

## Curriculum Vitae

### **Patrick D. Larkin, Ph.D.**

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### **Education**

PhD, Biochemistry, Texas A&M University, August 1999

BS, Biochemistry, University of Iowa, August 1989

### **Experience**

**Associate Professor of Biochemistry** Department of Physical and Environmental Sciences, Texas A&M University-Corpus Christi, Corpus Christi, TX, 2006-present

**Biochemistry Laboratory Coordinator**, Dept. of Physical and Environmental Sciences, Texas A&M University-Corpus Christi, Corpus Christi, TX, 2000-2016

**Director, Molecular Instrumentation Core Facility**, College of Science & Technology, Texas A&M University-Corpus Christi, Corpus Christi, TX, 2007-2013

**Assistant Professor of Biochemistry**, Department of Physical and Life Sciences, Texas A&M University-Corpus Christi, Corpus Christi, TX, 2000-2006

**Postdoctoral Research Associate** Norman Borlaug Center for Crop Improvement, Texas A&M University, College Station, Texas, 1999-2000.

**Graduate Teaching Assistant**, Biochemistry I, Biochemistry I & II Laboratory, Dept. of Biochemistry and Biophysics, Texas A&M University, College Station, Texas, 1998 – 1999.

**Graduate Research Assistant**, Department of Biochemistry and Biophysics, Texas A&M University, College Station, Texas, 1995 -1998.

**Graduate Research Fellow, Plant Biotechnology** Department of Biochemistry and Biophysics, Texas A&M University, College Station, Texas, 1993 -1995

**Research Associate**, E.I. DuPont de Nemours Co., Plant Biotechnology Laboratory, Ames, Iowa, 1990 - 1993

**Research Assistant**, Department of Infectious Diseases, U.S. Veteran's Affairs Hospital, Iowa City, IA, 1989-1990.

**Undergraduate Research Assistant (senior thesis)** Department of Biochemistry, University of Iowa, Iowa City, IA, 1988-1989

**Resident Assistant**, Hillcrest Residence Hall, University of Iowa, Iowa City, IA, 1987-1989

**Laboratory technician**, Department of Psychology, University of Iowa, Iowa City, IA, 1986

## **Teaching Experience**

### **Teaching Awards**

*Most Dedicated Professor Award* (2004), Alpha Eta Delta Honor Society

Finalist, *Excellence in Teaching Award* (2006), Texas A&M University-Corpus Christi

Finalist, *Digital Innovator of the Year Award* (2019), Texas A&M University-Corpus Christi

### **Courses taught**

Biochemistry I (CHEM 4401)

Biochemistry II (CHEM 4402)

Biochemistry I laboratory (CHEM 4101)

Biochemistry II laboratory (CHEM 4102)

Medicinal Chemistry/Pharmacology (CHEM 4320)

General Chemistry I (CHEM 1311)

Physiological Chemistry laboratory (CHEM 1106)

Senior Chemistry Seminar (CHEM 4292)

Directed Independent Study (CHEM 4696, CHEM 5696, BIOL 5696: 22 student projects)

Molecular Ecology (3-day short course)

### **New courses developed**

CHEM 5321 *Field and Laboratory Methods in Molecular Ecology*

CHEM 4320 *Drugs, Toxins and Natural Products Chemistry*

CHEM 4292 *Senior Chemistry Seminar*

CHEM 4402 *Biochemistry Laboratory II*

*Molecular Ecology Short course*

### **Additional undergraduate courses qualified to teach**

Organic Chemistry I & II

Molecular Biology

Botany

Introductory Biology

General Chemistry II

Genetics

Plant Physiology

Cell Biology

### **Graduate courses qualified to teach**

Molecular Ecology

Plant Biochemistry

Conservation Genetics

Natural Products Chemistry

### **Innovation in teaching, course design and technology**

#### ***Design of mini-course in molecular techniques for applications in ecology***

Designed and implemented 3 day course to train graduate students, staff and faculty in use and applications of molecular techniques to ecology. Course involved training in proper handling of biological samples, DNA extraction, quantification, Polymerase Chain Reaction (PCR), primer design, gel electrophoresis, DNA sequencing and molecular marker analysis.

#### ***Design of Green Fluorescent Protein Curriculum for Biochemistry Laboratory***

Designed and implemented series of 13 experiments for biochemistry laboratory using green fluorescent protein (GFP, *Aequorea victoria*) as the target molecule. Project involved series of overlapping protocols (DNA sequence retrieval, primer design, PCR, cloning, electrophoresis,

ligation & transformation, Restriction enzyme digest, DNA sequencing, molecular modeling, protein expression, purification and characterization) designed to introduce students to theory and practice of biochemistry by following a single molecule (green fluorescent protein) from DNA sequence to laboratory expression, purification and characterization.

#### ***Design of Peer-Centered Learning Format for Biochemistry Courses***

Converted upper-level biochemistry courses from lecture to *peer-centered* learning model. This format serves several purposes in large lecture sections: (1) lecture period is broken up into mini-lectures that cover specific topics, helping students to stay focused, (2) higher order thinking skills are reinforced through presentation of conceptual problems between mini-lectures, (3) students are allowed time to process information by discussing answers to conceptual problems with a partner in a focused, non-stressful manner, (4) instructor is provided with an opportunity to assess understanding of a specific topic by polling student answers before and after discussion with partners. Required development of concept-based, in-class problems, web-based reading quizzes and teaching style adapted to small group activities.

#### ***Design of Case-Based Study Curriculum for Senior Seminar Course***

Developed a curriculum for a senior seminar course (CHEM 4292) based upon the principles of case-based learning. This format utilizes realistic scenarios to engage students in problem-solving tasks that require a number of skills, including: teamwork, writing, speaking and critical analysis. Case-based problems, focusing on chemistry, included: global climate change, antibiotic resistance, methamphetamines, oil spills, pollution, and weapons of mass destruction.

#### ***Design of Career Development Curriculum for Senior Seminar Course***

Developed a curriculum for a senior seminar course (CHEM 4292) that focused on career building skills, including: self-inventory of skills, methods of organizational research, preparation of resume, interviewing, salary negotiation, budget analysis and graduate/professional school preparation.

#### ***Creation of Study Guides for Biochemistry and Medicinal Chemistry Courses***

Created study guides to accompany three courses: *Biochemistry I* (CHEM 4401), *Biochemistry II* (CHEM 4402) and *Drugs, Toxins and Natural Products Chemistry* (CHEM 4490). Each guide, which is approximately 50 pages long, consists of questions covering topics from lecture and reading assignments. Guide is designed to reinforce pertinent concepts and details, and prepare students for types of questions to be found on exams.

#### ***Genomics & Bioinformatics Curriculum Development***

Texas A&M University-Corpus Christi, United States Department of Agriculture-sponsored grant to promote development and utilization of genomics and bioinformatics tools in the undergraduate curriculum. Have Incorporated and modified five existing bioinformatics laboratory modules (BLAST searching, Metabolic and genetic disease database exploration, Protein structure and function analysis, Kinetic database exploration, Multiple protein sequence alignment) into the Biochemistry I laboratory (CHEM4401) curriculum.

#### ***Design and Development of Web-based Biochemistry Curriculum and Career aids***

Designed and produced personal web site ([www.tamucc.edu/~plarkin/](http://www.tamucc.edu/~plarkin/)) with access to extensive material (syllabi, course notes, exam study guides, laboratory assignments, laboratory data, career guides and links) to be used in conjunction with general chemistry, biochemistry, physiological chemistry, medicinal chemistry and senior seminar courses

### ***Design and Provisioning of Multifunctional Biochemistry Teaching Laboratory***

Designed and provisioned biochemistry teaching laboratory on Texas A&M University-Corpus Christi campus for biochemistry, molecular biology, and clinical laboratory science laboratories.

