

**Lindsay M. Porter, Ph.D.**  
**Curriculum vitae**

**EDUCATION**

<b>Doctor of Philosophy</b> , Veterinary Pathobiology College of Veterinary Medicine & Biomedical Sciences Texas A&M University, College Station, TX	<b>May, 2016</b> GPR: 4.0
<b>Bachelor of Science</b> , Genetics, Ecology & Evolution College of Science Australian National University, Canberra, Australia	<b>Jul, 2007</b> GPA: 3.6

**PROFESSIONAL EXPERIENCE**

<b>Assistant Professor of Biology</b> Department of Biology Stephen F. Austin State University, Nacogdoches, TX	<b>Jun 2019-Present</b>
<b>Assistant Professor of Biology</b> School of Biological & Physical Sciences Northwestern State University, Natchitoches, LA	<b>Aug 2016-May 2019</b>
<b>Graduate Research Assistant</b> Departments of Entomology & Veterinary Pathobiology Texas A&M University, College Station, TX	<b>Jun 2011-Jul 2016</b>

**TEACHING EXPERIENCE**

*Stephen F. Austin State University, Nacogdoches, TX*

**Spring 2020**

BIO 130: Principles of Cell & Molecular Biology  
(002) 29 stds  
BIO 220: Medical Terminology (001) 26 stds  
BIO 327: Human Physiology (001) 40 stds

**Fall 2019**

BIO 130: Principles of Cell & Molecular Biology  
(001, 002) 35/21 stds  
BIO 327: Human Physiology (001) 40 stds

*Northwestern State University, Natchitoches, LA*

**Spring 2019**

BIOL 1010: Biological Principles I (01N), 20 stds  
BIOL 1011: Biological Principles I Lab (02N), 23 stds  
BIOL 2240: Intro to Human Genetics (01I/03I), 24/15 stds  
BIOL 3270: Genetics (04N), 18 stds  
BIOL 3271: Genetics Lab (04N), 12 stds  
BIOL 3500: Forensic Death Investigation (01N), 18 stds  
BIOL 3501: Forensic Death Investigation Lab (03N), 16 stds  
BIOL 4900: Undergraduate Seminar (02N), 6 stds

**Fall 2018**

BIOL 1010: Biological Principles I (01N), 32 stds  
BIOL 2240: Intro to Human Genetics (01I, 02I, 03I, 04I), 25/26/28/26 stds  
BIOL 2070: Forensic Entomology (01N), 11 stds  
BIOL 2071: Forensic Entomology Lab (01N), 9 stds  
BIOL 4260: Medical Entomology (01N), 6 stds  
BIOL 4261: Medical Entomology Lab (01N), 4 stds  
BIOL 4900: Undergraduate Seminar (01N), 18 stds

**Summer 2018**

BIOL 2240: Intro to Human Genetics (01I, 03I), 25/21 stds

**Spring 2018**

BIOL 1010: Biological Principles I (01N, 02N, 03N), 31/18/22 stds  
BIOL 2240: Intro to Human Genetics (01I, 03I), 25/26 stds  
BIOL 3270: Genetics (04N), 13 stds  
BIOL 3271: Genetics Lab (04N), 4 stds  
BIOL 4900: Undergraduate Seminar (02N, 04N), 18/9 stds

### Fall 2017

BIOL 2240: Intro to Human Genetics (01I and 02I), 25/18 stds  
BIOL 3270: Genetics (02N), 12 stds  
BIOL 3271: Genetics Lab (01N and 02N), 17/16 stds  
BIOL 4260: Medical Entomology (01N), 8 stds  
BIOL 4261: Medical Entomology Lab (01N), 5 stds  
UNIV 1000: The University Experience (18N), 13 stds  
BIOL 4900: Undergraduate Seminar (01N), 21 stds

### Summer 2017

BIOL 2240: Intro to Human Genetics (01I and 02I), 17/24 stds

### Spring 2017

BIOL 2240: Intro to Human Genetics (01I, 03I), 27/22 stds

BIOL 4900: Undergraduate Seminar (02N/04N), 21/10 stds  
BIOL 4190: Immunology (01N), 32 stds  
BIOL 4191: Immunology Lab (01N), 22 stds  
BIOL 4300: Molecular Biology (01N), 20 stds  
BIOL 4301: Molecular Biology Lab (01N), 13 stds

### Fall 2016

BIOL 2240: Intro to Human Genetics (01N), 38 stds  
BIOL 3270: Genetics (01N), 49 stds  
BIOL 3271: Genetics Lab (01N/02N), 22/16 stds

*Texas A&M University, College Station, TX*

### Fall 2015

VTPB 920: Parasitology for Professional/DVM (2VM), (4 sections) 30-33 stds/section

### Fall 2013, 2014

ENTO 423: Medical Entomology (Junior/Senior), (501/504, 501/502) 20-25 stds/section

## MENTORING IN TEACHING

*Stephen F. Austin State University, Nacogdoches, TX*

**Sylvia Schepps**, Principles of Cell & Molecular Biology, Spring 2020, serving as course-specific tutor in AARC

*Northwestern State University, Natchitoches, LA*

**Bayleigh Smith**, Introductory Biology, Fall 2018, supervised student's creation of a video library for the course and assistance with feedback on formative assessments

**Sam Smith**, Medical Entomology Lab, Fall 2018, supervised lab setup and selected peer-to-peer instruction

**Sam Smith**, Genetics Lab, Spring 2018, supervised lab setup and instruction of experiments and procedures

**Emily Bencosme**, Genetics Lab, Fall 2017, supervised lab setup and instruction of experiments and procedures

## RESEARCH PROJECTS

*Stephen F. Austin State University, Nacogdoches, TX*

**Recombinant protein expression and toxicity analysis of delta-latroinsectotoxin ( $\delta$ -LIT) in the brown widow spider, *Latrodectus geometricus*.** Using our resolved open reading frame for the  $\delta$ -LIT transcript, cloning/sub-cloning into expression vectors for bacterial and yeast recombinant expression for toxicity assays against mosquitoes of medical importance.

**Resolving the transcript sequence of delta-latroinsectotoxin ( $\delta$ -LIT) in the brown widow spider, *Latrodectus geometricus* and comparative sequence analysis.** Mining of previously deposited GenBank DNA, mRNA, and SRA data to design primers for homology-based amplification, cloning, and sequencing of the  $\delta$ -LIT transcript in brown widows. Transcript and protein inter-species comparisons for evolutionary insights.

