009
R/V Thomas G. Thompson, Hydrate Ridge, offshore Oregon, 2 weeks, Undergraduate Research Assistant	2008

TEACHING

Courses taught (* = newly developed course)

Center for Teaching Excellence Student Success Faculty Fellow **2017-2018**

Professor:

*GEOL 689, Special Topics, Global Tectonics 2021
Spring 2021, 5 students, evaluation: pending

Supported by the NSF CAREER award, in non-pandemic years this course will include a field trip to southern Peru for enrolled students.

*GEOL 250, Geological Field Methods, undergraduate 2018–present
Spring 2021, 32 students
Spring 2020, 39 students
Spring 2018, 48 students

Perez has redeveloped the standard 9-day trip that runs during non-pandemic years, and developed multiple new day trips local to Bryan-College Station TX when travel is restricted.

*GEOL 152, History of the Earth, undergraduate 2018–2019
Spring 2019, 50 students, evaluation: 4.3
Spring 2018, 57 students, evaluation: 4.4

Perez designed this course to align with the new Departmental curriculum. with support from the TAMU Center for Teaching Excellence Student Success Faculty Fellow program. Involves multiple new modules in lecture and lab that use technology-based teaching, active learning, and includes a new day trip to Bastrop, TX.

*GEOL 106, Earth History, undergraduate 2017
Spring 2017, 79 students, evaluation: 4.1

Perez designed this course in alignment with the previous department curriculum. Course evaluations were the motivation for subsequent redesigns and inclusions of updated pedagogical techniques with day trips.

GEOL 300, Field Geology, undergraduate 2017
Summer 2017, 50 students

*GEOL 311, Geologic Writing 2015
Fall 2015, 20 students

*GEOP 628, Basin Architecture, graduate 2016–present
Fall 2020, 11 students, evaluation: N/A
Fall 2018, 10 students, evaluation: 4.7
Fall 2016, 8 students, evaluation: 4.5

Perez designed and has modified this course each time it is taught based on feedback. Updates include the development of a new multi-day trip to CO and UT, new problem sets based on analyzing real datasets, and group project work.

GEOL 491, Undergraduate geology research course 2016–present

Spring 2016, 6 students	Fall 2016, 5 students
Spring 2017, 2 students	Fall 2017, 8 students
Spring 2018, 5 students	Fall 2018, 6 students
Spring 2019, 5 students	Fall 2019, 4 students
Spring 2020, 5 students	

Multiple students from these research hours have participated for 2+ years, resulting in research products of sufficient magnitude to warrant inclusion as manuscript co-authors.

<u>Faculty mentor:</u>

GEOL 685, Directed Studies, 5 students 2016

Texas A&M University team in American Association of Petroleum Geologists Imperial Barrel Award competition, 5 students

Perez mentored this team, and developed a series of short courses that still runs today to train the team on necessary skills. This group places 3rd in the Gulf Coast Regional.

Texas A&M University team at European Association of Geoscientists and Engineers competition, 5 students. 2016
Perez mentored this team, who placed 2nd place at international competition.
Guest Lecturer:
GEOL 180, Introduction to geology and geophysics 2018-present

Graduate Teaching Assistant: 2010–2014
Undergraduate courses, The University of Texas at Austin: Structural Geology, Introduction to Field Methods, Life Through Time

Graduate advisees (* = peer-reviewed publication author)
Brenden Britt, Summer 2021, expected 2023 (M.S.)
Rachel Schroeder, Fall 2020, expected 2022 (M.S.)
Emily White, Fall 2019, expected 2023 (Ph.D.)
Payton McCain, Fall 2019, expected 2024 (Ph.D.)
Clyde Findlay, Fall 2016, Ph.D., December 2020, *now at Chevron Corp.*
*Maria Pesek, Fall 2016, M.S., December 2018, *now at Hess Corp.*
*Telemachos Manos, Fall 2016, M.S., August 2018, *now on active duty, U.S. Army.*
*Zihui "Vicky" Gao, Spring 2016, M.S., December 2017, *now at Royal Dutch Shell*

Undergraduate research advisees (= peer-reviewed publication co-author)**
2015 – present: Caroline Hamilton, Rachel Schroeder, **Clay Rowden, Keller Herrin, **Kristina Levine, **Bailey Ohlson, Colton Barr, Seth Hardin, Daniela Chiriboga, Liam Norris, Charlie Bruce, **Sarah Giles, Daniel Hou, Ben Gremillion, Cody Millet, Maria Pesek, Dominic Seidel, Marshall Settegast, Chase Wittman

Honors, awards, and funding to advisees (total: $93,575)
My advisees have been very proactive and successful with acquiring research funding to support their efforts.
Geological Society of America 2021
(to Rachel Schroeder; Payton McCain)
American Association of Petroleum Geologists Grants-in-Aid 2021
(to Rachel Schroeder)
Society of Economic Geologists (SEG); Geological Society of Nevada Elko; Society for Sedimentary Geology (SEPM) 2021
(to Emily White)
American Association of Petroleum Geologists Grants-in-Aid 2020
(to Emily White)
National Speleological Society Ernie Garza scholarship 2019
(to Bailey Ohlson, undergraduate advisee)
Berg-Hughes Center for Petroleum and Sedimentary Systems fellowship 2019
(to Emily White)
2nd place oral presentation 2018
American Association of Petroleum Geologists Annual Convention and Exhibition (to Telly Manos)

American Association of Petroleum Geologists Grants-in-Aid 2017
(to Vicky Gao, Telly Manos, Clyde Findlay)
American Association of Petroleum Geologists Military Veterans Scholarship 2017
(to Telly Manos)
Geological Society of America Graduate Student Research Grant 2017
(to Maria Pesek, Clyde Findlay)
Permian Basin Area Foundation 2017
(to Vicky Gao, Clyde Findlay)
Geological Society of America On to The Future award 2017
(to Maria Pesek)
Texas A&M Office of Graduate and Professional Students Travel Award 2017
(to Maria Pesek, Clyde Findlay)
Chevron Fellowship 2016
(to Clyde Findlay)
Berg-Hughes Center for Petroleum and Sedimentary Systems fellowship 2016
(to Telly Manos)
Permian Basin Area Foundation 2016
(to Vicky Gao)
US Army Tuition Assistant Scholarship 2016
(to Telly Manos)
Marathon Oil fellowship 2016
(to Vicky Gao)
Hess/Tieh/Gage-Larson Fellowship 2016
(to Telly Manos)

Graduate committee membership
Jessica McKay, expected 2024 (Ph.D.)
Rachel Hoar, expected 2023 (Ph.D.)
Zeyang Sun, expected 2022 (Ph.D.)
Benjamin Richards, expected 2022 (Ph.D.)
Samuel Price, December 2018 (M.S.)
Elizabeth Da Silva Rodriguez, August 2018 (M.S.)
Howard "Nate" Naylor, August 2018 (M.S.)

Mentor responsibilities
Texas A&M University Academy of Future Faculty program 2020-present
I mentor two Ph.D. students in my department, both of whom are not my advisees, nor am I on their dissertation committees.

Field Trips (* = new field trip developed for department)
*Millican Reserve, *Brazos River at Hwy 105 2021
*Bastrop, 1 day; West Texas and eastern New Mexico, 9 days 2019
West Texas and eastern New Mexico, 9 days; *Paradox Basin, UT and CO, 8 days 2018

Outreach
Geoscience Academic Preparation Program 2021
OpportunityX, St. Stephens Academy, Austin TX 2021

College of Geosciences Living Learning Community 2020
Texas A&M University GeoX Camp presenter 2020, 2018
University of Texas at Austin Jackson School of Geosciences 2020
Texas A&M University OGAPS 2018
Alliance for Graduate Education and the Professoriate (AGEP) 2016–2017
Williams Elementary, Elgin Elementary, central Austin, science advocate 2009–2015
GeoFORCE, University of Texas at Austin, mentor 2012–2014

Short courses convened (all 2016)
Kinematic restoration, Dr. Nate Eichelberger (StructureSolver)
Petroleum risk analysis, Kellam Colquitt (Rose & Associates)
Geophysics and seismic attribute analysis, Dr. Barton Payne (Chevron)
Basin Geochemistry, Dr. Irene Arango, Dr. Barry Katz, Autumn Eakin (Chevron)
Petrophysics, Dr. Zoya Heidari (University of Texas at Austin)
Structural Trap Styles, Dr. Carlos Dengo (Texas A&M University)

SERVICE

Texas A&M University, Department of Geology and Geophysics
Leader, Unlearning Racism in Geoscience (URGE) pod 2021
Member, College Diversity Committee 2020–present
Member, Task force on graduate curriculum 2020
Chair, Department Communication Committee 2019–2020
Member, Department Executive Committee 2018–2020
Chair, Department seminar 2019–2020
Member, Instructional assistant faculty search committee 2019
Judge, Geology and Geophysics Student Research Symposium 2018–2019
Member, Faculty search committee 2018
Member, Graduate Admissions Committee 2015–2018
Member, Graduate curriculum revision 2017
Member, Faculty search committee 2016–2017
Member, Curriculum revision 2015–2016

National Communities
Peer reviewer, journals 2015–present
Aeolian Research, American Journal of Science, Basin Research, Earth and Planetary Science Letters, Earth Science Reviews, Frontiers in Earth Science, Geology, Geoscience Frontiers, Geosphere, Geological Society of America Bulletin, Gondwana Research, Interpretation, International Geology Review, Journal of South American Earth Sciences, Lithosphere, Nature Scientific Reports, Tectonics
Peer reviewer, funding agencies 2015–present
American Chemical Society Petroleum Research Fund, National Science Foundation EAR-Post-doctoral Fellowship, National Science Foundation EAR-Tectonics, National Science Foundation International Research Experiences for Students, Deutsche Forschungs-gemeinschaft (DFG)
Reviewer 2021
AAPG ACE 2021 Siliciclastic theme

Panel member 2018
National Science Foundation International Research Experiences for Students
Workshop participant 2018
National Science Foundation Tectonics Community Vision Document (Huntington & Klepeis with 66 community contributors, 2018).
Convener 2017
American Geophysical Union annual meeting, *Multidisciplinary approaches to outstanding questions in Andean tectonics*
Liaison 2017
American Geophysical Union annual meeting, Outstanding Student Presentation Award
Convener 2016
American Geophysical Union annual meeting, *Sedimentary basin records of convergent orogenic systems*
Convener 2014
Geological Society of America annual meeting, *Deformation localization throughout the crust*. *Co-sponsored by Geological Society of America Structural Geology and Tectonics, and Geophysics Divisions; European Geophysical Union Division on Tectonics and Structural Geology*

University of Texas at Austin
Friends and Alumni Network member 2020-2021
Undergraduate representative 2009
Dean Search Committee, Jackson School of Geosciences, University of Texas at Austin

CONFERENCE ABSTRACTS
** - Undergraduate student; *- Graduate student; § - Invited

*Findlay, C.P. III, **Perez, N.D.,** Ewing, R.C., 2020, Sorting or Salt Walls? Investigating the Controls on Ancient Fluvial Transport Conditions Using Detrital Zircon Geochronology and Paleohydraulics: Permian Cutler Group, Paradox Basin, Utah and Colorado: AAPG ACE Online Convention.

§ **Perez, N. D.,** (2019), Spatial patterns of deformation and deposition across the southern Peruvian Andes: evidence for atypical fold-thrust belt behavior, AGU annual meeting

§ **Perez, N.D.,** (2019), Exploring the impact of shallow subduction on the overriding plate in the central Andes of Peru. Presented at GSA Annual Meeting, Phoenix, AZ. T53 140-6.

Saylor, J.E., Sundell, K., **Perez, N.D.**, Karsky, N., Lapen, T. J., Cardenas, J. (2018), Sedimentary response to exhumation of the central Andean retro-arc fold-thrust belt during flat slab subduction. T51B-07. AGU Fall Meeting.

Perez, N.D. (2018), Differences between Cordilleran Models and Real Margins: Impact of structural inheritance and dynamic topography on basin evolution in the central Andes, southern Peru, T53A-05. Presented at 2018 Fall Meeting, AGU, Washington, D.C., 10-14 Dec.

Pesek, M. E.*, and **Perez, N.D.** (2018), Exhumation of the Oregon Cascades: Testing the role of lithospheric and surface processes on orogen evolution. Presented at GSA Annual Meeting, Indianapolis, IN, T54 156-13.

Levine, K.**, and **Perez, N.D.** (2018), Investigating the role of multi-phase deformation history on Triassic to recent crustal exhumation in the Eastern Cordillera of southern Peru. Presented at GSA Annual Meeting, Indianapolis, IN, T54 172-70.

Rowden, C. Charles**, Pesek, M. E.*, and **Perez, N.D.** (2018), Investigating asynchronous exhumation trends along the Cascade Range in Washington and Oregon using thermochronologic modeling. Presented at GSA Annual Meeting, Indianapolis, IN, T54 172-65.

Perez, N.D. and Gao, Z.* (2018), Competing Laurentian and Gondwanan sediment sources during protracted Pangea assembly in the Marathon region of west Texas. Presented at GSA Annual Meeting, Indianapolis, IN.

*Manos, T.A., **Perez, N.D.,** (2018), Thermal Maturity Modeling of Organic-Rich Mudrocks in the Delaware Basin using Raman Spectroscopy of Carbonaceous Material, Presented at AAPG ACE Annual Meeting - Salt Lake City, UT. May 23, 2018.

*Findlay, C.P., Ewing, R.C., **Perez, N.D.** (2018), Assessing the Role of Detrital Zircon Sorting on Provenance Interpretations in an Ancient Fluvial System Using Paleohydraulics – Permian Cutler Group, Paradox Basin, Utah and Colorado, Presented at AAPG ACE Annual Meeting - Salt Lake City, UT. May 23, 2018.

*Manos, T.A., **Perez, N.D.,** (2018), Thermal Maturity Modeling of Organic-Rich Mudrocks in the Delaware Basin using Raman Spectroscopy of Carbonaceous Material, Houston Geological Society Mudrocks Convention.

*Findlay, C. P., Ewing, R. C., and **Perez, N. D.,** (2017), Assessing the role of detrital zircon sorting on provenance interpretations in an ancient fluvial system using paleohydraulics – Permian Cutler Group, Paradox Basin, Utah and Colorado, EP33A-1922, presented at 2017 Fall Meeting, AGU, New Orleans, LA, 11-15 Dec.

Giles, S. M., *Pesek, M. E., and **Perez, N. D., (2017), Analysis of the Exhumation Pathways Experienced in the Cascades Range, T13A-0491, presented at 2017 Fall Meeting, AGU, New Orleans, LA, 11-15 Dec.

Saylor, J. E., Sundell, K. E., **Perez, N. D.,** Karsky, N., Lapen, T. J., and Cardenas, J., (2017), Eocene unification of Peruvian and Bolivian Altiplano basin depocenters, T23D-0631, AGU Fall Meeting.

McQuarrie, N. Garzione, C. N., **Perez, N. D.,** Ehlers, T. A., Beck, S. L., Kar, N., Eichelberger, N., Chapman, A. D., Ward, K. M., Ducea, M. N., Lease, R. O., Poulsen, C. J., Wagner, L. S., Saylor, J. E., Zandt, G, and Horton, B. K., (2017), The Tectonic Evolution of the Central Andean Plateau and Geodynamics implications for the growth of plateaus, T31E-07, presented at 2017 Fall Meeting, AGU, New Orleans, LA, 11-15 Dec.

§ **Perez, N. D.,** (2017), Multiphase pre-Andean deformation guides Cenozoic mountain building in the central Andes, southern Peru, Geological Society of America annual meeting, T218.

§ Garzione, C. N., McQuarrie, N., **Perez, N. D.,** Ehlers, T. A., Beck, S. L., Kar, N., Eichelberger, N., Chapman, A. D., Ward, K. M., Ducea, M. N., Lease, R. O., Poulsen, C. J., Wagner, L. S., Saylor, J. E., Zandt, G, and Horton, B. K., (2017), The Tectonic Evolution of the Central Andean Plateau and Geodynamic Implications for the Growth of Plateaus, Geological Society of America annual meeting.

*Gao, Z., and **Perez, N. D.,** (2017), Temporal evolution of the sediment sources into the Delaware Basin, west Texas: Geological Society of America Abstract T15-2

Perez, N. D., Teixell, A., and Gomez, D., (2016), Early Mesozoic rift basin architecture and sediment routing system in the Moroccan High Atlas, American Geophysical Union.

Perez, N. D., Horton, B. K., McQuarrie, N., Stübner, K., and Ehlers, T.A., (2015), Shortening record in the central Andean plateau of southern Peru: Basement inversion, thin-skinned thrusting, and geomorphic response: American Geophysical Union, Paper T23A-2919.

Perez, N. D., and Horton, B. K., (2014), Punctuated upper-crustal shortening, exhumation, and basin subsidence during flat-slab subduction in southern Peru, American Geophysical Union, T23A-4630.

Perez, N. D. and Horton, B. K., (2014)**,** Stratigraphic signatures of crustal shortening and central Andean geodynamics in the Altiplano plateau, southern Peru: European Geophysical Union Research Abstracts v. 16, EGU2014-10047-1.

Perez, N. D., Horton, B. K., McQuarrie, N., Ehlers, T., (2013), Andean inversion of a Permo-Triassic rift system in southern Peru: Implications for Cenozoic shortening, flexure and deformation advance: Geological Society of America Abstracts with Programs, v. 45, (7), p.677.

Perez, N. D., and Horton, B. K., (2012), Cenozoic crustal shortening and thickening contributions to Andean orogenesis: Preliminary results from structural mapping in the southern Peruvian Andes: American Geophysical Union, T24C-02.

Perez, N. D., and Horton, B. K., (2011), Initial shortening in the northern Altiplano: Stratigraphic, structural and geochronological constraints from the Ayaviri basin, Peru: Geological Society of America Abstracts with Programs, v. 43 (5), p. 441.

Horton, B. K., **Perez, N. D.,** and Saylor, J. E., (2011), Timing of deformation and subsidence in the northern Altiplano, Peru: Insights from detrital zircon geochronology of the Ayaviri hinterland basin: Eos, Transactions, American Geophysical Union, v. 93 (52), Paper T23H-03.

University, College, and Other Research Symposia Abstracts:

** - Undergraduate student; *- Graduate student

Perez, N.D. (2018), Sediment dispersal reversal across western margin of South America potentially linked to Cretaceous-Cenozoic Cordilleran mountain building and dynamic topography interactions, South American Symposium on Isotope Geology, Cochabamba, Bolivia.

Perez, N. D., *Pesek, M. E., and Meigs, A. J., (2017), Does erosional exhumation explain Late Cenozoic rock uplift of the Western Cascades, OR? *Preliminary Results,* FACET II workshop, Oregon State University.

*Gao, Z., and **Perez, N. D.,** (2016), The provenance history of Delaware Basin, west Texas: The Crisman Institute for Petroleum Research & The Berg-Hughes Center for Petroleum and Sedimentary Systems, Industry Review of the Comprehensive & Integrated Research to Develop Predictive Models for Shale Oil & Gas Reservoirs in Texas.

*Manos, T. A., and **Perez, N. D.,** (2016), Spatial variability in sediment provenance in the Delaware Basin: Testing the role of reservoir composition on hydrocarbon production trends, Berg-Hughes Center Research Symposium, Texas A&M University.

Pesek, M. E. and **Perez, N. D., (2016), Sandstone petrography of the Triassic Mitu Group: implications for pre-Andean extensional basins, southern Peru, Texas A&M University Student Research Week poster.

Holmes, C., **Perez, N. D.,** Payne, B., and Shapiro, S., (2015), Pre-stack seismic interpretation workflows for enhanced reservoir understanding: A comparison of Next Gen integrated interpretation platform functionality, Chevron Corporation RM Forum.

PROFESSIONAL AFFILIATIONS
American Geophysical Union
Geological Society of America

NON-ACADEMIC EMPLOYMENT
2015 Geology intern, Chevron Corporation, Mid-Continent Business Unit
2014 Geophysics intern, Chevron Corporation, Energy Technology Company
2011 Geology intern, EOG Resources, Inc.
2010 Geology intern, EOG Resources, Inc.
2009 Geology intern, Apache Corporation

This CV is most current and correct as of the date of this signature.

Signature: **Date: July 1, 2021**

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EDUCATION

Ph.D. Advanced Quantitative Methods 2010
University of California, Los Angeles
Dissertation: Mixture modeling with behavioral data
Advisor: Bengt Muthén

M.A. Advanced Quantitative Methods 2004
University of California, Los Angeles

B.A. Statistics 2003
University of California, Berkeley

ACADEMIC APPOINTMENTS

Associate Professor (without tenure) 2019- Present
Department of Psychiatry & Behavioral Science
Genetics Interdisciplinary Graduate Program
Texas A&M University (TAMU)

Assistant Professor 2017-2019
Department of Psychology
Michigan State University (MSU)

Research Assistant Professor 2012-2017
Center for Biomarker Research and Precision Medicine
Virginia Commonwealth University (VCU)

Associate 2011-2015
Department of Mental Health
John Hopkins University

Postdoctoral Fellow 2010-2012
Center for Biomarker Research and Precision Medicine
Virginia Commonwealth University (VCU)

GRANTS

CURRENT

NICHD R01 HD104297 $2,576,956 2021-2025
Methylomic pathways from neighborhood disadvantage to antisocial behavior
Role: PI (with S. Alexandra Burt)
*See attached Notice of Award

NIAAA R01 AA026057 $662,625 2017-2021
Diagnostic and prognostic methylation biomarkers for alcohol and related health risks
Role: PI

PENDING

NIAAA R01 $2,287,203 Submitted June 2021
Mapping the single nuclei brain transcriptome in alcohol use disorder
Role: PI

NICHD R01 $2,169,914 Submitted June 2021
DNA methylation as a mediator of prenatal stress timing on infant regulatory functioning
Role: PI

NIDA R01 $1,838,093 Submitted July 2021
Detecting genetic sensitivity to cigarette smoking behaviors across environments using genome-wide gene-environment interaction methods
Role: Co-I (PI B. Verhulst)

PAST

NIAAA K01 AA021266 $582,644 2012-2018
Investigating methylation patterns associated with alcohol use and addiction
Role: PI

Center for Clinical and Translational Research Grant $49,995 2016-2018
Human brain DNA methylation signatures of alcohol addiction
Role: PI

Brain and Behavior Research Foundation $69,727 2018-2021
A comprehensive brain methylation study in alcohol dependent patients
Role: PI

RESEARCH PAPERS

For each publication listed, contributions included (A) conceptualization of the work, (B) substantial original writing, (C) methodological design, (D) data analyses, (E) data collection, (F) editing of the work, (G) obtaining funding for the project, and/or (H) supervision or mentoring of any of the above. For each of the works below, my contributions are noted with the corresponding letters. The order of authorship on works listed reflects the relative scientific or professional contributions of the authors involved, with the exception of last author(s), who have served in a

senior role and have supervised aspects of the work. Asterisked authors (*) are students, postdoctoral fellows or early career faculty that have worked under my complete or partial mentorship.

PEER-REVIEWED PAPERS

49. **Clark, S.L.,** Chan, R., Xie, L.Y., Zhao, M., Copeland, W.E., Aberg, K.A., van den Oord, E.J.C.G. (2021). Methylomic study of problematic adolescent cannabis use and its mental health risks. *Journal of the American Academy of Child & Adolescent Psychiatry.* In Press. A,B,C,D,F,G,H. *See attached letter of acceptance.

48. Verhulst, B., **Clark, S.L.,** Maes, H., Chen, J., Chen, X., Neale, M. Clarifying the genetic influences on nicotine dependence and quantity of use in cigarette smokers. *Behavior Genetics,* 51(4), 375-384. A,C,F

47. Pritikin, J.N., Neale, M.C., Prom-Wormley, E., **Clark, S.L.,** Verhulst, B. (2021). GW-SEM 2.0: Efficient, flexible and accessible multivariate GWAS. *Behavior Genetics*, 51(3), 343-357. A,B,C,F

46. *Kim, M., **Clark, S.L.,** Donnellan, B., Burt, S.A. (2020). A Multi-method investigation of the personality corelates of digital aggression. *Journal of Research in Personality*, 85(5), 103923. A,C,F,H

45. *Zhang, X., Winke, P., **Clark, S.L.** (2020). Background characteristics and oral proficiency development over time in lower-division college foreign language programs. *Language Learning*, 70(3), 807-847. A,C,E,F,H

44. **Clark, S.L.**, Hattab, M.W., Chan, R.F., Shabalin, A.A., Han, K.M., Smit, J.H., Jansen, R., Milaneschi, Y., Xie, L.Y., van Grootheest, G., Penninx, B.W.J.H., Aberg, K.A., van den Oord, E.J.C.G. (2020). Predicting the future disease status of depressed patients from DNA methylation patterns in blood. *Molecular Psychiatry*, 25(6), 1334-1343.A,B,C,D,F,G

43. Aberg, K.A., Dean, B., Shabalin, A.A., Chan, R.F., Han, L.K.M., Zhao, M., van Grootheest, G., Xie, L.Y., Milaneschi, Y., **Clark, S.L.,** Turecki, G., Penninx, B.W.J.H., van den Oord, E.J.C.G. (2020) Methylome-wide association findings for major depressive disorder overlap in blood and brain and replicate in independent brain samples. *Molecular Psychiatry*, 25(6), 1344-1354. A, B, C, D, F

42. **Clark, S.L.**, Costin, B.N., Chan, R.F., Johnson, A.W., Xie, L.Y., Jurmain, J.L., Kumar, G., Shabalin, A.A., Pandey, A.K., Aberg, K.A., Miles, M.F., van den Oord, E.J.C.G. (2018). A whole methylome study of ethanol exposure in brain and blood: an exploration of the utility of peripheral blood as proxy tissue for brain in alcohol methylation studies. *Alcoholism: Clinical and Experimental Research*, 42(12): 2360-2368. A, B, C, D, E, F, G, H

41. Aberg, K.A., Shabalin, A.A., Chan, R.F., Zhao, M., Kumar, G., van Grootheest, G., Xie, L.,

Milaneschi, Y., **Clark, S.L.,** Penninx, B.W.J.H., van den Oord, E.J.C.G. (2018). Convergence of evidence from a methylome-wide CpG-SNP association study and GWAS of major depressive disorder. *Translational Psychiatry*, 22(1):162. [A, B, C, D, F]

40. *Han, K.M., Aghajani, M., **Clark, S.L.,** Hattab, M.W., Shabalin, A.A., Zhao, M., Kumar, G., Chan, R.F., Xie, L.Y., Jansen, R., Aberg, K.A., van den Oord, J.C.G., Penninx, B.W.J.H. (2018). Accelerated epigenetic aging in major depressive disorder. *American Journal of Psychiatry*, 175(8): 774-782. [A, B, C, D, F, H]

39. Shabalin, A.A., Hattab, M.W., **Clark, S.L.,** Chan, R.F., Kumar, G., Xie, L.Y., Zhao, M., Aberg, K.A., van den Oord, E.J.C.G. (2018). RaMWAS: Fast Methylome-wide association study pipeline for enrichment platforms. *Bioinformatics*, 43(13), 2283-2285. [A, B, C, D, F]

38. *Hattab, M.W., **Clark, S.L.,** van den Oord, E.J.C.G. (2017) Overestimation of the classification accuracy of a biomarker for assessing heavy alcohol use. *Molecular Psychiatry*. Epub. 10.1038/mp.2017.181. [A, B, C, F, G, H]

37. *Cho, S.B., Aliev, F., **Clark, S.L.**, Adkins, A.E., Edenberg, H.E., Bucholz, K.K., Porjesz, B., Dick, D. M. (2017). Using patterns of genetic association to elucidate shared genetic etiologies across psychiatric disorders. *Behavioral Genetics*, 47(4), 405-45. [A, C, D, F, H]

36. *Chan, R.F., Shabalin, A.A., Xie, L.Y., Adkins, D.E., Zhao, M., Turecki, G., **Clark, S.L.,** Aberg, K.A., van den Oord, E.J.G.C. (2017). Enrichment methods provide a feasible approach to comprehensive and adequately powered investigations of the brain methylome. *Nucleic Acids Research*, 45(11): e97. [A, C, D, F, H]

35. **Clark, S.L.,** McClay, J.L., Adkins, D.E., Aberg, K.A., Nerella, S., Xie, L., Collins, A., Crowley, J.J., Quakenbush, C., Hillard, C., Gao, G., Shabalin, A.A., Vrieze, S.I., Peterson, R.E., Copeland, W., Silberg, J., McGue, M., Maes, H., Iacono, W.G., Sullivan, P.F., Costello, E.J., van den Oord, E.J. (2017) Deep sequencing of 71 candidate genes to characterize variation associated with alcohol dependence. *Alcoholism: Clinical and Experimental Research*. 41(4), 711-718. [A, B, C, D, E, F, G]

34. Hattab, M.W., Shabalin, A.A., **Clark, S.L.,** Zhao, M., Kumar, G., Chan, R.F., Xie, L.Y., Janssen, R., Han, L., Magnusson, P.K.E., van Grooteest, G., Hultman, C.M., Pennix, B.W., Aberg, K.A., van den Oord E.J.C.G. (2017) Correcting for cell type effects in DNA methylation studies: Reference-based methods outperform latent vector approaches in empirical studies. *Genome Biology*, 18(1), 24. [C, D, F, H]

33. **Clark, S.L.,** Gillespie, N., Adkins, D.A., Kendler, K.S., Neale, M.C. (2016). Psychometric modeling of abuse and dependence symptoms across six illicit substances indicates novel dimensions of misuse. *Addictive Behaviors*, 53, 132-140. [A, B, C, D, E, F, G]

32. *Cooke, M.E., Nasim, A., Cho, S.B., Kendler, K.S., Dick, D.M., **Clark, S.L**. (2016). Predicting tobacco use across the first year of college. *American Journal of Health Behaviors*, 40(4), 484-95. [A, B, C, D, F, H]

31. van den Oord, E.J., **Clark, S.L.,** Xie, L.Y., Shabalin, A.A., Dozmorov, M.G., Kumar, G., , Vladimirov, V.L., Magnusson, P.K., Aberg, K.A. (2016). A whole methylome CpG-SNP association study of psychosis in blood and brain tissue. *Schizophrenia Bulletin*, 42(4), 1018-26. A, B, C, D, F

30. McClay, J.L., Shabalin, A.A., Dozmorov, M.G., Adkins, D.E., Kumar, G., Nerella, S., **Clark, S.L.**, Bergen, S.E., Hultman, C.M., Magnusson, P.K., Sullivan, P.F., Aberg, K.A., van den Oord, E.J. (2016). High density methylation QTL analysis in human blood via next generation sequencing of the methylated genomic DNA fraction. *Genome Biology*, 16, 291. A, C, D, F

29. *Cho, S.B., Adkins, A.E., Cooke, M., Berenz, E.C., Kendler, K.S., Dick, D.M., **Clark, S.L.** (2015). Patterns of substance use across the first year of college and associated risk factors. *Frontiers in Psychiatry*, 6, 152. A, B, C, D, F, H

28. Neale, M.C., **Clark, S.L.,** Dolan, C.V., Hunter, M., (2016). Regime switching models of substance use: Time-varying and second-order Markov models and individual probability plots. *Structural Equation Modeling*, 23(2), 221-233. A, B, C, D, F

27. **Clark, S.L.,** McClay, J.L., Adkins, D.E., Aberg, K.A., Nerella, S., Xie, L., Collins, A., Crowley, J.J., Quackenbush, C., Hilliard, C., Gao, G., Copeland, W., Silberg, J., Maes, H., Sullivan, P., Costello, E.J., van den Oord, E.J. (2015). Deep sequencing of three loci implicated in large-scale GWAS smoking meta-analyses. *Nicotine and Tobacco Research*, 18(5), 626-31. A, B, C, D, F, G

26. **Clark, S.L.,** Aberg, K.A., Nerella, S., Kumar, G., McClay, J.L., Chen, W., Xie, L.Y., Hudson, A., Harada, A., Gao, G., Hultman, C.M., Magnusson, P.K.E., Sullivan, P.F., van den Oord, E.J.C.G. (2015). Combined whole methylome and genome-wide association study implicated *CNTN4* in alcohol use. *Alcoholism: Clinical and Experimental Research*, 39(8), 1396-405. A, B, C, D, F, G

25. Aberg, K.A., Xie, L.Y., Chan, R.F., Pandey, A.K., **Clark, S.L.,** van den Oord, E.J. (2015). Evaluation of methyl-binding domain based enrichment approaches revisited. *PLoS ONE*, 10(7): e0132205. A, G, F

24. Adkins, D.E., **Clark, S.L.**, Copeland, W., Kennedy, M., Conway, K., Angold, A., Maes, H., Liu, Y., Kumar, G., Erkanli, A., Silberg, J., Fergusson, D.M., Horwood, L.J., Eaves, L., van den Oord E.J.C.G., Sullivan, P., Costello. (2015). Genomewide meta-analysis of longitudinal alcohol consumption trajectories in youth and early adulthood. *Twin Research and Human Genetics*, 18(4), 335-47. A, B, C, D, F

23. Kumar, G., **Clark, S.L.,** McClay, J.L., Shabalin, A.A., Adkins, D.E., Xie, L., Chan, R., Nerella, S., Kim, Y., Sullivan, P.F., Hultman, C.M., Magnusson, P.K., Aberg, K.A., van den Oord, E.J. (2014). Refinement of schizophrenia GWAS loci using methylome-wide association data. *Human Genetics*, 134(1), 177-87. A, C, D, F, H

22. *Brown, R.C., **Clark, S.L.,** Dahne, J., Stratton, K.J., Macpherson, L., Lejuez, C.W., Amstadter, A.B. (2014) Testing the temporal relationship between maternal and adolescent depressive and anxiety symptoms in a community sample. *Journal of Clinical Child and Adolescent Psychology*, 44(4), 566-79. A, B, C, D, F, H