### ***Design and Modification of Physiological Chemistry Laboratory Curriculum***

Modified and redesigned physiological chemistry laboratory curriculum (CHEM 1106) for nursing students to emphasize practical aspects of general, organic and biochemistry. Introduced new laboratory modules on concentration calculations, molecular modeling and biochemistry.

### ***Instructor - Summer Camp for Applied Mathematics Preparation (SCAMP)***

Instructor for seagrass laboratory studying effects of light attenuation on marine plant growth as part of a USDA-sponsored science and mathematics camp for incoming freshmen.

### **Professional Development – Teaching**

*Critical Pedagogy*. Texas A&M University - Corpus Christi, January 2015

*High Impact Practices*. Texas A&M University - Corpus Christi, August 2014

*Teaching Naked: Flipping 101 Workshop*. Texas A&M University-Corpus Christi, August 2013

*Completing College: Rethinking Institutional Action*. Texas A&M University-Corpus Christi, August 2012

*Digital Natives: Technology Use Among University Students*. Texas A&M University-Corpus Christi. January 2012.

*Calibrated Peer Review* (Chautauqua Short Course for College Faculty). University of California – Los Angeles, June 2006.

*Strategies to promote active learning in Chemistry*. Texas Center for Excellence in Teacher Preparation (TxCETP). Tarleton State University, February 2003.

*Project Kaleidoscope Faculty for the 21<sup>st</sup> Century Summer Institute*. National Science Foundation. Workshop designed for development of innovative strategies for biochemistry and molecular biology education, Snowbird, UT, July 2001.

*Developing Higher Order Thinking*. Texas A&M Center for Teaching Excellence, April 1998

*Classroom Assessment techniques*. Texas A&M Center for Teaching Excellence, October 1998

*Active Learning*. Texas A&M Center for Teaching Excellence, November 1998

### **Mentoring and Advising**

#### **Graduate students – Major Advisor**

1. Krista (Storey) Heidemann, MS Biology, August 2005 *Development Of An Amplified Fragment Length Polymorphism Technique To Assess Genetic Diversity Among Propeller-Scarred Populations Of The Seagrass Halodule beaudettei In Redfish Bay, Texas*
2. Michael Barrett, MS Biology. MS Biology, May 2013. *Genetic variation within and among seedbanks of the seagrass Halodule wrightii (Ascherson) from the Texas Gulf Coast.*

3. Sebastian Rubiano-Rincon, MS Chemistry, December 2019. *An assessment of sulfide intrusion and its relationship to genotypic diversity in the seagrass Halodule wrightii*
4. Noemi Ramirez Miss, MS Chemistry, August 2021. *Assessing the influence of Genotypic Diversity on Seed Production and Environmental Stress Resistance in Texas Seagrasses*

### Graduate Committees

1. Keegan Granfor, MS Chemistry, May 2019. *Chemistry at the Glass Transition: Fluorescence-detected Proton Transfer Reactions.*
2. Whitney Roberson, MS Biology, December 2016. *Microbiome changes in epiphyte biofilms on the seagrass Halodule wrightii in response to top-down and bottom-up forcing.*
3. Margaret Allarilla, Ed.D, December 2016. *The impact of 40 developmental assets on mathematics and science achievement of 8th grade students in an urban school district.*  
Graduate Faculty Representative
4. Michelle Lindsey, MS Biology, May 2016. *Use of esp gene to detect human contamination in coastal waters.*
5. Sharon Furiness, MS Biology, August 2012. *Population Structure of Death Valley System Speckled Dace (Rhinichthys Osculus).*
6. Sarah Matakis, MS Biology, March 2012. *Evolutionary Genetics of the Invasion of Central Texas Grasslands by Bothriochloa ischaemum Var. Sogarica*
7. Stephanie Dovalina, MS Biology, August 2011. *Cloning, Sequencing and Analysis of Housekeeping Genes Towards the Development of Molecular Stress Response Markers in Seagrasses*
8. Sarah McBee, MS Environmental Science, May 2010. *Phytochelatin induced by heavy metal exposure in the common sunflower (Helianthus annuus).*
9. Leslie Patterson, MS Biology, December 2009. *Phylogeographic analysis of Stiphodon CF. elegans and Stiphodon caeruleus from Pohnpei, Federated States of Micronesia (FSM).*
10. Brendan Briggs, MS Mariculture, August 2009. *Environmental Persistence of Taura Syndrome Virus in South Texas Shrimp Farms Post-2004.*
11. Ray Schmidt, MS Biology, August 2008. *Morphometric and molecular variation of mountain catfishes (Amphiliidae, Amphilius) in Guinea, West Africa.*
12. Brooke Stanford, MS Biology, December 2007. *Metabolic stress in the spotted seatrout, Cynoscion nebulosus.*
13. Vinod Sontineni, MS Biology, December 2007. *Simulated Micro-and Hypergravity alters respiratory burst in Human monocytes.*
14. Sridhar Swargam. MS Environmental Science, December 2004, *Qualitative Analysis of Endocrine Disrupting Chemicals (EDCs) in Water Bodies of Southeastern Texas using a Retention time Locking (RTL) Technique on GC/MS.*
15. Kenneth Gaines. MS Mariculture.

16. Jayant Chatake, MS Biology
17. Venis Graham, MS Biology
18. Amanda Starring, MS Marine Biology
19. Lacey Lawrence, MS Biology
20. Pedro Gonzales, MS Chemistry
21. Lauren McClendon, MS Chemistry
22. Michael Kayne, MS Chemistry

### **Honors Student Supervision and Theses (Undergraduate)**

1. Sebastian Rubiano-Rincon, BS Chemistry 2013. *Genetic variation in a Bermuda population of the seagrass *Halodule wrightii*.*
2. Hoang Pham, BS Chemistry 2012. *Antibiotic properties of lipoproteins from *Bacillus subtilis**

### **Undergraduate research students**

1. Christopher McCormick, BS Chemistry, May 2021. *Metabolomic analysis of seagrass root, rhizome, and leaf tissue*
2. Ashley Hamilton, BS Biology, December 2019. *Analysis of seagrass genotypic diversity at three sampling scales.*
3. Alia Elkhaili, BS Chemistry, December 2016. *Genetic analysis of *Halodule wrightii* from the upper Texas Gulf Coast.*
4. Anthony Lopez, BS Chemistry, December 2016. *An assessment of clonal diversity at two different sampling scales for the seagrass *Halodule wrightii*.*
5. Julia Norrell, BS Biology, May 2015. *Genetic characterization of *H. wrightii* from its northern range on the Texas Gulf Coast*
6. Sebastian Rubiano-Rincon, BS Chemistry, May 2013. *Genetic variation in a Bermuda population of the seagrass *Halodule wrightii*.*
7. Tabitha Schonacher, BS Chemistry, 2011. *Genetic analysis of seagrass (*Halodule wrightii*) populations from the Texas Gulf Coast*
8. Sarah Lawson, BS Biomedical Science, 2010 *Mapping genetic structure in the seagrass *Halodule wrightii* along the Texas Gulf Coast*
9. Mindy Paturzzio, BS Chemistry, 2009. *Development of microsatellite DNA markers for the seagrass *Halodule wrightii**
10. Destiny Bean, BS Biomedical Science, 2008. *Development of microsatellite DNA markers for native legume *Desmanthus virgatus**
11. Megan Thompson, BS Psychology, 2007, BS Nursing, 2010 *Patterns of genetic variation across land use gradients in *Desmanthus virgatus**
12. Stephanie Salinas, BS. Biology, 2006. *DNA sequence variation in inter-transcribed spacer regions from the seagrass *Thalassia testudinum**
13. Joyce Parker, BS Biology, 2005, *Genetic variation in the seagrass *Thalassia Testudinum* from the Texas Gulf Coast*