**Validation of RNA seq-identified putative immune genes in *Amblyomma americanum* using *E. coli* and other bacterial species.** Mining of Illumina RNA sequencing data for putatively infection-responsive genes, validation of differential expression using semi-quantitative and quantitative RT-PCR, validation of immune function using RNAi, and characterization of cellular response in haemolymph assays.

Texas A&M University, College Station, TX

**PhD Dissertation: Bioinformatic and Biochemical Characterization of *Amblyomma americanum* (Acari: Ixodidae) Serine Protease Inhibitors (SERPINs); PI: Dr. Albert Mulenga.** Used next-generation sequencing data to assemble *de novo* transcriptomes for *A. americanum* across tissues and various feeding.

time points. Performed targeted data mining for serpin transcripts to establish serpin count in *A. americanum* genome. Performed inter- and intra-specific comparative analyses across hard tick genera. Expressed two serpins in yeast and insect cell expression systems and affinity-purified for characterization assays. Used a panel of *in vitro* kinetics assays, and *in vitro* and *ex vivo* studies with animal blood to characterize function.

**Transcriptome mining and comparative analysis of all protease inhibitor families from male and female *Amblyomma americanum* fed and unfed ticks; PI: Dr. Albert Mulenga.** Performed targeted data mining in *A. americanum* tick transcriptomes and in public databases for all tick protease inhibitor proteins, and performed inter- and intra-specific comparisons.

***Amblyomma americanum* bacterial genome assembly; PI: Dr. Albert Mulenga.** Used NGS data from bacteria cultured from ticks to create *de novo* genome assemblies with comparative analysis.

**Laser capture microscopy/LC-MS/MS to identify *Amblyomma americanum* and *Ixodes scapularis* cement composition; PI: Dr. Albert Mulenga.** Developed experimental procedures for and used the laser-capture microscope to microdissect cement from biopsies of tick feeding sites, and prepared samples for LC-MS/MS.

**Expression and characterization of *Amblyomma americanum* orphan protein CIR; PI: Dr. Albert Mulenga.** Cloned & expressed a tick protein (CIR) in yeast expression system, affinity purified and characterized function with *in vitro* assays.

**Characterization of immunogenic inter-species conserved *Amblyomma americanum* saliva protein, Aa05; PI: Dr. Albert Mulenga.** Performed RT-PCR expression analysis, cloned and expressed an immunogenic tick protein (Aa05) in yeast expression system with affinity purification, and used *in vitro* assays to characterize function.

## PUBLICATIONS

**Porter, Lindsay M.,** Željko M. Radulović, Tae Kim, Albert Mulenga. “*Amblyomma americanum* serpin 8 is a pro-inflammatory saliva protein required for complete tick engorgement.” (*in submission process*).

Bakshi, Mariam, Tae Kwon Kim, **Lindsay Porter**, Waithaka Mwangi, and Albert Mulenga. “*Amblyomma americanum* ticks utilizes countervailing pro and anti-inflammatory proteins to evade host defense. *PLoS Pathogens*, 15.11 (2019).

**Porter, Lindsay M.,** Željko M. Radulović, Albert Mulenga. “A repertoire of protease inhibitor families in *Amblyomma americanum* and other tick species: inter-species comparative analyses.” *Parasites & Vectors*, 10, no. 1 (2017): 152.

Bakshi, Mariam, Tae Kim, Željko Radulović, **Lindsay Porter**, Waithaka Mwangi, and Albert Mulenga. "Bait and Switch: A strategy to avoid host defense by the ticks." *The Journal of Immunology*, 196, (1 Supplement) (2016): 200.19. (*published conference abstract*)

Radulović, Željko, **Lindsay M. Porter**, Tae K. Kim, Mariam Bakshi, and Albert Mulenga. "Amblyomma americanum tick saliva insulin-like growth factor binding protein-related protein 1 binds insulin but not insulin-like growth factors." *Insect Molecular Biology*, 24.5 (2015): 539-550.

Lewis, Lauren A, Željko M Radulović, Tae K Kim, **Lindsay M Porter**, Albert Mulenga. “Identification of 24h *Ixodes scapularis* immunogenic tick saliva proteins.” *Ticks and Tick-Borne Diseases*, 6, no. 3 (2015): 424-434.

**Porter, Lindsay,** Željko Radulović, Tae Kim, Gloria RC Braz, Itabajara Da Silva Vaz, and Albert Mulenga. "Bioinformatic analyses of male and female *Amblyomma americanum* tick expressed serine protease inhibitors (serpins)." *Ticks and Tick-Borne Diseases*, 6, no. 1 (2015): 16-30.

- Radulović, Željko, Tae K. Kim, **Lindsay M. Porter**, Sing-Hoi Sze, Lauren Lewis, and Albert Mulenga. "A 24-48 h fed *Amblyomma americanum* tick saliva immuno-proteome." *BMC Genomics*, 15, no. 1 (2014): 518.
- Radulović, Željko, **Lindsay M. Porter**, Tae K. Kim, and Albert Mulenga. "Comparative bioinformatics, temporal and spatial expression analyses of *Ixodes scapularis* organic anion transporting polypeptides." *Ticks and Tick-Borne Diseases*, 5, no. 3 (2014): 287-298.
- Ibelli, Adriana MG, Tae K. Kim, Creston C. Hill, Lauren A. Lewis, Mariam Bakshi, Stephanie Miller, **Lindsay Porter**, and Albert Mulenga. "A blood meal-induced *Ixodes scapularis* tick saliva serpin inhibits trypsin and thrombin and interferes with platelet aggregation and blood clotting." *International Journal for Parasitology*, 44, no. 6 (2014): 369-379.