21. *Stratton, K.J., **Clark, S.L.,** Hawn, S.E., Amstadter, A.B., Cifu, D.X., Walker, W.C. (2014). Longitudinal interactions of pain and posttraumatic stress disorder symptoms in U.S. military service members following blast exposure. *Journal of Pain*, 15(10): 1023-32. B, C, D, F, H

20. Kubarych, T.S., Kendler, K.S., Aggen, S.H., Estabrook, R., Edwards, A.C., **Clark, S.L.**, Martin, N.G., Hickie, I.B., Neale, M.C., Gillespie, N.A. (2014). Comparing factor, class, and mixture models of cannabis initiation and DSM cannabis use disorder criteria, including craving, in the Brisbane longitudinal twin study. *Twin Research and Human Genetics*, 17(2): 88-98. C, F

19. Aberg, K.A., McClay, J.L., Nerella, S., **Clark, S.L.,** Kumar, G., Chen, W., Khachane, A.N., Gao, G., Xie, L.Y., Hudson, A., Harada, A., Swedish Schizophrenia Consortium, Bukszar, J., Hultman, C.M., Sullivan, P.F., Magnusson, P.K.E., van den Oord, E.J.C.G. (2014). Methylome-wide sequencing study of schizophrenia identifies blood biomarker signatures of environmental insults. *JAMA Psychiatry*, 71(3): 255-64. A, C, D, F

18. McClay, J.L., Aberg, K.A., **Clark, S.L.,** Nerella, S., Kumar, G., Xie, L.Y., Hudson, A.D., Harada, A., Hultman, C.M., Magnusson, P.K., Sullivan, P.F., Van Den Oord, E.J. (2014). A methylome-wide study of aging using massively parallel sequencing of the methyl-CpG-enriched genomic fraction from blood in over 700 subjects. *Human Molecular Genetics*, 23(5): 1175-85. A, C, D, F

17. **Clark, S.L.,** Muthén, B.O., Kaprio, J., D'Onofrio, B.M., Viken, R., Rose, R.J. (2014). Models and strategies for factor mixture analysis: An example concerning the structure underlying psychological disorders. *Structural Equation Modeling*, 20(4). 681-703. A, B, C, D, F

16. Adkins, D.E., McClay, J.L., Vanuck, S.A., Batman, A.M., Vann, R.E., **Clark, S.L**., Souza, R.P., Crowley, J.J., Sullivan, P.F., van den Oord, E.J., Beardsley, P.M. (2013). Behavioral metabolomics analysis identifies novel neurochemincal signatures in methamphetamine sensitization. *Genes, Brain and Behavior*, 12(8) 780-791. C, D, F

15. *Wolf, E. J., Harrington, K. M., **Clark, S. L.,** & Miller, M. W. (2013). Sample size requirements for structural equation models: Lessons learned from a Monte Carlo approach to the evaluation of power, bias, and quality. *Educational and Psychological Measurement*, 73, 913-934. A, C, F, H

14. Guille, C., **Clark, S.L**., Amstadter, A.B., Sen, S. (2013). Trajectories of depressive symptoms during medical internship: Insights into classes of depressive symptoms under conditions of stress. *Acta Psychiatrica Scandinavica,* 129(2) 109-115. B, C, D, F

13. **Clark, S.L.,** & Souza, R.P., Adkins, D.E., Bukszar, J., McClay, J.L., Sullivan, P.F., van den Oord, E.J. (2013). Genome-wide study of patient-rated and clinician-rated global impression of

severity during antipsychotic treatment. *Pharmacogenetics and Genomics*, 23(2), 69-77. [A, B, C, D, F]

12. Adkins, D. E., Souza, R.P., Aberg, K.A., **Clark, S.L.**, McClay, J.L., Sullivan, P.F., van den Oord, E.J.C.G. (2013). Genotype-based ancestral background consistently predicts efficacy and side effects across treatments in CATIE and STAR*D. *PLoS ONE*, 8(2): e55239. [C, D, F]

11. Costello, E.J., Eaves, L., Sullivan, P., Kennedy, M., Conway, K., Adkins, D.E., Angold, A., **Clark, S.L.,** Erkanli, A., McClay, J.L., Copeland, W., Maes, H., Liu, Y., Patkar, A.A., Silberg, J., van den Oord, E.J.C.G. Genes, environments, and development: Methods for a multi-site study of early substance abuse. (2013). *Twin Research and Human Genetics*, 16(2), 505-15. [A, C, F]

10. McClay, J.L., Adkins, D.E., Vunck, S.A., Batman, A.M., Vann, R.E., **Clark, S.L.,** Beardsley, P.M., van den Oord, E.J.C.G. (2013). Large-scale neurochemical metabolomics analysis identifies multiple compounds associated with methamphetamine exposure. *Metabolomics*, 9(2), 392-402. [C, D, F]

9. Aberg, K.A., McClay, J.L., Nerella, S., Xie, L.Y., **Clark, S.L.,** Hudson, A.D., Bukszár, J., Swedish Schizophrenia Consortium, Hultman, C.M., Sullivan, P.F., Magnusson, P.K.E., van den Oord, E.J.C.G. (2012). Massively parallel sequencing of the MBD-enriched genomic fraction as a cost-effective approach for methylome-wide disease association studies: Application, validation, and observations in 1500 case-control samples. *Epigenomics*, 4(6), 605-621. [A, C, D, F]

8. **Clark, S.L.,** Adkins, D.E., Aberg, K., Hettema, J.M., McClay, J.L., Souza, E., van den Oord, E.J.C.G. (2012). Pharmacogenomic study of side effects for antidepressant treatment options in STAR*D. *Psychological Medicine*, 42(6), 1151-62. [A, B, C, D, F]

7. Adkins, D.E., **Clark, S.L.,** Aberg, K., Hettema, J.M., Bukszar, J., McClay, J.L., Souza, R.P., Oord, E.J.C.G. (2012) Genome-wide study of citalopram induced side effects in STAR*D. *Translational Psychiatry*, 2, e129. [A, C, D, F]

6. Wood, J.J., Langer, D.A., Wood, P.A., **Clark, S.L.,** Eddy, J.M., & Ialongo, N. (2012). School attendance problems and youth psychopathology: Structural cross-lagged regression models in three longitudinal datasets. *Child Development*, 83 (1), 351-366. [C, D, F]

5. **Clark, S.L.,** Adkins, D.E., & van den Oord, E. (2011). Analysis of efficacy and side effects in CATIE demonstrates drug response subgroups and potential for personalized medicine. *Schizophrenia Research*, 13 (2-3), 114-20. [A, B, C, D, F]

4. Mistry, R. S., Benner, A. D., Biesanz, J. C., **Clark, S.L**., & Howes, C. (2010). Family and social risk, and parental investments during the early childhood years as predictors of low-income children's school readiness outcomes. *Early Childhood Research Quarterly*, 25, 432-449. [C, D, F]

3. McGough, J.J., Loo, S.K., McCracken, J.T., Dang, J., **Clark, S.L**., Nelson, S.F., & Smalley, S.L. (2008). The CBCL Pediatric Bipolar Disorder Profile and ADHD: A comorbidity study and quantitative trait loci analysis. *Journal of the American Academy of Child and Adolescent Psychiatry*, 47(10), 1151-7. C, D, F

2. Boomsma, D., Cacioppo, J., Muthén, B., Asparouhov, T. & **Clark, S.L.** (2007). Longitudinal genetic analysis for loneliness in Dutch twins. *Twin Research and Human Genetics*, 10, 267-273. C, D, F

1. Gearhart, M., Nagashima, S., Pfotenhauer, J., **Clark, S.L.,** Schwab, C., Vendlinski, T., Osmundson, E., Herman, J., & Bernbaum, D. (2006). Developing expertise with classroom assessment in K-12 science: Learning to interpret student work. *Educational Assessment*, 11(3&4), 237-263. C, D, E, F

PAPERS SUBMITTED FOR PUBLICATION

Clark, S.L., Chan, R., Zhao, M., Xie, L.Y., Copeland, W.E., Penninx, B.W., Aberg, K.A., van den Oord, E.J.C.G. Dual methylation and hydroxymethylation study in blood and brain of alcohol use disorder. Preprint DOI: https://doi.org/10.1101/2020.09.16.20194639

*Goodman-Williams, R., **Clark, S.L.,** Ullman, S.E., Campbell, R. Longitudinal Patterns of PTSD Symptoms Among Sexual Assault Survivors: A Latent Transition Analysis.

*Gruber, J.A., Anderson-Carpenter, K.A., McNall, M., **Clark, S.L.** Longitudinal impact of school-based health centers on school attendance: exploring the role of overall health and physical activity.

Guintavo, J., Aberg, K.A., **Clark, S.L.,** Rubinow, D.R., Sullivan, P.F., Meltzer-Brody, S., van den Oord, E.J.C.G. Transcriptome-wide association study for postpartum depression implicates altered B-cell activation and insulin resistance.

PAPERS IN PREPARATION

Clark, S.L., Xie, L.Y., Zhao, M., Copeland, W.E., Aberg, K.A., van den Oord, E.J.C.G. Developmental methylation study of alcohol use from early adolescence through adulthood.

Clark, S.L., Copeland, W.E., Aberg, K.A., van den Oord, E.J.C.G. Adolescent substance use leads to increased biological aging in early adulthood.

Clark, S.L., Zhao, M, Xie, L.Y., Aberg, K.A., van den Oord, E.J.C.G. Mapping the single nuclei transcriptome of the nucleus accumbens in alcohol use disorder.

*Marks, G., Verhulst, B., **Clark, S.L.** Examining sex differences in the relationship between callous-unemotional traits and substance use.

*Vasquez, A., Burt, S.A., **Clark, S.L.** Identifying DNA methylation biomarkers of mental health resiliency.

EXTRAMURAL PRESENTATIONS

LOCAL

July 2021 "DNA methylation as a mediator of prenatal stress timing on infant regulatory functioning". Research presentation. TAMU Stress, Anxiety and Resilience Symposium. College Station, TX.

Oct. 2020 "DNA methylation in alcohol use and addiction in humans (mostly)." Invited talk, Genetics and Genomics (G2) Seminar Series. College Station, TX.

Feb 2020 "Cell-type specific investigation of the DNA methylome and hydroxymethylome in the prefrontal cortex of alcohol dependent patients". Poster presentation, Texas Research Society on Alcoholism annual meeting. College Station, TX.

Sept 2017 "Human alcohol brain methylation and biomarker discovery project: preliminary results from the prefrontal cortex". Invited talk, Clinical Interest Group Seminar Series. Department of Psychology. East Lansing, MI.

July 2014 "Preliminary results of a methylome-wide association study of alcohol in mice". Invited talk, Alcohol Research Center Seminar Series. Richmond, VA.

NATIONAL

June 2021 "Dual methylation and hydroxymethylation study of alcohol use disorder". Poster presentation, Research Society on Alcoholism annual meeting. Virtual.

Oct 2020 "Dual methylation and hydroxymethylation study in blood and brain identifies BAIAP2 as a mediator of gene expression differences associated with alcohol use disorder". Poster presentation, American Society of Human Genetics annual meeting. Virtual.

Oct 2019 "DNA methylation". Invited session chair, American Society of Human Genetics annual meeting. Houston, TX

Oct 2019 "Cell-type specific investigation of the DNA methylome and hydroxymethylome in the prefrontal cortex of alcohol dependent patients". Poster presentation, American Society of Human Genetics annual meeting. Houston, TX

Oct 2018 "Human alcohol brain methylation and biomarker discovery project". Poster presentation, NIDA Genetics Consortia Meeting. Bethesda, MD

June 2017 "Human brain alcohol methylation and biomarker discovery project". Research presentation, Research Society on Alcoholism annual meeting. Denver, CO.

June 2015 "Deep sequencing of 71 candidate genes to detect variation associated with alcohol dependence". Research presentation, Behavioral Genetics Association annual meeting. San Diego, CA

Oct 2015 "Discovering methylation biomarker of addiction and associated health risks". Poster presentation, NIDA Genetics Consortia Meeting. Bethesda, MD

Oct 2014 "Deep sequencing of genes implicated in substance use disorder etiology:

Preliminary GEDI results" Poster presentation, NIDA Genetics Consortia Meeting. Bethesda, MD

Oct 2013 "Methylome-wide association study identifies *CNTN4* as an epigenetic risk factor for alcohol use". Research presentation, World Congress of Psychiatric Genetics annual meeting. Boston, MA.

Nov 2012 "Identifying new biomarkers for alcohol use in a methylome-wide MBD-seq study." Poster presentation, American Society of Human Genetics annual meeting. San Francisco, CA.

June 2012 "Growth mixture modeling with and without a zero-class". Research presentation, Society for Prevention Research annual meeting. Washington, D.C.

June 2011 "Dimensions of liability to substance abuse". Research presentation, NIDA Genetics Consortia Meeting. Bethesda, MD

June 2011 "Regime switching with ordinal data: Modeling drinking trajectories". Research presentation, Society for Prevention Research annual meeting. Washington, D.C.

Apr 2009 "When good latent class analyses go bad: Treating latent class membership as an observed variable". Research presentation, American Educational Research Association annual meeting, San Diego, CA.

June 2008 "Examination of context variables in school based research: Application of multilevel mixture modeling. Session Chair, Society for Prevention Research annual meeting. San Francisco, CA.

June 2008 "Multilevel growth mixture modeling: examining trajectories of student aggression" Research presentation, Society for Prevention Research annual meeting. San Francisco, CA.

June 2008 "When good latent class analyses go bad: Treating latent class membership as an observed variable". Research presentation, Society for Prevention Research annual meeting. San Francisco, CA.

Mar 2008 "Multilevel mixture modeling applications". Research presentation, Joint Statistical Meeting. Salt Lake City, Utah.

June 2007 "How to handle clustered data when deciding on the number of classes in a latent class analysis: A Monte Carlo simulation study." Research presentation, Society for Prevention Research annual meeting. Washington, D.C.

June 2007 "The structure of ADHD: An application of factor mixture modeling." Research presentation, Society for Prevention Research annual meeting. San Francisco, CA.

Apr 2007 "Latent class analysis of non-independent samples." Research presentation, American Educational Research Association annual meeting, Chicago, IL.

<u>INTERNATIONAL</u>

June 2019 "Of mice and men in alcohol use disorder epigenetics". Research presentation, Behavioral Genetics Association annual meeting. Stockholm, Sweden.

Oct 2018 "Comprehensive brain methylation and hydroxymethylation study in alcohol dependent patients." (2018). Poster session, World Congress of Psychiatric Genetics annual meeting. Glasgow, Scotland.

June 2016 "A whole methylome study in brain and blood of DBA/2j(D2) mice after acute ethanol exposure". Research presentation, Behavioral Genetics Association annual meeting. Brisbane, Australia

Mar 2015 "Methylome-wide association studies of schizophrenia". Invited talk, Epigenetics as the meeting point between nature and nurture: An epigenetics workshop. Uppsala University, Uppsala, Sweden.

July 2013 "Genome-wide pharmacogenomic study of anti-depressant induced side effects in STAR*D". Invited talk, Department of Genetic Epidemiology, Queensland Institute for Medical Research, Brisbane, Australia.

June 2013 "Combined methylome- and genome-wide association study identifies CNTN4 as an epigenetic risk factor for alcohol use" Research presentation, Behavior Genetic Association annual meeting. Marseille, France

June 2012 "Using next generation sequencing to investigate methylation patterns associated with alcohol use behaviors". Research presentation, Behavioral Genetics Association annual meeting. Edinburgh, Scotland

Nov 2011 "Pharmacogenomic study of side effects for antidepressant treatment options in STAR*D." Poster presentation, American Society of Human Genetics. Montreal, Canada.

TEACHING

UNDERGRADUATE COURSES

Design and measurement in psychological research, MSU	Fall 2017, 2018

GRADUATE COURSES

Longitudinal data analysis, MSU	Spring 2018
Quantitative methods for psychology in R, MSU	Spring 2019
Mentor, Medical student grand rounds (MEID 618), TAMU	Spring 2021

SHORT COURSES

- Clark, S.L. (2018) Genome-wide association study crash-course. Department of Psychology, Michigan State University.
- Clark, S.L. (2011). Longitudinal analysis with latent variables. Bloomberg School of Public Health Summer Institute in Mental Health Research. John Hopkins University.
- Clark, S.L. (2007). An introduction to mixture modeling: Applications in psychology. 2-day short course presented at the Department of Psychology, University of Indiana, Bloomington.

WORKSHOPS

- Clark, S.L. (2012). Growth mixture modeling. National Institute of Drug Abuse Advanced Genetic Epidemiology Statistical Workshop.
- Clark, S.L. (2012). Cross-sectional mixture modeling. National Institute of Drug Abuse Advanced Genetic Epidemiology Statistical Workshop.
- Clark, S.L. (2010). Mixture and multilevel modeling. National Institute of Drug Abuse Advanced Genetic Epidemiology Statistical Workshop.

RESEARCH ADVISING AND MENTORING

MENTORED UNDERGRADUATE STUDENTS

Garrett Marks, TAMU, callous-unemotional traits and substance use 2020-present
*3rd in undergraduate presentation category at TAMU CoM GSO Research Symposium
Aubrey Rinderknect, TAMU, PTSD and methylation aging 2019-2020
Nancy Bachir, TAMU, Depression and methylation aging 2019-2020
Kayla Hopkins, MSU, Externalizing behavior and alcohol use 2018-2019
Erika Ward, MSU, Psychiatric genetics 2018-2019
Nicole Jedding, MSU, Genetics of behavior 2018-2019
Hannah Fedorisin, MSU, Sex differences in alcohol use 2018-2019
Steven Li, MSU, Alcohol epigenetics 2018-2019
Megan Nicholson, MSU, Alcohol genetics review 2018-2019
Arielle, Buckley, MSU, Alcohol epigenetics 2018-2019
Colleen Rilling, MSU, Substance use genetics 2018-2019

MENTORED GRADUATE STUDENTS

Megan Cooke, PBSG, VCU 2013-2015
Statistical methods mentor for longitudinal mixture models

Mikayla Kim, Psychology, MSU 2017-2019
Master's thesis co-mentor

Xioawan Zhang, Second Language Studies, MSU 2018-2020
Master's committee

Jennifer Gruber, Psychology , MSU 2018-2020
Master's committee

Alexandra Vasquez, Psychology, MSU 2018-2020
Master's committee

Rachael Goodman-Williams, MSU 2019-2020
Ph.D. Dissertation committee

Duha Eldow, Medical Sciences, TAMU 2020-present
Master's co-advisor

Jessika Harris, Medical Sciences, TAMU 2020-present
Master's committee

Sydney Pawlichuk, Medical Sciences, TAMU 2021-present
Master's committee

Hailey Luckie, Medical Sciences, TAMU 2021-present
Master's committee, Chair

MENTORED POSTDOCS

Seung Bin Cho, Department of Psychiatry, VCU 2013-2016
Statistical methods mentor for mixture modeling

Ruth Brown, Department of Psychiatry, VCU 2013-2017
Statistical methods mentor for structural equation modeling

MENTORED FACULTY

Jessica Salvatore, Department of Psychology, VCU 2016-2021
Co-Mentor on NIAAA K01 AA024152 (PI: Salvatore)
Mentoring area: Statistical methods for genetic studies

SERVICE ACTIVITIES

SERVICE TO THE PROFESSION

Member, PGC Substance Use Disorder Epigenomics Workgroup, 2021-present
Member, Education Committee Research Society on Alcoholism (RSA), 2021-present
Member, Fundraising & Initiatives Committee RSA, 2021-present
Judge, DNA Day Essay Contest, American Society of Human Genetics, 2020-present
Judge, Texas Research Society on Alcoholism Poster Competition, 2020
Reviewer, Society for Prevention Research – Innovative Methods, 2010

Ad hoc Grant Reviews:

Medical Research Council, Mental Health and Addiction subsection, May 2017
NIH, Biomedical Research Review (AA-1), March 2019
NIH, Genetics of Health and Disease (GHD), June 2020
NIH, Behavioral Genetics and Epidemiology (BGES), October 2020
NIH, RADx-rad Predicting Viral-Associated Inflammatory Disease Severity in Children with Laboratory Diagnostics and Artificial Intelligence (ZRG1 IDM-C), October 2020

Ad hoc reviewer for professional journals (~8 per year; Selected list):
Addiction, Addiction Biology, Addictive Behaviors, Alcoholism: Clinical and Experimental Research, Drug and Alcohol Dependence, Clinical Epigenetics, Genes Brain and Behavior, Genome Medicine, Epigenetics, Epigenomics, Journal for Studies on Alcohol, Multivariate Behavioral Research, PLoS ONE, Psychological Medicine, Schizophrenia Research, Statistics in Medicine, Structural Equation Modeling

Professional Affiliations

American Society of Human Genetics (ASHG)
Behavioral Genetics Association (BGA)
International Society for Psychiatric Genetics (ISPG)
Research Society on Alcoholism (RSA)

Texas Research Society on Alcoholism (TRSA)

SERVICE TO TEXAS A&M UNIVERSITY

X grant reviewer, 2021
Judge, TAMU Postdoctoral Research Symposium, 2020

SERVICE TO TAMHSC COLLEGE OF MEDICINE

Judge, CoM Graduate Student Organization Research Symposium, 2021
Department Representative, CoM Research Strategic Planning Retreat,2020
Member (elected), Research Advisory Committee, College of Medicine, 2019-present
Member (elected), Faculty Advisory Committee, College of Medicine, 2019-present
Member, Pay Plan Task Force, College of Medicine, 2019

SERVICE TO TAMHSC DEPARTMENT OF PSYCHIATRY

Chair, Faculty Search Committees (2), 2019-present
Member, Faculty Search Committees (4), 2019-present
Member, Dept. of Psychiatry Promotion and Tenure committee, 2019- present

SERIVCE TO TAMU INTERDISCIPLINARY PROGRAM IN GENETICS

Member, Admissions Committee, 2020-present

SERVICE TO MSU DEPARTMENT OF PSYCHOLOGY

Member of Admissions Committee for Clinical Psychology, 2018-2019
Member of Clinical Science Forum committee, 2018
Faculty Judge, Undergraduate Research and Arts Forum, 2018
Member of Clinical Program Awards committee, 2017-2019
Chair of Committee – 2018-2019

SERVICE TO VCU COLLEGE OF MEDICINE

Reviewer for Grant Writing Institute Intensive Workshop, 2015
Faculty Judge, Postdoctoral Scholar Appreciation Week Poster Session, 2014

This CV submitted is most current and correct as of the date of this signature.

Signature:  Date: August 24, 2021

Kathryn E. F. Shamberger – Curriculum Vitae

Department of Oceanography, Texas A&M University, College Station, TX 77843, USA
Office: Eller O&M 911B | Phone: 1-979-845-5752 | Email: katie.shamberger@tamu.edu
https://ocean.tamu.edu/people/profiles/faculty/shambergerkathryn.html

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Education

2011 **Ph.D. in Chemical Oceanography**
University of Washington, Seattle, WA.
Dissertation title: *Calcification, Organic Production, and Carbon Dioxide on a Hawaiian Coral Reef.*
Advisor: Dr. Richard A Feely

2005 **M.S. in Chemical Oceanography**
University of Hawaii-Manoa, Honolulu, HI.
Thesis title: *Processes Controlling Air-Sea Exchange of CO_2 in Kaneohe Bay, Oahu, Hawaii.*
Advisor: Dr. Fred T Mackenzie

2001 **B.A. in Marine Science, emphasis in Chemistry**
University of San Diego, San Diego, CA.
Graduated with honors

Positions Held

2014 – current	Assistant Professor, Texas A&M University (TAMU)
2013	Postdoctoral Investigator, Woods Hole Oceanographic Institution
2011 – 2013	Postdoctoral Scholar, Woods Hole Oceanographic Institution
2005 – 2011	Graduate Research Assistant, University of Washington
2003 – 2005	Graduate Research Assistant, University of Hawaii
2002 – 2003	Graduate Teaching Assistant, University of Hawaii
2001	Intern, Center for Tropical Research, Mote Marine Laboratory

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Research Interests

Ocean acidification, seawater carbonate chemistry, coastal ocean carbon cycling, impacts of climate change on ocean ecosystems, calcifying marine ecosystems, ecosystem-level calcification and production, tropical coral reefs, deep-sea coral reefs, oyster reefs.

Honors and Awards

2018 TAMU Association of Former Students Distinguished Achievement College-Level Teaching Award

2011 – 2013	Woods Hole Oceanographic Institution Postdoctoral Scholarship
2007	Best poster award, Surface Ocean Lower Atmosphere Study (SOLAS) Summer School
2001	Anderson Scholarship for internship with Mote Marine Laboratory, Center for Tropical Research
2000 – 2001	Member of Mortar Board Senior Honors Society, Alcala chapter, University of San Diego
1999	Alcala Leadership Program, University of San Diego
1997 – 2001	University of San Diego Honors Program
1997 – 2001	Trustee Scholarship (academic scholarship), University of San Diego

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Publications

**Indicates graduate student advisee; Shamberger previously published as Fagan*

Number of citations from Google Scholar, 5-year Journal Impact Factor from Web of Science, and Scientific Journal Ranking (SJR) from Scimago Journal and Country Rank. Data accessed on 30 May 2020.

Refereed Publications

16. Steve S. Doo, *Andrea Kealoha, Andreas Andersson, Anne Cohen, *Tacey L. Hicks, Zackary Johnson, Matthew Long, Paul McElhany, Nathaniel Mollica, **Kathryn E. F. Shamberger**, Nyssa Silbiger, Yuichiro Takeshita, D. Shallin Busch. 2020. The challenges of detecting and attributing ocean acidification impacts on marine ecosystems. ICES Journal of Marine Science. 10.1093/icesjms/fsaa094.

- Myself and all coauthors conceived of this paper at the 2018 Ocean Acidification PI meeting in Portland, OR, sponsored by Ocean Carbon Biogeochemistry and NSF. My PhD student Kealoha and I helped lead the section on coral reefs and my PhD student Hicks helped lead the oyster section. Doo and Busch led the writing of the paper and all coauthors helped write, edit, and discuss the paper.
- Citations: 0; Journal Impact Factor: 3.402; SJR: 1.591

15. *Kealoha A.K., S.M. Doyle, **K.E.F. Shamberger**, J.B. Sylvan, R.D. Hetland, S.F. DiMarco. 2020. Localized hypoxia drives coral reef mortality at the Flower Garden Banks. Coral Reefs. 39, 119–132. https://doi.org/10.1007/s00338-019-01883-9

- This study utilizes chemical (Kealoha and Shamberger), physical (Hetland and DiMarco), and biological (Doyle and Sylvan) oceanography data to determine the mechanisms that led to an unprecedented coral reef mortality event likely caused by hypoxia. I advised Kealoha, helped write and edit the paper, and all carbonate chemistry analyses were performed in my lab by Kealoha and funded by my startup. DiMarco organized and funded the cruise and I provided supplies and arranged for carbonate chemistry samples to be collected on the cruise. Kealoha and Doyle led the writing and all coauthors edited the paper.
- Citations: 1; Journal Impact Factor: 3.551; SJR: 1.46

14. Wright, Rachel M., Adrienne M.S. Correa, Lucinda A. Quigley, Lory Z. Santiago-Vázquez, **Kathryn E. F. Shamberger**, Sarah W. Davies. 2019. Gene expression of endangered coral (*Orbicella* spp.) in Flower Garden Banks National Marine Sanctuary after Hurricane Harvey. Frontiers in Marine Science. 6:672. doi:10.3389/fmars.2019.00672

- This paper shows genetic markers of stress in corals following Hurricane Harvey, despite the storm not hitting these reefs directly and the reefs appearing healthy. I am a co-PI on the NSF RAPID grant that funded this work, helped design the study, myself and graduate and undergraduate students from my lab participated in the cruises and helped collect samples, and I edited the manuscript. Wright performed the coral analyses in Davies' lab and led the writing with Davies.
- Citations: 3; Journal Impact Factor: 3.086; SJR: 1.37

13. *Kealoha A.K., **Shamberger K.E.F.**, Reid E., Davis K.A., Lentz S.J., Brainard, R., Oliver T., Rappe M., Roark E.B., Rii S. 2019. Heterotrophy of oceanic particulate organic matter elevates net ecosystem calcification. Geophysical Research Letters. 46, 9851–9860. https://doi.org/10.1029/2019GL083726

- The paper shows for the first time that coral reef ecosystem calcification increases with increasing reef consumption of organic particles transported to the reef from offshore. I conceived of, led, and funded the project with my startup; advised the lead author; coordinated and performed field work; coordinated sample and data analyses; and helped lead the writing. Kealoha led the writing, performed field work, led part of the field work, performed carbonate chemistry analyses in my lab, and led the data analyses.
- Citations: 1; Journal Impact Factor: 4.909; SJR: 2.66

12. **Shamberger, K.E.F.**, S.J. Lentz, A.L. Cohen. 2018. Low and Variable Ecosystem Calcification in a Coral Reef Lagoon under Natural Acidification. Limnology and Oceanography, 63(2), 714-730, 10.1002/lno.10662.

- This paper is the first time ecosystem calcification rates were determined for a naturally low-pH coral reef and shows low and variable rates despite high coral cover and diversity. I led the writing of the paper, with edits provided by Lentz and Cohen. All three authors are co-PIs on the NSF grant (led by Cohen) that funded this project; conceived of and designed the project; and performed field work. I performed carbonate chemistry analyses, Lentz calculated residence times, and all three authors performed data analysis.
- Citations: 3; Journal Impact Factor: 4.402; SJR: 1.96

11. Baco, Amy R., Nicole Morgan, E. Brendan Roark, Mauricio Silva, **Kathryn E. F. Shamberger**, Kelci Miller. 2017. Defying Dissolution: Discovery of Deep-Sea Scleractinian Coral Reefs in the North Pacific. Scientific Reports, 7, 5436, 10.1038/s41598-017-05492-w.

- This paper reports the first discovery of deep-sea calcifying coral reefs in the North Pacific, with some reefs in undersaturated water that should dissolve the reef structure. I provided training and supplies to collect carbonate chemistry samples, and Miller performed carbonate chemistry analyses in my lab with the help of my graduate and undergraduate students. I performed data analyses and helped write the paper. Baco and Roark are co-PIs on the NSF grant that funded the work and Baco led the writing of the paper.

- Citations: 17; Journal Impact Factor: 4.525; SJR: 1.41

10. DeCarlo, T.M., A.L. Cohen, G.T.F. Wong, F.-K. Shiah, S.J. Lentz, K.A. Davis, **K.E.F. Shamberger**, P. Lohmann. 2017. Community production modulates coral reef pH and the sensitivity of ecosystem calcification to ocean acidification. JGR-Oceans, 122, 10.1002/2016JC012326.

- This project documents the highest coral reef ecosystem calcification rates ever measured, showed declines in calcification during a coral bleaching event, and showed community production affects the sensitivity of reefs to ocean acidification. I performed field work; assisted with sample/data analyses and calculations; and edited the paper. Cohen led the project and advised DeCarlo. DeCarlo led the analyses and writing.
- Citations: 40; Journal Impact Factor: 3.567; SJR: 1.89 (for JGR, JGR-Oceans not ranked)

9. Albright, R., Caldeira, L., Hosfelt, J., Kwiatkowski, L., Maclaren, J. K., Mason, B. M., Nebuchina, Y., Ninokawa, A., Pongratz, J., Ricke, K. L., Rivlin, T., Schneider, K., Sesboue, M., **Shamberger, K.**, Silverman, J., Wolfe, K., Zhu, K., Caldeira, K. 2016. Reversal of ocean acidification enhances net coral reef calcification. Nature, 531, 362-365, 10.1038/nature17155.

- This paper attributes declines in coral reef ecosystem calcification to ocean acidification in the field for the first time. I edited the paper and helped develop the experimental approach used for this paper during field work performed with Caldeira and other coauthors prior to the field work done for this paper. Caldeira, K. conceived of and funded the project and Albright led the field work, sample and data analyses, and writing of the paper.
- Citations: 161; Journal Impact Factor: 45.819; SJR: 16.35

8. Barkley, H.C., Cohen, A.L., Golbuu, Y., Starczak, V.R., DeCarlo, T.M., and **Shamberger, K.E.F.** 2015. Changes in coral reef communities across a natural gradient in seawater pH. Science Advances, 1, e1500328.

- This paper is a follow-up study from Shamberger et al. (2014) (publication #6) and shows changes in coral reef community composition and an increase in bioerosion with decreasing pH across a natural pH gradient in Palau. I am a co-PI on an NSF grant that partially funded this work; performed field work; assisted with sample/data analyses; and edited the paper. Cohen led the project and advised Barkley. Barkley led the analyses and writing.
- Citations: 75; Journal Impact Factor: 13.293; SJR: 6.27

7. DeCarlo, T.M., A.L. Cohen, H.C. Barkley, Q. Cobban, C. Young, **K. Shamberger**, R. Brainard, Y. Golbuu. 2015. Coral macrobioerosion is accelerated by ocean acidification and nutrients. Geology, 10.1130/G36147.1.

- This paper shows that macrobioerosion increases with decreasing pH across natural gradients in the Pacific and that the sensitivity of macrobioerosion to changing pH is significantly greater under high-nutrient conditions. I am a co-PI on an NSF grant that partially funded this work, performed field work and sample/data analyses for a subset of the data used in this study, and edited the paper. Cohen led and funded the project and advised DeCarlo. DeCarlo led the analyses and writing.
- Citations: 91; Journal Impact Factor: 5.406; SJR: 2.87

6. **Shamberger, K. E. F.**, Cohen, A. L., Golbuu, Y., McCorkle, D. C., Lentz, S. J., Barkley, H. C. 2014. Diverse Coral Communities in Naturally Acidified Waters of a Western Pacific Reef. Geophysical Research Letters, 41, 10.1002/2013GL058489.