14. Krista (Storey) Heideman, BS Biology, 2003, M.S. Biology (2005) Texas A&M University - Corpus Christi. *Genetic variation in the seagrass Thalassia Testudinum from the Texas Gulf Coast.*
15. Elizabeth Quevedo, BS Chemistry (2003). *Development of a Randomly Amplified Polymorphic DNA (RAPD) marker system for use with the seagrass Thalassia testudinum.*
16. James Cantu, BS Biology, Univ. Texas at San Antonio, 2003. *Development of a Randomly Amplified Polymorphic DNA (RAPD) marker system for use with the seagrass Thalassia testudinum.*
17. Charles Gailbreath, Texas A&M University - Corpus Christi, 2002. *Development of a Randomly Amplified Polymorphic DNA (RAPD) marker system for use with the seagrass Halodule wrightii.*
18. Trinity O'neal, BS Chemistry, 2002. *Development of a Randomly Amplified Polymorphic DNA (RAPD) marker system for use with the seagrass Halodule wrightii.*
19. Holly Bjorum, BS Chemistry, 2002. *Medicinal properties of plants native to south Texas.*
20. Michael Treanor, BS Chemistry, 2001. *Development of PCR methods for use in the undergraduate chemistry curriculum.*

#### **Directed Independent Study Supervision**

Heather Anderson (MS Biology) CHEM 5596: *Mechanism of preprogrammed cell death in cancer cells treated by ionized non-thermal plasma* (Fall 2011)

Miguel Diaz (MS Biology) CHEM 5596: *Catecholamine effects on microbial endocrinology of Vibrio spp.* (Fall 2010)

Miguel Diaz (MS Biology) CHEM 5596: *Oxidative stress and endocrine-like compounds in bacteria* (Fall 2009)

Melanie Franks (BS Chemistry) CHEM 4496: *Chemistry of food surfactants as emulsifying agents* (Spring 2004)

Alexis Galvan (MS Biology) CHEM 5596: *Chitin utilization in the marine bacterium Vibrio furnissii* (Spring 2008)

Christine Gonzalez (MS ESCI) CHEM 5596: *Biochemistry of inborn errors of metabolism* (Spring 2006)

Whitney Roberson (MS Biology) CHEM 5596: *A comparative literary review of seagrass stress response mechanisms* (Fall 2013)

Githzette M. Planas-Costas (MS Biology) CHEM 5596: *Role of SmcR in regulation of transcription in V. vulnificus* (Spring 2013)

Vinod Sontineni (MS Biology) CHEM 5596: *Anesthesia and anesthetic drugs in veterinary medicine* (Spring 2006)

#### **Supplemental Instructor (SI) Supervision**

Natasha Villagomez (BS Biomedical Science) CHEM 4401: *Biochemistry I* (Fall 2019)

Dawid Kala (BS Chemistry) CHEM 4401: *Biochemistry I* (Fall 2018)

Dylan Dinn (BS Chemistry) CHEM 4401: *Biochemistry I* (Fall 2016, 2017), CHEM 4402: *Biochemistry II* (Spring 2017)

### Academic Advising

Served as Academic Advisor to over 100 undergraduate science majors

*Texas Association of Advisors for the Health Professions* - 2001, 2002 workshops

### Research Experience

#### Publications (Peer-reviewed) (\*undergraduate investigator)

1. **Larkin PD**, \*Maloney TJ, \*Rubiano-Rincon, S, Barrett, M (2017). *A map-based approach to assessing genetic diversity, structure, and connectivity in the seagrass *Halodule wrightii**. Marine Ecology Progress Series 567: 95-107. <https://doi.org/10.3354/meps12037>
2. **Larkin PD**, \*Schonacher T, Barrett M, and \*Paturzzio M (2012). *Development and characterization of microsatellite markers for the seagrass *Halodule wrightii**. Conservation Genetics Resources 4(2): 511-13. DOI: 10.1007/s12686-011-9587-0.
3. **Larkin PD**, Heideman KL, Burfeind DD and Stunz GW (2010). *The effect of boat propeller scarring intensity on genetic variation in a subtropical seagrass species*. Botanica marina 53: 99-102.
4. **Larkin PD**, Heideman KL, \*Parker JE, Hardegree B (2008). *Genetic Structure of *Halodule wrightii* populations from the Laguna Madre region in the Western Gulf of Mexico*. Gulf of Mexico Science 26(2): 124-129.
5. **Larkin PD**, \*Quevedo E, \*Salinas S, \*Parker J, \*Storey K and Hardegree B (2006). *Genetic structure of *Thalassia testudinum* populations from the south Texas Gulf Coast*. Aquatic Botany 85 (3):198-202
6. **Larkin PD** and Hartberg Y (2005). *Development of a green fluorescent protein-based laboratory curriculum*. Biochemistry and Molecular Biology Education 33(1): 41-45
7. **Larkin PD**, McClung AM, Ayres NM and Park WD (2003). *The effect of the Waxy locus (granule bound starch synthase) on pasting curve characteristics in specialty rice*. Euphytica 131:243-253
8. **Larkin PD** and Park WD (2003). *Association of waxy gene single nucleotide polymorphisms with starch characteristics in rice (*Oryza sativa* L.)*. Molecular Breeding 12:335-339
9. **Larkin PD** and Park WD (1999). *Transcript accumulation and utilization of alternate and non- consensus splice sites in the granule bound starch synthase gene of rice are controlled by a temperature-sensitive mutation*. Plant Molecular Biology 40: 719-727
10. Shu, QY, Wu, DX, Xia, YW, Gao, MW, Ayres, NM, **Larkin, PD** and Park, WD (1999). *Microsatellite Polymorphism on the Waxy gene locus and the relationship to amylose content in indica and japonica rice, *Oryza sativa* L.* Acta Genetica Sinica 26:350-358
11. Bligh H†, **Larkin P†**, Roach P, Fu H, Jones C and Park W (1998). *Use of alternate splice sites in granule bound starch synthase mRNA from low amylose rice varieties*. Plant Molecular Biology 38: 407-415 † **equal contribution**.