## TECHNICAL SKILLS

PCR, traditional, reverse transcriptase, & real-time	insect cell systems and affinity purification
Agarose & polyacrylamide gel electrophoresis	<i>In vivo</i> dsRNA expression in bacteria, <i>in vitro</i>
Staining methods: silver, coomassie, & amido black	kit synthesis
Cloning/subcloning	Biochemical assays including <i>in vitro</i> kinetics, and
Sanger and next generation (Illumina) sequencing	<i>ex vivo</i> hemostasis assays
Bioinformatics including <i>de novo</i> genome &	Tick & black/brown widow spider colony
transcriptome assembly/annotation	maintenance
Northern, western blotting & chemiluminescence and	Experiments with lab mice, chickens, &
chromogenic detection methods	rabbits
Enzyme-linked immunosorbent assay (ELISA)	Laser capture microscopy
Immunoprecipitation	Protein preparation for mass spectrometry
Recombinant protein expression in bacteria, yeast, &	

## COMPETITIVE MONETARY AWARDS

*Northwestern State University, Natchitoches, LA*

- Nov 16, 2018:** Faculty Research Grant (\$1,000) – Academic Enhancement Funds, NSU
- Aug 30, 2018:** Travel Award (\$1,345) – Organizational Relieve Fund, awarded to my students and I for our Entomological Society of America conference in Vancouver, B.C.
- Jan 29, 2018:** Operational Research Fund Award (\$10,000) – Louisiana Mosquito Control Association
- Jan 29, 2018:** C. Lamar Meek Memorial Scholarship (\$1,500), awarded to Samantha Smith (Broughton) to be applied toward research activities completed in my lab – Louisiana Mosquito Control Association
- Oct 1, 2017:** John McIlhenny Endowed Professorship in Biology (\$7,000) – School of Biological and Physical Sciences

*Texas A&M University, College Station, TX*

- Apr 21, 2016:** Montgomery Award for Leadership and Service to Graduate Students (\$1,000) – Office of Graduate and Professional Studies
- Feb 11, 2016:** CVM Graduate Student Core Facility Experiential Learning Program Grant (\$2,500) – College of Veterinary Medicine and Biomedical Sciences (**PI: Lindsay M. Porter**)
- Jan 12, 2016:** Outstanding Graduate Student Scholarship (\$1,875) – College of Veterinary Medicine and Biomedical Sciences
- Nov 17, 2015:** Aggies Commit Fellowship for Training in Vector-Borne Pathogen Research (\$1,755) – Graduate and Professional Student Council

## MENTORING IN RESEARCH

*Stephen F. Austin State University, Nacogdoches, TX*

**Graduate (current)****Zach Elser****Fall 2019-Present**

Resolving tick immune gene transcript using RACE PCR/sequencing and transcript diversity profiling during infection. Major advisor.

**Undergraduate (current)****Jacqueline May****Aug 2019-Present**

Expression profiling and silencing of tick putative immune receptor gene

**Sylvia Schepps****Aug 2019-Present**

Expression profiling and silencing of tick immune gene (contig 38716)

**Gloria Romero****Aug 2019-Present**

Expression profiling and silencing of tick immune gene (contig 14494)

**Antonio Sainz****Aug 2019-Present**

Cloning and sequencing of brown widow  $\delta$ -LIT

**Angel Nuñez****Sep 2019-Present**

Cloning and sequencing of black widow  $\alpha$ -LIT

**Anna Scheuring****Aug 2019-Present**

Expression profiling and silencing of tick immune gene (contig 33177)

**Bailey Vogel****Aug 2019-Present**

Expression profiling of tick immune gene (contig 39181) & documenting tick hemolymph infection with various bacterial species

**Darrian Frausto****Aug 2019-Present**

Cloning and sequencing of brown widow  $\alpha$ -LIT

**Cameron Schmidt****Oct 2019-Present**

Cloning and sequencing of black widow  $\alpha$ -LIT

**Michael Stanford****Aug 2019-Present**

Expression profiling of tick putative macroglobulin immune gene

**Kaleth Salazar****Aug 2019-Present**

Cloning and sequencing of brown widow  $\delta$ -LIT

**Hailey Robinson****Jan 2020-Present**

Expression profiling of tick putative cell signaling gene

**Devin Smith****Jan 2020-Present**

Development of tick hemolymph assessment methodology

**Jacklyn Thompson****Jan 2020-Present**

Expression profiling of tick putative cell receptor gene

**Alicia Juarez****Jan 2020-Present**

Bioinformatic analysis of tick immunome

**Jayce Daniels****Jan 2020-Present**

Expression profiling of tick putative transcription factor gene

**Mika Taylor****Jan 2020-Present**

Documenting tick hemocyte response in bacterial infection pictographically

**Honor's Projects****Teyana Grooms****Jan 2020-Present**

Expression profiling of alpha-latrotoxin in *Latrodectus geometricus*

**Christopher Ogden****Jan 2020-Present**

Expression profiling of alpha-latrotoxin in *Latrodectus mactans*

**Amaya Jackson****Jan 2020-Present**

Characterizing tick immune response time at the cellular level

**Mariah Contreras****Sep 2019-Dec 2019**

Exploring Gram staining in tick hemolymph analysis

**Former undergraduate****Megan Eichler****Aug 2019-Dec 2019**

Expression profiling of tick putative macroglobulin immune gene

**Cayley Chapman****Aug 2019-Oct 2019**

Confirming expression profiles of orphan tick immune gene during bacterial infection

**Tommy Cole****Aug 2019-Oct 2019**Cloning and sequencing of brown widow  $\alpha$ -LIT*Northwestern State University, Natchitoches, LA***JOVE Scholars****David Marquis****Sep 2016-May 2019**

Tick trapping methods and host cues, characterizing tick cellular response to bacterial infection

**Samantha Smith (Broughton)****Sep 2016-Dec 2018**Widow colony maintenance; sequencing & recombinant expression of brown widow  $\delta$ -LIT**Emily Bencosme****Sep 2016-May 2018**Cloning, expression analysis, and RNAi silencing of *sig-1* in *Amblyomma americanum***Emma Warren****Sep 2016-Dec 2017**

Determining non-lethal bacterial loads in ticks, haemolymph assays

**Hunter Martin****Sep 2016-Dec 2017**Cloning and sequencing of *Amblyomma* spp. bacterial communities**Shelby Glynn****Sep 2016-Dec 2017**Cloning and sequencing of *Amblyomma* spp. bacterial communities**HarLee Possoit****Sep 2016-May 2017**Cloning and sequencing of *Dermacentor variabilis* bacterial communities**Victoria McGee****Sep 2016-Dec 2016**

Assessing viability of CRISPR-Cas gene editing in ticks

**Independent Researchers****Bayleigh Smith****Jan 2018-May 2019**

Cloning, sequencing, and silencing of tick immune gene (contig 25219)

