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EDUCATIONAL BACKGROUND

2000	Post-doc in Biochemistry, Institut für Zoophysiologie, Universität Düsseldorf, Germany
1999	Post-doc in Marine Biology, Estuary & Ocean Science Center, San Francisco State University
1997	Ph.D. in Physiology, University of California at San Francisco
1991	M.A. in Physiology and Behavioral Biology, San Francisco State University
1988	B.S. (with distinction) in Biology, San Francisco State University

EMPLOYMENT

2024–present	Associate Professor, Department of Physiology & Aging, University of Florida
2018–2019	Visiting Science Education Fellow, Howard Hughes Medical Institute
2000–present	Associate Professor with tenure (2006–present), Assistant Professor (2000–2006), Department of Biology, University of Florida
1996–1999	Lecturer, Department of Biology, San Francisco State University

PUBLICATIONS

Corresponding author underlined. ^G graduate student, ^U undergraduate student, [#] high school student.

Refereed Publications

Vasquez MC^G, Brockmann HJ and Julian D (2017). Between-population differences in multi-stressor tolerance during embryo development in the American horseshoe crab, *Limulus polyphemus*. *Estuaries and Coasts* 40(5): 1487–1501, DOI:10.1007/s12237-017-0218-1.

Crombie TA^G, Tang L^G, Choe KP and Julian D (2016). Inhibition of the oxidative stress response by heat stress in *Caenorhabditis elegans*. *Journal of Experimental Biology*, DOI: 10.1242/jeb.135327.

Vasquez MC^G, Murillo A^U, Brockmann HJ and Julian D (2015). Multiple stressor interactions influence embryo development rate in the American horseshoe crab, *Limulus polyphemus*. *Journal of Experimental Biology* 218:2355-2364. DOI:10.1242/jeb.117184

Vasquez MC^G, Johnson SL, Brockmann HJ and Julian D (2015). Nest site selection minimizes environmental stressor exposure in the American horseshoe crab, *Limulus polyphemus* (L.). *Journal of Experimental Marine Biology and Ecology*, pp. 105-114 DOI: 10.1016/j.jembe.2014.10.02.

Cardounel AJ, Julian D, Predmore BL^G (2011). Hydrogen sulfide increases nitric oxide production from endothelial cells by an Akt–dependent mechanism. *Frontiers in Physiology*, 2, 00104, DOI 10.3389 (5 pp).

Vasquez MC^G, Crombie TA^G and Julian D (2011). Lysosome number and size do not vary during a tidal cycle in erythrocytes of the bloodworm *Glycera dibranchiata*. *Bulletin of the Mount Desert Island Biological Laboratory*, 50: 45–47.

Predmore BL^G, Alendy MJ^U, Ahmed KI^U, Leeuwenburgh C and **Julian D** (2010). The hydrogen sulfide signaling system: changes during aging and the benefits of caloric restriction. *AGE: The Journal of the American Aging Association*, 32: 467–481.

Joyner–Matos J^G, Predmore BL^G, Stein JR^U, Leeuwenburgh C and **Julian D** (2010). Hydrogen sulfide induces oxidative damage to RNA and DNA in a sulfide–tolerant marine invertebrate. *Physiological and Biochemical Zoology* 83:356–365.

Joyner–Matos J^G, Andrzejewski J^U, Briggs L^U, Baker SM, Downs CA, and **Julian D** (2009). Assessment of cellular and functional biomarkers in bivalves exposed to ecologically-relevant abiotic stressors. *Journal of Aquatic Animal Health* 21: 104–116.

Ortega JA^U, Ortega JM^U, **Julian D** (2008). Hypotaurine and sulfhydryl–containing antioxidants reduce H₂S toxicity in erythrocytes from a marine invertebrate. *Journal of Experimental Biology* 211: 3808–3815.

Hance JM^U, Andrzejewski JE^U, Predmore BL^G, Dunlap KJ^U, Misiak KL^U, **Julian D** (2008). Cytotoxicity from sulfide exposure in a sulfide–adapted marine invertebrate. *Journal of Experimental Marine Biology and Ecology* 359 (2), 102–109.

de Castro e Paula LA^G, Andrzejewski J^U, **Julian D**, Spicer LJ and Hansen PJ (2008). Oxygen and steroid concentrations in preovulatory follicles of lactating dairy cows exposed to acute heat stress. *Theriogenology* 69: 805–813.

Wohlgemuth SE, **Julian D**, Akin DE, Fried J^U, Toscano K^U, Leeuwenburgh C and Dunn WA (2007). Autophagy in the aging heart and liver and the effect of calorie restriction. *Rejuvenation Research* 10(3):281–92.