12. Ayres N, McClung A, **Larkin P**, Bligh H, Jones C and Park W (1997). *Microsatellites and a single nucleotide polymorphism differentiate apparent amylose classes in an extended pedigree of US rice germplasm*. Theoretical and Applied Genetics 94: 773-781

#### **Publications (meeting proceedings)**

1. **Larkin PD**, Maloney TJ, Rubiano-Rincon, S, Barrett, M, and Paturzzio, M (2013). *Conserving Texas Seagrasses – The Role of Genetics*. In: Proceedings of the Native Plant Society of Texas Annual Symposium, South Texas – Beach to Brush Country, [http://npsot.org/SP/SymposiumProceedings\\_2013.pdf](http://npsot.org/SP/SymposiumProceedings_2013.pdf)
2. **Larkin, PD**, Onuf, Chris, Dunton, KH, and Pulich, W (2013). Seagrass Research in Texas. In: Seagrass Conservation Plan Workshop Proceedings: Ten-Year Review and Update [http://tpwd.texas.gov/landwater/water/habitats/seagrass/Conserv\\_Plan\\_Review.phtml](http://tpwd.texas.gov/landwater/water/habitats/seagrass/Conserv_Plan_Review.phtml)
3. McClung, AM, **Larkin, PD** and Park, WD (2000). *Heritability of amylase content, alkali spreading value, and starch pasting properties in progeny from a cross from Toro2/Rexmont*. In: Proceedings of the 28th Rice Technical Working Group, Biloxi, MS. Feb. 27 – March 1, 2000
4. **Larkin PD**, Park WD (1998). *Alternate splicing of Granule Bound Starch Synthase pre-mRNA is correlated with low amylose content in rice*. In: Proceedings of the 27<sup>th</sup> Rice Technical Working Group, Reno, NV. March 1-4, 1998
5. Ayres, N.M., A.M. McClung, **P.D. Larkin**, W.D. Park, F. Bligh and C. Jones (1996). *Control of apparent amylose content in rice*. In: Proceedings of the 26th Rice Technical Working Group, San Antonio, TX. Feb. 25-28, 1996
6. **Larkin PD**, McClung AM, Park WD (1996). *Genetic Factors in the Control of Cooking Quality in Texas Specialty Rice*. In: Proceedings of the 26<sup>th</sup> Rice Technical Working Group, San Antonio, TX. Feb. 25-28, 1996
7. Reddy, A.S., N.M. Ayres, **P.D. Larkin**, W.D. Park, A.M. McClung and J. Pfeifer (1996). *A novel DNA assay for marker-assisted breeding*. In: Proceedings of the 26<sup>th</sup> Rice Technical Working Group, San Antonio, TX. Feb. 25-28, 1996

#### **Publications (other)**

1. Larkin PD (1999), *Post-transcriptional control of Granule Bound Starch Synthase expression in rice (Oryza sativa L.)*. Ph.D. Dissertation, Texas A&M University
2. Larkin PD (1989). *The substrate specificity of the actin amino-terminal processing enzyme*. Senior Thesis (B.S.). Department of Biochemistry, University of Iowa, Iowa City, IA. Dr. Peter Rubenstein, advisor

#### **Intellectual Property (copyrights & patents)**

1. Green Fluorescent Protein Biochemistry Laboratory Manual. U.S. Copyright Office Registration No. TX 7-757-696.
2. Biochemistry I Study Guide. U.S. Copyright Office Registration No. TX 7-760-033.
3. Biochemistry II Study Guide. U.S. Copyright Office Registration No. TX 7-760-036.

4. Drugs, Toxins & Natural Products Chemistry Study Guide. U.S. Copyright Office Registration No. TX 7-760-040.

**Presentations** (\*undergraduate investigator)

1. \*Hamilton, Ashley and Larkin, Patrick D. *Understanding bed dynamics: seagrass genotypic diversity and growth strategies across different sampling scales*. Botany 2019, Tucson, AZ, July 27-31, 2019.
2. Larkin, Patrick D. *Seagrass genetics and metabolism at Texas A&M University-Corpus Christi*. 9<sup>th</sup> Annual Graduate Program in Marine Biology Science Symposium, Corpus Christi, TX, January 11-12, 2019.
3. Rubiano-Rincon, Sebastian, \*Hamilton, Ashley, and Larkin, Patrick. *A genetic analysis of the seagrass *Halodule wrightii* from Oso Bay, Texas*. Gulf Estuarine Society Biennial Meeting, Galveston, TX, November 8-10, 2018
4. Larkin, Patrick D. *Texas Seagrasses: A Genetic Perspective*. Harte Research Institute Seminar Series, Corpus Christi, TX, September 7, 2018.
5. \*Hamilton, Ashley, \*Lopez, Anthony and Larkin, Patrick. *Analysis of seagrass genotypic diversity at three sampling scales*. 47<sup>th</sup> Annual Benthic Ecology Meeting, Corpus Christi, March 27-30th, 2018.
6. \*Hamilton, Ashley, \*Lopez, Anthony and Larkin, Patrick. *Analysis of seagrass genotypic diversity at three sampling scales*. 7<sup>th</sup> Annual Marine Science Graduate Student Research Organization Research Forum, Texas A&M University - Corpus Christi, December 2, 2017. 2<sup>nd</sup> place, poster division.
7. \*Lopez, Anthony and Larkin, Patrick. *An assessment of clonal diversity at two different sampling scales for the seagrass *Halodule wrightii**. Coastal & Estuarine Research Federation Biennial Meeting, Providence, RI, November 6-10, 2017.
8. \*Elkhalili, Alia and Larkin, Patrick. *Genetic analysis of *Halodule wrightii* from the upper Texas Gulf Coast*. Corpus Christi Chemistry Club Science Innovation Night, Texas A&M University - Corpus Christi, April 25, 2017.
9. \*Lopez, Anthony and Larkin, Patrick. *An assessment of clonal diversity at two different sampling scales for the seagrass *Halodule wrightii**. Corpus Christi Chemistry Club Science Innovation Night, Texas A&M University - Corpus Christi, April 25, 2017.
10. \*Elkhalili, Alia and Larkin, Patrick. *Genetic analysis of *Halodule wrightii* from the upper Texas Gulf Coast*. 6<sup>th</sup> Annual Marine Science Graduate Student Research Organization Research Forum, Texas A&M University - Corpus Christi, December 2, 2016. 1<sup>st</sup> place, poster division.
11. \*Lopez, Anthony and Larkin, Patrick. *An assessment of clonal diversity at two different sampling scales for the seagrass *Halodule wrightii**. 6<sup>th</sup> Annual Marine Science Graduate Student Research Organization Research Forum, Texas A&M University - Corpus Christi, December 2, 2016. 2<sup>nd</sup> place, poster division.