**Taylor Burch****Jan 2018-May 2019**

Cloning, sequencing, and silencing of tick immune gene (contig 33177)

**Zachary Hevron****Sep 2018-May 2019**Cloning and sequencing of black widow  $\delta$ -LIT**Rebecca Hodnett****Jan 2017-May 2018**

Amplification and cloning of tick immune gene (contig 39181)

**Ariyanna Bonton****Dec 2017-May 2018**Colony maintenance and sequencing of *Latrodectus geometricus*  $\delta$ -LIT**Shelbie Waltman****Sep 2016-May 2017**Cloning and sequencing of *Ixodes scapularis* bacterial communities**Aimee Calmes****Sep 2016-May 2017**Expression analysis of putatively infection-responsive *Amblyomma americanum* lipocalin**Rashi Yadav****Jan 2017-May 2017**Expression analysis of putatively infection-responsive *Amblyomma americanum* A2M protein**Montariel Minor****Jan 2017-May 2017**Molecular toxin and spidroin analysis of *Latrodectus geometricus***Plant DNA Barcoding - Smithsonian Institute Barcode of Life Project****May 2017-May 2019**

Co-supervised two students (Samantha Simmons and Caleb Webster); helped generate ‘barcode’ sequences for 10 genomic regions in local plant species

Texas A&M University, College Station, TX

#### Undergraduate

##### Hayley Rodgers

Fall 2014

Instructed on molecular cloning techniques, recombinant protein expression, scientific presentation skills

##### Taelor Pastine

Fall-Spring 2013

Instructed on molecular cloning techniques, guided student through recombinant protein expression in insect cell expression system

##### Taylor Drost

Spring 2012

Instructed on molecular cloning techniques

#### Graduate

Spring 2012-Spring 2016

Trained three junior graduate students in laboratory equipment, molecular biology techniques, scientific writing and presentation skills, and graduate student requirements/expectations

### CONFERENCE PRESENTATIONS

**Nov 13, 2018:** “Silencing *sig* gene in *Amblyomma americanum* reduces immune response to bacterial infection”

Annual Meeting of Entomological Society of America, **Vancouver, B.C.**

**Feb 2, 2018:** “Pushing students to new academic heights using active-learning in a fluid classroom” Co-presented

with Dr. Francene Lemoine, For Our Future, University of Louisiana System Conference,

**Hammond, LA**

**Nov 7, 2017:** “Validating a putative immunome in *Amblyomma americanum*” **Invited Speaker**, Acari Come Full

Circle: From Omics to Physiology and Pathogen Transmission Biology, Member

Symposium, Annual Meeting of Entomological Society of America, **Denver, CO**

**Jul 13, 2015:** “Target Validation of Immunogenic Tick Saliva Proteins,” Annual Meeting of the American

Association of Veterinary Parasitologists, **Boston, MA**

**Nov 18, 2014:** “Characterization of immunogenic inter-species conserved *Amblyomma americanum* saliva protein,

Aa05,” Annual Meeting of the Entomological Society of America, **Portland, OR**

**Nov 17, 2014:** “Functional characterization and target validation of *Amblyomma americanum* serpin: AAS8,”

Annual Meeting of the Entomological Society of America, **Portland, OR**

**Nov 10, 2013:** “Intra- and inter-species comparison of *Amblyomma americanum* serine protease inhibitors

(SERPINs),” Annual Meeting of the Entomological Society of America, **Austin, TX**

**Mar 6, 2012:** “Biochemical characterization of tick saliva serine protease inhibitors,” Southeastern/Southwestern

joint meeting of the Entomological Society of America, **Little Rock, AR**

### UNIVERSITY/DEPARTMENT PRESENTATIONS & GUEST LECTURES

Northwestern State University, Natchitoches, LA

**Mar 23, 2018:** “Drug Targets, Target Identification, Validation, and Screening” **Guest Lecture** in Medicinal Chemistry (CHEM 3900)

Texas A&M University, College Station, TX

**Mar 30, 2016:** “Characterizing a Cross-Class Protease Inhibitor in Host Immune Evasion for *Amblyomma americanum* Serine Protease Inhibitor 4 (AAS4),” Texas A&M Student Research Week

**Mar 23, 2016:** “Effector mechanisms of humoral immune response” **Guest Lecture** in Intro to Immunology (VTPB 409)

**Jan 28, 2016:** “Investigating a Role in Immune Evasion for *Amblyomma americanum* Serine Protease Inhibitor 8 (AAS8),” College of Veterinary Medicine and Biomedical Sciences Annual Spring Research

## Symposium

- Jan 19, 2016:** “Exploring Tick Saliva for Anti-Immunity Ingredients,” Three-Minute Thesis (3MT) Competition
- Nov 29, 2015:** “Target Validation of Immunogenic Tick Saliva Proteins,” College of Veterinary Medicine and Biomedical Sciences Accreditation Reception
- Dec 2, 2014:** “Introduction to Mites,” **Guest Lecture** in Medical Entomology (ENTO 423)
- Aug 15, 2014:** “Functional Characterization and Target Validation of *Amblyomma americanum* Serpin: AAS8,” Department of Entomology Graduate Student Forum
- Feb 20, 2014:** “It Takes Two to Tango: the molecular interplay between the tick and the host,” Department of Entomology Graduate Student Awards Ceremony
- Sept 20, 2013:** “It Takes Two to Tango: the molecular interplay between the tick and the host,” Department of Entomology Vector Biology Seminar

## PRESENTATIONS BY MENTORED STUDENTS

## National and International Conferences

- Dec 6, 2018: Louisiana Mosquito Control Association Annual Meeting, Lafayette, LA**  
 “Homology-based cloning and recombinant protein expression of the brown widow spider (*Latrodectus geometricus*) delta-latroinsectotoxin” (**Samantha Smith**, LP), (Oral)
- Nov 12, 2018: Entomological Society of America Meeting, Vancouver, B.C.**  
 “Profiling DSCAM exon usage in Gram-negative infections in *A. americanum*” (**Bayleigh Smith**, LP), (Poster, won **first place** in the MUVE undergraduate poster competition);  
 “Homology-based cloning and recombinant protein expression of the brown widow spider (*Latrodectus geometricus*) delta-latroinsectotoxin” (**Samantha Smith**, LP), (Poster)
- Nov 5 & 7, 2017: Entomological Society of America Meeting, Denver, CO**  
 “Homology cloning identifies putative delta-latroinsectotoxin in the brown widow spider, *Latrodectus geometricus*,” (**Samantha D. Smith**, LP), (Oral), Nov. 7<sup>th</sup>;  
 “Expression analysis and functional validation of *in silico*-identified putative infection-responsive genes in the lone star tick,” (**Emily Bencosme-Cuevas**, LP), (Oral), Nov. 7<sup>th</sup>;  
 “Exploring the cellular and molecular interplay between ticks and their bacterial communities,” (**Emma Warren**, LP), (Oral), Nov. 5<sup>th</sup>