- This paper documents the first known occurrence of coral reefs with high diversity and coral cover in naturally low-pH conditions, and describes the oceanographic and biogeochemical mechanisms that result in low pH. I am a co-PI (with Cohen and Lentz) on an NSF grant that partially funded this work; performed field work and sample/data analyses; and led the writing. Cohen led the project and edited the paper.
- Citations: 103; Journal Impact Factor: 4.909; SJR: 2.66

5. Drupp, P. S., De Carlo, E. H., Mackenzie, F. T., Sabine, C. L., Feely, R. A., **Shamberger K. E. F.** 2013. Comparison of CO_2 Dynamics and Air-Sea Gas Exchange in Differing Tropical Reef Environments. Aquatic Geochemistry, 10.1007/s10498-013-9214-7.

- This paper utilizes in-situ CO_2 measurements by three different automated buoys around Oahu, HI to examine oceanographic and biogeochemical influences on the seawater CO_2 system in tropical reef environments. I assisted with data analysis and edited the paper. De Carlo led the study and advised Drupp. De Carlo, Mackenzie, Sabine, and Feely funded the work. Drupp led the writing.
- Citations: 41; Journal Impact Factor: 1.647; SJR: 0.6

4. Massaro, R. F. S., De Carlo, E. H., Drupp, P. S., Mackenzie, F. T., Maenner-Jones, S., **Shamberger, K. E.**, Sabine, C. L., Feely, R. A. 2012. Multiple Factors driving Variability of CO_2 Exchange Between the Ocean and Atmosphere in a Tropical Coral Reef Environment. Aquatic Geochemistry, 18(4), 357-386, 10.1007/s10498-012-9170-7.

- This paper utilizes in-situ CO_2 measurements to examine oceanographic and biogeochemical influences on the seawater CO_2 system in a tropical coral reef lagoon. I assisted with data analysis and edited the paper. De Carlo led the study and writing, and advised Massaro. De Carlo, Mackenzie, Sabine, and Feely funded the work.
- Citations: 36; Journal Impact Factor: 1.647; SJR: 0.6

3. **Shamberger, K. E. F.**, Feely, R. A., Sabine, C. L., Atkinson, M. J., DeCarlo, E. H., Mackenzie, F. T., Drupp, P. S., Butterfield, D. A. 2011. Calcification and Organic Production on a Hawaiian Coral Reef. Marine Chemistry, 127(1-4), 64-75, 10.1016/j.marchem.2011.08.003.

- This paper shows that while coral reef net ecosystem calcification is strongly correlated with seawater CO_2, individual reefs have different sensitivities to ocean acidification. I performed field work and sample/data analyses, and wrote the paper. Feely and Sabine advised Shamberger and funded the work. All coauthors contributed to field work and discussions, and edited the paper.
- Citations: 141; Journal Impact Factor: 3.779; SJR: 1.52

2. **Fagan, K. E.** and Mackenzie, F. T. 2007. Air-sea CO_2 exchange in a subtropical estuarine-coral reef system, Kaneohe Bay, Oahu, Hawaii. Marine Chemistry, 106(1-2): 174-191. doi:10.1016/j.marchem.2007.01.016

- This was the first time-series study of air-sea CO_2 exchange in a coral reef lagoon and showed the lagoon to be an annual net source of CO_2 to the atmosphere, despite short

periods following storm events when the lagoon serves as a net CO_2 sink. I performed field work and sample/data analyses, and wrote the paper. Mackenzie advised Fagan, funded the work, and edited the paper.

- Citations: 81; Journal Impact Factor: 3.779; SJR: 1.52

1. E. Gaidos, B. Deschenes, L. Dundon, **K. Fagan**, C. Mcnaugton, L. Menviel-Hessler, N.Moskovitz, and M. Workman. 2005. Beyond the Principle of Plenitude: A Review of Terrestrial Planet Habitability. Astrobiology, 5(2): 100-126.

- This paper was written as part of a graduate course taught by Gaidos. All coauthors were students in the class and each wrote a section of the paper as the final class project. I helped write the section on carbon and nitrogen cycling. Gaidos conceived the project, led the writing of the paper, and edited and integrated the student sections into the paper.
- Citations: 45; Journal Impact Factor: 3.79; SJR: 1.22

Publications Under Review

Shore, Amanda N, Jordan A Sims, Michael Grimes, Lauren I. Howe-Kerr, Lauren Stadler, Jason Sylvan, **Kathryn E.F. Shamberger**, Sarah W. Davies, Lory Z. Santiago-Vázquez, Adrienne M.S. Correa. *in review*. On a reef far, far away: Offshore transport of floodwaters following extreme storms impacts sponge health and associated microbial communities. Environmental Microbiology.

- This paper shows changes in microbial communities associated with coral reef sponges following flooding events. I am a co-PI on the NSF RAPID grant that funded this work; helped design the study; myself and graduate and undergraduate students from my lab participated in the cruises and helped collect samples; and I edited the manuscript. Shore performed the analyses in Correa's lab and led the writing with Correa.
- Journal Impact Factor: 5.513; SJR: 2.26

Lentz S.J, Cohen A.L., **Shamberger K.E.F.**, Barkley H.C. *in review*. Observations and a Model of Net Calcification Declines in Palau's Largest Coral Reef Lagoon between 1992 and 2015. JGR-Oceans.

- This paper utilizes a tidal exchange model to estimate coral reef ecosystem calcification rates and shows long-term declines in Palauan lagoon-barrier reef system calcification. I am a co-PI on the NSF grant (with Cohen and Lentz) that funded this project, performed carbonate chemistry analyses, and edited the paper. Lentz conceived of and wrote the paper. All coauthors edited the paper.
- Journal Impact Factor: 3.567; SJR: 1.89 (for JGR, JGR-Oceans not ranked)

*Kealoha A.K., **Shamberger K.E.F.**, DiMarco S.F., Thyng K.M., Hetland R.D., Manzello D.P., Slowey N.C., Enochs I.C. *in review*. Surface Water CO_2 Variability in the Gulf of Mexico (1996-2017). Scientific Reports.

- This paper utilizes publicly available underway CO_2 measurements to examine long-term trends in Gulf of Mexico surface water CO_2. While western and eastern coastal and open ocean waters show increasing CO_2 trends, central Gulf of Mexico CO_2 remained fairly stable over this time period. I advised Kealoha and helped write and edit the paper. Kealoha led the analyses and writing
- Journal Impact Factor: 4.525; SJR: 1.41

Publications In Preparation

*Hicks, T.L., **Shamberger K.E.F.**, Fitzsimmons, J.N., Thyng, K., Jensen, C. Carbonate Chemistry of Galveston Bay estuary: Impact of Hurricane Harvey and Implications for Oyster Reef Health. To be submitted to Nature Climate Change.

Non-Refereed Publications

Manzello D.P. and **Shamberger K.E.F.** 2015. Is there a CO_2 tipping point for coral reefs? Spring 2015 Ocean Carbon & Biogeochemistry Newsletter.

- OCB invited Manzello and I to write this newsletter. We compare coral reef health across several naturally low-pH sites, which taken together, suggest that temperature stress and elevated nutrients significantly exacerbate the negative impacts of ocean acidification. Manzello and I conceived of and wrote the newsletter together.

Funding History

*+Indicates undergraduate student advisee, *Indicates graduate student advisee*

Funded Grants

2019

A. Baco-Taylor (PI, FSU), B. Roark (Co-PI, TAMU), **K. Shamberger** (Co-PI, TAMU). NSF Division of Ocean Sciences 1851378 (TAMU), 1851365 (FSU). *Collaborative Research: Defying Dissolution: Unraveling the Enigma of North Pacific Deep-Sea Scleractinian Reefs in Undersaturated Water*. $1,828,841 ($853,391 to TAMU) (09/15/2019 to 08/31/2023)

- This project follows the discovery by all three PIs of deep-sea coral reefs in undersaturated water, for which my lab did all carbonate chemistry analyses (Baco et al. 2017, publication #11). I developed the motivation and hypotheses for the project and Baco-Taylor led the writing of the proposal. All PIs wrote the proposal together. I will lead the carbonate chemistry analyses, dissolution measurements, and reef net calcification calculations; Roark will lead the paleo-pH proxy work; and Baco-Taylor will lead the habitat suitability modeling. This project funds two 45 day research cruises and supports all PIs, two TAMU graduate students, and an FSU postdoc.

*S. Smith and **K.E.F. Shamberger** (PI, TAMU). Grants-In-Aid of Graduate Research, NOAA Texas Sea Grant. *Seawater Carbonate Chemistry at the Flower Garden Banks National Marine Sanctuary in the Northwestern Gulf of Mexico Following Hurricane Harvey*. $2500 (09/01/19 to 08/30/21)

- This grant provides funding for Smith to analyze carbonate chemistry samples that were opportunistically collected as part of an NSF RAPID grant I am Co-PI. I conceived of the project and guided Smith through writing the proposal. I advise Smith and will guide her through data analysis, interpretation, and presentation of results.

*T.L. Hicks and **K.E.F. Shamberger** (PI, TAMU). Grants-In-Aid of Graduate Research, Texas Sea Grant. *Characterizing Seawater Biogeochemistry of Deep-Sea Coral Reefs in the North Pacific*. $2500 (09/01/19 to 08/30/21)

- This grant provides funding for Hicks to analyze carbonate chemistry samples that were opportunistically collected by my collaborator E. B. Roark. I guided Hicks on the development and writing of the proposal. I advise Hicks and will guide her through data analysis, interpretation, and presentation of results.

K.E.F. Shamberger (PI, TAMU), S. Yvon-Lewis (Co-PI, TAMU), A. Quigg (Co-PI, TAMUG). T3: Texas A&M Triads for Transformation. *Impacts of Primary Productivity on Air-Sea Gas Exchange in an Anthropogenic Estuary*. $33,917 (01/01/19 to 12/31/20 plus 1 year no cost extension)

- This grant provides funding for sample analyses to combine the work of the PIs for the first time to investigate primary production and exchange of natural and anthropogenic gasses in Galveston Bay. This grant is also funding sample analyses for six different TAMU groups in Oceanography, TAMU Galveston, and Civil & Environmental Engineering, as part of a large interdisciplinary Galveston Bay project. I conceived of and wrote the proposal, with input and edits from Yvon-Lewis and Quigg, and my lab is investigating carbonate chemistry and air-sea CO_2 exchange.

2018

A. Knap (Co-PI, TAMU) and **K.E.F. Shamberger** (Co-PI, TAMU). DOE Office of Fossil Energy #DEFE0031558 to K. Romanak (lead PI, University of Texas at Austin). *Offshore Gulf of Mexico Partnership for Carbon Storage Resources and Technology Development (GOMCarb)*. $53,987 to TAMU (04/01/18 to 12/31/20)

- This grant is a subcontract to TAMU Geochemical & Environmental Research Group (GERG) for Knap and I to advise on geochemical monitoring of the seawater column for secure, long-term, large-scale, sub-seafloor geologic CO_2 storage. Knap invited me to join this project because of my expertise in seawater CO_2 chemistry. Romanak conceived of and wrote the proposal. The grant provides support for Knap and travel for Knap and I to participate in project meetings.

K.E.F. Shamberger (PI, TAMU) and J.B. Syvlan (Co-PI, TAMU). High Impact Learning Experience Grant, College of Geosciences, Texas A&M University. *Impact of freshwater runoff from Hurricane Harvey on Coral Reef Benthic Organisms and associated microbial communities*. $4260 (09/21/18 to 08/31/20)

- This grant has provided funding for 5 undergraduate students in my (3 students) and Sylvan's (2 students) labs to analyze carbonate chemistry and microbiology samples that were opportunistically collected as part of an NSF RAPID grant Sylvan and I are Co-PIs on. Sylvan and I conceived of and wrote the proposal together and advised students on data analysis, interpretation, and presentation of results.

2017

C. Wiederwohl (PI, TAMU), **K. Shamberger** (Co-PI, TAMU), S. Yvon-Lewis (Co-PI, TAMU). EPA Gulf of Mexico Cooperative Agreements #12461398. *Gulf Coast Stewards of Tomorrow: Working Towards a Sustainable Future through At-Sea Learning for South Texas Middle and High School Students*. $149,851 (12/01/17 to 11/30/20).

- This grant provides support for the PIs and funding for over 2000 TX underrepresented and underserved middle and high school students to participate in oceanography research

on short day cruises aboard the Texas Floating Classroom's (TFC) vessel *Archimedes*. Training is also provided for over 30 educators on how to implement oceanography content into their curriculum. In addition, seawater quality data collected on TFC cruises are being made publically available on the Gulf of Mexico Coastal Ocean Observing System (GCOOS) website. Wiederwohl is leading the project, I am implementing ocean acidification content into the project, and all PIs are holding in-person and web-based trainings, and developing curriculum.

A.M.S. Correa (PI, Rice), **K.E.F. Shamberger** (Co-PI, TAMU), J.B. Sylvan (Co-PI, TAMU), S.W. Davies (Co-PI, Boston U), L.Z. Santiago-Vasquez (Co-PI, U Houston-Clear Lake). NSF Division of Ocean Sciences #1800914 (Rice), #1800913 (TAMU), #1800904 (Boston U), #1800905 (UH-Clear Lake). *RAPID: Collaborative Research: Impact of freshwater runoff from Hurricane Harvey on coral reef benthic organisms and associated microbial communities*. $199,997 ($68,399 to TAMU) (10/09/17 to 10/08/18 plus 1.5 year no cost extension to TAMU).

- This project investigates the indirect impacts of Hurricane Harvey on the health of coral reef ecosystems off the TX coast. The grant funded three research cruises, analyses by all PIs, and support for all the PIs and three postdocs. This project has thus far contributed to publication #14, Shore et al. *in review*, and Smith's MS thesis in my lab. I led the water chemistry portion of the project, participated in field work, and the collection and analyses of all carbonate chemistry data were done by my lab.

T. Knap (PI, TAMU), S. DiMarco (Co-PI, TAMU), P. Chapman (Co-PI, TAMU), H. Potter (Co-PI, TAMU), **K. Shamberger** (Co-PI, TAMU). NSF Division of Ocean Sciences #1760381. *RAPID: The impact of increased fresh water input from Hurricane Harvey to the water quality and stratification of coastal and offshore waters of Texas*. $199,592 (09/17/17 to 09/16/18).

- This grant funded two research cruises along the TX coast following Hurricane Harvey, along with some funding for the PIs and carbonate chemistry analyses. The collection and analyses of all carbonate chemistry data for the project were done by my lab.

2016

+J. Brooks and **K.E.F. Shamberger** (PI, TAMU). Undergraduate Scholars Program, Texas Sea Grant. *Investigation of Changing Seawater Carbonate Chemistry Near Deep-Sea Coral Beds*. $1000 (11/1/16 to 10/31/17)

- This grant provided funding for Brooks to analyze carbonate chemistry samples that were opportunistically collected by my collaborator E. B. Roark. I was Brooks' advisor in the TAMU Undergraduate Research Scholars program that she wrote a thesis for using these data. I conceived of the project and advised Brooks through data analysis, interpretation, and presentation of results. These data were used in Baco et al. (2017, publication #11) and the proposal that funded an NSF grant I am Co-PI on (with Baco and Roark).

K.E.F. Shamberger (PI, TAMU). High Impact Learning Experience Grant, College of Geosciences, Texas A&M University. *Seawater Carbonate Chemistry of Deep-sea Coral Beds.* $300 (08/01/16 to 07/31/17)

- This grant provided funding for undergraduate student Brooks to analyze carbonate chemistry samples that were opportunistically collected by my collaborator E. B. Roark. I was Brooks' advisor in the TAMU Undergraduate Research Scholars program that she

wrote a thesis for using these data. I conceived of the project and advised Brooks through data analysis, interpretation, and presentation of results. These data were used in Baco et al. (2017, publication #11) and the proposal that funded an NSF grant I am Co-PI on (with Baco and Roark).

*A.K. Kealoha and **K.E.F. Shamberger** (PI, TAMU). Grants-In-Aid of Graduate Research, Texas Sea Grant. *The influence of oceanic particulate organic matter uptake on coral reef calcification: Implications for ocean acidification*. $2025 (05/1/16 to 04/30/17)

- This grant helped fund field work for a project that I led and funded primarily with my startup. This project resulted in Kealoha's first publication from her PhD research (Kealoha et al. 2019, publication #13) and was used in an NSF CAREER proposal (not funded, to be resubmitted).

2014

*A.K. Kealoha and **K.E.F. Shamberger** (PI, TAMU). Department of Oceanography Students at Sea Grant, Texas A&M University. *Net Ecosystem Calcification and Production on a Palauan Barrier Reef*. $4000 (12/1/14 to 11/31/15)

- This grant provided funding for Kealoha to receive field training critical for her PhD research, during work funded by an NSF grant I am Co-PI on (with Cohen and Lentz). I guided Kealoha in writing the proposal and conceived of the project with Cohen and Lentz.

2012

A. Cohen (PI, WHOI), S. Lentz (Co-PI, WHOI), **K. Shamberger** (Co-PI, WHOI). NSF Ocean Acidification Program #1220529. *Toward Predicting the Impact of Ocean Acidification on Net Calcification by a Broad Range of Coral Reef Ecosystems: Identifying Patterns and Underlying Causes*. $695,322 to WHOI (9/1/12 to 08/31/15 plus 6 month no cost extension)

- This project highlighted the important role of primary production and other processes that modulate reef pH on the acidification and calcification of coral reef ecosystems. The project contributed to 11 peer-reviewed publications (including publications #6-8, 10, 12, and Lentz et al. *in review*), one software program (coral CT), postdoctoral research, four PhD theses, one undergraduate senior thesis, and a PBS NOVA documentary on ocean acidification. This grant funded my postdoctoral research, Cohen led the project, and Cohen and Lentz both advised my postdoctoral work. All three PIs wrote the proposal together. This was my first time writing an NSF proposal.

Declined Grants

2019

JN Fitzsimmons (PI, TAMU), P Chapman (Co-PI, TAMU), S DiMarco (Co-PI, TAMU), **K Shamberger** (Co-PI, TAMU), S Yvon-Lewis (Co-PI, TAMU). NSF Ocean Sciences Division 1949017. *CarGOS: Carbon in the Gulf Ocean System*. $1,425,248 requested

K Thyng (PI, TAMU), **K.E.F. Shamberger** (Co-PI, TAMU), Christin Jensen (Co-PI, TX Parks and Wildlife Dept). Texas Sea Grant. *Oyster larval transport and acidification in Galveston Bay.* $300,000 requested (pre-proposal submitted, full proposal encouraged but not submitted)

K Thyng (PI, TAMU), **K.E.F. Shamberger** (Co-PI, TAMU), Christin Jensen (Co-PI, TX Parks and Wildlife Dept). National Academies Gulf Research Program. *Oyster larval transport and acidification in Galveston Bay.* $500,000 requested (pre-proposal submitted, full proposal encouraged but not submitted)

2018

K.E.F. Shamberger (PI, TAMU), S. Yvon-Lewis (Co-PI, TAMU), A. Quigg (Co-PI, TAMUG). T3: Texas A&M Triads for Transformation. *Impacts of Primary Productivity on Air-Sea Gas Exchange in an Anthropogenic Estuary*. $30,000 requested (funded on second submission)

K.E.F. Shamberger (PI, TAMU). NSF Ocean Sciences Division. *CAREER: Coral Reef Climate Change Vulnerability: Impact of Heterotrophy of Oceanic Particulate Organic Matter on Ecosystem Calcification*. $646,140 requested

JN Fitzsimmons (PI, TAMU), G Gold-Bouchot (Co-PI, TAMU), K-H Chu (Co-PI, TAMU), **K.E.F. Shamberger** (Co-PI, TAMU), S. Yvon-Lewis (Co-PI, TAMU), A. Quigg (Co-PI, TAMU). TAMU X-Grants. *Fate and transport of contaminants in the Gulf of Mexico critical coastal zone*. $1,500,000 requested (pre-proposal submitted, full proposal not encouraged)

K Thyng (PI, TAMU), **K.E.F. Shamberger** (Co-PI, TAMU), Christin Jensen (Co-PI, TX Parks and Wildlife Dept). Galveston Bay Estuary Program. *Oyster larval transport and acidification in Galveston Bay.* $148,000 requested

K Thyng (PI, TAMU), **K.E.F. Shamberger** (Co-PI, TAMU), Jason Sylvan (Co-PI, TAMU). TAMU Program to Enhance Scholarly and Creative Activities (PESCA). *Transport, chemical, and biological processes impacting the Flower Garden Banks coral reefs.* $25,000 requested

2017

K.E.F. Shamberger (PI, TAMU) and J. Pollack (Co-PI, TAMU-CC). Texas Sea Grant. *Are Oyster Reef Restoration Trajectories Affected by pH?* $149,927 requested

K.E.F. Shamberger (PI, TAMU). TAMU TEES Seed Grants for Water Research. *Coastal Acidification in Gulf of Mexico Estuaries: Implications for Oyster Fisheries*. $25,000 requested

2016

K.E.F. Shamberger (PI, TAMU), S. DiMarco (Co-PI, TAMU), R. Hetland (Co-PI, TAMU). NSF Division of Ocean Sciences 1635050. *Processes Affecting Coastal Hypoxia and Acidification: Multiple Anthropogenic Stresses in a Tropical Bay*. $899,707 requested

K.E.F. Shamberger (PI, TAMU). Packard Foundation. *Ocean Acidification in Coastal Calcifying Ecosystems*. $787,500 requested (Shamberger nominated by College of Geosciences)

S. DiMarco (PI, TAMU) and ~dozen Co-PIs, including **Shamberger**. NOAA 1604456. *Cooperative Institute for Gulf of Mexico Connectivity*. $24,893,056 total ($875,000 to Shamberger) requested

K.E.F. Shamberger (PI, TAMU) and J. Pollack (Co-PI, TAMU-CC). NOAA-RESTORE 1701087. *Are Oyster Reef Restoration Trajectories Affected by pH?* $1,291,115 total ($623,996 to TAMU) requested

S. Siedlecki (PI, UW), **K.E.F. Shamberger** (Co-PI, TAMU) and R. Hetland (Co-PI, TAMU). NOAA-RESTORE 1701092. *Experiments with Seasonal Forecasts of ocean acidification conditions for the Flower Garden Banks region in the Gulf of Mexico*. $1,973,481 total ($1,320,290 to TAMU) requested

K.E.F. Shamberger (PI, TAMU). Alfred P. Sloan Foundation Research Fellowships in Ocean Sciences. *Ocean Acidification in Coastal Calcifying Ecosystems*. $120,000 requested

2015

K.E.F. Shamberger (PI, TAMU) and J. Pollack (Co-PI, TAMU-CC). Texas Sea Grant. *Ocean Acidification Sensitivity of Natural and Restored Oyster Reefs in Copano Bay, Texas*. $199,998 total ($163,246 to TAMU) requested

2014

K.E.F. Shamberger (PI, TAMU). Marion Milligan Mason Award for Women in the Chemical Sciences. *Coral Reef Vulnerability to Ocean Acidification: Effects of Particulate Organic Matter Uptake on Ecosystem Calcification*. $50,000 requested

K.E.F. Shamberger (PI, TAMU). Alfred P. Sloan Foundation Research Fellowships in Ocean Sciences. *Ocean Acidification in Coastal Calcifying Ecosystems*. $50,000 requested

K.E.F. Shamberger (PI, TAMU), S. DiMarco (Co-PI, TAMU), R. Hetland (Co-PI, TAMU). NSF Division of Ocean Sciences 1459495. *Processes Affecting Coastal Hypoxia and Acidification: Multiple Anthropogenic Stresses in a Tropical Bay*. $898,342 requested

K.E.F. Shamberger (PI, TAMU). NOAA NMFS Marine National Monument Program. *Coral Reef Vulnerability to Ocean Acidification: Effects of Particulate Organic Matter Uptake on Ecosystem Calcification*. $68,785 requested

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Field Experience (295 days total)

Jun 2018	(1 day) R/V *Trident*. Galveston Bay research cruise. Carbonate chemistry lead.
Nov 2017	(1 day) R/V *Trident*. Hurricane Harvey Galveston Bay research cruise. Carbonate chemistry lead.
Oct 2017	(6 days) R/V *Point Sur*. Hurricane Harvey Flower Garden Banks research cruise. Project Co-PI.
Sep 2017	(2 days) R/V *Pelican*. Hurricane Harvey Texas coast and Flower Garden Banks research cruise. Project Co-PI.
Feb 2017	(3 days) Palau International Coral Reef Center. Filmed a Google 360 video with TAMU on my coral reef research. Project lead.

Jan 2017	(17 days) Hawaii Institute of Marine Biology. Coral reef field work in Kaneohe Bay, Oahu, HI. Project lead.
Jan 2015	(16 days) Palau International Coral Reef Center. Coral reef field work in Palau. Project Co-PI.
Jun-Jul 2014	(10 days) Dongsha Atoll Research Station, Dongsha Atoll Marine National Park. Coral reef field work in the South China Sea. Project Co-PI.
Oct-Nov 2013	(21 days) Palau International Coral Reef Center. Coral reef field work in Palau. Project Co-PI.
Feb-Mar 2013	(35 days) One Tree Island Research Station. Coral reef field work on the Great Barrier Reef. Helped develop experimental methods and collected and analyzed carbonate chemistry water samples.
Mar-Apr 2012	(18 days) Palau International Coral Reef Center. Coral reef field work in Palau. Project Co-PI.
Sep 2011	(10 days) Palau International Coral Reef Center. Coral reef field work in Palau. Helped coordinate and collect seawater samples.
Jan-Feb 2010	(19 days) Hawaii Institute of Marine Biology. Coral reef field work in Kaneohe Bay, Oahu, HI. Project lead.
Aug-Sep 2009	(18 days) Hawaii Institute of Marine Biology. Coral reef field work in Kaneohe Bay, Oahu, HI. Project lead.
Jan-Feb 2009	(21 days) Hawaii Institute of Marine Biology. Coral reef field work in Kaneohe Bay, Oahu, HI. Project lead.
Jun 2008	(18 days) Hawaii Institute of Marine Biology. Coral reef field work in Kaneohe Bay, Oahu, HI. Project lead.
Sep 2007	(1 day) Hawaii Institute of Marine Biology. Coral reef field work in Kaneohe Bay, Oahu, HI. Scouted out sites for instrument deployment for 2008 field work.
Feb-Mar 2006	(29 days) R/V *Hi'ialakai*. NOAA Coral Reef Ecosystem Division research cruise in American Samoa. Carbonate chemistry lead.
2003-2004	(25 days) Hawaii Institute of Marine Biology. Coral reef field work in Kaneohe Bay, Oahu, HI. 1 day research cruises every other week from Sep 2003 through Sep 2004. Project lead.
Mar 2000	(24 days) The School for Field Studies, Turks & Caicos Islands, British West Indies. Performed coral reef benthic and fish surveys via scuba on reefs surrounding South Caicos island.

Presentations

*+Indicates undergraduate student advisee, *Indicates graduate student advisee*

Presentations only included for which Shamberger or a student advisee was the presenter

Shamberger previously presented as Fagan

Conference Presentations

33. **K. E. F. Shamberger**, A. L. Cohen, S. J. Lentz, H. C. Barkley, T. M. DeCarlo, D. C. McCorkle, M. Gouezo, Yimnang Golbuu, G. Rengiil. 2021. Coral Reef Ecosystem Metabolism

Over Twenty Years on Palau's Barrier Reef. 14th International Coral Reef Symposium, Bremen, Germany. Oral presentation accepted, **session chair**. Moved from 2020 to 2021 for COVID-19.

32. *Kealoha A.K., **K. E. F. Shamberger**, Reid EC, Davis KA, Lentz SJ, Brainard RE, Oliver TA, Rappe MS, Roark EB, Rii YM Heterotrophy of oceanic particulate organic matter elevates net ecosystem calcification. 2021. Coral Reef Ecosystem Metabolism Over Twenty Years on Palau's Barrier Reef. 14th International Coral Reef Symposium, Bremen, Germany. Oral presentation accepted, **session chair**. Moved from 2020 to 2021 for COVID-19.

31. *Hicks, T. L., **K. E. F. Shamberger**, Roark EB, Baco AR, Miller K. 2021. Characterizing Seawater Biogeochemistry of Deep-Sea Coral Reefs Across the Northwest Hawaiian Islands and Emperor Seamount Chain. 14th International Coral Reef Symposium, Bremen, Germany. Oral presentation accepted. Conference moved from 2020 to 2021 for COVID-19.

30. **Shamberger, K. E. F.**, *AK Kealoha, S Doyle, JB Sylvan, RD Hetland, SF DiMarco. 2020. Localized Hypoxia May Have Caused Coral Reef Mortality at the Flower Garden Banks. ASLO Ocean Sciences Meeting 2020, San Diego, CA, USA. Oral presentation.

29. *Hicks, T. L., **Shamberger, K. E. F.**, Jensen, C., Fitzsimmons, JN. 2020. Carbonate Chemistry of Galveston Bay Estuary: Impact of Hurricane Harvey and Implications for Oyster Reef Health. ASLO Ocean Sciences Meeting 2020, San Diego, CA, USA. Poster presentation.

28. *Smith, S, **Shamberger, K. E. F.**, +L Barrett, JB Sylvan, A Correa, LZ Santiago, S Davies. 2020. Seawater carbonate chemistry at the Flower Garden Banks National Marine Sanctuary in the Northwestern Gulf of Mexico following Hurricane Harvey. ASLO Ocean Sciences Meeting 2020, San Diego, CA, USA. eLightning oral/poster presentation.

27. *Hicks TL, **Shamberger, K. E. F.**, +Henderson C, Jensen C, Fitzsimmons JN. 2019. Impact of Hurricane Harvey on the Carbonate Chemistry of Galveston Bay, Texas. AGU Virtual Poster Showcase. Poster presentation.

26. +Barrett, L., **Shamberger, K. E. F.**, *Hicks, T. L., +Hooper, M., Correa, A. M. S., Davies, S. W., Santiago-Vazquez, L. Z., Sylvan J. B. 2019. Post-Harvey Carbonate Chemistry at the Flower Garden Banks Coral Reefs. Aquatic Sciences Meeting 2019, Puerto Rico, USA. Oral presentation.

25. *Hicks, T. L., **Shamberger, K. E. F.**, +Henderson, C., Jensen, C. 2018. Impact of Hurricane Harvey on the Carbonate Chemistry of Galveston Bay, Texas. Hurricane Harvey Symposium, Port Aransas, TX. Oral presentation.

24. *Kealoha A.K., **K.E.F. Shamberger**, S.F. DiMarco, S.M. Doyle, R.D. Hetland, J.B. Sylvan. 2018. Seawater Chemical Anomalies Following the 2016 EFGB Localized Mortality Event. 2016 Flower Garden Banks Localized Mortality Event Mini-Symposium, February 2018, Galveston, TX. Oral presentation.

23. **Shamberger, K. E. F.**, Lentz, S. J., Cohen, A. L. 2018. Low and Variable Ecosystem Calcification in a Coral Reef Lagoon under Natural Acidification. Ocean Sciences Meeting 2018, Portland, OR, USA. Poster presentation.

22. *Kealoha, A.K., **Shamberger, K. E. F.**, Reid, E. C, Davis, K. A., Lentz, S. J., Rii, Y. M., Rappe, M.S., Oliver, T. and Brainard, R. E. 2018. The Relationship between Oceanic Organic Matter and Net Ecosystem Calcification on a Hawaiian Coral Reef. Ocean Sciences Meeting 2018, Portland, OR, USA. Oral presentation.

21. *Hicks, T. L., **Shamberger, K. E. F.**, +Henderson, C. 2018. Impact of Hurricane Harvey on the Carbonate Chemistry of Galveston Bay, Texas. Ocean Sciences Meeting 2018, Portland, OR, USA. Oral presentation.

20. +Ashley Davis, **Kathryn E. F. Shamberger**, E. Brendan Roark, Amy R. Baco, +Jahna Brooks, Kelci Miller. 2018. Carbonate Saturation Horizons in the Northwestern Hawaiian Islands: Implications for Deep-Sea Corals. Ocean Sciences Meeting 2018, Portland, OR, USA. Poster presentation.

19. +Ashley Davis, **Kathryn E. F. Shamberger**, E. Brendan Roark, Amy R. Baco, +Jahna Brooks, Kelci Miller. 2017. Characterization of Carbonate Saturation Horizons Near Deep-sea Coral Beds in the Northwestern Hawaiian Islands. Aquatic Sciences Meeting 2017, Honolulu, HI, USA. Oral presentation.

18. *Kealoha, A. and **Shamberger, K. E. F.** 2016. Spatiotemporal Trends in Surface Seawater CO_2 in the Gulf of Mexico. AGU 2016 Fall Meeting, San Francisco, CA, USA. Poster presentation.

17. **Shamberger, K. E. F.**, Cohen, A. L., Lentz, S. J., Barkley, H.C., DeCarlo, T.M., McCorkle, D. C., Golbuu, Y., 2016. Spatiotemporal Variability in Net Ecosystem Calcification of a Western Pacific Coral Reef System. 13th International Coral Reef Symposium, Honolulu, HI, USA. Oral presentation.

16. **Shamberger, K. E. F.**, Lentz, S. J., Cohen, A. L. 2016. Net Ecosystem Calcification by a Coral Reef Community under Natural Acidification. Ocean Sciences Meeting 2016, New Orleans, LA, USA. Oral presentation.

15. +Brooks, J., **Shamberger, K. E. F.**, Roark, E.B., Baco-Taylor, A. 2016. Seawater Carbonate Chemistry of Deep-sea Coral Beds off the Northwestern Hawaiian Islands. Ocean Sciences Meeting 2016, New Orleans, LA, USA. Oral presentation.

14. **Shamberger, K. E. F.**, Lentz, S. J., Cohen, A. L., 2015. Net Ecosystem Calcification by a Coral Reef Community under Natural Acidification. Ocean Acidification Principle Investigators Meeting, Woods Hole, MA, USA. Poster presentation.