12. \*Lopez, Anthony and Larkin, Patrick. *An assessment of clonal diversity at two different sampling scales for the seagrass Halodule wrightii*. Texas A&M University System Pathways Conference, Prairie View A&M University, November 3-4, 2016.
13. \*Elkhalili, Alia and Larkin, Patrick. *Genetic analysis of Halodule wrightii from the upper Texas Gulf Coast*. Texas A&M University System Pathways Conference, Prairie View A&M University, November 3-4, 2016.
14. Patrick Larkin, Tabitha Maloney\*, Sebastian Rubiano-Rincon\*, and Michael Barrett. *Genetic structure of seagrasses from the western Gulf of Mexico*. Annual Meeting of the Society for the Study of Evolution, the Society of Systematic Biologists, and the American Society of Naturalists, Austin, TX, June 16-22, 2016.
15. Larkin PD, \*Maloney TJ, \*Rubiano-Rincon, S, Barrett, M. *Genetic Diversity, structure and migration in Halodule wrightii: a report from the Gulf of Mexico*. Marine Biology Program Annual Retreat, Texas A&M University - Corpus Christi, January 22, 2016.
16. Larkin PD, \*Maloney TJ, \*Rubiano-Rincon, S, Barrett, M. *Genetic Diversity, structure and migration in Halodule wrightii: a report from the Gulf of Mexico*. Coastal & Estuarine Research Federation Biennial Meeting, Portland, OR, November 9-13, 2015.
17. Larkin PD, \*Maloney TJ, \*Rubiano-Rincon, S, Barrett, M. *Population expansion, structure, and migration patterns for the seagrass Halodule wrightii*. Seagrass Monitoring Working Group, University of Texas Marine Science Institute, April 15, 2015.
18. Larkin PD, \*Maloney TJ, \*Rubiano-Rincon, S, Barrett, M. *Population expansion, structure, and migration patterns for the seagrass Halodule wrightii*. 2014 Gulf Estuarine Research Society Meeting, Port Aransas, TX October 30-31, 2014.
19. Larkin PD, \*Maloney TJ, \*Rubiano-Rincon, S, Barrett, M. *Genetic relationships among populations of the seagrass Halodule wrightii* (shoalgrass). Texas Bays & Estuaries Meeting, University of Texas Marine Science Institute, Port Aransas, TX April 23-24, 2014.
20. Larkin PD, \*Maloney TJ, Barrett M, \*Paturzzio M. *Genetic analysis of seagrass (Halodule wrightii) populations from the Texas Gulf coast*. 11<sup>th</sup> Annual Ecological Genomics Symposium. Kansas City, MO November 1-3, 2013.
21. Larkin PD, \*Maloney TJ, \*Rubiano-Rincon, S, Barrett, M, and \*Paturzzio, M. *Conserving Texas Seagrasses – The Role of Genetics*. Annual Native Plant Society of Texas Symposium. Corpus Christi, TX October 17-20, 2013.
22. Larkin PD, Barrett M. *Genetic variation within and among seedbanks of the seagrass Halodule wrightii from the Texas Gulf Coast*. Seagrass Monitoring Working Group, Corpus Christi, TX October 23, 2013.
23. Rubiano SR, Larkin PD. *Genetic variation in a Bermuda population of Halodule wrightii*. Texas Bays & Estuaries Meeting, University of Texas Marine Science Institute, Port Aransas, TX April 25-26, 2013.
24. Rubiano SR, Larkin PD. *Genetic variation in a Bermuda population of Halodule wrightii*. 12<sup>th</sup> Annual Sigma Xi Undergraduate Research Symposium. Texas A&M University - Corpus Christi, Corpus Christi, TX March 1-2, 2013.

25. Larkin PD. *Seagrass Genetics & Conservation*. Texas A&M System Marine Biology Program Annual Retreat. Texas A&M University - Corpus Christi, December 13, 2012.
26. Larkin PD, \*Maloney TJ, Barrett M, \*Paturzzio M. *Genetic analysis of seagrass (Halodule wrightii) populations from the Texas Gulf coast*. Seagrass Monitoring Working Group, Corpus Christi, TX November 2, 2012.
27. Larkin PD, \*Maloney TJ, Barrett M, \*Paturzzio M. *Genetic analysis of seagrass (Halodule wrightii) populations from the Texas Gulf coast*. Plant Biology 2012, American Society of Plant Biologists, Austin, TX July 20-24, 2012.
28. Larkin PD, \*Maloney TJ, Barrett M, \*Paturzzio M. *Genetic analysis of seagrass (Halodule wrightii) populations from the Texas Gulf coast*. 2012 Texas Bays & Estuaries Meeting, University of Texas Marine Science Institute, Port Aransas, TX April 11-12, 2012.
29. Barrett M and Larkin PD. *Genetic Variation Among Seedbanks of the Seagrass Halodule wrightii (Ascherson) from the Texas Gulf Coast*. 2012 Texas Bays & Estuaries Meeting, University of Texas Marine Science Institute, Port Aransas, TX April 11-12, 2012.
30. Larkin PD, \*Schonacher T, Barrett M, \*Paturzzio M. *Development of microsatellite markers for the seagrass Halodule wrightii*. 21<sup>st</sup> Biennial Conference of the Coastal and Estuarine Research Federation. Daytona Beach, FL November 6-10, 2011.
31. Larkin PD, \*Schonacher TJ, Barrett M, \*Paturzzio M, and Tolan J. *Genetic Analysis of Halodule wrightii (shoalgrass) populations from the Texas Gulf Coast*. 10<sup>th</sup> Annual Sea Grant Researcher and Extension Conference. Texas A&M University, College Station, TX October 17-18, 2011.
32. Barrett, M, \*Schonacher TJ and Larkin, PD. *Seagrass Conservation: What have genes got to do with it?* 7<sup>th</sup> Annual Texas Bays & Estuaries Meeting, University of Texas Marine Science Institute, Port Aransas, TX April 27-28, 2011.
33. \*Schonacher, TJ, Barrett, M and Larkin PD. *DNA Microsatellite Variation in Halodule wrightii from the Texas Gulf Coast*. 7<sup>th</sup> Annual Texas Bays & Estuaries Meeting, University of Texas Marine Science Institute, Port Aransas, TX April 27-28, 2011.
34. Barrett, M and Larkin, Patrick D. *Seagrass Conservation: What have genes got to do with it?* Seagrass Festival of Knowledge. Gulf of Mexico Alliance. Aransas Pass, Texas, March 4, 2011.
35. Larkin, PD, \*Schonacher T, Barrett, M, \*Paturzzio M, \*Lawson, S. and Tolan, J. *Preliminary results from a study on genetic variation in the seagrass Halodule wrightii (Ascherson)*. Gulf Estuarine Society Meeting, Port Aransas, TX November 3-4, 2010.
36. Larkin, PD, \*Schonacher T, Barrett, M, \*Paturzzio M, and \*Lawson, S. *Development of DNA microsatellite markers for the seagrass Halodule wrightii*. 9<sup>th</sup> Annual Sea Grant Researcher Conference, University of Texas Marine Science Institute, October 7-8, 2010.
37. \*Shonacher T, Barrett, M, \*Paturzzio, M, \*Lawson, S, and Larkin, PD. *Microsatellite marker variation in the seagrass Halodule wrightii*. 10<sup>th</sup> Annual Sigma Xi Research Symposium, Texas A&M University-Corpus Christi, September 24-25, 2010.

38. Larkin, Patrick D. *Texas Seagrasses: Issues, Conservation and role of Genetic Research*. 1<sup>st</sup> Seagrass Festival of Knowledge. Gulf of Mexico Alliance. Aransas Pass, Texas, March 5, 2010.
39. Larkin, Patrick D. *Seagrass Conservation: What have genes got to do with it?* Seagrass Festival of Knowledge. Gulf of Mexico Alliance. Aransas Pass, Texas, March 5, 2010.
40. \*Paturzzio, M. \*Schonacher, T and Larkin, PD. *Determination of effective Polymerase Chain Reaction conditions for amplification of 18S ribosomal DNA from Halodule wrightii*. 9<sup>th</sup> Annual Sigma Xi Research Symposium, Texas A&M University-Corpus Christi, October 9-10, 2009.
41. Larkin, PD. *Human Disturbance in Seagrass Meadows: a Molecular Genetic Perspective*. Harte Research Institute Weekly Seminar Series, June 19, 2009.
42. Larkin, PD, Heideman, KL, Burfeind, DD, and Stunz, GW. *The effect of boat propeller scarring on genetic variation in a subtropical seagrass species*. Benthic Ecology Meeting 2009. Corpus Christi, TX, March 4-7, 2009. pp. 47-48
43. Larkin, PD. *Texas Seagrasses: Issues, Conservation and Research*. 8<sup>th</sup> Annual Texas Plant Conservation Conference, Texas A&M University - Corpus Christi, Corpus Christi, TX, Sept. 17-20, 2008. p.15
44. Larkin, PD, Heideman, KL, Burfeind, DD, and Stunz, GW. *The effect of boat propeller scarring on genetic variation in a subtropical seagrass species*. 2008 Texas Bays & Estuaries Meeting. University of Texas Marine Science Institute, Port Aransas, TX. April 16, 2008. p.14
45. Larkin, PD, Heideman, KL, Burfeind, DD, and Stunz, GW. *The effect of scarring intensity on seagrass genetic variation in a single bay system*. 111<sup>th</sup> Annual Meeting of the Texas Academy of Science. Texas A&M University - Corpus Christi, Corpus Christi, TX. March 6-8, 2008. p.93.
46. \*Bean, DS, \*Thompson, ML, and Larkin, PD. *Development of a microsatellite assay for use with the invasive species Dichanthium annulatum*. 111<sup>th</sup> Annual Meeting of the Texas Academy of Science. Texas A&M University - Corpus Christi, Corpus Christi, TX. March 6-8, 2008. p.144.
47. Larkin, PD, \*Storey, KL, and \*Parker, J. *Genetic structure of Halodule wrightii populations from a hypersaline lagoon region in the Western Gulf of Mexico*. 111<sup>th</sup> Annual Meeting of the Texas Academy of Science. Texas A&M University - Corpus Christi, Corpus Christi, TX. March 6-8, 2008. p.81.
48. \*Thompson, ML and Larkin, PD. *Molecular Genetic Variation in the Native Plant Species Desmanthus virgatus*. 7<sup>th</sup> Annual Sigma Xi Research Symposium, Texas A&M University - Corpus Christi, November 16-17, 2007.
49. \*Bean, DS, \*Thompson, ML, and Larkin, PD. *Development of a Microsatellite Assay for use with the Invasive Species Dichanthium annulatum*. 7<sup>th</sup> Annual Sigma Xi Research Symposium, Texas A&M University - Corpus Christi, November 16-17, 2007.
50. \*Thompson, ML, \*Bean, DS and Larkin, PD. *A Molecular Genetic Evaluation of Kleberg Bluestem (Dichanthium annulatum) Populations from South Texas*. Texas Invasive Plant Conference, Austin, TX, November 14-16, 2007.