## State and Regional Conferences

- Apr 12, 2019: University of Louisiana System Academic Summit, Grambling State University, LA**  
 “Characterizing the TNF receptor associated factor (TRAF) *Amblyomma americanum* homolog in immune response to bacterial infection,” (**Taylor Burch**, LP), (Oral)
- Apr 20, 2018: University of Louisiana System Academic Summit, University of New Orleans, LA**  
 “RNAi validation of a putative immune gene, *lipocalin*, in the lone star tick,” (**Emily Bencosme**, LP), (Oral)
- Mar 11, 2018: Louisiana Academy of Sciences, Alexandria, LA**  
 “Bioinformatic and RNAi analysis of putatively infection-responsive genes in *Amblyomma americanum*,” (**HarLee Possoit**, ZR, AM, LP), (Oral);  
 “Analysis of sequence conservation of latroinsectotoxins in *Latrodectus geometricus*,” (**Samantha Smith**, **Montariel Minor**, LP), (Oral)
- Mar 4-7, 2018: Southeastern Branch Meeting Entomological Society of America, Orlando, FL**  
 “Homology cloning identifies putative delta-latroinsectotoxin in the brown widow spider, *Latrodectus geometricus*,” (**Samantha D. Smith**, LP), (Oral);  
 “Expression analysis and functional validation of *in silico*-identified putative infection-responsive genes in the lone star tick,” (**Emily Bencosme-Cuevas**, LP), (Oral)
- Nov 17-18, 2017: Undergraduate Research Conference, University of Louisiana Lafayette (ULL), LA**



- “Homology cloning identifies putative delta-latroinsectotoxin in the brown widow spider, *Latrodectus geometricus*,” (**Samantha D. Smith**, LP), (Oral);
- “Expression analysis and functional validation of *in silico*-identified putative infection-responsive genes in the lone star tick,” (**Emily Bencosme-Cuevas**, LP), (Orals)

**Mar 11, 2017: Louisiana Academy of Sciences, Ruston, LA**

- “Bioinformatic and RNAi analysis of putatively infection-responsive genes in *Amblyomma americanum*,” (**HarLee Possoit**, ZR, AM, LP), (Poster);
- “Analysis of sequence conservation of latroinsectotoxins in *Latrodectus geometricus*,” (**Samantha Smith**, LP), (Poster)

*School and University Conferences, Northwestern State University, Natchitoches, LA*

**NSU Annual Research Day**

- Apr 25, 2019:** “Characterizing the TNF receptor associated factor (TRAF) *Amblyomma americanum* homolog in immune response to bacterial infection,” (**Taylor Burch**, LP), (Oral);
- “Comparative expression analysis of tick immune genes in Gram-negative versus Gram-positive infections,” (**David Marquis**, LP), (Oral);
- “Expression analysis and gene silencing of a hypervariable immune system receptor in the lone star tick,” (**Bayleigh Smith**, LP), (Oral);
- “Expression of a lipocalin-like hypothetical protein as a part of *Amblyomma americanum* tick immune response to a Gram-negative bacterial infection,” (**Abigail Poe**, LP, Željko Radulović), (Oral)
- Apr 12, 2018:** “Sequencing and bioinformatic analysis of the delta-latroinsectotoxin in the brown widow spider (*Latrodectus geometricus*),” (**Sam Smith**, LP), (Oral);
- “RNAi validation of a putative immune gene, *lipocalin*, in the lone star tick,” (**Emily Bencosme**, LP), (Oral)
- Apr 20, 2017:** “In vivo validation of putative immune-related genes in ticks,” (**Drew Cheshier**, LP), (Oral);
- “Illumina RNA-seq data mining reveals a very highly conserved, putative infection-responsive gene, *C33177*, in *Amblyomma americanum*,” (**HarLee Possoit**, LP), (Poster);
- “Cloning and RNAi silencing of latroinsectotoxins from the brown widow spider, *Latrodectus geometricus*,” (**Montariel Minor**, **Samantha Smith**, LP), (Poster);
- “Attraction and repulsion assays show host breath and hair as strongest cues for stimulating attraction across tick species,” (**David Marquis**, LP), (Poster);
- “Identification of bacterial communities in local populations of the deer tick, *Ixodes scapularis*,” (**Shelbie Waltman**, **Victoria McGee**, LP), (Poster);
- “Validating differential gene expression of ticks to Gram-negative bacterial infection,” (**Emma Warren**, LP), (Poster);
- “Developing an artificial feeding system for maintaining tick laboratory colonies,” (**Emily Bencosme**, LP), (Poster);
- “Quantitative expression and RNAi analysis of a putatively infection-responsive *A. americanum* gene,” (**Aimee Calmes**, LP), (Poster)

**School of Biological and Physical Sciences, Annual Science Showcase**

- Feb 23, 2018:** “Functional validation of putative immune genes in *A. americanum* during bacterial infection,” (**Emily D. Bencosme Cuevas**, **Dave Marquis**, LP), (Poster), **Won Second Place Award**;
- “Sequence resolution of the *Latrodectus geometricus* delta-latroinsectotoxin,” (**Samantha Smith**, LP), (Poster), **Won Second Place Award**
- Feb 17, 2017:** “Illumina RNA-seq data mining reveals a very highly conserved, putative infection-responsive gene, *C33177*, in *Amblyomma americanum*,” (**HarLee Possoit**, LP), (Poster);
- “Cloning and RNAi silencing of latroinsectotoxins from the brown widow spider, *Latrodectus*