13. **Shamberger, K. E. F.**, Lentz, S. J., Cohen, A. L., McCorkle, D. C., Golbuu, Y. 2014. Carbonate Chemistry Variability on a Coral Reef with Tidally Driven Flow. Gordon Research

Conference Global Ocean Change Biology: Interactive Effects of Multiple Global Change Variables 2014, Waterville Valley, NH, USA. Poster presentation.

12. **Shamberger, K. E. F.**, Lentz, S. J., Cohen, A. L., McCorkle, D. C., Golbuu, Y., 2014. A Decline in Net Ecosystem Calcification by Coral Reefs of the Palauan Archipelago. Ocean Sciences Meeting 2014, Honolulu, HI, USA. Oral presentation.

11. **Shamberger, K. E. F.**, Cohen, A. L., Golbuu, Y., McCorkle, D. C., Lentz, S. J., Barkley H. C. 2013. Processes Driving Natural Acidification of Western Pacific Coral Reef Waters. AGU 2013 Fall Meeting, San Francisco, CA, USA. Oral presentation and **session chair**.

10. **Shamberger, K. E. F.**, Cohen, A. L., McCorkle, D. C., Golbuu, Y., Lentz, S. J. 2012. Natural Acidification of Coral Reef Communities in the Western Pacific Warm Pool. 12th International Coral Reef Symposium, Cairns, Queensland, Australia. Oral presentation.

9. **Shamberger, K. E. F.**, Drupp, P., Feely, R. A., Sabine, C. L., Solomon, R. F., De Carlo, E. H., Mackenzie, F. T., Atkinson, M. J. 2011. Controls on Diel and Seasonal Aragonite Saturation State and Carbon Dioxide Variability in a Hawaiian Coral Reef Ecosystem. AGU 2011 Fall Meeting, San Francisco, CA, USA. Oral presentation.

8. **Shamberger, K. E. F.**, Feely, R. A., Sabine, C. L., Atkinson, M. J., DeCarlo, E. H., Mackenzie, F. T., Drupp, P. S., Butterfield, D. A. 2011. Calcification, Production, and CO_2 on a Hawaiian Coral Reef. Ocean Sciences Meeting 2011, San Juan, Puerto Rico. Oral presentation.

7. **Shamberger, K. E. F.**, Feely, R. A., Sabine C. L., Drupp, P. S., De Carlo, E. H., Mackenzie, F. T., Atkinson, M. J., Butterfield, D.A. 2010. Ocean Acidification and Calcification on a Hawaiian Coral Reef. Ocean Sciences Meeting 2010, Portland, OR. Poster presentation.

6. **Kathryn E. Fagan**, Solomon, R. F., Sabine, C. L., Feely, R. A., De Carlo, E. H., Mackenzie, F. T. 2008. Variability in the Surface Water Inorganic Carbon Parameters of a Hawaiian Coral Reef System and Implications for Calcification Rates. Ocean Sciences Meeting 2008, Orlando, Florida. Poster presentation.

5. **Kathryn E. Fagan**, Feely, R. A., Sabine C. L., Solomon, De Carlo, E. H., Mackenzie, F. T., Musielewicz, S. 2007. Inorganic Carbon Variability in a Hawaiian Coral Reef System and Implications for Field Based Calcification Rate Studies. SOLAS Summer School, October 2007, Corsica, France. Oral and poster presentations.

4. **Kathryn E. Fagan**. 2007. Biogeochemistry and Climate. Graduate Climate Conference, October 2007, University of Washington Center for Sustainable Forestry at Pack Forest, WA. Oral presentation and **session chair**.

3. **Kathryn E. Fagan**, Francois Paquay, Daniel E. Lockett IV, and Fred T. Mackenzie. 2005. Processes controlling air-sea exchange of CO_2 in subtropical Pacific estuaries. Ocean Sciences Meeting 2005 Meeting, Salt Lake City, UT. Oral presentation.

2. **Kathryn E. Fagan**, Fred T. Mackenzie, and Andreas J. Andersson. 2004, Processes controlling air-sea exchange of carbon dioxide in a subtropical Pacific estuary, *EOS Trans. AGU*, 85(47), Fall Meet. Suppl., Abstract, OS13A-0521. Poster presentation.

1. **Kathryn E. Fagan**, Fred T. Mackenzie, Daniel W. Sadler, and Justin Dilg. 2004. Processes controlling air-sea exchange of carbon dioxide, Kaneohe Bay, Oahu, Hawaii. PICES 13 Fall 2004 Meeting, Honolulu, HI. Oral presentation.

Invited Presentations

2018 **Shamberger, K. E. F.**, Kealoha, A., Davis, K., Reid, E., Lentz, S. J., Rappe, M., Rii, S., Brainard, R., Oliver, T. 2018. Coral Reef Climate Change Vulnerability: Effects of Oceanic Particulate Organic Matter Uptake on Net Ecosystem Calcification. NOAA Headquarters, Silver Spring, MD.

2018 *Kealoha, A., **Shamberger, K.**, Reid, E., Davis, K., Lentz, S., Brainard, R., Oliver, T., Rappe, M., Young, C., Rii, S., Roark, B., Slowey, N. 2018. Heterotrophy of oceanic particulate organic matter elevates net ecosystem calcification. NOAA Pacific Island Fisheries Science Center, Honolulu, HI.

2014 **Shamberger, K. E. F.**, Cohen, A. L., Lentz, S. J., McCorkle, D. C., Golbuu, Y., Barkley H. C. 2014. Processes Driving Natural Acidification and Decline in Net Ecosystem Calcification of Diverse Palauan Coral Reefs. Texas A&M University at Galveston, Galveston, TX.

2014 **Shamberger, K. E. F.**, Cohen, A. L., Lentz, S. J., McCorkle, D. C., Golbuu, Y., Barkley H. C. 2014. Processes Driving Natural Acidification and Decline in Net Ecosystem Calcification of Diverse Palauan Coral Reefs. Scripps Institution of Oceanography, University of California San Diego, San Diego, CA.

2013 **Shamberger, K. E. F.** 2013. Variable Responses of Coral Reefs to Ocean Acidification: Lessons from the Field. Department of Earth, Ocean, and Atmospheric Science, Florida State University, Tallahassee, FL.

2013 **Shamberger, K. E. F.**, Feely, R. A., Sabine, C. L., Atkinson, M. J., DeCarlo, E. H., Mackenzie, F. T., Drupp, P. S., Butterfield, D. A. 2013. Calcification, Organic Production, and Carbon Dioxide on a Hawaiian Coral Reef. Department of Oceanography, Texas A&M University, College Station, TX.

2013 **Shamberger, K. E. F.** 2013. Coral Reef Responses to Ocean Acidification: Lessons from the Field. Department of Oceanography, Texas A&M University, College Station, TX.

2012 **Shamberger, K. E. F.**, Feely, R. A., Sabine, C. L., Atkinson, M. J., DeCarlo, E. H., Mackenzie, F. T., Drupp, P. S., Butterfield, D. A. 2012. One size does not fit all: Coral reef responses to ocean acidification in the Hawaiian Islands. University of Massachusetts Boston, May 2012, Boston, MA.

2010 **Kathryn E. F. Shamberger**. 2010. Calcification and Production on a Hawaiian Coral Reef. Woods Hole Oceanographic Institute, November 2010, Woods Hole, MA.

2010 **Kathryn E. F. Shamberger**. 2010. Ocean Acidification and Coral Calcification on a Hawaiian Reef. Hawaii Institute of Marine Biology, University of Hawaii, February 2010, Kaneohe, HI

2008 **Kathryn E. Fagan**, Richard A. Feely, and Christopher L. Sabine. 2008. Ocean Acidification: How We Have Changed the Chemistry of the World's Oceans and Implications for Calcifying Organisms. GSA Joint Annual Meeting, October 2008, Houston, TX

Courses Taught

1. Introduction to Oceanography (OCNG 251)
    - Undergraduate introduction to the field of oceanography for non-science majors. This course has long been taught by many of the faculty in our department. I revised the content by integrating multiple think/pair/share concept questions into every class, and including group portions and written short answer questions on exams to engage students and emphasize oral and written communication. I also reduced the material covered so I can spend more time on critical topics.
    - 2020 Fall: registration ongoing
    - 2017 Fall: 85 students. Student evaluation average 4.76/5.00 (46% responded)
    - 2016 Fall: 59 students. Student evaluation average 4.75/5.00 (61% responded)
    - 2015 Spr: 23 students. Student evaluation average 4.87/5.00 (40% responded)
    - 2014 Fall: 54 students. Student evaluation average 4.11/5.00 (58% responded)

2. Professional Communication in Oceanography (OCNG 303)
    - I designed this new undergraduate course, which is required for all oceanography majors and is focused on writing, presenting, and career development in the field of oceanography. Students get extensive instruction, practice, and feedback from me and their classmates in all three areas, give presentations in front of the class, explore career opportunities, and mock-apply for a job, including doing a mock interview.
    - 2020 Spr: 12 students. Student evaluation average 4.62/5.00 (50% responded)
    - 2018 Fall: 3 students. Student evaluation average 4.20/5.00 (100% responded)

3. Communicating Ocean Sciences (OCNG 603):
    - I designed this new graduate course, which is required for all oceanography graduate students (professional masters, MS, PhD) and is focused on presenting scientific information clearly in presentations and in writing. Students get extensive instruction, practice, and feedback from me and their classmates on their writing and presenting. As part of class, every student presents individually at the AGU Virtual Poster Showcase, an online scientific

conference for students, ensuring that all of our graduate students get the experience of presenting at a conference.

- 2020 Spr: 10 students. Student evaluation average 4.39/5.00 (80% responded)
- 2019 Spr (sec 1): 10 students. Student evaluation average 4.21/5.00 (60% resp)
- 2019 Spr (sec 2): 5 students. Student evaluation average 4.65/5.00 (40% resp)
- 2018 Spr (sec 1): 5 students. Student evaluation average 4.64/5.00 (100% resp)
- 2018 Spr (sec 2): 8 students. Student evaluation average 4.79/5.00 (100% resp)
- 2017 Spr (sec 1): 7 students. Student evaluation average 4.80/5.00 (71% resp)
- 2017 Spr (sec 2): 9 students. Student evaluation average 3.75/5.00 (89% resp)
- 2016 Spr: 12 students. Student evaluation average 4.58/5.00 (100% responded)
- 2015 Spr: 5 students. Student evaluation average 4.80/5.00 (100% responded)

Teaching exemptions:

- 2019 Fall: One course teaching reduction for maternity leave
- 2016 Spr: One course teaching reduction for maternity leave
- 2015 Fall: One semester teaching release for maternity leave
- 2014 Spr: One semester teaching release per startup negotiations

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Student Mentorship

Graduate Students – Committee Chair

Dates	Name	Degree	Department	Graduation
Aug 2020	Allison Savoie	PhD	Oceanography	Projected 2024
Aug 2018 – current	Serena Smith	MS	Oceanography	Projected 2020
Aug 2017 – current	Tacey Hicks	PhD	Oceanography	Projected 2022
Aug 2014 – May 2019	Andrea Kealoha	PhD	Oceanography	2019

Graduate Students – Committee Member

Dates	Name	Degree	Department	Graduation
2019 – current	Alyssa Schultz	PhD	Geography	Projected 2025
2018 – current	Kourtney Higgins	PhD	Geography	Projected 2024
2018 – current	Richard Rosas	MS	Oceanography	Projected 2020
2016 – 2018	Kelci Miller	MGsc	Geography	2018
2016 – 2018	Vance Nygard	MS	Oceanography	2018
2014 – current	John Schiff	PhD	Geography	Projected 2020
2014 – 2017	Connie Previti	MS	Oceanography	2017
2013 – 2016	Jordan Young	MS	Oceanography	2016
2012 – 2017	Michael Evans	PhD	Oceanography	2017

Undergraduate Students – Research Advisor

Dates	Name	Degree	Graduation
2020 Spr – current	Mahima Yogesh	BS Bioenvironmental Sci	Projected 2022
2018 Fall – 2019 Fall	Shelley Culver	BS Oceanography	On leave
2017 Fall – 2019 Spr	Cody Padlo	BS Environmental Geosci	2019

2017 Fall – 2018 Sum	Miranda Hooper	BS Environmental Geosci	2018
2018 Sum REU	Lauren Barrett	Geos&Chem, BloomsburgU	2019
2017 Sum REU	Cameron Henderson	BS Mar Sci, USCarolina	2019
2016 & 2017 Sum REU	Ashley Davis	BS Mar Sci, USCarolina	2019
2016 Fall – 2017 Spr	Faith Benner	BS Biomedical Sciences	2017
2015 Spr – 2016 Spr	Kelci Miller	BS Environmental Studies	2016
2015 Spr – 2016 Spr	Jahna Brooks	BS Environmental Geosci	2017

Student Honors and Awards

*+Indicates undergraduate student advisee, *Indicates graduate student advisee*

Awards listed are those Shamberger nominated students for or advised students on the application/presentation

2020 – 2024	*Allison Savoie, TAMU College of Geosciences Graduate Merit Fellowship
2019	*Tacey Hicks, NSF Graduate Research Fellowship Program Honorable Mention
2018	*Andrea Kealoha, NOAA Sea Grant John A. Knauss Marine Policy Fellowship (declined)
2018	*Andrea Kealoha, TAMU Oceanography Chapman Award for Graduate Research
2018	+Lauren Barret, TAMU Observing the Ocean REU Symposium 2nd Place Presentation Conference Travel Award
2017 – 2021	*Tacey Hicks, TAMU College of Geosciences Graduate Merit Fellowship
2017	+Ashley Davis, TAMU SEAWATER Undergraduate Conference Travel Award
2017	+Jahna Brooks, TAMU Excellence in Oceanography Award
2017	+Jahna Brooks, TAMU Student Research Week Best Undergradaute Poster
2016 – 2019	*Andrea Kealoha, NOAA Nancy Foster Graduate Fellowship
2016	*Andrea Kealoha, TAMU Oceanography John Wormuth Memorial Award for Excellence in Undergraduate Teaching
2015	+Jahna Brooks, TAMU SEAWATER Symposium 1st Place Presentation Undergraduate Conference Travel Award

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Professional Service

Department of Oceanography, TAMU

2014 – current Recruiting and Admissions Committee

- Evaluate and rank applications for admission to graduate programs and for scholarships to be awarded to outstanding undergraduate and graduate students. Determine criteria for which admission and scholarships are awarded.

2014 – 2019 Faculty advisor for Ocean Graduate Council

- Advised the student leadership of the Oceanography graduate student council on matters ranging from academics, mental health, distance learning, fund raising, training opportunities, community building, etc.

College of Geosciences, TAMU

2020 – current College of Geosciences Awards Committee
- Determine criteria and evaluate nomination packages for college-level awards.

2019 – current College of Geosciences Faculty Advisory Council
- This council has been focused on reviewing and revising college policies as requested by the dean, but is now transitioning towards promoting faculty advocacy and transparent, two-way communication between faculty and the dean.

2018 College of Geosciences Dean Search Committee
- My department head requested that I serve on the committee to provide an early career prospective in the hiring process. I was the only assistant professor on the committee. As a committee, we wrote the advertisement, evaluated applications, interviewed candidates at the airport, coordinated on campus interviews, met with candidates multiple times, discussed candidates, and made recommendations to the Provost.

Texas A&M University

2018 TAMU Graduate Diversity Excellence Fellowship
- Evaluated nomination packages for this fellowship that seeks to increase the diversity of the graduate student population at TAMU.

2014 – 2015 Women's Faculty Network
- Planned mentoring activities and facilitated awards for women faculty at TAMU.

External Scientific Service

2019 – current Advisory Board Member for NOAA Ocean Acidification Program project led by Xinping Hu at TAMU-Corpus Christi
- Provide guidance on ways to make the project successful and ensure it meets NOAA OAP objectives for optimizing ocean acidification observing systems.

2016 – current Steering Committee Member for the Gulf of Mexico Coastal ocean Acidification Network (GCAN)
- Technical chair of the steering committee from 2017-2018.
- GCAN is a collaboration between the Gulf of Mexico Coastal Ocean Observing System Regional Association (GCOOS RA), the National Oceanic and Atmospheric Administration's Ocean Acidification Program (NOAA OAP), federal and state agency representatives, resource managers, industry partners and research scientists to identify impacts and develop strategies to mitigate ocean acidification on the Gulf of Mexico large marine ecosystem.

2016 – current Panel reviewer: NSF Chemical Oceanography and NSF Partnerships for International Research and Education (PIRE).

2014 – current Ad hoc proposal reviewer: NSF Chemical Oceanography; NSF Ocean Acidification, under NSF Science, Engineering and Education for Sustainability (SEES); NOAA Integrated Ocean Observing System (IOOS); NOAA Ocean Acidification Program.

2012 – 2013 Postdoctoral Association, Secretary, Woods Hole Oceanographic Institution

- Organized and facilitated three separate career building workshops for postdocs and graduate students on 1) academic job applications, 2) academic interviews, and 3) job negotiations.

2009 – current Peer reviewer: Aquatic Geochemistry, Biogeosciences, Coral Reefs, Geophysical Research Letters, Global Biogeochemical Cycles, ICES Journal of Marine Science, Journal of Experimental Marine Biology and Ecology, Journal of Geophysical Research-Oceans, Limnology and Oceanography, Marine Chemistry, Nature Communications, Oceanography.

2007 – current National and international conference sessions chaired:

2021: "Thinking outside the reef: how do open-ocean processes influence coral reefs now and in the future?", 14th International Coral Reef Symposium, Bremen, Germany.

2018: "Open Ocean – Coral Reef Teleconnections" (merged with another session), Ocean Science Meeting, Portland, OR, USA.

2013: "The Carbonate System Chemistry of Coastal Ecosystems: Physical, Chemical and Biological Drivers", American Geophysical Union Fall Meeting, San Francisco, CA, USA.

2007: "Biogeochemistry and Climate", Graduate Climate Conference, University of Washington, Center for Sustainable Forestry, Pack Forest, WA.

2007 Co-organizer of the 2nd Graduate Climate Conference, University of Washington, Center for Sustainable Forestry, Pack Forest, WA.

- This annual conference is organized and attended entirely by graduate students. I helped organize and fund the second conference. The conference was hosted by the University of Washington for several years and now alternates between UW and WHOI.

2004 – current Member of American Geophysical Union, Association for the Sciences of Limnology and Oceanography, International Coral Reef Society.

Workshops Attended

2019 NOAA Ocean Acidification Program Xinping Hu Project Team Meeting, Corpus Christi, TX

2018 TAMU CAREER Proposal Writing Workshop, College Station, TX

2018 4th Ocean Acidification PI Meeting, sponsored by Ocean Carbon Biogeochemistry and NSF, Portland, OR

2016 Texas One Gulf Consortium Workshop, University of Houston, Houston, TX

2015 TAMU ADVANCE Stress-Free Writing/Power Writing Workshop, College Station, TX

2015 3rd Ocean Acidification PI Meeting, sponsored by Ocean Carbon Biogeochemistry and NSF, Woods Hole Oceanographic Institution, Woods Hole, MA
2014 TAMU ADVANCE Center Roadmap for a Successful Academic Career Workshop, College Station, TX
2014 Centers for Ocean Science Education Excellence (COSEE) Early Career Workshop, Honolulu, HI
2014 TAMU Center for Teaching Excellence, Technology-Enhanced Approaches for Engaging Students in Large Classes Workshop, College Station, TX
2012 Coral Reef Ocean Acidification Monitoring Portfolio Workshop, sponsored by NOAA and Nova Southeastern University Oceanographic Center, Dania Beach, FL
2008 Anthropogenic Stresses on Ocean Ecosystems Workshop, University of Washington, Seattle, WA
2007 Ocean Carbon and Biogeochemistry Scoping Workshop on Ocean Acidification Research, Scripps Institution of Oceanography, San Diego, CA
2005 Impacts of Ocean Acidification on Coral Reefs and Other Marine Calcifiers, sponsored by NSF, NOAA, and USGS, St. Petersburg, Florida,

Selected Media Coverage

2020 "What killed the colorful coral reefs in the Gulf of Mexico sanctuary?" Research @ Texas A&M: https://research.tamu.edu/2020/01/24/what-killed-the-colorful-coral-reefs-in-this-gulf-of-mexico-sanctuary/
2020 "Researchers think they know what caused coral to die at Flower Garden Banks" Galveston County The Daily News: https://www.galvnews.com/news/article_f558c6a2-4e8e-5a5b-b030-a99e1c4c6c92.html
2019 "Texas A&M Team Finds New Ways For Coral Reef Ecosystems To Grow" Texas A&M Today: https://today.tamu.edu/2019/08/29/texas-am-team-finds-new-ways-for-coral-reef-ecosystems-to-grow/
2017 "Palau's Coral Reefs | Beyond Texas 360° VR" YouTube (Texas A&M University): https://www.youtube.com/watch?v=LF6rI-fZdas
2017 "A Giant Blob of Floodwater From Harvey Is Still Moving Through the Gulf" The Atlantic: https://www.theatlantic.com/science/archive/2017/10/harvey-freshwater-gulf-of-mexico/543408/
2017 "Harvey runoff menaces Texas' coral reefs" ScienceDaily and Rice University: https://www.sciencedaily.com/releases/2017/10/171016102805.htm
2015 "Palau's Improbably Healthy Coral Reefs" NOVA PBS: https://www.pbs.org/wgbh/nova/article/acidic-coral-refugia/
2015 "Pacific Mystery: Coral Reefs Thriving, But How?" Texas A&M Today: https://today.tamu.edu/2015/06/05/pacific-mystery-coral-reefs-thriving-but-

how/

2014 "On the Cusp of Climate Change - Coral Reefs" The New York Times: https://www.nytimes.com/interactive/2014/09/22/science/on-the-cusp-of-climate-change.html?_r=2

2014 "Pacific Coral Thrives in Acidified Waters" NBC News: https://www.nbcnews.com/science/science-news/pacific-coral-thrives-acidified-waters-n17906

Outreach

2017 – current EPA funded collaboration with the Texas Floating Classroom: brings middle and high school students from underrepresented and underserved areas in TX to participate in a research cruise in Corpus Christi Bay, TX and provides training, lesson plans, and publically available data for teachers to incorporate into their State of Texas Assessments of Academic Readiness (STAAR) curriculum.

2017 – current Local outreach activities: lead K-12 and high school students in the Bryan/College Station, TX area through hands on ocean acidification activities through local programs including the TAMU College of Geosciences GEOX summer camp, Children's Museum Under the Sea Camp, and TAMU College of Science Open House.

2016 – current On the Ocean Podcast: this podcast airs weekly on KAMU-FM, features oceanography research, and is produced by the TAMU Department of Oceanography and KAMU. I have written several scripts on my research and every student that takes my graduate Communicating Ocean Science course writes a script, all of which are recorded and aired on KAMU.

2013 Invited Earth Day speaker for New Hampton High School in New Hampshire. Gave a talk to the entire student body and faculty entitled "Climate Change, Double Trouble for Tropical Coral Reefs: Warming and Acidification."

2012 – 2014 Synergy project: participated in this collaboration between artists and MIT/Woods Hole Oceanographic Institution scientists that produced an exhibition at the Boston Museum of Science and New Bedford Art Museum, which let viewers explore oceanography through art: http://www.whoi.edu/website/synergy/about-synergy.

2012 Public Ocean Acidification Event, Woods Hole Oceanographic Institution: ran a table with information and activities on coral reef ocean acidification field research for the general public.

2012 Guest Lecture, Woods Hole Oceanographic Institution, Woods Hole, MA: gave a lecture on ocean acidification to a group of about twenty BP employees who were taking an ocean science short course at WHOI.

2012 Guest Lecture, Sea Education Association (SEA), Woods Hole, MA: gave a lecture on ocean acidification and coral reefs to undergraduate students participating in a semester of marine research through the SEA Semester program.

2011 Guest Lecture and Field Trip, Palau Community College, Korror, Palau: gave a

lecture on my research in Hawaii and how it relates to Palauan reefs, emphasizing the effects of ocean acidification. Took students out for a short research cruise and taught them how to collect water samples from a Niskin.

2011 Educurious Ecological Impacts of Climate Change: worked with high school students in Bellevue, WA via the Educurious website on science projects as part of an interactive course.

2008 Centers for Ocean Science Education Excellence (COSEE) Ocean Learning Communities event: gave overview on impacts of ocean acidification to science educators.

2006 – 2011 Guest Lectures: gave lectures on climate change and ocean acidification to high school, community college, and undergraduate classes at several schools in the Seattle area, WA.

2004 – 2009 National Ocean Science Bowl: volunteered several times in Honolulu, HI and Seattle, WA to help run this high school oceanography competition.

2004 – 2009 Judged high school science fairs in Honolulu, HI and Seattle, WA.

Certifications

2008 Obtained U.S. Coast Guard approved Boat U.S. Foundation General Boating certification.

2000 – 2003 Obtained scientific diver, stress rescue, advanced, and wreck scuba diving certifications.

This CV submitted is most current and correct as of the date of this signature.

Signature: 

Date: 31 May 2020

CURRICULUM VITAE

I. Personal Information

Associate Professor
Department of Entomology
Texas A&M University
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Office Phone: (979) 845 7556
Lab website: http://slotmanlab.tamu.edu/

II. Education

2003	Ph.D. in Ecology and Evolutionary Biology, Yale University
2000	M.Ph. in Biology, Yale University
1999	M.S. in Biology, Yale University
1997	M.S. in Biology, Wageningen Agricultural University, The Netherlands
1997	B.S. in Biology, Wageningen Agricultural Universty, The Netherlands

III. Experience

Sept 2014 – present	Associate Professor, Entomology TAMU
Aug 2008 – Aug 2014	Assistant Professor, Entomology TAMU
June 2019 – July 2019	Visiting Scholar, Entomology, Wageningen Univ, The Netherlands
June 2013 – Aug 2013	Visiting Scholar, Entomology, Wageningen Univ, The Netherlands
June 2012 – Aug 2012	Visiting Scholar, Entomology, Wageningen Univ, The Netherlands
June 2011 – Aug 2011	Visiting Scholar, Entomology, Wageningen Univ, The Netherlands
July 2010 – Aug 2010	Visiting Scholar, Entomology, Wageningen Univ, The Netherlands
Sept 2008 – present	Member, Ecology and Evolutionary Biology, TAMU
July 2007 – July 2008	Associate Research Scientist, Ecol. Evol. Biol., Yale University
Aug 2005 – June 2007	Post-Doctoral Associate, Ecol. Evol. Biol., Yale University
Aug 2003 – July 2005	Post-Doctoral Fellow, Entomology, University of California at Davis

IV. Publications and Professional Output

In my professional field, the senior author (PI) is listed as the last author

For several key publications their importance is briefly described below the reference.

(R)= research assistant/associate under my supervision
(P)= post-doc under my supervision
(G)= graduate student under my supervision
(U)= undergraduate under my supervision

Publications	Total	Since last promotion		Google scholar	Google scholar
	Published	Published	Under Review	Citations	H- index
Full professor	39	12	4	2,425	25
Tenure	27	12	2	552	16

Manuscripts under review

43 CA Guerra, G Fuseini, OT Donfack, JM Smith, TAO Mifumu, G Akadiri, DEM Eyang, CO Eburi, LM Vaz, VM Micha; LA Okenve, CR Janes[(R)], RM Andeme, MR Rivas, WP Phiri, **MA Slotman**, DL Smith; GA García. Malaria outbreak in Riaba district, Bioko Island, in 2019 – Lessons learned. Submitted to ***Malaria Journal*** (Impact Factor: 3.19).

Contribution: supervised part of data acquisition, edited manuscript.

42 Athrey G[(P)], W Takken, **MA Slotman**. Genetic analyses of human host preference in the malaria vector *Anopheles coluzzii.* Submitted to ***Molecular Ecology*** (Impact factor: 6.13).

Contribution: conceived, planned and supervised experiments and data acquisition, conducted data analyses, wrote manuscript.

This paper presents the first genetic map of human host preference in *An. gambiae/An. coluzzii*, containing six QTL. In combination with molecular evolution analyses, and previously published gene expression data, it identifies candidate genes for human host preference. This work also demonstrates that human host preference is likely driven primarily by divergence in expression rather than changes in binding affinity of chemosensory genes, and that IRs and OBPS likely play a role in human host preference.

41 Deitz KC[(G)],W Takken, **MA Slotman**. The genetic architecture of post-zygotic reproductive isolation between Anopheles coluzzii and An. quadriannulatus. Submitted to ***Frontiers in Genetics*** (Impact factor: 3.78). Available as preprint at https://biorxiv.org/cgi/content/short/2020.05.19.104786v1

Contribution: conceived, planned and supervised experiments and data acquisition, edited manuscript.

40 Athrey G[(P)], Popkin-Hal[(G)], W Takken, **MA Slotman**. Expression of chemosensory genes in the male maxillary palps of *An. coluzzii* and *An. quadriannulatus.* Submitted to ***Journal of Medical Entomology*** (Impact Factor: 1.90)

Contribution: conceived, planned and supervised experiments and data acquisition, wrote manuscript.

Peer Reviewed Publications

39 Athrey G[(P)], Z Popkin-Hal[(G)], LV Cosme[(G)], W Takken, **MA Slotman** (2020) Species and sex-specific chemosensory gene expression in *Anopheles coluzzii* and *An. quadriannulatus* antennae. ***Parasites and Vectors*** 13:212 (Impact Factor = 3.43)

Contribution: conceived, planned and supervised experiments and data acquisition, wrote manuscript.

38 Fuseini G, RN Nguema, WP Phiri, OT Donfack, C Cortes, ME von Fricken, JI Meyers[(P)], I Kleinschmidt, G Garcia, C Maas , C Schwabe, **MA Slotman** (2019) Increased biting rate of insecticide-resistant *Culex* mosquitoes and community adherence to IRS for malaria control in urban Malabo, Bioko Island, Equatorial Guinea. ***Journal of Medical Entomology*** (Impact Factor = 1.71)

Contribution: supervised part of data collection, data interpretation, co-wrote manuscript.

37 Deitz KC[(G)], W Takken, **MA Slotman** (2018) The effect of hybridization on dosage compensation in member species of the *Anopheles gambiae* Species Complex. ***Genome Biology and Evolution*** **10**, 1663-1672 (Impact factor = 3.94)

Contribution: conceived, planned and supervised experiments and data acquisition, edited manuscript.

36 Vontas J, L Grigoraki, J Morgan, D Tsakireli, G Fuseini, L Segura, J Niemczura de Carvalho, Nguema, D Weetman, **MA Slotman**, J Hemingway (2018). Rapid selection of a pyrethroid metabolic enzyme CYP9K1 by operational malaria control activities. ***PNAS***, *526*, 201719663–6 (Impact factor = 9.50)
Contribution: supervised part of data acquisition, edited manuscript

35 Athrey G***(P)***, LV Cosme***(G)***, Z Popkin-Hall***(G)***, S Pathikonda, W Takken, **MA Slotman** (2017). Chemosensory gene expression in olfactory organs of the anthropophilic *Anopheles coluzzii* and zoophilic *Anopheles quadriannulatus*. ***BMC Genomics*** 18: 751 (Impact factor = 3.7)
Contribution: conceived, planned and supervised experiments and data acquisition, wrote manuscript.

This paper compared the expression of chemosensory genes between two closely related mosquitoes with contrasting host preference: the malaria vector *Anopheles coluzii* which prefers feeding on humans, and the cow preferring *An. quadriannulatus.* This comparison identified candidate genes for human host preference in one of the most important malaria vectors in the world.

34 Deitz KC***(G)***, G Athrey***(P)***, M Jawara, HJ Overgaard, A Matias, and **MA Slotman** (2016). Genome-wide divergence in the West-African Malaria Vector *Anopheles melas.* ***G3 Genes Genomes Genetics*** 6: 2867-2879 (impact factor = 3.20)
Contribution: conceived, planned and supervised experiments and data acquisition, co-wrote manuscript.

33 Bradley J, D Hergott, G Garcia, J Lines, J Cook, **MA Slotman**, WP Phiri, C Schwabe, I Kleinschmidt (2016) A cluster randomized trial comparing deltamethrin and bendiocarb as insecticides for indoor residual spraying to control malaria on Bioko Island, Equatorial Guinea. ***Malaria Journal*** **15:**378. (impact factor = 3.11)
Contribution: contributed to planning of experiments, edited manuscript

32 Meyers JI, S Pathikonda, ZR Popkin-Hall, MC Medeiros, G Fuseini, A Matias, G Garcia, HJ Overgaard, V Kulkarni, VP Reddy, C Schwabe, J Lines, I Kleinschmidt, **MA Slotman** (2016). Increasing outdoor host-seeking in *Anopheles gam*biae over 6 years of vector control on Bioko Island. ***Malaria Journal*** **15:** 239 (impact factor = 3.11)
Contribution: conceived, planned and supervised experiments and data acquisition, co-wrote manuscript

This paper demonstrated an ongoing increase in outdoor host seeking of the malaria vector *An. coluzzii* on Bioko Island across a 6-year period of intense vector control. This behavioral shift has the potential to undermine control operations which are based on the indoor application of insecticides.

31 Bradley J, J Lines, G Fuseini, C Schwabe, F Monti, **MA Slotman**, D Vargas, G Garcia, D Hergott, I Kleinschmidt (2015) Outdoor biting by *Anopheles* mosquitoes on Bioko Island does not currently impact on malaria control. ***Malaria Journal*** **14**:170 (Impact Factor = 3.11)
Contribution: contributed to experimental planning and data interpretation, edited manuscript.