51. Larkin PD, \*Parker J, \*Quevedo E, \*Salinas S, \*Storey K, and Hardegree B. *Genetic Structure of seagrass populations from the south Texas Gulf Coast*. Seagrass Monitoring Working Group. June 6, 2007.
52. Larkin PD, \*Parker J, \*Quevedo E, \*Salinas S, \*Storey K, and Hardegree B. *Genetic Structure of seagrass populations from the south Texas Gulf Coast*. Harte Research Institute Seminar Series. April 27, 2007.
53. Larkin, PD, \*Parker, J, \*Storey, K, and Hardegree, B. *Genetic Structure of Halodule wrightii (shoalgrass) populations from the south Texas Gulf Coast*. Gulf Estuarine Research Society Meeting, Corpus Christi, TX, November 2-4, 2006. p.17
54. Larkin PD, \*Quevedo E, \*Salinas S, \*Storey K, \*Parker J and Hardegree B. *Genetic structure of two Thalassia testudinum populations from the south Texas Gulf coast*. Gulf Estuarine Research Society Meeting, Corpus Christi, TX, November 2-4, 2006. p.15
55. Larkin PD, \*Quevedo E, \*Salinas S, \*Storey K, \*Parker J and Hardegree B. *Genetic structure of two Thalassia testudinum populations from the south Texas Gulf coast*. 2006 Texas Bays & Estuaries Meeting. University of Texas Marine Science Institute, Port Aransas, TX. April 20, 2006. Addendum.
56. \*Thompson ML, \*Parker JP, Larkin PD. *Development of an Amplified Fragment Length Polymorphism Assay (AFLP) for the Study of Genetic Diversity among Populations of Desmanthus virgatus (Bundleflower)*. 5<sup>th</sup> Annual Sigma Xi Research Symposium, Texas A&M University - Corpus Christi, October 2005. (1st prize winner, poster presentation)
57. \*Thompson ML, \*Parker JP, Larkin PD. *Development of an Amplified Fragment Length Polymorphism Assay (AFLP) for the Study of Genetic Diversity among Populations of Desmanthus virgatus (Bundleflower)*. TAMU Systems Pathways Conference, Texas A&M University – Kingsville, November 2005 (3rd prize winner, poster presentation)
58. Storey K, Burfeind D, Stunz G and Larkin P. *Development of an amplified fragment length polymorphism technique to assess genetic diversity among propeller-scarred populations of the seagrass Halodule beaudettei in Redfish bay, Texas*. 108th Annual Meeting of the Texas Academy of Science, University of Texas-Pan American, Edinburg, TX, March 2005, p29.
59. Gaines KL, Fox JM, Lawrence AL, Hasson K, Varner T, Lightner D, Larkin PD, Gregg K, Mott J. *A Survey of Taura Syndrome Virus Intermediate Hosts in South Texas Shrimp Farms*. World Aquaculture Society Conference, New Orleans, LA, January 2005.
60. \*Salinas, S, \*Quevedo, E, Hardegree, B, Larkin, P. *Identifying genetic diversity and gene flow among populations of Thalassia testudinum by a random amplified polymorphic DNA (RAPD) procedure*. 107th Annual Meeting of the Texas Academy of Science, Schreiner University, Kerrville, TX, March 4-6, 2004, p29.
61. \*Parker, J, \*Storey, K, Hardegree, B, Larkin, P. *Evaluation of Halodule beaudettei Diversity Along the South Texas Gulf Coast Using a Randomly Amplified Polymorphic DNA Procedure*. 107th Annual Meeting of the Texas Academy of Science, Schreiner University, Kerrville, TX, March 4-6, 2004, p29.
62. \*Parker, J, \*Storey, K, Hardegree, B, Larkin, P. *Evaluation of Halodule beaudettei Diversity Along the South Texas Gulf Coast Using a Randomly Amplified Polymorphic DNA Procedure*.

Texas A&M System Pathways Research Symposium, Texas A&M University-Galveston, November 2003.

63. \*Storey, K, Hardegree, B, Larkin, P. *Use of a DNA Fingerprinting Technique to Assess Genetic Diversity among Populations of the Seagrass Halodule beaudettei Along the Texas Coast.* Sigma Xi Research Symposium, Galveston, TX. November 2002.
64. Larkin, P. *Plant Biotechnology in Agricultural Research.* Summer Camp for Applied Mathematics Preparation (SCAMP), Texas A&M University-Corpus Christi, Sept. 2000
65. Ayres N, McClung A, Larkin P, Bligh H, Jones C, Park W. *Microsatellites and a single nucleotide polymorphism differentiate apparent amylose classes in an extended pedigree of US rice germplasm.* 19<sup>th</sup> Annual Symposium in Plant Physiology, University of California-Riverside, Riverside, CA. Jan. 14-16, 1997.