- geometricus*,” (**Montariel Minor, Samantha Smith**, LP), (Poster);
- “Identification of bacterial communities in local populations of the deer tick, *Ixodes scapularis*,” (**Shelbie Waltman, Victoria McGee**, LP), (Poster);
- “Validating differential gene expression of ticks to Gram-negative bacterial infection,” (**Emma Warren**, LP), (Poster);
- “Cloning and sequencing of 16s ribosomal DNA from bacterial communities in *Amblyomma maculatum*,” (**Hunter Martin, Shelby Glynn**, LP), (Poster);
- “Developing an artificial feeding system for maintaining tick laboratory colonies,” (**Emily Bencosme**, LP), (Poster);
- “Quantitative expression and RNAi analysis of a putatively infection-responsive *A. americanum* gene,” (**Aimee Calmes**, LP), (Poster)

## RESEARCH RECOGNITION AWARDS FOR MENTORED STUDENTS

- May 3, 2019:** Excellence in Research Award, Biology Department Award, **Bayleigh Smith**  
Excellence in Research Award, Biology Department Award, **Taylor Burch**
- Nov 6, 2018:** MUVE Undergraduate Poster Competition First Place Award, Entomological Society of America Annual Meeting, **Bayleigh Smith**
- Apr 26, 2018:** Excellence in Research Award, Biology Department Award, **Emily Bencosme**
- Feb 23, 2018:** Poster Presentation Award, Second Place, Science Showcase Day, **Sam Smith**
- Feb 23, 2018:** Poster Presentation Award, Second Place, Science Showcase Day, **Emily Bencosme**
- Apr 7, 2017:** Excellence in Research Award, Biology Department Award, **HarLee Possoit**

## DEPARTMENT/UNIVERSITY COMMITTEES

*Stephen F. Austin State University, Nacogdoches, TX*

- |   |                         |
|---|-------------------------|
| <b>Graduate Committee (standing)</b>  | <b>Aug 2019-Present</b> |
| <ul style="list-style-type: none"> <li>Review/provide input on graduate applications</li> </ul> |                         |
| <b>Assessment Committee (standing)</b>  | <b>Aug 2019-Present</b> |
| <b>Cellular/Molecular Course Development Committee (ad hoc)</b>                                 | <b>Aug 2019-Present</b> |

*Northwestern State University, Natchitoches, LA*

- |   |                          |
|---|--------------------------|
| <b>Chair of Academic Assessment Review Committee</b>  | <b>Feb 2017-May 2019</b> |
| <ul style="list-style-type: none"> <li>Assisted 23 program coordinators &amp; co-coordinators in their first-ever preparation of 22 degree program assessment reports (all programs in the College of Arts and Sciences) for submission to SACSCOC (2017) to meet accrediting standards</li> <li>In 2018, guided program coordinators in new report element of AY17-18 data comparison to previous year's data using new University reporting guidelines to meet SACSCOC deficiencies</li> <li>Responsible for coordinating the continued, annual submission of assessment reports for these degree programs as well as 3 certificate programs</li> <li>Attended monthly meetings with other ARC chairs and Director of Institutional Effectiveness</li> <li>Attended annual President's Brief meeting</li> </ul> |                          |
| <b>Pre-Professional School Advising Committee</b>   | <b>Feb 2018-May 2019</b> |
| <ul style="list-style-type: none"> <li>Gave lecture to the committee regarding how to advise students in preparing a resume (10 Jan 2019)</li> <li>Co-administered mock medical school interviews</li> <li>Wrote recommendation letters from the committee</li> <li>Edited resumes for medical school applicants</li> </ul>   |                          |

**Faculty Engagement Committee**

- Organized annual holiday potluck lunches
- Hosted weekly biology game nights
- Co-organized bi-weekly Friday breakfast socials
- Wrote a monthly newsletter for the School of Biological and Physical Sciences
- Organized weekly writing groups

**Chair of Chemistry Faculty Search Committee**

**Jun-Jul 2017**

- Led the search for a tenure-track assistant professor of chemistry position
- Scheduled interviews
- Developed on-campus interview itineraries and hosted candidates
- Contacted references

**Student Engagement Committee**

**Sep 2016-May 2019**

- Organized and presented student awards at annual Biology Ball
- Co-developed Student Success Workshop series, organized passports and stamps system of attendance
- Co-organized the Second Annual Science Showcase recruitment event including coordinating faculty workshops and drafting the schedule of events

**Professional School Task Force Committee**

**Sep 2016-May 2019**

- Prepared documents to assist advising of medical school-oriented students including a list of medical schools in LA and surrounding states, and a recommended academic course plan
- Composed lists of PA school prerequisite courses
- Revised lists of Physician's Assistant and Occupational Therapy school prerequisite courses, and included recommended activities and exams
- Consulted with students that have taken MCAT to revise recommended pre-MCAT curriculum plan, and compiled list of MCAT topics and recommended curriculum

*Texas A&M University, College Station, TX*

**Office of Graduate & Professional Students Professional Development Steering Committee Nov 2015-May 2016**

- Worked with a committee to implement this new university program
- Assisted in resolving administrative issues with database and records maintenance and tracking
- Assisted in program advertisement
- Developed and proposed requirements for the advanced-level certificate and presented the idea to the committee which was very favorably received

**Women in Science and Engineering (WISE) Committee**

**May 2015-May 2016**

- Assisted in planning and execution of WISE Conference 2016
- Served on review panel for research & mentoring awards; presented awards at ceremony
- Participated in 6<sup>th</sup> grade outreach program by designing and running a workshop in three sessions

**College of Veterinary Medicine Graduate Instruction Committee**

**May 2015-May 2016**

- Advocated on behalf of graduate students in the college
- Reported to the faculty committee on activities of the Graduate Student Association

**Sexual Assault Survivors Services Committee**

**Sep 2015-May 2016**

- Served as liaison to the Graduate Student Council
- Provided ideas on student outreach and education

**Council on Climate and Diversity**

**Aug 2015-May 2016**

- Reviewed and evaluated reports from academic and non-academic university units on their climate and diversity initiatives
- Discussed progress and merit of these initiatives and provided feedback and scoring for each unit
- Based on my observations of university unit functionality I suggested to the University President (Michael

Young) to have a department-level accountability measure

## OTHER SERVICE ACTIVITIES

*Stephen F. Austin State University, Nacogdoches, TX*

Faculty advisor for Paintball Club

**September 2019-Present**

Faculty advisor for The Conservation of Aquatic Life and the AG Pond (CALAP) group