30 Neafsey DE, RM Waterhouse,…..,**MA Slotman** (83rd out of 123 authors),…..,NJ Besansky (2015) Highly Evolvable Malaria Vectors: the genomes of 16 *Anopheles* mosquitoes. ***Science*** **347:** 1258522 (Impact factor = 31.5)
Contributed to discussions, supervised partial data analyses, provided samples and comments on manuscript. * This paper was the result of the joined effort of a large consortium. Not all the data analyses conducted by the group was included in the paper.*

29 Fontaine MC, JB Pease, A Steele, RM Waterhouse, DE Neafsey, IV Shakarov, X Jiang, AB Hall, F Catteruccia, E Kakani, SN Mitchell, Y-C Wu, HA Smith, RR Love, MK Lawniczak, **MA Slotman**, SJ Emrich, MW Hahn and NJ Besansky (2015) Extensive Introgression in a malaria vector species complex revealed by phylogenomics. ***Science* 347:** 1258524 (Impact factor = 31.5)

Contributed to discussions, provided samples, supervised partial data analyses, provided comments on manuscript. * This paper was the result of the joined efforts of a larger group. Not all the data analyses conducted by the group was included in the paper.*

28 Hodges TK***(P)***, G Athrey***(P)***, KC Deitz***(G)***, HJ Overgaard, A Matias, A Caccone, **MA Slotman** (2013). Large fluctuations in the effective population size of the malaria mosquito *Anopheles gambiae s.s.* during vector control cycle. ***Evolutionary Applications* 6** (8): 1171-1183. (Impact factor = 4.2)

Contribution: conceived, planned and supervised experiments and data acquisition, co-wrote manuscript

27 Rehman AM, AG Mann, C Schwabe, MR Reddy, IR Gomes, **MA Slotman**, L Yellott, A Matias, A Caccone, GN Nchama, I Kleinschmidt (2013) Five years of malaria control in the continental region, Equatorial Guinea*.* ***Malaria Journal* 12**: 154 (Impact Factor 3.5)

Contributed to experimental planning and data interpretation, edited manuscript.

26 Reddy MR, A Godoy, K Dion, A Matias, K Callender, AE Kiszewksi, I Kleinschmidt, F Ridl, JR Powell, A, Caccone, and **MA Slotman** (2013) Insecticide resistance allele frequencies in *Anopheles gambiae* before and after anti-vector interventions in continental Equatorial Guinea. ***American Journal of Tropical Medicine and Hygiene* 88**: 897-907 (Impact factor 2.6)

Contributed to planning and supervision of experiments and data analyses, co-wrote manuscript

25 Athrey G***(P)***, TK Hodges***(P)***, MR Reddy, HJ Overgaard, A Matias, FC Ridl, I Kleinschmidt, A Caccone, MA **Slotman** (2012) The effective population size of malaria mosquitoes: large impact of vector control. ***PLoS Genetics* 8** (12): e1003097 (Impact factor: 8.7)

Contribution: conceived, planned and supervised experiments and data acquisition, co-wrote manuscript

This paper was the first to successfully use a population genetic approach to determine the impact malaria control on mosquito population size. It showed that the use of indoor residual spraying and long-lasting insecticidal nets reduced the population of various malaria mosquitoes by approx. 80% and 55%, respectively.

24 Overgaard HJ, VP Reddy***(R)***, S Abaga, A Matias, MR Reddy, V Kulkarni***(R)***, C Schwabe, L Segura, I Kleinschmidt, **MA Slotman** (2012) Malaria transmission after five years of vector control on Bioko Island, Equatorial Guinea. ***Parasites and Vectors* 5**: 253 (Impact factor 3.3)

Contributed to planning and supervision of experiments and data analyses, co-wrote manuscript

23 Deitz KC***(G)***, G Athrey***(P)***, MR Reddy, HJ Overgaard, A Matias, M Jawara, A della Torre, J Pinto, A Kiszewski, P Kengne, C Costantini, A Caccone and **MA Slotman** (2012) Genetic isolation within the malaria mosquito *Anopheles melas.* ***Molecular Ecology* 21**: 4498-4513. (Impact factor: 6.3)

Contribution: conceived, planned and supervised experiments and data acquisition, co-wrote manuscript

This paper showed that the malaria vector *Anopheles melas* consists of three population clusters, with species level divergence between them. It also demonstrated a remarkable difference in the migration rate between Bioko Island and the African mainland populations of *Anopheles melas* and the other malaria vector on the island, *Anopheles coluzzii.* The latter showing no genetic differentiation between mainland and island populations. This indicates that in contrast to *An. melas,* the *An. coluzzii* population is very vulnerable to the introduction of insecticide resistance mutations currently restricted to the mainland.

22 Deitz KC*(G)*, VP Reddy*(R)*, MR Reddy, N Satyanarayanah*(U)*, M Lindsey*(R)*, HJ Overgaard, J Musa, A Caccone and **MA Slotman** (2012) Limited usefulness of microsatellite markers from the malaria vector *Anopheles gambiae* when applied to the closely related species *An. melas.* ***Journal of Heredity*** **103**: 585-593. (Impact factor: 2.3)

Contribution: conceived, planned and supervised experiments and data acquisition, co-wrote manuscript

21 Overgaard HJ, S Sæebø, MR Reddy, VP Reddy*(R)*, S Abaga, A Matias and **MA Slotman** (2012) Light traps fail to estimate reliable malaria mosquito biting rates on Bioko Island, Equatorial Guinea. ***Malaria Journal*** **11**: 56. (Impact Factor: 3.5)

Contributed to planning and supervision of experiments and data acquisition, co-wrote manuscript

20 Reddy MR, HJ Overgaard, S Abaga, VP Reddy*(R)*, A Caccone, AE Kiszewski, **MA Slotman** (2011). Outdoor host-seeking behaviour of *Anopheles gambiae* mosquitoes following initiation of malaria vector control on Bioko Island, Equatorial Guinea. ***Malaria Journal*** **10**: 184 (Impact Factor: 3.5)

Contributed to planning and supervision of experiments and data acquisition, co-wrote manuscript

This paper showed that *Anopheles coluzzii* (previously named *An. gambiae* M form) on Bioko Island, which was reported to be host seeking almost exclusively indoors on Bioko, in fact host seeks outdoors to a large degree. This greatly reduces its exposure to indoor based control methods and raised concerns about the evolution of behavioral resistance. (294 citations).

19 Brown JE, CS McBride, P Johnson, S Ritchie, C Paupy, H Bossin, J Lutomiah, I Fernandez-Salas, A Ponlawat, AJ Cornel, WC Black IV, N Gorrochotegui-Escalante, L Urdaneta-Marquez, M Sylla, **M Slotman**, C Walker, JR Powell (2011). Worldwide patterns of genetic differentiation imply multiple "domestications" of *Aedes aegyti*, a major vector of human diseases. ***Proceedings of the Royal Society*** **B 278**: 2446-2454 (Impact Factor: 4.6)

Contributed to data acquisition, edited manuscript

18 Parmakelis A, M Moustaka, N Poulakakis, C Louis, **MA Slotman**, JC Marshall, PH Awono-Ambene, C Antonio-Nkondjio, F Simard, A Caccone, JR Powell (2010) *Anopheles* Immune Genes and Amino Acid Sites Evolving Under the Effect of Positive Selection. ***PloS ONE*** **5**(1): e8885 (Impact Factor: 4.4)

Contributed to planning and data analyses, edited manuscript

17 Ng'Habi KR, CR Meneses, AJ Cornel, **MA Slotman**, BGJ Knols, HM Ferguson, and GC Lanzaro (2008). Clarification of anomalies in the application of a 2La molecular karyotyping method for the malaria vector *Anopheles gambiae*. ***Parasites and Vectors*** **1**: 45 (Impact Factor: 2.1)

Contribution: data interpretation, edited manuscript

16 Brown JE, KJ Komatsu, PP Abila, AS Robinson, LMA Okedi, N Dyer, MJ Donnelly, **MA Slotman**, and A Caccone (2008) Polymorphic microsatellite markers for the tsetse fly *Glossina fuscipes fuscipes* (Diptera: Glossinidae), a vector of human African trypanosomiasis. ***Molecular Ecology Resources*** **8**: 1506-1508 (Impact Factor: 1.3)

Contribution: planned and supervised experiments and data acquisition, wrote manuscript

15 Abila PP[1], **MA Slotman**[1], A Parmakelis[1], KB Dion[1], AS Robinson, VB Muwanika, JCK Enyaru, LMA Okedi, S Aksoy, A Caccone (2008) High levels of genetic differentiation between Ugandan *Glossina fuscipes fuscipes* populations separated by Lake Kyoga. ***PLoS Neglected Tropical Diseases*** **2**: e242. (Impact Factor: 4.7)

[1]These authors contributed equally

Contribution: data analyses, co-wrote manuscript

14 Parmakelis A, **MA Slotman**, JC Marshall, PH Awono-Ambene, C Antonio-Nkondjio, F Simard, A Caccone, JR Powell (2008) The molecular evolution of four anti-malarial immune genes in the *Anopheles gambiae* species complex. ***BMC Evolutionary Biology* 8**: 79 (Impact Factor: 4.3)
Contributed to planning and data analyses, edited manuscript

13 **Slotman MA**, A Parmakelis, JC Marshall, PH Awono-Ambene, C Antonio-Nkondjo, F Simard, A Caccone and JR Powell (2007) Patterns of selection in anti-malarial immune genes in malaria vectors: evidence for adaptive evolution in *LRIM1* in *Anopheles arabiensis.* ***PLoS One* 2**(8): e793. (Impact Factor: 4.4)
Contribution: data acquisition and analyses, wrote manuscript

12 Tripet F, JA Wright, A Cornel, A Fofana, R MacAbee, CR Meneses, LJ Reimer, **MA Slotman**, TC Thiemann, G Dolo, S Traoré and GC Lanzaro (2007) Longitudinal survey of knockdown resistance to pyrethroid (*kdr*) in Mali, West Africa, and evidence of its emergence in the Bamako form of *Anopheles gambiae* s.s. ***American Journal of Tropical Medicine and Hygiene* 76**: 81-87 (Impact Factor: 2.5)
Contributed to data acquisition and interpretation, edited manuscript

11 **Slotman MA**, F Tripet, AJ Cornel, CR Meneses, Y Lee, LJ Reimer, TC Thieman, E Fondjo, A Fofana, SF Traoré and GC Lanzaro (2007) Evidence for subdivision within the M molecular form of *Anopheles gambiae* s.s. ***Molecular Ecology* 16**: 639-649. (Impact Factor: 6.0)
Contribution: data acquisition and analyses, wrote manuscript

This paper showed for the first time that *An. coluzzii* (formerly the M form of *An. gambiae*) is genetically subdivided into two distinct clusters. This finding added an additional layer of complexity to our understanding of speciation and divergence within the *An. gambiae* species complex, which has become a model system for studying speciation

10 **Slotman MA**, NB Kelly, LC Harrington, S Kittahwee, JW Jones, TW Scott, A Caccone and JR Powtell (2007) Polymorphic microsatellite markers for studies of *Aedes aegypti*, the vector of dengue and yellow fever. ***Molecular Ecology Notes* 7**: 168-171 (Impact Factor: 1.3)
Contribution: planning, data acquisition and analyses, wrote manuscript

9 **Slotman MA**, L Reimer, T Thiemann, G Dolo, E Fondjo, and GC Lanzaro (2006) Reduced recombination rate and genetic differentiation between the M and S forms of *Anopheles gambiae*. ***Genetics* 174**: 2081-2093 (Impact Factor: 4.2)
Contribution: conceived, planned and supervised experiments and data acquisition, wrote manuscript

8 Dijkstra E, **MA Slotman** and RJ Post (2006) Resolution of phylogenetic relationships of the major subfamilies of the Delphacidae (Homoptera: Fulgoroidea) using the mitochondrial ribosomal DNA. ***Insect Science* 13**: 167-177 (Impact Factor: 1.1)
Contribution: data acquisition and analyses, edited manuscript.

7 **Slotman MA**, MM Mendez, A della Torre, G Dolo, Y Touré and A Caccone (2006). Genetic differentiation between the Bamako and Savanna chromosomal forms of *Anopheles gambiae* as indicated by AFLP analysis. ***American Journal of Tropical Medicine and Hygiene* 74**: 641-648 (Impact Factor: 2.5)
Contributed to planning, acquired data and performed analyses, wrote manuscript.

6 Reimer L, F Tripet, **M Slotman**, A Spielman and GC Lanzaro (2005). An unusual distribution of the kdr gene among populations of *Anopheles gambiae* on the Island of Bioko, Equatorial Guinea. ***Insect Molecular Biology* 14**: 683-688 (Impact Factor: 2.6)
Contributed to data acquisition and interpretation, edited manuscript

5 **Slotman MA**, A della Torre, M Calzetta and JR Powell (2005). Differential introgression of chromosomal regions between *Anopheles gambiae* and *Anopheles arabiensis*. ***American Journal of Tropical Medicine and Hygiene* 73**: 326-335. (Impact Factor: 2.5)
Contributed to planning experiments, acquired and analyzed data, wrote manuscript

4 Elnaiem, DA, C Meneses, **M Slotman** and GC Lanzaro. (2005) Genetic variation of the sand fly salivary protein, Sp-15, a potential vaccine candidate against *Leishmania major*. ***Insect Molecular Biology* 14**: 145-150 (Impact Factor: 2.6)
Contributed to data interpretation and analyses, edited manuscript

3 **Slotman M**, A della Torre and JR Powell (2005) Female sterility in hybrids between *Anopheles gambiae* and *An. arabiensis* and the causes of Haldane's rule. ***Evolution* 59**: 1016-1026.
(Impact Factor: 5.4)
Contribution: conceived and planned experiments, acquired and analyzed data, wrote manuscript

2 **Slotman M**, A della Torre and JR Powell (2004) The genetics of inviability and male sterility in hybrids between *Anopheles gambiae* and *Anopheles arabiensis*. ***Genetics* 167**: 275-287. (Impact Factor: 4.2)
Contribution: conceived part of experiments, acquired and analyzed data, wrote manuscript

1 Gentile G, **M Slotman**, V Ketmaier, JR Powell and A Caccone (2001). Attempts to molecularly distinguish cryptic taxa in *Anopheles gambiae* s.s. ***Insect Molecular Biology* 10**(1): 25-32 (Impact Factor: 2.6)
Contribution: data acquisition and analyses, edited manuscript

Encyclopedia Entry

1 **Slotman MA**, JR Powell, EB Ford (2008) Polymorphism (Genetics) in AccessScience, ©McGraw-Hill Companies, 2008 http://www.accessscience.com

Presentations

Invited Talks Slotman

2018 The genetics of human host preference in the *Anopheles gambiae* complex. Arthropod Genomics Symposium Urbana Champaign, June 8th.

2017 Genomic analysis of behavioral adaptation of the malaria mosquito *Anopheles coluzzii* to vector control. Symposium "Genomics of Adaptation" Meeting of the Entomological Society of America, Denver Nov 7th.

2016 The genetics of human host seeking in mosquitoes. Department of Entomology, Texas A&M University (March 10)

2015 The antennal transcriptome of *Aedes aegypti* pre- and post-blood meal. Symposium "Synergy in arthropod Genomics: Integrative Solutions to Functional and Evolutionary Biology." Meeting of Entomological Society of America. Minneapolis, MN (Nov 15).

2015 A genetic approach to understanding human host choice in *An. gambiae*. Symposium "Molecular Genetic Approaches to the Study of Vector Population Biology." Society for Vector Ecology Meeting. Albuquerque, NM (Sept 30).

2014 The genetics of human host choice in *An. gambiae*. The Genomic Epidemiology of Malaria organized by the Welcome Trust. Hinxton, UK, (June 10).

2014 Controlling Malaria, Throwing the Mosquito of our Scent. TEDX TAMU, College Station (April 5th)

2013 The genetic basis of anthropophily in *Anopheles gambiae.* Workshop on "Population replacement strategies for control of malaria transmission". Organized by Foundation of National Institutes of Health, Washington DC, (Nov 18).

2013 The genetic basis of anthropophily in *Anopheles gambiae.* Symposium "Towards malaria eradication: targeting the mosquito vector. Harvard School of Public Health, Boston, MA (March 15)

2013 Malaria transmission past and present and the impact of control: Entomology. Planning meeting for Bioko Island Malaria Control Program III, London, United Kingdom (Feb 28)

2012 The genetic basis of human host preference in the malaria mosquito *Anopheles gambiae.* Department of Biology, Baylor University, Waco, TX (Oct 12)

2011 Mosquito migration: Implications for malaria control on Bioko Island. Technical Advisory Group Meeting of the Bioko Island Malaria Control Program, Paris, France (Nov 17)

2011 The effect of *kdr* selection on the efficacy of pyrethroid-based anti-malarial interventions: A cohort-based probabilistic simulation. Technical Advisory Group Meeting of the Bioko Island Malaria Control Program, Paris, France (Nov 16)

2011 The population structure of *Anopheles melas* and the impact of vector control on effective population size. Department of Biology, University of Texas at Tyler, Tyler, TX (Oct 7)

2011 Tackling malaria through private sector partnerships. Lessons learned from Equatorial Guinea. Center for Strategic and International Studies, Washington DC, USA (April)[1]

[1] *with co-presenters*

2010 Highlights of medical entomology 2010: Next generation sequencing in vector biology" MUVE section meeting, Entomological Society of America Meeting, San Diego, USA (Dec 2010)

2010 The evolution of reproductive isolation within the malaria vector *Anopheles gambiae*. Department of Entomology, Wageningen University, The Netherlands (August)

2008 *Anopheles melas* and malaria transmission on Bioko Island. Annual Review and Planning meeting of the Bioko Island Malaria Control Project and the Equatorial Guinea Malaria Control Initiative, Houston, USA (February)

2004 The population genetics of *Anopheles gambiae*. Symposium talk at the meeting of the Entomological Society of America, Miami, US (Fall)

2001 The genetics of speciation in the *Anopheles gambiae* complex" Department of Animal and Human Biology, University of Rome "La Sapienza", Rome, Italy (Spring)

2001 The genetics of speciation in the *Anopheles gambiae* complex" Department of Biology, University of Rome "Tor Vergata", Rome, Italy (Spring)

<u>Talks invited to but unable to attend</u>

2020 Seminar Department of Entomology, University of Maryland April 24th (cancelled due to Covid 19 travel restrictions)

2016 Seminar Pasteur Institute, Paris, France, June 30th (unable to attend due to family circumstance)

2016 Seminar Imperial College, London, UK (declined invitation due to family circumstances).

2015 Seminar Pasteur Institute, Paris, France, June 18th (postponed due to exorbitant flight costs)

<u>Invited Talks by Students/Post-docs</u>

(R)= research assistant/associate under my supervision
(P)= post-doc under my supervision
(G)= graduate student under my supervision
(U)= undergraduate under my supervision

2017 Meyers JI[(P)], Athrey G, Deitz KC[(G)], Ridl FC, Overgaard HJ, Reddy VP, Kleinschmidt I, MA Slotman. Genomic analysis of behavioral resistance in *Anopheles coluzzii* points towards flight activity as the underlying mechanism. ACME Symposium at meeting of American Society of Tropical Medicien and Hygiene, Baltimore, (Nov 7th).

2014 Deitz KC[(G)], MC Fontaine, NJ Besansky, DE Neafsey and MA Slotman Genomic analysis of divergence within the malaria vector *An. melas.* Society for Vector Ecology, San Antonio, TX (Oct 1st)

2013 Athrey G[(P)] and MA Slotman Impacts of vector control on the effective population sizes of malaria mosquitoes. Symposium "Measuring Entomological Outcomes of Vector Control Interventions: Working towards the Development of Standardized Approaches for Monitoring Vector Population Dynamics and Risk of Exposure to Disease Vectors" at American Society of Tropical Medicine and Hygiene meeting. Washington DC (Nov 17)

2013 Athrey G[(P)] The genetic basis of adaptation to human hosts in *Anopheles gambiae.* Evolution Symposium at Texas A&M. College Station, TX (Oct 28-29)

2013 Cosme LV[(G)], Craig Coates and MA Slotman Snapshots of the RNA turnover between different behavioral states of the yellow fever mosquito Aedes aegypti. Student Symposium Society of Vector Ecology meeting, Palm Springs, CA (Sept 23)

2013 Deitz, KC[(G)] and MA Slotman Genetic Isolation within the West-African Malaria Mosquito *Anopheles melas.* Symposium "Population Genomics" at Society for Vector Ecology meeting. Palm Springs, CA (Sept 26).

2013 Athrey G[(P)] and MA Slotman Impacts of vector control on the effective population sizes of malaria mosquitoes. Symposium "Towards malaria eradication: targeting the mosquito vector." Harvard School of Public Health, Boston, MA (March 15)

2013 Cosme LV[(G)] Can miRNAs regulate mosquito behavior? Texas A&M University, Dept of Entomology Graduate Student Recognition Seminar, College Station, TX

2012 Deitz KC[(G)] and MA Slotman. Genetic isolation within the malaria mosquito *Anopheles melas*. Texas A&M University Dept of Entomology Graduate Student Recognition Seminar, College Station, TX.

2013 Athrey G[(P)] How far is too close, and how many are two few: perspectives from reconciling demography with genetics? Texas State University, San Marcos. (Feb 25)

2011 Cosme LV[(G)] and MA Slotman. Olfaction gene expression in mosquito disease vectors. Symposium talk at the meeting of the Entomological Society of America (Nov 16). Reno, NV
This talk was presented by graduate student Luciano Cosme as my replacement due to a scheduling conflict with the Bioko Island Malaria Control Program meeting.

2011 Athrey G[(P)] Flying packets of DNA: perspectives on genetic patterns and processes from birds and mosquitoes. Department Seminar, Texas A&M University. (October)

2011 Athrey G[(P)] Flying packets of DNA: perspectives on genetic patterns and processes from birds and mosquitoes. National Center for Biological Sciences, Bangalore, India. (August)

<u>Submitted Talks Slotman</u>

2019 Cicadian gene knockout reduces fitness and alters behavior in *Aedes aegypti.* JI Meyers[(P)] and **MA Slotman** Meeting of the American Society for Tropical Medicine and Hygiene. National Harbor, MD

2018 Identification of candidate genes underlying human host preference in the malaria mosquito *Anopheles coluzzii* G Athrey, Z Popkin-Hall[(G)], W Takken, **MA Slotman** Meeting of the American Society for Tropical Medicine and Hygiene. New Orleans, LA.

2013 **Slotman MA** Genetic isolation within the West-African malaria vector *Anopheles melas.* Evolution symposium at Texas A&M. College Station, TX

2012 Cosme LV[(G)], **MA Slotman**. Expression of the olfaction gene repertoire in *Aedes aegypti* following blood feeding. Meeting of the American Society for Tropical Medicine and Hygiene. Atlanta, GA

2010 **Slotman MA**, KC Deitz[(G)], MR Reddy, HJ Overgaard, AM Arnez, N Satyanarayan[(U)], M Jawara, A della Torre, J Pinto, S Abaga, A Caccone. High level of population structuring within the West-African malaria vector *Anopheles melas.* Entomological Society of America Meeting. San Diego, CA

2008 **Slotman MA** Evolutionary genetics of the *Anopheles gambiae* complex. Texas and Louisiana Mosquito Control Association meeting. Lake Charles, LA

2008 **Slotman MA**, A Parmakelis, N Poulakakis, KB Dion, A Caccone, and JR Powell. The evolutionary genetics of immune genes in the *Anopheles gambiae* complex. Entomological Society of America meeting. Reno, NV

2007 **Slotman MA**, A Parmakelis, JC Marshall, P Awono-Ambene, C Antonio-Nkondjio, F Simard, A Caccone and JR Powell. Patterns of selection in anti-malarial immune genes in the *Anopheles gambiae* complex: evidence for positive selection in *LRIM1* in *An. arabiensis*. European Molecular Biology Organization symposium "Molecular and Population Biology of Disease Vectors" Kolymbari, Greece

2006 **Slotman MA**, F Tripet, A Cornel, C Meneses, Y Lee, L Reimer, T Thiemann, E Fondjo, A Fofana, SF Traoré and GC Lanzaro. Evidence for further isolation within an incipient species of *Anopheles gambiae* s.s. and the role of inversions in reproductive isolation. Meeting of the Society for the Study of Evolution. Stony Brook, NY

2004 **Slotman M**, F Tripet, S Rian, A Cornel, R McAbee, CR Meneses, A Fofana, G Dolo, S Traore, E Fondjo, CE Taylor and GC Lanzaro. The distribution of chromosomal forms of *Anopheles gambiae* across ecological zones in Mali and Cameroon. Meeting of the American Society for Tropical Medicine and Hygiene. Miami, FL

2002 **Slotman M**, A della Torre and JR Powell. Genetics of speciation in the *Anopheles gambiae* complex. Meeting of the Society for the Study of Evolution. Urbana-Champaign, IL

<u>Oral Presentations Students/Post-docs</u>

2019 Exploring the impact of the circadian clock on *Aedes aegypti* fitness and behavior. Jacob I Meyers and **MA Slotman** Texas Vector Mix, College Station, TX. Jan 2019.

2018 Popkin-Hall ZR[(G)] MA Slotman Differential expression of chemosensory genes in the proboscis of the sibling species *Anopheles* (*An.*) *coluzzii* and *An. quadriannulatus*. Meeting of the Entomological Society. Vancouver, Canada.

2018 Meyers JI[(P)], X Huang, MA Slotman. Estimating the Impact of Vector Control on Mosquito Effective Population Size using Approximate Bayesian Computation (ABC). Annual Meeting of the Western Gulf Center of Excellence in Vector Borne Disease, MacAllen TX.

2017 Popkin-Hall ZR[(G)], LV Cosme[(G)], G Athrey[(P)], MA Slotman Chemosensory gene expression in the proboscis of *Anopheles gambiae s.l.* mosquitoes with varying host preference. Meeting of the American Society of Tropical Medicine and Hygiene, Baltimore, MD.

2017 Meyers JI[(P)], MA Slotman Genomic Basis of Behavioral Resistance in Anopheles gambiae Mosquitoes on Bioko Island. Texas A&M University Postdoctoral Research Symposium 2017, College station, TX.

2017 Meyers JI[(P)], MA Slotman. Genomic analysis of behavioral resistance in Anopheles coluzzii points towards flight activity as the underlying mechanism. Southeast Texas Evolutionary Genetics and Genomics Symposium, Galveston TX.

2016 Deitz KC[(G)], W Takken, MA Slotman The effect of hybridization on genes expression in the *Anopheles gambiae* complex. Meeting of the American Society of Tropical Medicine and Hygiene,

Atlanta, GA.

2016 Meyers JI[(P)], G Athrey, S Pathikonda, Z Popkin-Hall[(G)], M Medeiros, G Fuseini, A Matias, G Garcia, HJ Overgaard, V Kulkarni, V Reddy, C Schwabe, J Lines, I Kleinschmidt, MA Slotman Genetic basis for outdoor host-seeking in Anopheles coluzzii from Bioko Island. Meeting of the American Society of Tropical Medicine and Hygiene, Atlanta, GA

2016 Meyers JI[(P)] Adaptation to vector control? A shift in host-seeking behavior by the malaria mosquito Anopheles gambiae after eleven years of vector control on Bioko Island. Texas A&M Postdoctoral Research Symposium (Sept 2016).

2016 Meyers JI[(P)], S Pathikonda, Z Popkin-Hall, M Medeiros, G Fuseini, A Matias, G Garcia, H Overgaard, V Kulkarni, V Reddy, C Schwabe J Lines, I Kleinschmidt, MA Slotman Increase in outdoor host-seeking behavior of *Anopheles gambiae* s.l. over 6 years of vector control on Bioko Island. International Congress of Entomology, Orlando, Florida

2016 Meyers JI[(P)],, S Pathikonda, Z Popkin-Hall, M Medeiros, G Fuseini, A Matias, G Garcia, H Overgaard, V Kulkarni, V Reddy, C Schwabe J Lines, I Kleinschmidt, MA Slotman Increase in outdoor host-seeking behavior of *Anopheles gambiae* s.l. over 6 years of vector control on Bioko Island. Meeting of Society for the Study of Evolution, Austin, TX

2016 Popkin-Hall Z[(G)] Chemosensory gene expression in the proboscis of *Anopheles gambiae* mosquitoes, Entomology Graduate Student Forum. College Station, TX (Aug 25).

2015 Popkin-Hall Z[(G)], S Pathikonda[(R)], G Fuseini, A Matias, HJ Overgaard, V Kulkarni[(R)], VP Reddy[(R)], C Schwabe, I Kleinschmidt, **MA Slotman**. Outdoor biting rate of malaria vectors on Bioko Island, Equatorial Guinea, continues to increase in response to indoor-based vector control. Meeting of Entomological Society of America, Minneapolis, MN (Nov 17).

2014 Cosme LV[(G)], CC Coates, **MA Slotman** Olfaction gene expression in *Aedes aegypti* in relation to host seeking. Society for Vector Ecology, San Antonio, TX (Oct 1st)

2014 Athrey G[(P)], TK Hodges[(P)], LV Cosme[(G)], S Pathikonda, W Takken and **MA Slotman** Species-specific chemosensory gene expression in the olfactory organs of the malaria vector *Anopheles gambiae.* Society for Vector Ecology, San Antonio, TX (Oct 1st)

2013 Athrey G[(P)], TK Hodges[(P)], LV Cosme[(G)], W Takken and **MA Slotman** The genetic basis of human host choice in the malaria vector *Anopheles gambiae.* American Society for Tropical Medicine and Hygiene meeting, Washington DC (Nov 14th)

2013 Deitz KC[(G)], DE Neafsey, M Jawara, A Matias, NJ Besansky, and **MA Slotman** Population genomic isolation within the African malaria vector *Anopheles melas* Entomological Society of America meeting, Austin, TX (Nov 11)

2013 Cosme LV[(G)], CJ Coates and **MA Slotman** What genes are targeted by miRNAs in the antennae of *Aedes aegypti?* Entomological Society of America meeting, Austin, TX (Nov 11)

2013 Athrey G[(P)], TK Hodges[(P)] , MR Reddy, HJ Overgaard, A Matias, F. Ridl, I Kleinschmidt, A Caccone, and **MA Slotman** Large impacts of vector control on the effective population size (N_e) of malaria vector mosquitoes in Equatorial Guinea Entomological Society of America meeting, Austin, TX (Nov 12).

2013 Cosme LV[(G)] Could miRNAs control mosquito behavior? Texas A&M Student Research Week, College Station, TX

2013 Deitz KC[(G)] and **MA Slotman**. The populations genetics of the malaria vector *Anopheles melas*. Texas A&M University Student Research Week, College Station, TX.

2012 Athrey G[(P)], TK Hodges[(P)], LV Cosme[(G)], W Takken and **MA Slotman**. The genetic basis of human host choice in the malaria vector *Anopheles gambiae.* Meeting of the American Society of Tropical Medicine and Hygiene. Atlanta, GA

2012 Hodges TK[(P)], G Athrey[(P)], LV Cosme[(G)], W Takken, and **MA Slotman**. The expression of olfaction genes in *Anopheles gambiae* in relation to human host preference. Meeting of the American Society of Tropical Medicine and Hygiene. Atlanta, GA

2012 Cosme LV[(G)] Transcriptome analysis of the *Aedes aegypti* antennae. Texas A&M Student Research Week, College Station, TX

2012 Cosme LV[(G)] The microRNA endeavor. Entomology Graduate Student Forum. College Station, TX.

2012 Athrey G[(P)], TK Hodges[(P)], LV Cosme[(G)], W Takken and **MA Slotman**. The genetic basis of adaptation to human hosts in the malaria vector *Anopheles gambiae.* Meeting of Society for the Study of Evolution. Ottowa, CA

2012 Hodges TK[(P)], G Athrey[(P)], LV Cosme[(G)], W Takken, and **MA Slotman**. Differential gene expression in *Anopheles gambiae* vs*. Anopheles quadriannulatus* olfactory organs. Meeting of Society for the Study of Evolution. Ottowa, CA

2011 Deitz KC[(G)], MR Reddy, HJ Overgaard, AM Arnez, N Satyanarayana[(U)], M Jawara, A della Torre, V Petrarca, J Pinto, P Kenge, C Costantini, S Abaga, GC Lanzaro, A Kiszewski, A Caccone and **MA Slotman**. Genetic isolation between *Anopheles melas* populations. Meeting of the American Society for Tropical Medicine and Hygiene. Philadelphia, PA

2011 Athrey G[(P)], TK Hodges[(P)], MR Reddy, AM Arnez, H Overgaard, M Atue, S Abaga, A Caccone, **MA Slotman**. Impacts of anti-malaria interventions on *Ne* of malaria vectors. Meeting of the society for the study of evolution. Norman, US

2011 Deitz KC[(G)], HJ Overgaard, AM Arnez, N Satyanarayana[(U)], M Jawara, A della Torre, V Petrarca, J Pinto, P Kenge, C Costantini, S Abaga, G Lanzaro, A Kiszewski, A Caccone, and MA Slotman. Genetic isolation between populations of the West-African malaria vector *Anopheles melas.* Meeting of the society for the study of evolution. Norman, USA

2011 Deitz KC[(G)] Genetic isolation between populations of the West]African malaria vector *Anopheles melas*. Entomology Graduate Student Forum, College Station, TX

2011 Cosme LV[(G)] The role of miRNAs in the regulation of host seeking behavior in *Aedes aegypti.* College Station, TX

2010 Deitz KC[(G)] The population genetic structure of the malaria vector *Anopheles melas* in West Africa. Entomology Graduate Student Forum. College Station, TX

Poster Presentations Slotman

2019 Exploring the impact of the circadian clock on *Ae. aegypti* fitness and behavior. Jacob I Meyers and **MA Slotman**. Global Vector Control Response Conference. Wageningen, The Netherlands. June 2019.