### **Extramural Research Awards**

1. **Welch Foundation. 2007-2022** (Three-year renewals). *Chemistry Departmental Research Training Grant.* Co-Principal Investigator (**\$555,000** cumulative). Award No. BT-0041
2. **Texas Sea Grant 2018-19** Grants-in-Aid of Graduate Research *An assessment of sulfide intrusion and its relationship to genotypic diversity in the seagrass Halodule wrightii from the Texas Gulf Coast .* **Principal investigator (\$2000)**
3. **Texas Sea Grant** (National Oceanic and Atmospheric Administration) **2008-2011.** *Mapping genetic structure in the seagrass Halodule wrightii (shoalgrass) along the Texas Gulf Coast.* **Principal Investigator (\$80,000).** Award. No. S080033.
4. **National Science Foundation. 2005-2008.** Major Research Instrumentation Award *Acquisition of an AA Graphite Furnace and Microwave Digester for the Enhancement of Research/Teaching at Texas A&M University-Corpus Christi.* Co-Principal Investigator (**\$98,643**). Award No. 0421239.
5. **Welch Foundation. 2004-2007.** *Chemistry Departmental Research Training Grant.* **Principal Investigator (\$75,000).** Award No. BT-0041
6. **National Science Foundation 2003-2006.** Major Research Instrumentation Award *Acquisition of a GC/MS for the Enhancement of Research at Texas A&M University-Corpus Christi.* Co-Principal investigator (**\$142,385**). Award No. 0321201.
7. **Texas Research Development Fund. 2005-2006.** *Genetic Evaluation of the Invasive Species Dichanthium annulatum.* **Principal Investigator (\$23,600).** Funded. No award no. available.
8. **United States Department of Agriculture, 2005-2006.** Animal and Plant Health Inspection Service. *A Survey of Taura Syndrome Virus Intermediate Hosts in South Texas Shrimp Farms.* Co-principal Investigator (**\$50,000**). Award No. 2002-38808-03145
9. **Texas Excellence Fund. 2005-06.** *Use of GIS and DNA Fingerprinting to Assess the Effect of Habitat Fragmentation and Land Use on Genetic Diversity among Native Plant Populations.* **Principal Investigator (\$14,166).** Funded. No award no. available.
10. **National Science Foundation. 2002-2005.** Major Research Instrumentation Award. *Acquisition of a digital imaging system to support research and research training in applications of molecular biology.* Co-Principal investigator (**\$130,800**). Award No. 0216557.

11. **United States Department of Agriculture. 2002-2005.** Cooperative Research, Education and Extension Service Higher Education Program Grant. *Genomics-Based Curriculum Development for Hispanic Serving Institutions in South Texas*. Co-Principal investigator (**\$150,000**). Award No. 2001-38422-10973.
12. **National Science Foundation. 2001-2004.** Major Research Instrumentation Award. *Acquisition of Instrumentation for the Chemical and Biological Characterization of Factors Affecting the Distribution of Seagrasses in Coastal Bays and Estuaries*. **Principal Investigator (\$180,710)**. Award No. 0116711.
13. **Welch Foundation. 2001-2004.** *Chemistry Departmental Research Training Grant*. Co-Principal Investigator (**\$75,000**). Award No. BT-0041.

### **Intramural Research Awards**

1. Texas A&M University-Corpus Christi Research Enhancement Award. *Clonal Architecture and population fitness in the seagrass Halodule wrightii (2019-20)*. **Principal Investigator (\$5,066)**.
2. Center for Coastal Studies – Graduate Research and Travel Award *An assessment of sulfide intrusion and its relationship to genotypic diversity in the seagrass Halodule wrightii (2018-19)* Co-Principal Investigator (**\$800**)
3. Texas A&M University - Corpus Christi Research Enhancement Award. *Assessing small-scale clonal diversity in the seagrass Halodule wrightii (2017)* **Principal Investigator (\$5,000)**
4. Texas A&M University-Corpus Christi College Research Enhancement Award. *Contribution of clonal diversity to environmental resistance in the seagrass Halodule wrightii (2015-16)*. **Principal Investigator (\$2,212)**.
5. Texas A&M University-Corpus Christi College Research Enhancement Award. *Characterization of genetic variation, migration and biodiversity in a population of the seagrass Halodule wrightii (Ascherson) (2013-14)*. **Principal Investigator (\$3000)**.
6. Texas A&M University-Corpus Christi College Research Enhancement Award. *Characterization of seed bank genetic variation from the seagrass Halodule wrightii (Ascherson) (2011-12)*. **Principal Investigator (\$3000)**.
7. Texas A&M University-Corpus Christi College Research Enhancement Award. *Characterization of novel phenolic- and flavone sulfates from seagrasses (2007-08)*. **Principal Investigator (\$3000)**.
8. Texas A&M University - Corpus Christi University Research Enhancement Award. *Estimation of Genetic Variation Among Populations of the South Texas Invasive Species King Ranch Bluestem (Bothriochloa ischaemum) (2006-2007)*. **Principal Investigator (\$8552)**.
9. Texas Collaborative for Excellence in Teacher Preparation: *Application of Investigative Case-Based Learning to an Upper-level Chemistry Course (2006)*. **Principal Investigator (\$6867)**.
10. Harte Research Institute Gulf of Mexico Environmental Research Lab (GMERL) Special Item Funding. *A Molecular Genetic Evaluation of the Effect of Habitat Fragmentation on the Seagrass Halodule beaudettei (2005)*. **Principal Investigator (\$5500)**.



11. Texas A&M University -Corpus Christi. College Research Enhancement Award. *Mapping population genetic diversity among fragmented populations of the native south Texas species *Desmanthus virgatus* (2005-2006). Principal Investigator (\$3000).*
12. Texas Center for Excellence in Teacher Preparation. *Conversion of a biochemistry lecture course to a peer-centered learning model (2003-2004). Principal Investigator (\$4700).*
13. Texas A&M University - Corpus Christi. University Research Enhancement Award. *A molecular Genetic Evaluation of the Effect of Habitat Fragmentation on the Seagrass *Halodule Beaudettei* (2004-2005). Principal investigator (\$8000).*
14. Texas A&M University -Corpus Christi. College Research Enhancement Award. *Characterization of metal-binding peptides in the seagrass *Halodule beaudettei* from South Texas Coastal Bays (2003-2004). Principal Investigator (\$3000).*
15. Texas A&M University -Corpus Christi. University Research Enhancement Award. *A comparison of genetic diversity among highly impacted populations of seagrasses along the south Texas Gulf coast (2002 -2003). Principal investigator (\$6535).*
16. Texas A&M University -Corpus Christi. Title V Strategy to support Best Practices in Advising, Innovative Pedagogues & Outcome Assessment. *Acquisition of Electrophoresis Equipment for an Improved and Updated Biochemistry Laboratory Curriculum (2002). Principal Investigator (\$1200).*
17. Texas A&M University -Corpus Christi. College Research Enhancement Award. *Identification and Assessment of Genetic Diversity among Seagrass Populations using a Randomly Amplified Polymorphic DNA (RAPD) Procedure (2001-2002). Principal investigator (\$4699).*
18. Texas A&M University, College Station, Texas. *Plant Biotechnology Graduate Fellowship (1993 -1995) \$37,000.*

## **Service Experience**

### **Service Awards**

Finalist, Texas A&M University-Corpus Christi *Excellence in Service Award* (2011)

### **Program (Chemistry) Service**

Chemistry Alumni Coordinator (2001-present)

*Island Days* recruiting events (2000-present)

Chemistry Graduate Admissions Committee (2017-19)

Chair, Faculty Search Committee (2017)

Co-Chair, Chemistry Program 5-year review (2015-16)

Chemistry Faculty Search Committee (2 positions) (2013-14)

Chemistry Budget Coordinator (2012-13)

Chemistry Faculty Search Committee (2011-12)

Chair, Biochemistry Faculty Search Committee (2010-11)

Chair, Biochemistry Faculty Search Committee (2009-10)

Visiting Assistant Professor of Chemistry Search Committee (2009)

Accreditation coordinator - American Chemical Society (2004-06)

Development of Biochemistry/Clinical Lab Science major track (2008)  
Development of Biochemistry track recruiting program (2007)  
Chair, Organic Chemistry Faculty Search committee (2005).  
Development of Biochemistry major track (2004)  
Development of Chemistry Program recruiting presentation (2004)  
Physical Chemistry Search committee (2003)  
Organic Chemistry Search Committee (2001)  
Development of recruiting brochure for Chemistry Program (2001)

### **Departmental (Physical & Environmental Sciences) Service**

Promotion and Tenure Committee (2007-present)  
Mary & Jeff Bell University Library Liaison (2005-present)  
Coastal & Marine System Sciences Search Committee (2014-15)  
PENS departmental P&T revision (2012)  
Chair, Physical & Environmental Sciences Chair Search Committee (2006)  
Information Technology purchasing coordinator (2005-10)  
Marine Biologist Search committee (2002)  
Chair, Physical & Life Sciences Teaching Effectiveness committee (2001-02).