**October 2019-Present**

*Northwestern State University, Natchitoches, LA*

*Academic advising*

**Spring 2019:** 30 advisees

**Fall 2018:** 32 advisees

**Spring 2018:** 17 advisees

**Fall 2017:** 22 advisees

**Spring 2017:** 20 advisees

**Fall 2016:** 15 advisees

*Service to the Department/University*

**Oct 31, 2018:** Organized the School's first Pop-Up Science Art Show featuring 63 original science-themed creative pieces by the School's students and faculty

**Oct 13, 2018:** N-side View Faculty Representative for School of Biological & Physical Sciences

**Sep 24, 2018:** Developed and directed the first NSU Fear Factor contest for Demon Days (First Year Experience event series)

**Sep 5, 2018-Present:** Faculty mentor for STEPS program, serving mentoring role (as a non-academic advisor) guiding freshmen in early steps for academic success

**May 24-25, May 31-Jun 1, Jun 20-21, & Jul 10, 2018:** Freshman Connection for School of Biological and Physical Sciences. Created and directed new program for orientation to include ice breakers, extended introductions with faculty, intro to upper-level courses and department-specific extra-curricular offerings, and building tours

**Feb 23, 2018:** Served as Undergraduate Student Oral Presentation Judge at Science Showcase Day, School of Biological and Physical Sciences

**Jan 26, 2018:** Invited by Academic Provost Dr. Vickie Gentry to serve on *ad hoc* committee to review and revise the University's Academic Excellence Strategic Plan including metrics and benchmarks associated with each of 5 objectives

**Oct 19, 2017:** "What can I do with a Science degree?" workshop with University's student success workshop series. (Co-presented with Dr. Shreyashi Ganguly)

**Oct 17, 2017:** "Career opportunities for students," School of Biological and Physical Sciences Student Success Workshop Series (co-presented with Dr. Chad Thibodeaux)

**Aug 28, 2017:** "Establishing good communication skills," School of Biological and Physical Sciences Student Success Workshop Series

**Jun 23, 2017:** Freshman Connection; assisting students in course registration

**May 10, 2017:** Program Assessment; assisted in development of School of Biological and Physical Sciences program assessment SLOs, measures, and targets for biology and microbiology programs; collected data for two SLOs

**Jan-May, 2017:** Served as a second reader for Louisiana Scholar's College Undergraduate Thesis "Revolutionizing Forensic Technology: Identification of Humans Through Hair Shaft Proteins" by Tristan Bridges

**May 18, 2017:** Co-wrote (with Director, Dr. Francene Lemoine) funding proposal for Innovative Teaching Classroom Remodel, Bienvenu 211 (**Awarded: \$46,000**); assisted in selection/purchase of classroom furniture and technology

**Mar 4, 2017:** N-side View Faculty Representative for School of Biological & Physical Sciences

**Feb 23, 2017:** "Creation of Biology and Chemistry MOOCs to Enhance the Preparedness of Undergraduate Students," Board of Regents eLearning Innovation Grants Program (Co-wrote with Director, Dr. Francene Lemoine)

**Jan 10, 2017:** Drafted a Mission, Vision, and Values statement for the School of Biological and Physical

Sciences (with Mr. Colby Lasyone and Director, Dr. Francene Lemoine) to present to faculty

*Service to the Community/Outreach*

- Sep 4, 2019:** Outreach to Central Heights Elementary 3<sup>rd</sup> grade classes (5), snake & arachnid demonstrations
- Jan 9 & Apr 17, 2019:** Consulted for J&J Exterminating Company in identifying a termite species
- Sep 7, 2018:** Insects Show & Tell, Second Grade Classes, Natchitoches Magnet School
- Oct 13, 2017:** Spiders Show & Tell, First Grade Classes, Natchitoches Magnet School
- Feb 21, 2017:** Advised students of the Pre-Vet Club at University of North Texas (skype interview) about Vet School entry requirements, my experience in the vet school
- May, 2016:** “Mosquitoes” presentation at the Becky Gates Childcare Center, Texas A&M campus
- Apr 2, 2016:** Served as Big Event Job Site Leader for Indian Graduate Student Association, coordinating registration and equipment, and directing and overseeing 14 other student volunteers to complete yard work project for community resident
- Dec 5, 2015:** “What Bug is That?” Expanding Your Horizons Workshops (3), 6th grade; Texas A&M campus
- Nov 23, 2015:** “Graduate School and Career Opportunities in Biomedical Sciences,” presentation for 12th grade, College Station High School

*Service to the Profession/Field*

- Aug 2018-Present:** Serving as reviewer for the Journal of Medical Entomology (2 reviews to-date)
- Nov 13, 2018:** Moderator for 10-minute talks, MUVE section, Biology and Ecology of Disease Vectors, Annual Meeting of the Entomological Society of America Meeting, Vancouver, B.C.
- Mar 5, 2018:** Served as Master’s Student Poster Presentation Judge and as Ph.D. Student Oral Presentation Competition session IV moderator, Southeastern Branch Meeting of the Entomological Society of America Meeting, Orlando, Florida
- Jan 23, 2018:** Wrote a letter of support for Dr. Shahid Karim (University of Southern Mississippi) for an NSF grant proposal for a multiphoton microscope system

*Texas A&M University, College Station, TX*

- Apr 12 & 14, 2016:** Served on the University Disciplinary Appeals Panel
- Mar 29, 2016:** Served as topic judge for 10 undergraduate poster presentations, Student Research Week
- Nov 19, 2015:** Presenter, Ethel Ashworth-Tsustui Research and Mentor Awards Presentation Ceremony
- May-Aug 2015:** Served as Grad Camp counselor including planning and implementation of camp events

## TEACHER/INSTRUCTOR DEVELOPMENT TRAINING

*Stephen F. Austin State University, Nacogdoches, TX*

- Jan 17, 2020:** Tech + Teaching in the STEM Building
- Jan 13, 2020:** Refreshed Classroom Workshop

*Northwestern State University, Natchitoches, LA*

- Jan 08, 2018:** What’s New in Moodle 3
- Sep 13, 2016:** NSU Online Teaching Bootcamp
- Aug 19, 2016:** TopHat Instructional Orientation, Zoom Session