2011 G Athrey[(P)], TK Hodges[(P)], MR Reddy, A Matias, HJ Overgaard, M Atue, S Abaga, A Caccone, **MA Slotman**. The impact of anti-vector interventions on the effective population size of malaria mosquitoes. Meeting of the American Society of Tropical Medicine and Hygiene. Philadelhia, PA

2010 Athrey G[(P)], A Badamchi-Zadeh[(G)], M Lindsey[(R)], L Balle II[(R)], J Castro, VP Reddy[(R)], **MA Slotman**. Molecular evolution of olfaction genes in the *Anopheles gambiae.* Meeting of the American Society of Tropical Medicine and Hygiene. Atlanta, GA

2008 **Slotman MA**, A Parmakelis, N Poulakakis, KB Dion, JC Marshall, P Awono-Ambene, C Antonio-Nkondjio, F Simard, A Caccone, and JR Powell. The evolution of anti-malarial immune genes in the *Anopheles gambiae* complex. Poster presented at the American Society for Tropical Medicine and Hygiene. New Orleans, LA

2007 **Slotman MA**, A Parmakelis, JC Marshall, N Poulakakis, P Awono-Ambene, C Antonio-Nkondjio, F Simard, A Caccone and JR Powell. Patterns of selection on anti-malarial immune genes: adaptive evolution in *LRIM1* in *Anopheles arabiensis.* Poster at the meeting of the American Society for Tropical Medicine and Hygiene. Philadelphia, PA

2006 **Slotman MA**, A Parmakelis, JC Marshall, P Awono-Ambene, C Antonio-Nkondjio, F Simard, A

Caccone and JR Powell. Patterns of selection in genes implicated in the immune response of anopheline vectors against malaria. Poster presented at the meeting of the American Society for Tropical Medicine and Hygiene. Atlanta, GA

2005 **Slotman MA**, L Reimer, T Thiemann, G Dolo, E Fondjo, and GC Lanzaro. The role of reduced recombination in the evolution of reproductive isolation between the M and S forms of *Anopheles gambiae* s.s. Meeting of the American Society for Tropical Medicine and Hygiene. Washington, DC

Poster Presentations Students/Post-docs

2019 Popkin-Hall, Z. R. and **M. A. Slotman**. Impacts of Chemosensory Organ Ablation on Host-Seeking Activity in the Malaria Vector *Anopheles coluzzii*. American Society of Tropical Medicine and Hygiene, National Harbor, Maryland, USA.

2019 Popkin-Hall, Z.R. and **M. A. Slotman**. Differential Expression of Chemosensory Genes in the Sibling Species *Anopheles* (*An.*) *coluzzii* and *An. quadriannulatus*. Texas Vector Mix, College Station, TX

2019 JI Meyers and **MA Slotman** Exploring the impact of the circadian clock on *Aedes aegypti* fitness and behavior. Tropical Infectious Diseases Gordon Research Conference, Galveston, TX, March

2018 JI Meyers*(P)*, **MA Slotman** The Genetic Basis for Outdoor Host-Seeking Behavior in *Anopheles coluzzii* During the Bioko Island Malaria Control Project. Meeting of the American Society of Tropical Medicine and Hygiene. New Orleans, LA (November).

2016 Deitz KC*(G)*, W Takken, **MA Slotman** Hybrid allelic imbalance and gene expression evolution in the *Anopheles gambiae* species complex. Meeting of Society for the Study of Evolution, Austin, TX

2016 Popkin-Hall Z*(G)*, **MA Slotman** Chemosensory gene expression in the proboscis of *Anopheles gambiae* mosquitoes Meeting of Society for the Study of Evolution, Austin, TX

2015 Deitz KC*(G)*, W Takken, **MA Slotman** The Effect of Hybridization on Gene Expression in the *An. gambiae* Complex. Meeting of the American Society of Tropical Medicine and Hygiene. Philadelphia, PA

2014 Athrey G*(P)*, TK Hodges*(P)*, Luciano CV*(G)*, S Pathikonda*(R)*, W Takken, and **MA Slotman** The molecular adaptation of the olfactory system to human hosts in *Anopheles gambiae.* Meeting of the American Society for Tropical Medicine and Hygiene.

2014 Deitz KC*(P)*, G Athrey*(P)*, M Jawara, HJ Overgaard, The *Anopheles* Genome Consortium, **MA Slotman** Genome-wide isolation within the West-African malaria vector *Anopheles melas.* Meeting of the American Society for Tropical Medicine and Hygiene.

2014 Luciano CV*(G)*, CJ Coates and **MA Slotman**: miRNAs: a viable option for transgenic mosquito control? Meeting of the American Society for Tropical Medicine and Hygiene.

2013 Luciano CV*(G)*, CJ Coates and **MA Slotman** Behavioral switches and gene regulation in the yellow fever mosquito *Aedes aegypti.* Meeting of the American Society for Tropical Medicine and Hygiene. Washington, DC

2013 Athrey G*(P)*, TK Hodges*(P)*, MR Reddy, HJ Overgaard, A Matias, F. Ridl, I Kleinschmidt, A Caccone, and **MA Slotman** The impacts of vector control on the effective population sizes of malaria mosquitoes. Meeting of the American Society for Tropical Medicine and Hygiene. Washington, DC

2013 Rodriguez DR*(U)*, MI Khan*(U)*, G Athrey, and **MA Slotman**. The molecular evolution of three salivary proteins within species of the *Anopheles gambiae* complex. National Conference on Undergraduate Research. La Cross, WI

2010 Deitz KC*(G)*, MR Reddy, HJ Overgaard, AM Arnez, N Satyanarayana*(U)*, M Jawara, A della Torre, J Pinto, S Abaga, A Caccone and **MA Slotman**. The population structure of the malaria vector *Anopheles melas* in West Africa. Meeting of the American Society of Tropical Medicine and

Hygiene. Atlanta, GA

2010 Deitz KC[(G)], MR Reddy, HJ Overgaard, AM Arnez, N Satyanarayana[(U)], M Jawara, S Abaga, A Caccone and **MA Slotman**. The population genetic structure of the West-African malaria mosquito *Anopheles melas.* Meeting of the Society for the Study of Evolution. Portland, OR

V Research Grants and Funding

Since arriving at Texas A&M in 2008, I obtained $4,263,124 in funds that are attributable to my lab. The majority of these are from extramural sources like NIH, CDC and industry. Much of my research projects were independently conceived, being the PI on $3.55 million in grant and contract funds. Furthermore, the continued productivity of my research program is ensured by active (or soon to be active) grants totaling $1.34 million. Finally, my grant writing proficiency and the potential impact of my research proposals are attested to by the fact that each of the three NIH grants on which I am the PI were awarded upon the first submission.

	Career total at TAMU				**Since last promotion**			
	External Total	External Slotman	Internal Total	Internal Slotman	External Total	External Slotman	Internal Total	Internal Slotman
Full professor	$15,832,720	$3,679,404	$883,720	$583,720	$13,550,783	$1,942,278	$883,720	$583,720
Tenure	$2,281937	$1,737,126	$356,553	$56,553	$2,281,937	$1,737,126	$356,553	$56,553

Pending

2020-2021 (Collaborator) The cryopreservation of *Anopheles* embryos (Sanaria Inc.)
Source: NIH (NIAID) SIBR Phase II R43 - *(external competitive)*
Amount: Total $2,000,000, **Slotman $126,041.**
(grant awarded to Sanaria Inc., subcontract not yet in place)

Active funding

2020-2021 (PI) The role of the circadian clock in the behavior of the malaria mosquito *Anopheles coluzzii.*
Source: NIH (NIAID) - R21
(external competitive, funded upon first submission)
Amount: Total $414,375: **Slotman $414,375**.

2020 (PI) The molecular analyses of malaria mosquitoes from Bioko Island.
Source: Marathon Oil Corp. through Medical Care Development International.
(external noncompetitive)
Amount: Total $92,250: **Slotman $92,250**

2018-2021 (PI) Chemosensory Aspects of Mating Behavior in Malaria Mosquitoes.
Source: Texas A&M Agrilife Insect Vector Diseases Grant Program.
(internal non-competitive)
Amount: Total $300,000: **Slotman $300,000**.

2017-2021 (co-PI) West Gulf Coast Center of Excellence for Vector Borne Diseases.
Source: CDC
(external competitive)
Amount: Total $9,995,253: **Slotman $407,177.**

Completed funding

2019 (PI) The Role of olfaction in the attraction of *Anopheles coluzzii* to conspecifics. *Source:* Infravec2
(external competitive)
Amount: Total approx. $8,000: **Slotman $8,000.**

2016-2018 (PI) Shutting down the circadian clock of the yellow fever mosquito to disrupt host seeking.
Source: Texas A&M Agrilife Insect Vector Diseases Grant Program.
(internal competitive)
Amount: Total $200,000: **Slotman $200,000.**

2016-2017 (Collaborator) A non-toxic solution to develop next generation of insecticidal bed nets.
Source: NIH (NIAID) R43 AI126957-01. With Lynntech Incorporated (P.I: Singh)
(external competitive)
Amount: Total $210,274: **Slotman $63,802.**

2016-2017 (PI) The genomics of hybrid sterility & speciation in the *Anopheles gambiae* species complex.
Source: NSF Dissertation Improvement Grant to graduate student Kevin Deitz.
(external competitive)
Amount: Total $19,305: **Slotman $19,305**.

2015-2018 (PI) The genetics of behavioral resistance in *Anopheles gambiae*.
Source: NIH (NIAID) R21
(external competitive, funded upon first submission)
Amount: Total $396,698: **Slotman $396,698**.

2014 -2019 (PI) The molecular analyses of malaria mosquitoes from Bioko Island.
(Yearly fee-for service contracts)
Source: Marathon Oil Corp. through Medical Care Development International.
(*external noncompetitive)*
Amount: Total $500,548: **Slotman $500,548.**

2014-2015 (PI) Identifying targets for the transgenic control of the malaria vector *Anopheles gambiae*.
Source: Texas A&M AgriLife Research Genomics and Bioinformatics Seed Grant. *(internal competitive)*
Amount: Total $27,167: **Slotman $27,167.**

2013-2016 (co-PI) Tier One Program grant "Ecology & Evolutionary Biology",
Source: Texas A&M University *(internal competitive)*
Amount: Total $300,000: **Slotman: $0**

2013 (Collaborator) Novel pyroelectrical coatings to provide insect repellent textiles
Source: DoD SYBR Phase I to Lynntech Incorporated *(external competitive)*
Amount: Total Approx. $100,000: **Slotman $18,427**

2011-2013 (PI) Identification of olfaction genes that are specifically expressed during the host-seeking phase of *Aedes aegypti* females.
Source: Texas A&M AgriLife Research Genomics and Bioinformatics Seed Grant. *(internal competitive)*
Amount: Total $17,437.76: **Slotman $17,437.76**

2010-2015 (PI) The genetic basis of anthropophily in *Anopheles gambiae*
Source: NIH (NIAID) R01 AI085079 *(external competitive, funded upon first submission)*
Amount: Total: $1,053,179: **Slotman $965,847.**

2009-2013 (PI) The molecular analyses of malaria mosquitoes from Bioko Island.
Yearly fee-for service contracts.
Source: Marathon Oil Corp. through Medical Care Development International. *(external noncompetitive)*
Amount: Total $403,464: **Slotman $403,464.**

2009-2011 (PI) Ecological, behavioral and insecticidal resistance determinants of anti-vector intervention success on Bioko Island and mainland Equatorial Guinea.
Source: Marathon Oil Corp. through Medical Care Development International. *(external noncompetitive)*
Amount: Total $725,043: **Slotman $349,138**.

2008 (PI) Automated DNA extraction system.
Source: Texas Agrilife and Dept of Entomology at TAMU. *(Internal competitive)*
Amount: Total $39,115: **Slotman $39,115** (for shared equipment housed in my lab).

Funding prior to TAMU

2003 (Co-PI) Role of division 6 of the X chromosome in genetic differentiation between chromosomal forms of *Anopheles gambiae*.
Source: WHO Special Program for Research and Training in Tropical Disease (TDR) Grant in Molecular Entomology. (PI: Lanzaro) - *(external competitive)*
Amount: Total: **$18,000**
(*Slotman conceived and wrote proposal. Job title did not permit PI status*)

2002-2003 CDC Training Fellowship, Centers of Disease Control and Prevention Training Program in Vector-Borne Infectious Disease.
Amount: Total approx **$20,000**

2002 Fellowship to attend the Biology of Disease Vectors course at University of Colorado at Fort Collins. - *(external competitive)*
Amount: Total approx **$1,000**

2000 The genetics of speciation in the *Anopheles gambiae* complex. *NSF DIG application was "thought to be outstanding" by the panel and "the Program would have recommended funding if the NIH grant had been rejected". (My advisor Jeffrey Powell obtained an R01 NIH grant that overlapped with the proposed research, and my application had to be withdrawn)* Total: **$12,000** - *(external competitive)*

1999 Fellowship to attend the Summer Institute in Statistical Genetics, North Carolina State University, Raleigh - *(external competitive)*
Amount: Total: **$1,000**

1998 G. Evelyn Hutchinson Prize
Source: Yale Institute for Biospheric Studies *(internal noncompetitive)*
Amount: Total approx **$4,000**

1997 G. Evelyn Hutchinson Prize
Source: Yale Institute for Biospheric Studies *(internal noncompetitive)*
Amount: Total approx **$4,000**

IV Teaching

Post-Doctoral Associate Supervision

CURRENT POSTDOCS	since
Vinaya Shetty (PhD 2017, Center for Applied Genetics, Bangalore University, India).	March 2020
Kevin Deitz (PhD 2017, Texas A&M University)	May 2020
Maral Molaei (PhD 2019, Texas A&M University)	Aug 2020*

** Dr Molalei's joining the lab was delayed due to the covid-19 shut down, but she is slated to start as soon as research activities expand.*

PREVIOUS POSTDOCS

Jacob I Meyers (PhD 2015, Colorado State University at Fort Collins, USA) Sept 2015 – Sept 2019
Subsequent position: Research Scientist I at Takara Bio Inc.

Theresa Hodges (PhD 2010, University of Maryland Baltimore, USA) Sept 2010 – Sept 2013
Subsequent position: bioinformatics analyst at the Institute for Genome Sciences at Univ. of Maryland School of Medicine

Giridhar Athrey (PhD 2009, University of Louisiana at Lafayette, USA) April 2010 – Dec 2014
Subsequent position: Assistant Professor in the Department or Poultry Science at TAMU

Graduate Student Supervision

CURRENT STUDENTS

Zach Popkin-Hall, PhD student Entomology Sept 2014 – Present*
Project title: Gustatory receptor expression and evolution in the *An. gambiae* complex

** Zach successfully defended his thesis on 6/11/2020 and is scheduled to graduate in August 2020.*

Honors/Awards:

- Agrilife Excellence Fellowship 2014 ($12,500)
- Honorable mention NSF Graduate Fellowship Application 2016
- Scholarship to attend Summer Institute in Statistical Genetics 2016 ($1,800)
- 2nd Place, Student Competition for Presidents Prize, Graduate Student 10-Minute Paper, MUVE: Biting Arthropods – *Entomological Society of America Meeting, Vancouver, BC, Canada,* November 2018
- John A. Jackman Endowed Scholarship ($1,500) – *Texas A&M University* Fall 2018-Spring 2019
- NSF Close the Gap Program Professional Development Fellowship ($1,000) – *Texas A&M University* 2017
- Herb Dean Endowed Scholarship ($2,500) – *Texas A&M University* Fall 2016 – Spring 2017

Zach had a post-doctoral position lined up at the University of North Carolina, which unfortunately fell through due to a covid-19 related reduction in funding.

Xinyue Huang, PhD student Ecology and Evolutionary Biology Sept 2017- Present
Project title: the impact of vector control on mosquito populations in Houston.

Thomas McGlynn, PhD student Entomology Sept 2018- Present
Project title: the role of chemosensation in the mating behavior of *Anopheles coluzzii.*

Honors/Awards:

- AgriLife Strategic Assistantship ($116,514)
  (*Thomas was accepted in Navy PhD program and therefore declined the fellowship*)

PREVIOUS GRADUATE STUDENTS

Kevin Deitz, PhD student Entomology Jan 2012 – Aug 2017

Thesis title: The genetics of speciation in the malaria mosquitoes of the *Anopheles gambiae* complex.

Honors/Awards:

- Invited speaker at Society for Vector Ecology Meeting 2014
- 3rd place Entomology Graduate Student Seminar 2014
- Invited Speaker at Entomology Graduate Student Recognition Seminar 2012
- Texas Ecolab Grant: Identification of West Nile Vectors in central Texas ($8,561.93)
- J.H. Benedict, Sr. Memorial Graduate Student Scholarship 2015 ($2,500)
- Herb Dean '40 Endowed Scholarship 2015 ($2,500)
- NSF Dissertation improvement grant 2016 ($19,305)
- TAMU dissertation fellowship 2016-2017 (approx. $24,000)

Kevin went on to post-docs at Princeton and Columbia University after this graduation. He rejoined my lab in May 2020 for a four month stint in which he will complete the publication of his PhD research before moving on to a Post-doctoral fellowship at the American Museum of Natural History in New York. He was recently the top candidate for a faculty search at Univ. of Delaware, but due to covid-19 this search is currently on hold.

Luciano Cosme, PhD Entomology Sept 2009 – Dec 2015

Thesis title: Gene and miR expression in the yellow fever mosquito *Aedes aegypti*

Honors/Awards:

- 1st place Entomology Graduate Student Seminar 2014
- 2nd place Entomology Graduate Student Seminar 2012
- 3rd place Entomology Graduate Student Seminar 2011
- Invited speaker at Entomology Graduate Student Recognition Seminar 2013
- co-PI on Texas Agrilife Research Genomics Seed grant ($17,437.76)

Luciano is currently a post-doctoral fellow at Yale University

Kevin Deitz, MS Entomology Sept 2009 - Dec 2011

Thesis Title: The Population Genetic Structure of the Malaria Vector *Anopheles melas.*

Honors/Awards:

- Guest Lecture: Using Population Genetics to Inform Malaria Control (GENE 412 - Population and Ecological Genetics)
- Texas A&M Ecol. & Evol. Biol. Student Travel Grant ($440)
- Texas A&M College of Agriculture and Life Sciences Lechner Graduate Student Presentation Grant ($500)

After completing his MS degree, Kevin continued towards his PhD degree in my lab.

Undergraduate Student Researchers in the lab

Casey Branach	ENTO 491	Spring	2009
Jonathan Castro	ENTO 491	Summer/Fall	2009
Neha Satyanarayana	RUE-Excite	Summer	2009
Katie Kendrick	GENE 491	Fall	2009
Alejandro Alaniz	ENTO 491	Fall, Spring	2010, 2011
Quinton F. Williams	REU-Excite	Summer	2012
Diana Rodriguez (**URS***)	ENTO 491	Spring, Fall	2012
Maryam I. Khan (**URS***)	ENTO 419	Spring, Fall, Spring	2013, 2014
Caleb Wheeless	ENTO 491	Spring	2013
Hayley Rogers	ENTO 491	Spring	2013
Bradley Dye	ENTO 491	Fall, Spring	2015, 2016
Mackenzie Hartman (**URS***)	ENTO 491	Spring to Spring	2016, 2017
1st prize undergraduate oral presentation in Agriculture and Life Sciences during research week, March 2017			
Kacy Peterson	ENTO 491	Fall	2016
Sydney Tippelt (**URS***)	ENTO 491	Fall - Spring	2016-2018
1st prize undergraduate oral presentation in Sciences during research week, March 2018			
Adam Baker	ENTO 491	Fall- Spring	2017-2018
David Eskandari	ENTO 491	Fall- Spring	2019-2020
Myongsun Kim	ENTO 491	Spring	2020

**** Undergraduate Research Scholar***

Graduate Student Committees

CURRENT

Ashley Wilson	PhD	ESSM	Popescu/Eriksson	TAMU
Dayvion Adams	MSc	Entomology	Hamer lab	TAMU
Carlos Aguero	PhD	Entomology	Vargo Lab	TAMU
Bert Foquet	PhD	Entomology	Song Lab	TAMU
Hannah Justen	PhD	EEBL	Delmore	TAMU

GRADUATED

Stephen Berhane	MS	Geography (2009)	Sui Lab	TAMU
Hyeog S. Kwon	PhD	Entomology (2012)	Pietrantonio Lab	TAMU
Michael J Johanson	MS	Genetics (2013)	Coates Lab	TAMU
Alison Bockhoven	PhD	Entomology (2015)	Eubanks Lab	TAMU
David Poche	MS	Wildlife & Fisheries (2015)	Grant Lab	TAMU
Lindsay Porter	PhD	Entomology (2015)	Mulenga Lab	TAMU
Ahmet Yavuz	PhD	Genetics (2017)	Amrein Lab	TAMU
Johanna Harvey	PhD	Wildlife & Fisheries (2017)	Voelker Lab	TAMU
Heather Eggleston	PhD	Genetics	Adelman Lab	TAMU
Andrew Golnar	PhD	Entomology	Hamer Lab	TAMU

Ecol & Evol Biol examination committee

2017 Rachel Glazner	PhD	Ecol & Evol. Biol.	Armitage Lab	TAMU

Graduate Student Rotation/Exchange Student Supervision

Jiaxin Lei, PhD MEPS, Rotation (Summer 2009)
Alexander Badamchi, (Exchange Student from Oxford University) (Fall 2009)
Alicia Leahy, MD/PhD, Rotation (Summer 2010)

Student Worker Supervision

Javier Pellacani	2017 - 2018
Alex Seua	2017 - 2018
Brooke Stair	2018 - current
Sarah Rico	2019 – 2020 (left due to covid19 shut down)
Xavier Tijerina	2019 – 2020 (left due to covid19 shut down)
Kaylin Hall	2019 – 2020 (left due to covid19 shut down)

Research Assistant/Associate Supervision:

Michael Lindsey	Research Assistant	2008 - 2009
Larry Balle	Research Assistant (part time)	2009 - 2009
Vamsi P. Reddy	Research Associate	2009 - 2011
Michael Ben Alexander	Research Assistant (part-time)	2011 - 2011
Vani Kulkarni	Research Assistant	2011 - 2012
Diana Rodriquez	Research Assistant	2012 - 2012
Sharmila Pathikonda	Research Assistant	2012 - 2015
Isaac McNeely	Research Assistant	2016 - 2018
Christopher Janes	Research Assistant	2018 - 2020
	Research Associate	2020 - current

Mentoring

2020 Served as faculty advisor to Dayvion Adams (MSc Student in Hamer lab) in his Academy of Future faculty program

2016 Served as faculty advisor to Zeljko Radulovic (Post-doc in Mulenga lab) in his Academy of Future faculty program

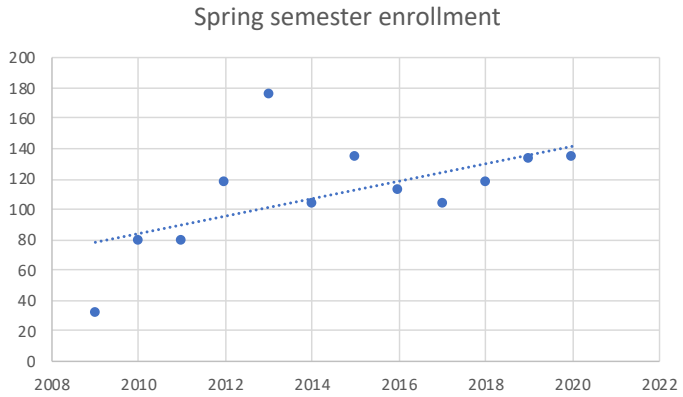
Courses Taught

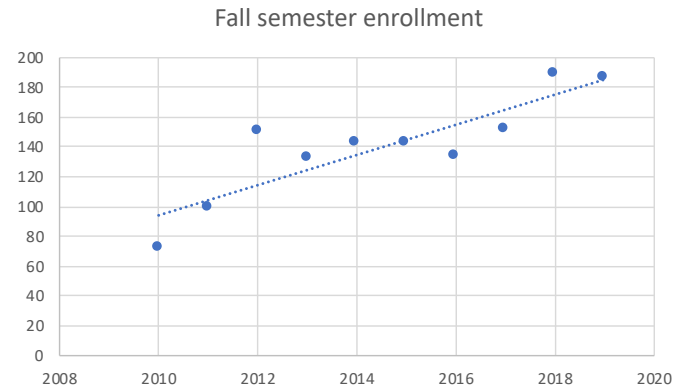
Undergraduate courses	Credit Hour	Enrollment	Semester	Evaluation (out of 5)
ENTO 289 Sp.T. Public Health Ento.	3	32	Spring 2009	4.45
ENTO 289 Sp.T. Public Health Ento.	3	79	Spring 2010	4.08
ENTO 289 Gl. Public Health Ento.	3	72	Fall 2010	4.23
ENTO 210 Gl. Public Health Ento.	3	79	Spring 2011	4.26
ENTO 210 Gl. Public Health Ento.	3	99	Fall 2011	4.28
ENTO 210 Gl. Public Health Ento.	3	118	Spring 2012	4.38
ENTO 210 Gl. Public Health Ento	3	150	Fall 2012	4.18

ENTO 210 Gl. Public Health Ento	3	175	Spring 2013	4.30
ENTO 210 Gl. Public Health Ento	3	132	Fall 2013	4.13
ENTO 210 Gl. Public Health Ento	3	103	Spring 2014	4.15
ENTO 210 Gl. Public Health Ento	3	142	Fall 2014	4.08
ENTO 210 Gl. Public Health Ento	3	134	Spring 2015	4.12
ENTO 210 Gl. Public Health Ento (+Honors)	3	142	Fall 2015	3.99
ENTO 210 Gl. Public Health Ento (+Honors)	3	108 (+5)	Spring 2016	N.A.
ENTO 210 Gl. Public Health Ento (+Honors)	3	130 (+4)	Fall 2016	4.08
ENTO 210 Gl. Public Health Ento (+Honors)	3	101 (+2)	Spring 2016	3.98
ENTO 210 Gl. Public Health Ento (+Honors)	3	142 (+10)	Fall 2017	4.12
ENTO 210 Gl. Public Health Ento (+Honors)	3	109 (+8)	Spring 2018	3.98
ENTO 210 Gl. Public Health Ento (+Honors)	3	178 (+10)	Fall 2018	4.22
ENTO 210 Gl. Public Health Ento (+Honors)	3	129 (+4)	Spring 2019	4.23
ENTO 210 Gl. Public Health Ento (+Honors)	3	177 (+9)	Fall 2019	4.09
ENTO 210 Gl. Public Health Ento (+Honors)	3	130 (+4)	Spring 2020	3.86*

** Transitioned to online half-way through the semester due to covid-19*

Enrollment in ENTO210 continues to display an upward trend in both semesters





Graduate courses	Credit Hour	Enrollment	Semester	Evaluation
ENTO 681 Current Topics in Vector Biology Research	1	15	Fall 2012	4.59
ENTO 681 Vector Biology, Ecology and Control	1	9	Spring 2015	4.31
ENTO 681 Progress and Prospects in Evolutionary Biology, The *Drosophila* model *(co-taught with Dr Aaron Tarone)*	1	12	Fall 2015	4.29
EEBL 605 Population and Quantitative Genetics *(EEB core module co-taught with Dr Giri Athry* and *Dr. Charles Criscione)*	1 1 1 1 1	5 7 7 13 16	Spring 2016 Spring 2017 Spring 2018 Spring 2019 Spring 2020	3.94 4.13 4.63 4.41 4.86
ENTO 618 Med & Vet Entomology (co-taught with Dr Gabe Hamer)	3	7	Fall 2019	NA*

* *None of the students submitted an evaluation.*

Department of Entomology peer evaluation of teaching:

"Dr. Slotman is the sole instructor for ENTO 210 Global Public Health Entomology, a long running course that he developed from scratch. This is a large enrollment course that fills in both the fall and spring semesters. This course meets the core International Cultural Discourse (ICD) requirements and is one of the primary entry points into the increasingly sought-after Certificate in Public Health Entomology.

Dr. Slotman is an excellent visual teacher who has also put considerable time and thought into strategies to reach his non-visual learners, particularly during the change in delivery forced by the COVID-19 pandemic. The strategies he utilizes to teach complex topics and keep students on track have been highlighted as examples for graduate students who are pursuing a future academic career.

While this is a large enrollment course, active learning in the classroom is supported through the use of iClicker technology and Dr. Slotman encourages students to think about the course material and engage in the topics, with multiple opportunities to ask questions. When the option to add an honors section to the course was presented, Dr. Slotman added the honors section and his honors projects promote both active learning and critical thinking, requiring higher level synthesis of the course topics.

Dr. Slotman also recently co-taught ENTO 618 Medical and Veterinary Entomology, a critical course in our graduate program given the strength of the faculty working in vector biology and as a component of the educational training aspect of the CDC Western Gulf Center of Excellence in Vector Biology. In addition to his visual approach to teaching in this class, there is a laboratory component where students actively engage through hands on work, and also facilitated discussions of primary papers to engage in critical thinking and evaluation of the papers.

Dr. Slotman is a valued member of our teaching faculty and his undergraduate course in particular allows the Department to serve a large number of non-ENTO majors, often resulting in students adding a minor or double major in Entomology, as well as the completion of the Certificate in Public Health Entomology."

Guest Lectures

"Evolutionary Genetics of the *Anopheles gambiae* Complex"
Genes, Ecology, Evolution BIO 210, Dec 8, 2009

"The genetic basis of human host preference in *Anopheles gambiae*"
Genetics Seminar GENE 481, Sept 19, 2013

"Grant writing and identifying funding opportunities"
First Year Seminar EEBL610 2015 - 2020

VII Service

Symposia organized

2013 Organizer Evolution Symposium at TAMU sponsored by EEB program (Oct 28-29)
2016 Co-organizer Vector Biology mini-symposium TAMU, sponsored by Agrilife (May 18)
2016 Co-organizer "Parallels, opportunities, and shared challenges across plant, animal and human ` vector-borne disease" at TAMU (Oct 16-17)
2016 Organizer "A shift in biting behavior: Outdoor host seeking behavior of malaria vectors and the potential impact on malaria control" Meeting of American Society of Tropical Medicine and Hygiene, Atlanta Nov 2016

Journal Subject/Associate Editor

Guest editor special topics issue on Speciation Genetics for Frontiers in Genetics (2020)
Associate Editor for *Hereditas* (since April 2015)
Subject Editor for *Journal of Medical Entomology* (since March 2018)

Journals reviewed for:

Cell	*PLoS Pathogens*	*J. of Medical Entomology*
Proc. Natl. Acad. of Science USA	*Genetics*	*Am. J. Trop. Med. Hygiene*
PLoS ONE	*Journal of Genetics*	*Acta Tropica*
Evolution	*Heredity*	*Parasites and Vectors*
Journal of Molecular Evolution	*Journal of Heredity*	*Journal of Vector Ecology*
Molecular Ecology	*Pathogens and Global Health*	*Environmental Entomology*
Molecular Biology and Evolution	*PLoS Neglected Tropical Diseases*	*Journal of Insect Science*
BMC Evolutionary Biology	*Trends in Parasitology*	*Bull. Entomol. Research*
BMC Biotechnology	*The Malaria Journal*	*Journal of Biogeography*
Insect Biochem. and Mol. Biology	*Infection, Genetics and Evolution*	*Behavioral Ecology*
Insect Molecular Biology	*Molecular Ecology Resources*	*Memorias Oswaldo Cruz*
BMC Research Notes	*G3 (Genes|Genomes|Genetics)*	*PLoS Genetics*

BMC Biology	*BMC Genomics*	*Insects*
Scientific Reports	*BMC Ecology*	

Grant/Fellowships/Promotion Reviews

Reviewer Welcome Trust Grant Application	May	2008
External Reviewer for NIH Vector Biology Study Section	Oct 12	2011
External Reviewer for NIH Vector Biology Study Section	Oct 12	2012
Reviewer Welcome Trust Fellowship Application	March	2013
Review Sigma Delta Epsilon "Graduate Women in Science Fellowship"	April	2013
Reviewer European Science Foundation Post-Doc Fellowship	March	2014
Reviewer Welcome Trust Grant Application	May	2014
External Reviewer for NIH Vector Biology Study Section	July 14	2014
Member review panel NIH Non-HIV Anti-infective Therapeutics	July 14-15	2014
Member review panel NIH "Topics in Microvbiology"	Oct 30th	2014
Reviewer Welcome Trust Fellowship Application	Sept	2014
Member review panel NIH Vector Biology Study Section	Feb	2015
Reviewer for Welcome Trust Fellowship Application	April	2015
Member review panel NIH Topics in Infectious Diseases	June	2015
Member review panel NIH Vector Biology and Pathogenic Eukaryotes	March	2016
Review grant application NWO (= "Dutch NSF")	May	2016
Member review panel NIH International Research in Infectious Disease	Oct	2016
Review grant application for the Canadian Foundation for Innovation	Jan	2017
Review member of Florida Dept of Health Zika Research Review	Jan	2017
Review promotion package UC Davis	Sept	2017
Review Welcome Trust Grant	June	2019
Review NSF Proposal	Oct	2019
Review Israeli Ministry of Science, Technology and Space Grant proposal	Oct	2019

Committees

Departmental

Faculty Advisory Committee (*Elected*)	2010 - 2013
Graduate Admissions Committee	2011 - 2012
Graduate Admissions Committee	2014 - 2016
Ad hoc committee on Medical Entomology Graduate courses	2011
Subcommittee on Department of Entomology Graduate Curriculum	2012
Education committee	2012 - 2013, 2017- 2019
Utilization and Assignment of Physical Space Committee	2013 - 2017 2018- present
Search committee "Insect systematics"	2014
Recruitment committee	2015
Search committee "Chemical Ecology"	2016

College

EEB representative on Graduate Program Council	April	2015 – 2019

Texas A&M

Membership/Travel grant chair of Interdisciplinary EEB Program (Elected)	Jan	2011 - 2015

Professional Organizations

Member of scientific program committee for Entomology for the American Society for Tropical Medicine and Hygiene	2014
Chair of scientific program committee for Entomology for the American Society for Tropical Medicine and Hygiene	2015 - present
Council Member of the American Committee of Medical Entomology	2014 – 2018

Advisory Positions

2008- current	Member of the technical advisory group for the Bioko Island Malaria Control Project (BIMCP) and Bioko Island Malaria Elimination Project (BIMEP)
2008-2011	Member of the technical advisory group for the Equatorial Guinea Malaria Control Initiative (EGMCI).
2015-2018	Faculty Advisor to TAMU chapter of MEDLIFE

Professional Development Activities

April 13th2019	Promotion to full professor workshop
Sept-Oct 2018	NIH specific aims workshop
April 2nd 2018	Promotion to Full Professor workshop
May 3rd 2016	Private discussion with Jean Layne of Center for Teaching Excellence
April 13 2016	Promotion to full professor
March 4 2016	Leveraging Popular Culture, Multimedia, and Current Events to Engage Students
Aug 6, 2015	Teaching methods workshop
Sept 17, 2014	Leveraging Technology in your Teaching
Aug 10-11, 2014	R workshop at Texas A&M
Sept 11, 2013	Lecturing well workshop
Sept 11, 2012	Blended Learning Approaches for Engaging Students in Large Classes
Fall-Spring 2011	Attended three sessions of the Faculty Teaching Academy
Fall 2008	Semester-long grant writing workshop
Sept 2, 2008	Lecturing well workshop
Sept 25, 2008	Achieving, Attaining, and Accomplishing: Strategies for Striving, Surviving, and Thriving through Tenure and Beyond!