### **College (Science & Engineering) Service**

College Curriculum Committee (2015-17)  
Faculty Senator (2011-15)  
Co-author, College Promotion & Tenure Policy (2012-13)  
Core Laboratory Coordinator Search Committee (2012)  
Director, Core Molecular Instrumentation Facility (2007-13)  
Marine Biology Faculty Search Committee (2011-12)  
Marine Biology Faculty Search Committee (2010-11)  
Instructor, Core Facility mini-course in molecular techniques (2007-10)  
Chair, College Scholarship committee (2009-10)  
Clinical Laboratory Science Faculty search committee (2009-10)  
College Scholarship Committee (2008-10)  
College Research Enhancement committee (2007-09)  
Special Programs (Undergraduate Research) Advisory committee (2008)  
Instrumentation Coordinator Search Committee (2008)  
Biomedical Sciences Neuroscientist search committee (2007)  
College of Science & Technology Library Liaison (2004)  
College of Science & Technology Dean's Search Committee (2005)  
Harte Research Institute Library resources committee (2005)  
Designed, filmed, edited and produced promotional video for College of S&T (2002-03)  
Harte Research Institute laboratory design committee (2002)

### **University Service**

Merit & Equity Task Force (2017-18)  
Undergraduate Council (2017-18)  
Speaker, Faculty Senate (2014-15)  
Deputy Speaker, Faculty Senate (2012-14)  
Provost's Select Committee on Faculty Merit & Equity (2015)

Search Committee – Executive Vice President for Finance & Administration (2015)  
New Faculty Orientation, committee member and host (2014)  
Information Technology & Distance Education Committee (2014)  
Staff Council, *ex officio* (2014-15)  
Council of Principal Investigators and Research Administrators, *ex officio* (2014-15)  
Provost’s Leadership Team (2014-15)  
Executive Compliance Committee (2014-15)  
Faculty Senate Faculty Affairs Committee (2013-14)  
University Calendar Committee (2013-14)  
Honorary Degree Committee (2013-15)  
Honors Thesis Defense Committee (2013)  
Faculty Senate Budget Committee (2011-2013)  
Secretary, Faculty Development Leave Committee (2010)  
University Research Enhancement Committee (2007-09)  
Chair, University Library committee (2006-07)  
University Librarian award committee (2007)  
Secretary, University Library committee (2005-06)  
University Library committee (2001-07)  
American Democracy Project (2007)  
Recreational Sports Advisory Board (2007–14)  
Momentum 2015 Program Expansion Task Force (2005)

### **Community Service & Outreach**

Diocese of Corpus Christi Science Fair, Corpus Christi, TX (2006-present)  
St. Patrick’s Elementary School Science Fair, Corpus Christi, TX (2006-present)  
*Texas Seagrasses 101* Coastal Bend Bays Foundation (2018)  
*What does a Professor Do?* Corpus Christi Montessori Middle School (2017)  
*Marine Science*, Washington Elementary School, Davenport, IA (2017)  
Panelist, *Science Innovation Night*, Texas A&M University - Corpus Christi (2012, 2014, 2017)  
Science Mentor, *International Baccalaureate* program, WB Ray High School (2014)  
*Chemistry Club Demonstration*, Montessori School of Corpus Christi (K5-8) (2013)  
*The Power and Magic of Plants*, Girl Scout Troop 9643/9686, Corpus Christi, TX (2013)  
*Chemistry Club Demonstration*, St. Patrick’s Elementary School, Corpus Christi, TX (2012)  
*Seagrass Genetics & Conservation*, Seagrass Festival of Knowledge, Aransas Pass, TX (2012)  
*What do Scientists Do?*, St. Patrick’s Elementary Career Day, Corpus Christi, TX (2012)  
*Seagrass Genetics & Conservation*, Seagrass Festival of Knowledge, Aransas Pass, TX (2011)  
*Water Chemistry and the Environment*, Girl Scout Troops 9643/9686, Corpus Christi, TX (2010)  
*Native Plants on Ward Island*, Girl Scout Troops 9643 and 9686, Corpus Christi, TX (2010)  
*Seagrass Research in South Texas*, Corpus Christi ISD Innovation Academy (2008)  
*Extracting and visualizing DNA*, Seagrass Festival of Knowledge, Aransas Pass, Texas (2010)  
*What do Chemists do?* –St. Patrick’s Elementary Career Day, Corpus Christi, TX (2010)  
*Innovation Academy* instructor- Laguna Madre Field Station, Corpus Christi, TX (2008)  
Chair, Coastal Bend Science Fair Hospitality Committee, Corpus Christi, TX (2002-07)  
Coastal Bend Science Fair, Corpus Christi, TX (2001-2005)  
Judge, Region IV Texas Academic Decathlon, Corpus Christi, TX (2004)

### **Media Presentations**

KEDT-TV, Biochemistry expert, “*Challenge*” *Series Academic Competition* (2016)  
KIII-TV interview, *Seagrass research with the CCISD Innovation Academy* (2008)  
KIII-TV interview, *Ferid Maurad, Nobel Laureate*, Corpus Christi, TX (2002)

## **Professional Service**

### ***Reviewer***

*Aquatic Botany*

*Conservation Genetics*

*Lehninger Principles of Biochemistry* (WH Freeman Co.)

*Biochemistry* (WH Freeman Co.)

Medical College Admission Test (MCAT)

*Maryland Sea Grant*

*PLOS ONE*

*Texas Academy of Science*

### ***Professional Leadership***

Texas Seagrass Monitoring Workgroup (2006 – present)

Session Chair – *Gulf Estuarine Research Society Biennial meeting* (2018)

Program Committee - *Gulf Estuarine Research Society Biennial meeting* (2018)

Judge, TAMUCC Marine Science Graduate Organization Research Forum (2016, 2017)

Seagrass Mitigation Review Panel – Lower Laguna Madre, Texas (2016)

Judge, Coastal & Estuarine Research Federation Student Research Competition (2015, 2017)

Chair, Texas A&M University System Council of Faculty Senates (2014-15)

Delegate, Texas Council of Faculty Senates (2013-2015)

Judge, Gulf Estuarine Research Society Student Research Competition (2014)

Technical advisory committee, South Texas Native Plants Consortium (2002-05)

Judge, Sigma Xi Student Research Competition (2002, 2003, 2009, 2010)

Executive Committee, *Texas Seagrass Conservation Plan Workshop* (2008-09)

Co-Chair, Research Subcommittee, *Texas Seagrass Conservation Plan Workshop* (2008-09)

Chair, American Chemical Society, South Texas Section (2003, 2004)

Treasurer, American Chemical Society, South Texas Section (2001, 2002)

Co-coordinator, USDA *Genomics-Based Curriculum Development Conference*, Texas A&M University-Corpus Christi (November 2002)

## **Professional Associations**

American Chemical Society

Coastal & Estuarine Research Federation

Gulf Estuarine Research Society

Society for the Study of Evolution

American Association of University Professors

Texas Association of College Teachers