*Texas A&M University, College Station, TX*

- Apr 14, 2016:** Use Your Phone in Class, Workshop
- Mar 04, 2016:** Leveraging Pop Culture in the Classroom, Workshop
- Jan 26, 2016:** Fostering Transformative Learning, Workshop
- Spring 2016:** The College Classroom: Evidence-Based Teaching 8-week Seminar Series
- Spring 2016:** STEM Teaching Professional Development: College Classroom Teaching Integrating Teaching, Research, and Learning (GEOS 677)

**Apr 20, 2015:** Academy for Future Faculty, CIRTL Practitioner-Fellow, Certificate

**Mar 25, 2015:** FiT (Fundamentals of Instructional Technology) - A Basic Guide to Digital Multimedia Production for Teaching and Learning, Workshop

## PROFESSIONAL DEVELOPMENT PROGRAMS/WORKSHOPS

*Stephen F. Austin State University, Nacogdoches, TX*

**Fall 2019-Spring 2020:** Multicultural Diversity Certificate Program

**Fall 2019-Spring 2020:** Faculty writing group, weekly meetings

*Texas A&M University, College Station, TX*

**Apr 2016:** Intermediate Professional Development Certificate, Office of Graduate and Professional Studies

**Jan 2016:** Basic Professional Development Certificate, Office of Graduate and Professional Studies

**Aug 2015:** Successful Grant Writing Certificate Course, CVMBS

**July 2015:** Effective Scientific Writing Certificate Course, CVMBS

**Mar 2015:** Mentoring Relationships Workshop

**Apr 15-16, 2010:** A Community of Respect Workshop on cultural diversity awareness (6 hours of training)

## HONORS & SPECIAL RECOGNITION

*Northwestern State University, Natchitoches, LA*

**Dec 18, 2018:** Natchitoches Parish Journal article highlighting our Vancouver, B.C. trip including Bayleigh Smith's first place win in the poster competition:

<https://natchitochesparishjournal.com/2018/12/18/nsu-biology-students-present-at-canadian-conference/>

**Oct 4, 2018:** NSULA Fear Factor Event News Coverage (including my interview)

<https://nsulastudentmedia.com/2018/10/04/student-face-their-fears-in-nsus-first-fear-factor/>

**May 16, 2018:** Article covering my undergraduate researcher, Emily Bencosme, (including my interview)

<https://www.theadvertiser.com/story/news/local/education/2018/05/16/why-not-brings-student-puerto-rico-louisiana/606836002/>

**Apr 26, 2018:** 'The Leading Strand' recognition award from Beta Beta Beta Biology Organization

**Apr 5, 2018:** News coverage of Dr. Philip Cole active-learning classroom (noting my contribution)

<http://news.nsula.edu/home/innovative-classroom-named-for-dr-philip-cole/>

**Apr 7, 2017:** 'Rookie of the Year' recognition award from Beta Beta Beta Biology Organization

*Texas A&M University, College Station, TX*

**May 9, 2016:** Featured in 'The Battalion' Texas A&M Newspaper for Graduation Special Edition

**Jul 14, 2015:** Honorable Mention - American Association of Veterinary Parasitologists (AAVP) – Elanco Student Poster Presentation Award, Annual Meeting of the AAVP, Boston, Massachusetts

**Apr 2014–Apr 2016:** Phi Kappa Phi Honor Society, Texas A&M Chapter

**Apr 2014–Apr 2015:** Gamma Sigma Delta International Honor Society of Agriculture, Texas A&M Chapter

## STUDENT ORGANIZATIONS

*Texas A&M University, College Station, TX*

**President,** Graduate Student Association of the College of Veterinary Medicine

**May 2015-May 2016**

- Identified campus resources and events and sharing them with students at monthly meetings
- Co-coordinated the Annual Research Symposium with 80+ presenters and a keynote speaker, including coordinating abstract submissions, deciding symposium agenda, and managing volunteers; Assisted in resolving the problem of a record number of abstract submissions by contributing suggestions for alternative scheduling

- Coordinated College Open House event including leading a 17-person committee to design a booth & manage resource acquisition, and managed 27+ student volunteers
- Created the Postdoc to Grad Student Instruction Group
- Co-developed the Research Conversation Group and Grad Student Summer Seminar Series
- Coordinated monthly meetings including finding and inviting speakers, and delegating tasks to my officers who assisted me in planning and execution
- Served on the Biomedical Research Awareness Day Planning Committee where I helped to secure funding for the event, plan the agenda, and recruit volunteers to present their research

**Chair of Quality of Life Committee, Graduate and Professional Student Council** **May 2015-May 2016**

- Created and implemented the Knowledge Sharing Groups program where students share their specialized knowledge and skills by teaching them to other students
- Created HEB Ride-Share program to provide grocery store rides for students without cars
- Lobbied the Transportation Services Department to create new weekend bus line to local grocery store to help students without a car
- Created and administered a quality of life poll; shared the collected data with university officials
- Worked with Student Counseling Services to address some of the needs discovered in the poll
- Served as graduate student advocate on university committees (described below)
- Met with advisor to discuss layout of a new GPSC office, created a sketch of a new office and pitched it to University architect

**President, Grad Aggie Parent Group** **Sep 2015-May 2016**

- Founded organization
- Secured official university recognition including drafting a constitution
- Coordinated meetings for parents for support and resource sharing
- Advocated on behalf of students who are parenting to university officials
- Participated in reviewing university policies related to pregnancy/maternity issues and began conversations with university administrative officials on changing university policies in this area

**Vice President, Entomology Graduate Student Organization** **Apr 2014-May 2015**

- Assisted with fund-raising and entomology program awareness
- Served as a representative for entomology in the graduate council and thereby reestablished the department's eligibility for travel awards
- Identified need for historical record keeping and lobbied to change the constitution to officially add this job duty to the Vice President's position

## AFFILIATIONS

**Nov 2017–Present:** Louisiana Mosquito Control Association

**Mar 2017–Present:** Louisiana Academy of Sciences

**Feb 2015–Present:** American Association of Veterinary Parasitologists

**Feb 2012–Present:** Entomological Society of America

## PROFESSIONAL SOCIAL MEDIA

LinkedIn Profile: <https://www.linkedin.com/in/lindsay-porter-2aa6b560>

Lab Facebook Page: <https://www.facebook.com/pg/porterresearchlabnsula/about/> or @porterresearchlabnsula

Lab Website: <https://porterlab.weebly.com/>