Membership Professional Organizations

The American Society of Tropical Medicine and Hygiene
American Committee of Medical Entomology
The Society for Vector Ecology
The Entomological Society of America

Outreach

May 3rd	2010	Interview with Amanda Gardner from HealthDay on resistance of mosquitoes to DEET.
April 27th	2011	Interview with Mitch Carr from KRLD News Radio 1080 in Dallas on the use of transgenic mosquitoes to combat malaria.
July 26th	2011	Interview with Mitch Carr from KRLD News Radio 1080 in Dallas on the threat of Dengue virus transmission in the United States.
Aug 27th	2012	TV Interview with Owen Conflenti from KPRC Houston on mosquito repellents This resulted in two segments that were broadcast on Sept 4th and
Oct 8th	2012	Interview with Waco newspaper on the effect of cold weather on mosquito populations.
May 2nd	2013	Interview with Brabara Kessler from “Green Living” on how to protect one self from West Nile.
May 29th	2013	Interview with Amy Norton from Healthday on a article in Nature on mosquito olfaction.
Sept 16th	2016	Talk about being a scientist at Spring Creek Elementary School, College Station
March 22nd	2019	Talk about insects at Aggieland Country School, College Station

This CV submitted is most current and correct as of the date of this signature.

Michel A Slotman 6/28/2020

Curriculum Vitae

KATI I. STODDARD

Department of Plant Pathology and Microbiology
Texas A&M University
College Station, Texas 77843-2132
Office Phone: 979-845-8278
E-mail: kstoddard@tamu.edu

EDUCATION

2009-2012 **Ph.D.**, Environmental Science, University of North Texas
2005-2007 **M.S.,** Water Management and Hydrological Science, Texas A&M University
2001-2005 **B.S.,** Bioenvironmental Sciences, Texas A&M University

PROFESSIONAL EXPERIENCE

Current Appointment

2015-Present **Instructional Assistant Professor**, Plant Pathology and Microbiology (PLPM) department, Bioenvironmental Sciences (BESC) undergraduate program, Texas A&M University, Appointment: 90% Teaching, 10% Service

Previous Appointments

2013-2015 **Assistant Professor of Environmental Science,** College of STEM, Texas A&M University-Texarkana (TAMU-T), Appointment: 55% Teaching; 30% Scholarship; 15% Service

2014-2015 **Biology Department Head,** College of STEM, TAMU-T

Spring 2013 **Adjunct Instructor,** Biology Department, University of North Texas

NON-ACADEMIC WORK EXPERIENCE

2012-2013 **Research and Technical Writing Consultant**, Tate and Lyle PLC, global supplier of food and beverage ingredients to industrial markets

- Led a team of three interdisciplinary scientists to develop a comprehensive literature review on an emerging sub-discipline within aquatic toxicology
- Conducted independent literature reviews and compiled corresponding white papers to advise Tate and Lyle on the state of the science in their areas of interest

2007-2009 **Project Scientist**, KBA EnviroScience, Ltd., Lewisville Texas

- Mainly responsible for storm water permitting and monitoring
- Provided expert environmental consultation in the following areas:
  - National Environmental Policy Act (NEPA)
  - Wetland determination, delineation, and permitting
  - Environmental assessment and documentation
- Compiled reports inclusive of ArcGIS analysis of environmental conditions

2006 **Summer Intern**, HDR Engineering Inc.

- Conducted wetland and stream delineations and environmental site assessments
- Authored and edited sections of NEPA documents
- Developed comprehensive maps using ArcGIS

AWARDS AND HONORS

2019 Recognized mentor of COALS Senior Merit Award recipient, Deidre Worth (TAMU)
- College of Agriculture and Life Sciences Senior Merit Award recipients self-report the faculty member they felt mentored them through their time at A&M

2017 Student Employment Impact Award Nominee (TAMU)
- Nominated by a student worker in the PLPM office

2016 Plant Pathology Teaching Faculty of the Year Award (TAMU)
- One award is given per academic year to PLPM teaching faculty

2015 Interdisciplinary Studies-University Foundations Faculty of the Year Award (TAMU-T)
- One award is given per academic year to faculty who taught the University Foundations course

PROFESSIONAL AFFILIATIONS

2015-Current National Association of Environmental Professionals (NAEP)
2009-Current Society of Environmental Toxicology and Chemistry (SETAC)
2015-2017 National Science Teachers Association (NSTA)
2009-2013 National American Hazardous Materials Management Association (NAHMMA)

TEACHING AND SCHOLARSHIP OF TEACHING

Summary of teaching approach: I believe in an evidence-based approach to my teaching, therefore I regularly attend workshops, trainings, and conferences and read the current literature on best practices in education and on effective learning and teaching strategies. I incorporate what I learn into my courses, so that I can continually improve the courses and the student performance and experience in the courses. I incorporate instructional technology (e.g. student engagement technology, reusable learning objects (RLOs), etc.), active learning (e.g. debates, case studies, in-class polling, scenarios, etc.), current events, and real-world examples to engage students and demonstrate the relevance of the course to their lives. I also highly value an inclusive learning environment, so I strive to make every student feel welcome, comfortable, and part of the scholarly space of the course.

TEACHING PROFESSIONAL DEVELOPMENT

2019 **TAMU Transformational Teaching and Learning Conference**, May 1-2
Workshop Presenter: "Top Hat vs. iClicker—A Professor's Side by Side Comparison of Two Active Learning Technology Tools"

- Keynote speaker, Dr. Sara Brownell of Arizona State University, presented her research on inclusive and active leaning
  - Various groups of students are differentially impacted by active learning in the classroom
  - Attempts to make a classroom more active and inclusive might be divisive for some students based on their culture, background, social identities, and various other factors.
  - Mitigating strategies to build a more diverse, inclusive and active classroom also presented
  - Now well informed, I will take more care when planning and executing active classroom activities to try to ensure all students feel comfortable in the classroom.
- Other valuable information I learned from TTLC and plan to act on includes:
  - Suggested readings on critical thinking;
  - Using name tents to help learn names and build a relationship with students;
  - Strategies for improving collaborative student work;
  - Plans to apply to be a Service Learning Faculty Fellow, when the program begins again;
  - The Testing Effect; providing past exams as a study and learning tool for students
  - Library resources available to assist me in teaching my students

2019 **Texas A&M Race, Identity, & Social Equity (RISE) Conference**, March 22

- RISE illuminated to me the unique needs of students from a race, identity and social equity perspective.
- Attending this conference provided me with ideas, language, and professional connections that I hope will allow me to create a more inclusive and supportive learning environment.
- Networking at RISE connected me with TAMU staff passionate about sustainability, such as Dr. Carol Binzer, the Director of Administrative & Support Services.
    - Dr. Binzer invited me to be a faculty attendee at the Sustainability Dinner in fall 2019.

2019 **Strengthening Students' Communication Skills Using Reusable Learning Modules (RLMs)**, March 3

- Communication RLMs developed as part of a USDA-NIFA Higher Education Challenge Grant
- Communication RLMs designed for faculty to easily and efficiently incorporate communication skills curricula into their current course content.
- I plan to incorporate at least one of these modules into the communication intensive courses I teach and share what I have learned with my department.

2019 **TAMU AgriLife Conference, Teaching Session**, January 9

- Andrew McPeak, professional workshop facilitator, presented "Marching off the Map".
- Provided insight on the characteristics of the next generation of college students, Gen Z, and teaching strategies to better reach Gen Z.
- Four key points from this workshop were that teaching and learning for Gen Z needs to be:
    - Experiential
    - Participatory
    - Image rich, and
    - Connected with others.
- I am now working to incorporate many of these elements into my courses

2018 **Invited Instructional Technology Services (ITS) Workshop Presenter—"Using eCampus to Instill Accountability for Academic Dishonesty"**, August 22

- Presented the Academic Dishonesty eCampus Quiz I developed to TAMU staff and faculty at an ITS workshop to show how I ensure my students know the academic honesty rules to which they are held accountable.
- My Academic Dishonesty Quiz is now used in several departments across TAMU

2018 **TAMU Transformational Teaching and Learning Conference**, April 17-18, 2018
*Presenter***:** "Using the peer review platform Peerceptiv to improve critical thinking and written communication while also introducing students to different worldviews"
*Poster***:** "Using the IPG to Incrementally Improve BESC 201: Intro. to Bioenvironmental Sciences"

- Plenary speaker Dr. Michael Wesch spoke about academic motivation and using technology to broaden the learning experience of his students. Some changes made to my courses as a result of this talk include:
    - When planning curriculum and lessons, I first consider the meaning and significance to the students instead of content topics
    - I now challenge students to try something new in response to his quote: "you can't think your way into a new way of living; you have to live your way into a new way of thinking".
    - I have been applying his three lessons to course design, teaching methods, and approach to communications with students:
        - 1. Try new things; 2. Failure is fun and fascinating, and 3. Growth is real.
    - He has lunch with his students to get to know their needs and circumstances as individuals and students. I plan to try this with my First Year Experience Hullabaloo course.

- Plenary speaker, Dr. Kimberly Tanner said teaching and learning is fundamentally about changing the human brain and challenged attendees to structure learning experiences to foster this change by doing the following:
    - 1. Make sure students are awake, attending and interested—Challenged to start class with something engaging that elicits students' prior knowledge.
    - 2. Instructor needs to actively relate knowledge and memories so new knowledge connections can be made—Challenged to give students the opportunity to explore what they know before lecturing
    - 3. Students need time to practice the new connections in new contexts—Challenged to give students an opportunity to practice their new knowledge (I feel I do this well through some elements already in place in my courses)
    - 4. Students need opportunities to self-assess their understanding and identify confusions—Challenged to collect some form of assessment/evaluation from student every class.
        - I have improved how I execute #3 and #4; I am now working to improve how I apply #1 and #2 in my courses.

2018 **Blackboard Webinar—"Backwards design to support flexibility within courses"**, March 22

- Backwards design, aka objective driven design, advocates for a course design that prioritizes focused, measurable, and meaningful learning objectives before planning curriculum, content delivery and activities. When I plan lessons and activities, I ask myself the following question in order:
    - 1. What is my goal for my students?
    - 2. How do I know if they have achieved this goal?
    - 3. What activities are the most effective way for students to reach that achievement?
    - 4. What do they need to know to be successful in those activities?

2018 **TAMU Center for Teaching Excellence—"Interactive Teaching Methods"** Workshop, March 8

- Learned practical strategies, activities, and technologies I have implemented in my courses to more effectively engage students and help them to interact with the content and each other more.
- Examples of things I use in my course in response to this training include:
    - The website ViewPure, which removes adds and video suggestions from YouTube videos
    - Priming students before showing a video clip and then debriefing the video
    - Framing instructions better
    - Changing body language in class
    - Breaking the room into quadrants and calling on quadrant rather than cold-calling a student

2018 **TAMU, COALS—"Best Practices in Assessment",** March 3

- I assist Dr. Heather Wilkinson with curriculum and program assessment in PLPM and BESC. The five points I learned from this training that we now apply in our assessment efforts are:
- 1. Ensure curricular alignment
- 2. Make assessment minimally invasive
- 3. Measure growth overtime
- 4. Standardize expectations
- 5. Utilize results

2017 **Project Reporting and Writing Impacts: Who Cares? You Should**, APS Webinar, May 24

- Useful training that I applied to writing impact statements for teaching

2017 **TAMU Center for Teaching Excellence-"Can I Use That?-An Interactive Workshop on Copyright and Fair Use"**, April 6.

- I applied concepts learned from this workshop to my course to more fully comply with copyright and fair use laws and informed students on basic principles so they are knowledgeable as well.

2017 **TAMU Center for Teaching Excellence Wakonse South 19th Annual Conference on College Teaching**, April 1-3
*Presenter***:** "One assignment to rule them all: Using infographics to accomplish multiple learning objectives"

- Learned about the connection between visual and performing arts and teaching.
- Introduced to the "Boiling Water in a Small Village" scenario developed by Dr. Catherina LaPorte.
    - I now use this scenario in my BESC 201 face-to-face class to engage students, encourage critical thinking, and incorporate real-world application of course concepts

2017 **Teaching with Technology Conference**, Texas A&M University, College Station, TX, March 1-2

2017 **Innovative Pedagogy Grant Project**—Accepted into the first cohort of the IPGP.

- Awarded $10,000 when I completed the program. The project was executed in 3 phases.
    - Phase 1: Instructional Technology Institute, which included training in flipping your course, teaching within an active learning space, overview of instructional technologies, overview of the Americans with Disabilities Act (ADA) and Universal Design, and the Quality Matters Improving your Online Course (IYOC).
    - Phase 2: The Instructional Technology Certificate Program, which included training in online, face-to-face, blended and hybrid teaching best practices, communication, syllabus creation, learning outcomes overview, incorporating instructional technologies, and course design and development.
    - Phase 3: 6 months of course redesign and application of previous IPGP training. My timeline for phase 3 was extended due to maternity leave I took in late Fall 2017 and early Spring 2018
- Certifications I earned through IPGP:
    - Quality Matters—Improving your Online Course
    - Instructional Technology Certificate Program
- I have used IPGP to improve the structure, composition, and layout of my BESC 201 course. Most importantly, BESC 201 is now more streamlined, student-focused, and better meets accessibility standards.

2016 **University of Buffalo National Center for Case Study Teaching in Science**, May 16-20

- 5-day training on how to create case studies and teach with case studies
- Training including demonstrations and activities on a variety of case study methods
- I also created my own case study, delivered it to undergraduate students, and received constructive criticism from students and colleagues
- I use the case study I created at this workshop in every face-to-face BESC 201 class

2016 **Global Thinking Academy**

- 10-month fellowship program to improve teaching and scholarship with regard to incorporating critical thinking and global issues into collegiate courses.
- Completed pedagogical training, however did not complete the international travel and Reusable Learning Object assignment due to physical and travel constraints.
- Applied elements of the critical thinking training to my courses, helping students identify quality references and analyze the value and perspective of the references
- Applied lessons I learned from being an online student in this academy to improve my own online course to be more user friendly

2016 **TAMU Center for Teaching Excellence Wakonse South 19th Annual Conference on College Teaching**, April 1-3
- Networked with TAMU and Blinn instructors, exchanging ideas and approaches

2016 **Flipping Your Course Faculty Institute**, March 28-April 1 ($2,000 bursary received)
- Attended this institute and realized I was already flipping my courses, but learned strategies to do so more effectively.

2016 **Teaching with Technology Conference**, Texas A&M University, College Station, TX, Feb 2-3

2016 **Online Pedagogy Excellence Network (OPEN)**, Spring 2016:
- Co-led a series of brown bag lunches once a month for College of Agriculture and Life Sciences (COALS) faculty who were working with students in any online capacity
- OPEN provided an opportunity for COALS faculty to exchange ideas about pedagogy in the online environment

2015 **Association of American Colleges and Universities (AACU) Project Kaleidoscope: Summer Leadership Institute**, July 14-17
- 5 day leadership development training for early to mid-career STEM faculty who are engaged in projects focused on transforming undergraduate education in classrooms, departments, and institutions.
- I learned about leadership styles and strategies for initiating positive changes at higher education institutions and was given time to reflect as to how I could do this at my institution.
- I attended this institute before having worked very long in my current position at TAMU and I left this institute early due to a family emergency, so I would like to attend this institute again and their follow-up institute.

2015 **The Eyes Have It: Teaching Visual Communication**, TAMU Writing Center Workshop, July 10
- This training was not as helpful as I had hoped it would because it was more applicable to visual and performing arts instructors.
- I would like to attend future trainings to learn more about teaching visual communication to science-focused students.

2015 **Chancellor's Summit on Academic Technology**, TAMU, June 25

2015 **Applying the Quality Matters Rubric, Quality Matters Certification**, Texas A&M University, College Station, TX, June 24
- This course is designed to improve online courses; however, I have used it to improve both my online and face-to-face courses. My ultimate goal is to have my courses QM certified. The IPGP provided training and resources to help me make changes to my BESC 201 course to get closer to this goal.

2015 **National Science Teachers Association Conference (NSTA)**, Chicago, IL, March 12-14

2015 **Teaching with Technology Conference**, Texas A&M University, College Station, TX, March 4-5

2014 **Teaching with Technology Conference**, Texas A&M University, College Station, TX, Feb 26-27

2013 **Transforming STEM Higher Education**, Association of American Colleges and Universities (AACU), San Diego, CA, October 31-November 2

Student Life Trainings taken at Texas A&M University

2019 **QPR—Question Persuade Refer, Suicide Prevention Gatekeeper Training**, April 15
- Training for recognizing warning signs, clues and suicidal communications of people in trouble
- Training for skills to act to prevent tragedy

2019 **Green Dot Bystander Training**, March 12
- Training on strategies for de-escalating power based violence, with the ultimate goal of establishing a culture of intolerance for such behavior and a reduction in violence on campus

2019 **Step In, Stand Up Training**, March 12
- Bystander training designed to reduce the incidences of sexual harassment and sexual violence at Texas A&M

2019 **Aggie Ally Training**, February 17
- Aggie Allies are trained A&M faculty, staff, students or community members who are willing to provide a safe environment, support, and listening ear for LGBTQ+ individuals

Training Completed while at Texas A&M University-Texarkana

2014 The Grant Training Center—Grant Writing Workshop, Fort Worth, July
2014 Quality Matters—"Applying the Quality Matters Rubric", 2 Week Online Training Course, July
2014 LeaderCast—Leadership Training, May
2014 Texas Water Watch—Water Quality Monitoring Training, February

Trainings Completed Prior to Academic Appointments

2013 The University of North Texas Sustainability Program—Grant Writing Training, October
- One class in what was once the UNT Sustainability Leadership Program. Other classes included:
  - Fundamentals of Sustainability
  - Changing Behavior
  - Stakeholder Involvement
  - Measuring Success
  - Public/Private Partnerships
  - Sustainability Marketing and Promotions
- I was unable to complete all the classes for the training program because the program was canceled

COURSE RESPONSIBILITIES AT TEXAS A&M UNIVERSITY

Summary Table of Courses Taught at Texas A&M since Fall 2015 with Student Evaluation Data

Semester	Course #	# Credits	# Students	Student Evaluation Score (PICA, unless specified as Paper)	Number of Students who Completed the Evaluation
Summer 2019	BESC 484-905	3	3	N/A	N/A
	BESC 201-700	3	36	N/A	N/A
Spring 2019	BESC 201-500	3	55	N/A	N/A
	BESC 201-700	3	97	N/A	N/A
	BESC 481-931	1	14	N/A	N/A
Fall 2018	BESC 201-500	3	94	4.78 (Paper)	69 (of 94) 73%
	BESC 201-700	3	90	4.48	44 (of 90) 48%
	BESC 403-500	3	24	4.86 (Paper)	24 (of 24) 100%
Summer 2018	BESC 484-903; 907	3	4	N/A	N/A
	BESC 201-700	3	27	N/A	N/A
Spring 2018	BESC 201-500	3	46	4.83	9 (of 46) 20%
	BESC 201-700	3	98	4.56	36 (of 98) 37%
	BESC 481-932	1	14	4.85	6 (of 14) 43%
Fall 2017	*BESC 201-500	3	91	4.74 (Paper)	68 (of 91) 75%
	*BESC 201-700	3	82	4.36	17 (of 82) 21%
	*BESC 403-500	3	21	4.86 (Paper)	19 (of 21) 90%
Summer 2017	BESC 484-902	3	4	4.8	1 (of 4) 25%
	BESC 201-700	3	26	4.86	5 (of 26) 19%
Spring 2017	BESC 201-500	3	44	4.79 (Paper)	33 (of 44) 75%**
				4.95	8 (of 44) 18%**
	BESC 201-700	3	86	4.32	45 (of 86) 52%
	BESC 481-932	1	15	4.81 (Paper)	12 (of 15) 80%**
				4.94	5 (of 15) 33%**
	BESC 484-915	3	4	5.00	1 (of 4) 25%
Fall 2016	BESC 201-500	3	72	4.76 (Paper)	55 (of 72) 76%
	BESC 201-700	3	47	4.28	27 (of 47) (57%)
	BESC 484-901	3	4	4.00	3 (of 4) 75%
Summer 2016	BESC 484-909/970	3	5	3.4	1 (of 5) 20%***
	BESC 201-700	3	24	4.25	8 of (24) 33%
Spring 2016	BESC 201-500	3	37	4.77 (Paper)	27 (of 37) 73%
				4.9	2 (of 37) 5%
	BESC 201-700	3	46	4.10	24 (of 46) 52%
	BESC 481-932	1	15	4.6	1 (of 15) 7%
	BESC 484-915	3	4	4.45	2 (of 4) 50%
Fall 2015	BESC 201-500	3	95	4.5	23 (of 95) 24%
	BESC 201-599	3	91	4.17	34 (of 91) 37%
	BESC 484-930	3	2	N/A	N/A
Mean Evaluation Score				**4.59**	
Mean Evaluation Score sans outlier of Summer 2016 BESC 484				**4.63**	
Departmental Mean for Fall 16, 17 & Spring 17, 18				**4.60**	
Stoddard Mean for Fall 16, 17 & Spring 17, 18				**4.64**	

BESC 201-500—Face-to-Face Introduction to Bioenvironmental Sciences
BESC 201-700(599)—Online Introduction to Bioenvironmental Sciences
BESC 403—Environmental Sampling and Monitoring
BESC 484—Field Experience course (Certified Writing (W) course)
BESC 481—Seminar (Certified Communication (C) course)

*I taught these courses in fall 2017 until Thursday 10/26/17. That night I gave birth to my first child, so I took maternity leave for the remainder of the fall semester. I was in constant communication with my TAs and the faculty who taught my courses for the remainder of the fall (Drs. Wilkinson and Shim) to ensure they had all the information and resources they needed to teach my courses for me in my stead.

**Indicates data provided from both an in-person paper evaluation and a PICA online evaluation for the same course in the same semester.

***Student indicated in comments they felt their internship would have been as successful with only completing two of many the assignments from the course. The student did not recognize the objective of the course was to practice and improve technical writing skills (not to complete their internship) and seemed to be disgruntled at the concept of the course in general.

BESC 201 Introduction to Bioenvironmental Sciences:

- Introduces students to global environmental issues with an emphasis on human impacts and the importance of biological processes
- Core Curriculum Life and Physical Sciences course
- Educates students inside and outside of the BESC major on the core curriculum standards of:
    - Critical thinking,
    - Communication,
    - Teamwork, and
    - Empirical and quantitative skills

Improvement Example #1: Online Course Offering:

- During the summer of 2015, I developed the online version of the course (BESC 201-700). I have continued to improve the online course since then.

Impact of Online Course Offering:

- I increased enrollment and access to a core curriculum sciences course by 500 students in three years.

Improvement Example #2: Learning Modules:

- Beginning in spring 2017, I was accepted into the Innovative Pedagogy Grant Project (IPGP). One of the most significant course improvements that came from this year-long intensive pedagogy training project was that I worked with ITS to revise reusable learning objects (RLOs) I created previously with Articulate Storyline to meet ADA and universal design requirements.
- Each of the three units of instruction in BESC 201 includes 12-15 RLOs (learning modules).
- These learning modules are a low-stakes method of earning points in 201. Low-stakes assignments allow students to assess their own learning and make adjustments, if necessary, before a high-stakes assignment, such as an exam.
- A collection of many low-stakes assignments can also instill students' sense of accountability for their own self-directed learning

Impact of Learning Modules in BESC 201:

- The average on the first two unit exams of the course improved after modules were introduced (81 vs. 84 and 79 vs. 80, respectively).
- The average on the third unit exam decreased from 75 to 69, however the average grade on modules was lower for unit 3 modules compared to unit 1 or 2 modules.
- These data suggest that when students use the modules to earn higher scores on these low-stakes assessments, they perform better on the high-stakes assessment unit exams.
- The modules require students to practice with the course material in small digestible quantities on a regular basis, which organically promotes engagement and learning.

Improvement Example #3: Top Hat:

- In fall 2018 I started using Top Hat, a 3rd party student engagement platform. Top Hat:
    - Allows me to present PowerPoints slides and pose questions to all my students during class
    - Allows students use their phones or laptops to respond to the questions
    - Facilitates engagement of students and formative evaluations of student learning during class
    - Quickly takes attendance in a way that deters academic dishonesty
    - Quantifies student participation. Prior to using Top Hat, I had no reliable way to measure how engaged my students were.

Impact of Top Hat:

There several important impacts of using Top Hat:

1. I can engage with all my students, not just the outspoken 5% of students. Top Hat allows me to complete valuable formative assessments during class, so I can evaluate learning of my students during lessons and adjust my instruction as necessary.
2. Top Hat allows me to foster a more inclusive learning environment because student responses are anonymous to their peers. Students can exchange ideas through discussions and answer questions, without revealing their identity to their peers. Experience and student feedback has informed me this anonymity helps students feel secure in the learning environment.
3. 88% of my Fall 2018 students thought Top hat was moderately to highly helpful at engaging students in class.

Improvement Example #4: Peerceptiv

- The Worldview Essay:
    - Students write three worldview essays for the core curriculum requirements of communication and critical thinking.
    - The essay consists of prompts relating to an environmental issue about which individuals could feel very differently.
        - For example, one prompt asks, "*Describe your perspective/worldview of the role governments should or should not play in regulating or influencing population size."*
    - Students must explain what their worldview is and incorporate course terms accurately. Students also must explain how they formed their worldview, which is an example of metacognition or a type of critical thinking.
    - From fall 2015 to fall 2016, my TA and I would work together to grade all the essays from both sections. However, because there were so many, it was impossible to provide critical feedback to each student. Furthermore, the vision of students learning about other students' worldviews was entirely unrealized.
- In spring 2017, I began using Peerceptiv, which is a cloud-based double-blind peer review system.
- The Peerceptiv assignment sequence is as follows:
    - Students submit their assignment,
    - Students complete peer evaluations using a rubric, and
    - Students complete back evaluations, which means they assess the helpfulness of the peer review comments they received for their own essays.
- Peerceptiv sends the instructor the top 5 and bottom 5 scored essays (benchmarks) to grade
- Benchmarks set the curve to which all peer-reviewed scores are calibrated.

Impact of Peerceptiv:

1. More opportunities for students to practice and display critical thinking. Students now must utilize critical thinking when they:
    - Write their essays, and
    - When they peer-review other students' essays.
2. Peerceptiv allows students to read their peers' worldviews and how their peers formed their worldviews (e.g. culture, religion, education, and other significant life experiences).

- To date, 758 students have read on average 10.3 different peer worldview essays, which means each student since 2017 has been exposed to about 10 different worldviews. I believe this is a step towards helping students gain appreciation for diversity and develop intercultural competence.

BESC 403 Environmental Sampling and Monitoring:

- Introduction to environmental sampling and monitoring methodology, which provides an overview of current applications of sampling and monitoring in the environmental sciences and places emphasis on practical aspects of sampling from air, soil and water

BESC 403 Redesign:

- Redesigned past instructors' teaching materials to incorporate active learning strategies
  - Examples include case studies, peer-to-peer teaching opportunities, guided exploration of material, and mini-poster sessions
- Refined the assignments so instructions and expectation were more clearly communicated
- Created streamlined rubrics for assignments so students understand the standards expected for their work
- Incorporated my personal experience as an environmental consultant into the course
- Worked with the BESC Professional Board to create a water sampling case study
  - The BESC Professional board consists of 26 established environmental professionals who advise BESC and PLPM faculty on skills and knowledge students need in the environmental industry post-graduation
  - Students design a sampling strategy and analyze data for a realistic sampling scenario
  - Students execute sampling strategy at a local stream
  - Final work product is a memo to the "client", explaining the outcome of the survey and data analysis
- Incorporated weekly lists of terms and concepts. Every week students completed a low-stakes quiz on the terms and concepts from the week before. Low-stakes weekly quizzes allowed students to incrementally earn points towards their final grade. More importantly, it also allowed students to assess their own learning, prompted weekly studying as opposed to studying only before the two major exams of the course, and gave students familiarity and practice with the types of questions included on major exams.

Impact of BESC 403 Redesign:

- Feedback from the BESC Professional Board and other industry experts indicate they highly value the real-world sampling, technical writing, and data analysis experience students gain from BESC 403.
- While I do not have quantitative data for this, I believe the impact on my 403 students is that I prepare them for professional careers, especially if those careers are in the environmental field.
  - Students regularly ask about my consulting experience to learn from me
  - I've served as a professional reference for students pursuing environmental consulting positions
- Because I have never taught the course without the low-stakes weekly terms and concept quizzes, I cannot definitively say these quizzes improved the exam scores, however written end-of-term student feedback revealed the vast majority of students appreciated the weekly quizzes and the value they brought to the course and their learning.

BESC 481 Seminar (Communication certified course; Capstone course):

- Students do the following for this course:
  - Research and critically analyze an environmental issue within a theme selected by instructor
  - Prepare two presentations and a final report on their topic
  - Critically analyze a journal article on the selected course topic for the semester
  - Peer-review each other during presentations
- I provide students detailed and timely feedback on each of their two presentations and written assignments.
  - When providing feedback, I apply lessons I have learned from ITS and CTE workshops I have attended to ensure my feedback is as useful as possible.

BESC 481 Changes

- Created a rigorous Academic Dishonesty quiz, which my students must master before they can access assignments
- Recertified the course as a communication course in spring 2018, making improvements to better meet Communication Course requirements

Impact of 481 Changes

- Academic Dishonesty quiz now used by instructors in PLPM and faculty in other departments
    - Students who master this quiz clearly understand the definitions and examples of various types of academic dishonesty, thus they are better informed on the academic standards of TAMU
- Students can satisfy their communication course requirements using BESC 481

BESC 484 Field Experience (Writing Certified Course):

- Students enrolled in BESC 484 are concurrently working in an internship or in a research experience. Each summer, there are departmental funds allocated to support students in the BESC Undergraduate Research Scholars (BURS) program.
    - Course objective is to help students refine their professional written communication skills through a variety of technical writing assignments, including: memos, reports, posters, resumes, cover letters, annotated bibliographies, and technical outlines

BESC 484 BURS Student

- During summer 2018, I supervised my first BURS student. Her project was to work with me and ITS to create online reusable learning objects (RLOs) for BESC 201 using Articulate Storyline.

BESC 484 Improvements—Reusable Learning Objects (RLOs):

- Created a set of nine RLOs on grammar and writing for my section of 484. Students are required to:
    - Read a short website on a select set of grammar or punctuation rules
    - Master a brief quiz (2-5 questions) on the reading
    - Apply what they learned in the module (and previous modules) to their writing for the week

Impact of 484 RLOs:

- Quantitative data on the effectiveness of these RLOs is not available, but after implementing these RLOs, I noticed a substantial decrease in the common writing errors I had previously seen and corrected.
- I believe the impact of my teaching 484 is that students improve their technical writing skills as they learn to apply them to real-world working experiences.

BESC 484 and 481 Master Syllabi and Rubrics:

- I continually improve the master course syllabi for all 481 and 484 instructors.
- I continually improve the rubrics for 481 and 484 and provide these to other PLPM instructors.

Impact of BESC 484 and 481 Master Syllabi and Rubrics:

- Uniform syllabi and rubrics for BESC 481 and 484 eases the faculty burden of syllabi and course preparation
- Continual syllabi improvement ensures the courses continue to meet the requirements of writing and communication certified courses
- Continual syllabi improvement also helps to fine tune assignments and alignment between assignments and learning outcomes.
- Shared rubrics allow instructors to grade assignments consistently and efficiently. Continually improving rubrics facilitates better alignment between the rubric, the desired learning outcomes, and student work product.
- I streamline the rubric to simplify data collection and ease the burden on faculty for providing 484 and 481 assessment data.

BESC 484 and 481 eCampus shells:

- Developed eCampus shells for PLPA faculty interested in using eCampus to execute 484 or 481
- Upon request, I set up any PLPM faculty member's 484 or 481 course using the corresponding shell

Impact of BESC 484 and 481 eCampus shells:

- Eases the burden to faculty to adopt eCampus
- Simplifies faculty course preparation for 481 and 484, saving faculty time and effort
- Allows me to teach PLPM faculty how to use eCampus
- Allows me to easily collect data from 484 and 481 for the annual assessment of the academic program
    - Eases the burden on faculty for providing 484 and 481 assessment data.

PLPA 303 Plant Pathology Lab:

- Each summer I work with the Technical Laboratory Coordinator, Elena Kolomiets, and the Teaching Assistants for the course to revise the lab manual.
- From 2015-2018, I set up the eCampus course and taught the TAs and Mrs. Kolomiets how to use eCampus
- From my eCampus lessons, Mrs. Kolomiets is now able to set up the PLPA 303 course herself, however I am always on hand to troubleshoot eCampus questions.

Guest Lecture: BESC 403, Fall 2016—Environmental Sampling and Environmental Monitoring

- Developed a computer lab exercise that provided hands-on activities for students to learn how to use and integrate Geographic Information Systems (GIS), Global Positioning Systems (GPS), and Visual Sample Plan (VSP).

Creation of Shared Education Materials or Collaborations on Shared Education Materials

- I frequently collaborate with other PLPA/BESC faculty to ensure BESC 201 and 403 are harmonizing with other BESC courses. For example:
    - Collaboration with Dr. Heather Wilkinson to create a case study about the Chesapeake Bay oyster collapse. Students were introduced to the concept of stakeholders and wicked environmental problems in 201, which primed them for a more in depth analysis of these topics in BESC 367 (U.S. Environmental Laws and Regulations)
- I helped Dr. Daniel Ebbole adopt the use of mini-poster sessions as a teaching approach to promote student independent exploration of difficult content.
- Two colleagues have adopted my streamlined approach to collecting and processing student peer-review data using Google surveys.
- Dr. Brian Shaw adopted my infographic assignment after I explained to him how I designed the assignment to measure critical thinking, empirical and quantitative skills, oral communication, visual communication, and written communication.
- I created an Academic Dishonesty Quiz and shared it with colleagues, many of which are outside my department
- I develop departmental syllabi, rubrics and assessment designs (BESC 484 and 481 Master Syllabi and Rubrics on CV pg. 12)
- I am working with the BESC Professional Board on a model for industry participation and demonstrations in BESC courses

COURSE RESPONSIBILITIES AT TEXAS A&M UNIVERSITY -TEXARKANA

BIOL 1306 Biology I for Science Majors:

- Introduces students to the nature of science and the application of science to contemporary issues.
- Content includes the chemistry of life, the cell, genetics, and mechanisms of evolution.
- I engaged students and did formative assessment through in class quizzing/polling and Think-Pair-Share (TPS)
- Developed a poster project that required teams of 4 students to research a topic within the field of biology
    - Posters were presented and judged at an undergraduate poster session, which grew to be an interdisciplinary poster session to include students from liberal arts classes.
    - I left TAMU-T in 2015, but my colleagues there informed me this event was taken over by other faculty because it was such a popular event with the students, faculty, and administration.

BIOL 1307 Biology II for Science Majors:

- Introduces students to the nature of science and the application of science to contemporary issues.
- Content includes plant form and function, animal form and function, and ecology.
- Engagement strategies I used included quizzing/polling, TPS, and a poster project.
- I also used Pearson MasteringBiology online resources for interactive activities, assessments, and study aids and I used Learning Catalytics for interactive learning activities in class.

BIOL 2406 Environmental Biology:

- Content includes conservation, pollution, energy, and other contemporary environmental problems
- Course evolved from a seminar format to a more interactive course that included TPS, active learning exercises, and the poster project.
- The final semester I taught this course I was awarded a $25,000 grant through the 100K Strong in the Americas grant.
    - TAMU-T partnered with a university in Colombia
    - BIOL 2406 students Skyped with the environmental science class at the Colombia institution.
    - Summer student travel exchanges were supported for both sets of students
        - When the Colombia students were at TAMU-T, they worked with my students to execute the Environmental Education through Experiential Learning (E3) project, which I developed for a different grant project.
        - E3 project was an environmentally focused field education day for local elementary students.
            - Elementary students cycled through hands-on outdoor learning stations
            - Colombian and TAMU-T students taught young children about environmental concepts such as erosion control, watersheds and water pollution, recycling, and pharmaceutical environmental contamination.

BIOL 307 General Ecology:

- Content includes principles of ecology with special reference to populations and their ecosystems, distribution, biotic communities, and environmental relationships.
- I developed some interesting lab activities that incorporated physical movement and a gaming atmosphere that were well received by students.
- I organized field trips to the Station for Environmental and Educational Research (SEER) campus, where students conducted field investigations of species diversity and landscape ecology.

BIOL 330 Introduction to Geographic Information Systems:

- Introduces students to the concepts and applications of geographic information systems (GIS) technology
- Mini-lectures supported lab exercises designed to develop technical GIS skills through practical exercises
- I spearheaded adding this course to the curriculum because I also developed an environmental science minor for the biology major and believed students should have some exposure to GIS.

IS 1100 University Foundations (Freshmen Academic Success Course):

- Engages first-year students as members of the A&M-Texarkana academic community
- Assists students in acquiring essential academic success skills and developing a better understanding of learning processes
- Some students were dismayed and frustrated that this was a required course, however I tried to make this course as engaging, meaningful, and interactive as possible by incorporating in-class discussions, peer-to-peer teaching, and in-class activities that reinforced the learning objectives of each lesson.

BESC 201 Introduction to Bioenvironmental Sciences:

- During the summer of 2014, I worked as a co-developer with Dr. Heather Wilkinson of TAMU on the technology enhanced Introduction to Bioenvironmental Sciences (BESC 201) course. BESC 201 is very similar to the Environmental Biology (BIOL 2406) course.

Accomplishments while at TAMU-T

- Added 2 new courses to the curriculum: BIOL 2406 and 330
- Redesigned 3 existing courses: BIOL 1306, 1307 and 307
- Developed an environmental science minor and a natural resource minor
- Co-designed outdoor experiential lessons that utilized a mixed-use parcel of land owned by TAMU-T (SEER Campus) to provide hands-on learning and lab experiences for students taking classes in environmental biology, ecology, and natural resource management
- Lead advisor for student driven initiative to build a sustainable community garden on campus
- Faculty advisor for TAMU-T Environmental Club, which later turned into the STEM Club
- Served on the Committee for the Annual Thematic Program and Lecture Series (CATPALS)
- Taught and helped develop a freshman university success course (IS 1100)
- Faculty mentor for First Year Experience students, which involved meeting with a set of freshman students and working with them on academic and life success strategies
- Member of the High Impact Practices for Technology and Educational Reform (HIPsTER) committee
- Biology Department Head **(**Oct 2014-May 2015**)**

COURSE RESPONSIBILITIES AT THE UNIVERSITY OF NORTH TEXAS

BIOL 1112 Biology for Non-Science Majors:

- Objective of this course is to provide students with a foundation in biological principles
- Content includes the cell concept, the study of basic chemistry as it relates to biology, an introduction to genetics, evolution, animal organization with an emphasis on human systems and homeostasis.
- I taught this course for 3 weeks as an adjunct professor

BIOL 1132 Environmental Science:

- I developed my own presentations by modifying publisher provided slides for each chapter.
- Although I attempted to make this class as engaging as possible, looking back I recognize that I was very early in my professional career and know I made “rookie mistakes”. I view these mistakes as an opportunity to grow, learn, and advance my skills as an instructor.

EXPERIENCE TEACHING WITH TECHNOLOGY (order is reverse of customary format to illustrate progression over time)

At TAMU-T

Fall 2013

Used Learning Catalytics (LC) in Biology I for Science Majors.

- LC is a real- time assessment tool through which instructors can pose questions to the class and have students answer questions in a variety of different formats (e.g. multiple choice, long answer, sketch, word cloud, highlighting, and more) using their personal electronic devices.
- Student responses are analyzed and sent to instructor's tablet.
- I used LC to assess student performance and determine which concepts need further reinforcement and/or clarification.
- LC is somewhat like clickers except that there a wider variety of question types.

Also used Pearson MasteringBiology online resources for interactive activities, assessments, and study aids for students in Biology II for Science Majors.

I also incorporated reading and content mastery assessments through online quizzes administered through BlackBoard.

At TAMU

Fall 2015

Taught BESC 201-599 (later 201-700) fully online by building and managing an eCampus course that included narrated video lectures with transcripts, online group tools and activities, an online version of TPS, online discussion boards, and online content mastery quizzes.

Also taught BESC 201-500 with a well-developed eCampus course that included all of the above except for video lectures.

Spring 2016

Taught BESC 201-700 fully online by utilizing and improving the eCampus course build the previous semester. Technology incorporated into the eCampus course included Google Documents to facilitate real-time editing of group project documents, narrated video lectures with transcripts, online group tools and activities, online discussion boards, and online content mastery quizzes.

Also taught BESC 201-500 with a well-developed eCampus course that included all of the above except for video lectures.

Summer 2016

Taught BESC 201-700 online during the second summer session, which required condensing the 15-week course into a 5-week summer course. Technology incorporated into the eCampus course included Google Documents to facilitate real-time editing of group project documents, Google surveys, narrated and video lectures with transcripts, online group tools and activities, online discussion boards, and online content mastery quizzes, wikis, and discussion boards. Introduced a required Academic Dishonesty (AD) Quiz. Have since required students in all of my courses to master both the AD quiz and a Syllabus quiz before they can access any assignment.

Fall 2016

Taught BESC 201-700 and BESC 201-500 employing previously used instructional technologies as described above.

Spring 2017

1) Remade all BESC 201-700 video lectures to follow best practices for videos and PowerPoint presentations and to replace the computer-automated voice with a human voice. Another significant change made to the videos were they were reorganized to limit

the length of the videos. Videos lasting 20 minutes or more were split into multiple videos. Instructional Technology specialists advised that videos be no longer than 8-12 minutes. These recommendations were followed and I received positive feedback from students. All videos were developed with closed captions and the transcripts were no longer provided, as it was discovered students would not read the transcript or watch the videos; they would use a search tool with the transcript to find the answers to questions. Students are now advised to watch the video (with or without captions) and take notes.

2) Created a Reusable Learning Object (RLO) called "Note Taking and CORE Learning System" module that was designed to teach students how to take notes and expose them to a study and learning strategy.

3) Created RLOs for key topics in BESC 201 to provide students with a low-stakes environment for practicing with the course material, but which eased the burden on the instructor because it grades itself. RLOs were assigned to BESC 201-700 students and provided to BESC 201-500 students as a reference.

4) Introduced the peer review software program Peerceptiv as a tool to peer review and grade BESC 201 worldview essays.

Summer 2017	Revised course organization of BESC 201-700 for Summer II, applying best practices for online courses I learned in IPGP. Incorporated the first three changes identified in the spring 2017 narrative above.
Fall 2017	Revised eCampus course organization of BESC 201-700 and BESC 201-500 and built an eCampus course for BESC 403 applying best practices for online courses I learned in IPGP. In BESC 201 course sections, incorporated RLOs created during spring 2017 and revised video lectures.
Spring 2018	Revised eCampus course organization and text throughout to be more conducive to universal accessibility. Incorporated Google Surveys in BESC 201 and BESC 481 to streamline data on team projects (in BESC 201) and peer evaluations (in BESC 481)
Summer 2018	Incorporated Peerceptiv Worldview essays into the 5-week summer course. Simplified the team project slightly to balance the additional workload created by the WV essays.
Fall 2018	Incorporated Peerceptiv into the team project for both the online and face-to-face sections of BESC 201 (BESC 201-700 and 201-500, respectively). Incorporated Top Hat in to the face-to-face version of BESC 201 (201-500) and iClickers into BESC 403.
Spring 2019	Continued to use Peerceptiv for the team project in BESC 201 and Top Hat in BESC 201-500

PEER EVALUATION OF COURSES TAUGHT AT TAMU

Completed Peer Evaluations

Fall 2015 and spring 2018—Department Head has attended and assessed individual class sessions of BESC 201. Overall positive comments of support for innovative teaching style.

Fall 2017—BESC 201 Peer review by colleague and Associate Dean of Faculties for Faculty Development, Dr. Heather Wilkinson. Very positive reviews provided and areas of improvement identified.

Spring 2019-- Formal peer evaluation by the Center for Teaching Excellence conducted on 3/1/19. Comments received from CTE assessment:

- Organization and facilitation appeared well thought through and effective for supporting the students in the task.
- Students were engaged and participated in the activity; Percentage of students highly engaged during a significant portion of the session: 100%
- Exercise appeared to go as planned, addressed multiple student learning outcomes, and fit well within the session time.
- The instructor crafted an activity for students to apply course content in an expanded way while reinforcing critical course concepts.
- Multiple types of thinking were required of students during the session – both lower and higher order as defined by Bloom's Taxonomy.
- The class activity was carefully planned for a brief review and highlight of material at the beginning, collaborative application of content with peers in the middle, and an overview of what was learned in the groups at the end.
- The instructor was highly engaged with students, moving from group to group to monitor their progress and facilitate their work with affirmations, comments, and questions. Time spent with groups was variable as needed.
- The instructor's framing of the activity indicated carefully planning and excitement for the opportunity to engage students as planned.
- Students appeared comfortable with the activity and willing to ask for help where needed. The instructor anticipated where the challenges might be and was ready with questions to help the students affirm what they knew and isolate areas of misunderstanding.
- The instructor was flexible in her response to questions. She responded directly to some but also used questions of her own to help lead student thought processes toward answers they were missing.
- The instructor affirmed correct answers, acknowledged partial answers, and let students know when their responses needed some correction and why.

SERVICE

Summary of service approach: The service I provide to my department, college, and university compliments and reinforces my teaching role at Texas A&M. I see service opportunities at each level as an opportunity to influence positive changes and activities that will ultimately improve student learning, student success, and the student experience at Texas A&M. I also seek out service opportunities that will allow me to help my faculty peers in their roles as instructors and as a way to build a support network for faculty who share my passion for excellence in teaching and learning. I also see service as another opportunity to develop myself as a master teacher. As I continue in my career, I plan to seek out service with national organization of which I am a member, specifically the Society of Environmental Chemistry and Toxicology, and other professional organization with which my professional interests align (e.g. AACU).

External to Texas A&M University

2018 Reviewed manuscript for publication in Journal of Environmental Management, December

At Texas A&M University

Spring 2020 Member of the Teaching & Transformational Learning Technologies Committee (TTLTC) Task Force on Peer Review Software Platforms—our task will be to evaluate peer review platform options and provide a recommendation to the TTLTC on the preferred peer review platform (University Service).

Fall 2019 Organized and executed the Discipline Specific PLPM Teaching Assistant (TA) Training (Department Service)

- *Teaching and mentoring of graduate students teaching PLPA or BESC course*s

Fall 2019 Course Section Coordinator for BESC 484 (Department Service)

- *Set up eCampus courses and/or provided guidance and assistance for navigating and managing eCampus courses for the following PLPM faculty:*
  - *Dr. Mike Kolomiets*

Fall 2019 Hullabaloo U Interdisciplinary course instructor for the First Year Experience program (0-credit course designed to create a welcoming and affirming environment for new students). In this course, I will mentor incoming students on personal and professional development, personal responsibility and safety in the college environment, learning strategies, and help them actively engage inside and outside of their classrooms. This course will also help students understand the many resources and services available to them as students of A&M. Finally, I hope to create a sense of community in my class, where we all support and encourage each other through the academic year (University Service).

2018-2019 Committee member of the Learning Management System (LMS) Selection Subcommittee (by invitation) (University Service). Worked with faculty and staff from across the university to review LMSs currently available, develop evaluation criteria, select three top systems for final review, facilitate an extensive evaluation of the top three systems, and write a formal recommendation report. The top three LMS systems, named by company were, Blackboard Ultra, Brightspace (Desire2Learn), and Canvas. Served as the co-leader of the Communication Task Force on the LMS subcommittee. In this role I worked with fellow Communication Task Force members to develop a draft logistics plan for evaluating the top three systems, which consisted of company demonstrations, company led workshops, and faculty feedback forums and surveys. This task force also developed graphics, draft survey questions, and a communication plan for informing A&M faculty, staff, and students about the demonstrations, workshops, surveys, and forums. At the first faculty forum, I served as a scribe, and at the second faculty forum, I served as a co-facilitator.

Summer 2019 Course Section Coordinator for BESC 484 (Department Service)
- *Set up eCampus courses and/or provided guidance and assistance for navigating and managing eCampus courses for the following PLPM faculty:*
    - *Drs. Mike Kolomiets, Tom Chappell*

Spring 2019 Course Section Coordinator for BESC 484 (Department Service)
- *Set up eCampus courses and/or provided guidance and assistance for navigating and managing eCampus courses for the following PLPM faculty:*
    - *Drs. Kevin Ong, Mike Kolomiets, Tom Chappell, Sandy Pierson*

2018- Present Future Faculty Mentor for Mr. Nick Farmer, PLPM graduate student admitted to the CTE's Academy for Future Faculty (AFF) (Department Service)

Fall 2018 Organized and executed the Discipline Specific PLPM Teaching Assistant (TA) Training (Department Service)
- *Teaching and mentoring of graduate students teaching PLPA or BESC course*s

Fall 2018 Course Section Coordinator for BESC 484 (Department Service)
- *Set up eCampus courses and/or provided guidance and assistance for navigating and managing eCampus courses for the following PLPM faculty:*
    - *Dr. Mike Kolomiets*

Summer 2018 Course Section Coordinator for BESC 484 (Department Service)
- *Set up eCampus courses and/or provided guidance and assistance for navigating and managing eCampus courses for the following PLPM faculty:*
    - *Drs. Mike Kolomiets, Daniel Ebbole, Won-Bo Shim*

Spring 2018 Co-Chair of Curriculum and Assessment Sub-Committee, January-April (Department Service)
- *Organized the effort to revise the BESC 484 poster templates and rubrics*

Spring 2018 Led effort to recertify BESC 481, making improvements to better meet Communication Course requirements (Department Service)

Spring 2018 Faculty judge for PLPM Graduate Student Poster Symposium (Department Service)

Spring 2018 Course Section Coordinator for PLPA 303 (Department Service)
- *Set up eCampus course for combined sections of PLPA 303 labs*

Spring 2018 Organized and executed the PLPM Teaching Assistant (TA) Debriefing to identify gains and shortcomings from TAs in 2017-2018 and plan for future improvements and trainings (Department Service)
- *Teaching and mentoring of graduate students teaching PLPA or BESC courses; helping them identify areas of professional teaching growth from the past year and areas to focus on improving for the future*

Spring 2018 Managed requirements for Teaching Assistant Training and Evaluation Program (TATEP) (Department Service)

2017 Assisted PLPM Department Head write a Proposal for Funds to Support a High Impact Student Learning Activity. Proposal of $29,462 submitted in Oct 2017 and funded in March 2018. Funds to be used to purchase high caliber water quality-monitoring systems to be used at White Creek on TAMU west campus (Department Service)

2017 Lead advocate for 21st century classroom in PLPM new building (Department Service)
- *Led conversations, tours, and discussion to build a 21st century classroom in the new PLPM building*
- *Assisted with writing a BNSF grant to fund the new classroom*

Fall 2017 Course Section Coordinator for PLPA 303 (Department Service)
- *Set up eCampus course for combined sections of PLPA 303 labs*

Fall 2017 Organized and executed the Discipline Specific PLPM Teaching Assistant (TA) Training (Department Service)
- *Teaching and mentoring of graduate students teaching PLPA or BESC courses*

Fall 2017 Managed requirements for Teaching Assistant Training and Evaluation Program (TATEP) (Department Service)

Summer 2017 Led PLPA 303 TAs in course lab manual evaluation to improve student and TA manual and overall course quality (Department Service)

Summer 2017 Lead liaison with COALS on their assessment of BESC's high impact practice course (BESC 484). Led the revision of the BESC 484 to better meet the learning outcomes and address critiques of COALS (College Service)

Summer 2017 Course Section Coordinator for BESC 484 (Department Service)
- *Set up eCampus courses and/or provided guidance and assistance for navigating and managing eCampus courses for the following PLPM faculty:*
  - *Drs. Libo Shan, Kevin Ong, Daniel Ebbole, Mike Kolomiets*

Spring 2017 Organized and executed the PLPM Teaching Assistant (TA) Debriefing to identify gains and shortcomings from TAs in spring 2017 and plan for future improvements and trainings (Department Service)
- *Teaching and mentoring of graduate students teaching PLPA or BESC courses; helping them identify areas of professional teaching growth from the past year and areas to focus on improving for the future*

Spring 2017 Organized and submitted student artifacts for BESC's high impact practice course (BESC 484) to COALS for review and assessment (College Service)

Spring 2017 Faculty judge for PLPM Graduate Student Poster Symposium (Department Service)

Spring 2017 Course Section Coordinator for PLPA 301, PLPA 303, BESC 402, BESC 403, BESC 481, & BESC 484 (Department Service)
- *Set up eCampus courses and/or provided guidance and assistance for navigating and managing eCampus courses for the following PLPM faculty:*
  - *Drs. Libo Shan, Dennis Gross, Charles Kenerley, Won-Bo Shim*

Fall 2016 Organized and executed the PLPM Teaching Assistant (TA) Debriefing to identify gains and shortcomings from TAs in fall 2016 and plan for future improvements and trainings (Department Service)
- *Teaching and mentoring of graduate students teaching PLPA or BESC courses; helping them identify areas of professional teaching growth from the past year and areas to focus on improving for the future*

Fall 2016 Course Section Coordinator for PLPA 301, PLPA 303, BESC 367, BESC 403, BESC 481, & BESC 484 (Department Service)
- *Set up eCampus courses and/or provided guidance and assistance for navigating and managing eCampus courses for the following PLPM faculty:*
    - *Drs. Heather Wilkinson, Young-Ki Jo, Kevin Ong, Dennis Gross, Daniel Ebbole*

Fall 2016 Led effort to recertify BESC 484, making improvements to better meet Writing Course requirements (Department Service)

Fall 2016 Faculty Judge for BESC Student Poster Symposium (Department Service)

Fall 2016 Assisted in managing the NAEP EPIC EXPO (Department Service)

Fall 2016 Organized and executed the Discipline Specific PLPM Teaching Assistant (TA) Training (Department Service)
- *Teaching and mentoring of graduate students teaching PLPA or BESC courses*

Summer 2016 Course Section Coordinator for PLPA 603 & BESC 484 (Department Service)
- *Set up eCampus courses and provided guidance and assistance for navigating and managing eCampus courses for the following PLPM faculty:*
    - *Drs. David Appel, Charles Kenerley, Mike Kolomiets, Dennis Gross, Heather Wilkinson, Kevin Ong, Sandy Pierson, Libo Shan*

Summer 2016 Led PLPA 303 TAs in course revision to improve student and TA manual and overall course quality (Department Service)

Spring 2016 Course Section Coordinator for PLPA 303, PLPA 301, BESC 204, BESC 402, BESC 403, & BESC 484 (Department Service)
- *Set up eCampus courses and provided guidance and assistance for navigating and managing eCampus courses for the following PLPM faculty:*
    - *Drs. Libo Shan, Charles Kenerley, Won-Bo Shim, Brian Shaw*

Spring 2016 Faculty Judge for PLPM Graduate Student Poster Symposium (Department Service)

Fall 2015 Cooperatively planned and ran the PLPM Teaching Assistant Debriefing meeting with Dr. Wilkinson (Department Service)

Fall 2015 Faculty Judge for BESC Student Poster Symposium (Department Service)

Fall 2015 Assisted in managing the NAEP EPIC EXPO (Department Service)

Fall 2015 eCampus Course Section Coordinator for PLPA 301, PLPA 303, BESC 367, BESC 403, BESC 411, BESC 481, & BESC 484 (Department Service)
- *Set up eCampus courses and/or provided guidance and assistance for navigating and managing eCampus courses for the following PLPM faculty:*
    - *Drs. Sandy Pierson, Brian Shaw, Libo Shan, Heather Wilkinson, Daniel Ebbole, Clint Magill*

Fall 2015 Cooperatively planned and ran the Discipline Specific PLPM Teaching Assistant (TA) Training with Dr. Wilkinson (Department Service)
- *Teaching and mentoring of graduate students teaching PLPA or BESC courses*

June 26, 2015 Core Curriculum Assessment (CCA) Pilot Screening Panel (University Service)

- *Revised and calibrated CCA rubrics, assessed student CCA artifacts*

Summer 2015 Digital Lecture Capture of Dr. Starr's nematode lectures. Lectures developed into video lectures posted online for students in coordination with Dr. Dan Ebbole (Department Service)

Summer 2015 Course Section Coordinator for BESC 484 (Department Service)

- *Provided guidance and assistance for navigating and managing eCampus courses for the following PLPM faculty:*
    - *Drs. Sandy Pierson, Heather Wilkinson, David Appel*

2015-Present Standing committee member and Vice Chair of BESC Curriculum and Assessment Committee (CAC) (Department Service)

- *Maintain record of meetings on the eCampus CAC Learning Community. Collaborate with chair for meeting ideas. Follow up with faculty on important curriculum or assessment matters to ensure deadlines and decisions are met and followed.*

2015-Present Serve as Departmental Academic Program Assessment Liaison to COALs (College Service)

- *Work cooperatively with Dr. Heather Wilkinson to conduct Undergraduate and Graduate Program Assessment*

2015-Present Core Curriculum Recertification PLPM Department Liaison (Department Service)

- *Coordinate recertification process for PLPM core curriculum courses*
- *Advise faculty teaching core curriculum courses on requirements for and process required for recertification*

2015-Present Faculty co-advisor (fall 2015-spring 2017) and later main advisor (spring 2017-Present) for student Chapter of National Association of Environmental Professionals (NAEP) (Department Service)

- *Attend each NAEP meeting*
- *Lead NAEP officer meetings*
- *Train NAEP officers in leadership skills*
- *Mentor NAEP members and officers*
- *Fall 2017, 2018, 2019—Facilitated Student Activities Recognition Process for NAEP*
- *Chaperone NAEP students to the Texas Commission on Environmental Quality (TCEQ) Trade Fair in Austin each May*

At Texas A&M University-Texarkana

2015 Texas High School Environmental Expo Volunteer and TAMU Biology department representative (Department Service)

2014-2015 Member of the Search Committee for Nursing Faculty (Department Service)

2014-2015 Member of the First Year Experience (FYE) University Foundations Course Subcommittee (University Service)

2014-2015 Member of the High Impact Practices for Technology and Educational Reform (HIPsTER) committee (University Service)

2014-2015 Member of the Academic Master Plan Committee and one of the coauthors of TAMU-T vision statement and core values statement (University Service)

2014 Faculty Organizer and Developer of the Interdisciplinary Student Poster Session (University Service)

2014 Texas High School College Night—College of STEM and Biology department representative (Department and College Service)

2014 Panel Speaker at the Future of Water Symposium at TAMU-T (University Service)

2014 Faculty Advisor for STEM Student Organization (College Service)

2014 Volunteer Faculty Advisor for TAMU-T Eagle SOAR—Advising of incoming freshmen (University Service)

2014 Faculty Organizer and Developer of the Biology Student Poster Session (Department Service)

2014 Co-Organizer of the Great Pi Run to raise money for the TAMU-T Math Club (University Service)

2014 Volunteer TAMU-T Faculty Member at Texas High School Environmental Expo (College Service)

2014 Coordinator and developer of the Biology and Chemistry Course Schedule, 2 Year Schedule, and the Biology and Chemistry Course Catalog Revisions (College Service)

2014 Presenter at the "Ask a Professor" Panel Discussion hosted by TAMU-T Success Center (University Service)

2013- 2014 Member of the Search Committee for a Lab Coordinator in the College of STEM (College Service)

2013- 2014 Chair of the Search Committee for an Assistant/Associate Chemistry Professor (College Service)

2013 Volunteer Faculty Advisor for TAMU-T Eagle SOAR —Advising of incoming transfer students (University Service)

2013 Faculty Presenter for the TAMU-T Honor Student Colloquium (University Service)

2013-2015 Lead TAMU-T Faculty for Community Outreach and Engagement with the Bowie Landowner's Protection Association (University Service)

2013-2015 Faculty lead on the Station for Environmental and Educational Research (SEER) Developmental Task Force and coauthor of the *SEER Initiative White Paper* (University Service)

2013-2015 Member of the Academic Affairs Advisory (A3) Council Core Curriculum Subcommittee (University Service)

SCHOLARSHIP

INVITED TALKS

2015 Stoddard, Kati I., *Earth Day-Past, Present and Future.* Texarkana College, April 22.

2010 Stoddard, Kati I., *Optimizing Scientific and Social Attributes of Pharmaceutical Take Back Programs to Improve Public and Environmental Health*, EPA Region 6 Operation Rx ROUND-UP; A Prescription for a Clean and Safe Environment, Dallas, TX, March 23.

2009 Stoddard, Kati I., *Optimizing Scientific and Social Attributes of Pharmaceutical Take Back Programs to Improve Public and Environmental Health*, Pharmaceutical Waste Management Workshop, Houston, TX, October 27.

GRANTS SUBMITTED/AWARDED

2017 BNSF Environmental Sciences Experiential Learning Laboratory, Co-PI, submitted August

2017 COALS Proposal for funding to support a high impact student learning activity, Co-writer, submitted October, Awarded March 2018, $29,462

2017 Innovative Pedagogy Grant Project, PI—Awarded $10,000 upon project completion in spring 2018

2016 Neuhaus-Shepardson Teaching Grant (2 separate applications, PI)—Awarded $2,000 & $700
Funds used to attend Wakonse South Conference and the National Center for Case Study Teaching in Science Workshop at the University of Buffalo in Buffalo, New York.

2014 100K Strong in the Americas, Co-PI—Awarded $25,000
Grant awarded at TAMU-Texarkana (TAMU-T). The grant supported student exchanges between my TAMU-T environmental biology students (BIOL 2406) and students in a similar course at Universidad Autónoma de Bucaramanga (Colombia). During the semester, the classes Skyped with each other to discuss the topics they were learning in class. In the summer, funds from the grant supported travel of TAMU-T students to UNAB and UNAB students to TAMU-T.

2014 TAMU-T Faculty Research Enhancement and Professional Development, PI—Approved, Funded to attend AACU conference. Awarded while at TAMU-T

2013 Horace C. Cabe Foundation Grant, PI—Awarded $3,000
Grant awarded while at TAMU-T. Grant used to support an outdoor experiential environmental education project in which college environmental science students taught elementary school children

2013 Texas Parks and Wildlife Department Recreation Wilderness Trails Grant, Co-PI,—Awarded $199,500
Grant awarded while at TAMU-T. Used to support improvements to a trail around Bringle Lake, including educational signage about local flora and fauna.

DISCIPLINE SPECIFIC CONFERENCE PARTICIPATION

2013 Society of Environmental Toxicology and Chemistry (SETAC) North America 34th Annual Meeting, Nashville, TN, November 17-21.
Platform Presentation: "Can Pharmaceutical Take Back Programs (TBPs) Improve Public and Environmental Health? Results from an Interdisciplinary Investigation of a TBP"
Poster Presentation: "Fish and Invertebrate Behavior Analysis: A Review of the Current Literature and Recommendations for Future Research"

2011 SETAC North America 32nd Annual Meeting, Boston, MA, November 13-17. **Poster Presentation:** "Optimizing Scientific and Social Attributes of Pharmaceutical Take Back Programs to Improve Public and Environmental Health"

2011 SETAC South Central Annual Regional Chapter Meeting, Denton, TX, May 20-21. **Poster Presentation:** "Optimizing Scientific and Social Attributes of Pharmaceutical Take Back Programs to Improve Public and Environmental Health "

2010 SETAC North America 31st Annual Meeting, Portland, OR, November 7-11. **Poster Presentation: "**Optimizing Scientific and Social Attributes of Pharmaceutical Take Back Programs to Improve Public and Environmental Health"

2009 SETAC North America 30th Annual Meeting, New Orleans, LA, November 19-23. **Poster Presentation: "**Expanding Pharmaceutical Take Back Programs to Include Social and Environmental Factors"

2009 North American Hazardous Materials Management Association (NAHMMA) Annual National Conference, Houston, TX, November 9-14. **Platform Presentation:** "Optimizing Scientific and Social Attributes of Pharmaceutical Take Back Programs to Improve Public and Environmental Health"

2007 Universities Council on Water Resource (UCOWR)/National Institute for Water Resources (NIWR) Annual Conference: Hazards in Water Resources, Boise, ID, July 24-26. **Platform Presentation:** "Mortality Risk Perception and Willingness to Pay for Reductions of Arsenic in Drinking Water."

REFEREED PUBLICATIONS

Published since working at Texas A&M

Stoddard, K.I., Hodge, V, Maxey, G, Tiwan, C., Manzo, P., Huggett, D.B. (2017) "Investigating Research Gaps of Pharmaceutical Take Back Events: an Analysis of Take Back Program Participants' Socioeconomic, Demographic, and Geographic Characteristics and the Public Health Benefits of Take Back Programs*" Journal of Environmental Management*. 59:871-884

Kelly, M., **Stoddard, K.I.**, Allard, D. (2016) "Simultaneous Measurement of the Acceptance of the Theory of Evolution at Regionally Distinct Colleges." *Journal of Academic Perspectives*. 2016 (2).

Published while working at Texas A&M-Texarkana

Stoddard, K.I., and Huggett, D.B. (2015). "Wastewater Effluent Hydrocodone Concentrations as an Indicator of Drug Disposal Program Success*." Bulletin of Environ. Contamination and Toxicology*. 95 (2) 139-144

Stoddard, K.I and Huggett, D.B. (2014). "Early Life Stage (ELS) Toxicity of Sucralose to Fathead Minnows, *Pimephales Promelas.*" *Bulletin of Environ. Contamination and Toxicology*. 93 (4) 383-387.

Published prior to full-time academic appointment

Huggett, D.B. and **K.I. Stoddard**. (2011). "Effects of the artificial sweetener sucralose on *Daphnia magna* and *Americamysis bahia* survival, growth, and reproduction." *Food and Chemical Toxicology*. 49, 2575-2579.

NON-REFEREED PUBLICATIONS

Published prior to full-time academic appointment

K. Stoddard, D.B. Huggett. (2012). Pharmaceutical Take Back Programs: State of the Science and Future Research Needs. In B.W. Brooks & D.B. Huggett (ed.) Human Pharmaceuticals in the Environment.