Wohlgemuth SE, Arp AJ, Bergquist DC and **Julian D** (2007). Rapid induction and disappearance of electron–dense organelles following sulfide exposure in the marine annelid *Branchioasychis americana*. *Invertebrate Biology*, 126(2): 163–172.

Joyner–Matos J^G, Chapman LJ, Downs CA, Hofer T, Leeuwenburgh C and **Julian D** (2007). Stress response of a freshwater clam along an abiotic gradient: Too much oxygen may limit distribution. *Functional Ecology* 21, 344–355 (erratum in vol. 21: 619).

Joyner–Matos JL^G, Downs CA and **Julian D** (2006). Increased expression of stress proteins in the surf clam *Donax variabilis* following hydrogen sulfide exposure. *Comparative Biochemistry and Physiology, Part A*, 145: 245–257.

Julian D, April KL^U, Patel S^U, Stein JR^U and Wohlgemuth SE (2005). Mitochondrial depolarization following hydrogen sulfide exposure in erythrocytes from a sulfide–tolerant marine invertebrate. *Journal of Experimental Biology* 208, 4109–4122.

Julian D, Statile J^G, Roepke T^G and Arp AJ (2005). Sodium nitroprusside potentiates H₂S–induced contractions in body wall muscle from a marine worm. *Biological Bulletin* 209: 6–10.

Jang YM, Kendaiiah S, Drew B, Phillips T, Selman C, **Julian D**, Leeuwenburgh C (2004). Doxorubicin treatment in vivo activates caspase–12 mediated cardiac apoptosis in both male and female rats. *FEBS Letters* 577(3): 483–490.

Julian D and Leeuwenburgh C (2004). Linkage between insulin and the free radical theory of aging. *American Journal of Physiology–Regulatory Integrative and Comparative Physiology* 286, R20–R21.

Wohlgemuth SE and **Julian D** (2003). Mitochondrial sulfide–sensitivity in coelomocytes from the sulfide–adapted marine invertebrate *Glycera dibranchiata*. *Bulletin of the Mount Desert Island Marine Biological Laboratory* 42: 15–16.

Julian D, Crampton WGR, Wohlgemuth SE and Albert JS (2003). Oxygen consumption in weakly electric Neotropical fishes. *Oecologia* 137, 502–511.

Urcuyo IA, Massoth GJ, **Julian D** and Fisher CR (2003). Habitat, growth and physiological ecology of a basaltic community of *Ridgeia piscesae* from the Juan de Fuca Ridge. *Deep–Sea Research I* 50: 763–780.

Julian D, Statile JL^G, Wohlgemuth SE and Arp AJ (2002). Enzymatic hydrogen sulfide production in marine invertebrate tissues. *Comparative Biochemistry and Physiology a—Molecular and Integrative Physiology* 133, 105–115.

Osovitz CJ^U and **Julian D** (2002). Burrow irrigation behavior of *Urechis caupo*, a filter-feeding marine invertebrate, in its natural habitat. *Marine Ecology—Progress Series* 245, 149–155.

Faillace MP, **Julian D** and **Korenbrodt JI** (2002). Mitotic activation of proliferative cells in the inner nuclear layer of the mature fish retina: Regulatory signals and molecular markers. *Journal of Comparative Neurology* 451, 127–141.

Julian D, Chang ML^G, Judd JR and Arp AJ (2001). Influence of environmental factors on burrow irrigation and oxygen consumption in the mudflat invertebrate *Urechis caupo*. *Marine Biology* 139, 163–173.

Olson AJ, Picones A, **Julian D** and **Korenbrodt JI** (1999). A developmental time line in a retinal slice from rainbow trout. *Journal of Neuroscience Methods* 93, 91–100.

Julian D, Gaill F, Wood E^U, Arp AJ and **Fisher CR** (1999). Roots as a site of hydrogen sulfide uptake in the hydrocarbon seep vestimentiferan *Lamellibrachia* sp. *Journal of Experimental Biology* 202, 2245–2257.

Julian D, Wieting SL, Seto SL, Bogan MR and Arp AJ (1999). Thiosulfate elimination and permeability in a sulfide-adapted marine invertebrate. *Physiological and Biochemical Zoology* 72, 416–425.

Julian D, Ennis K^U and **Korenbrodt JI** (1998). Birth and fate of proliferative cells in the inner nuclear layer of the mature fish retina. *Journal of Comparative Neurology* 394, 271–282.

Julian D, Dalia WE^G and Arp AJ (1998). Neuromuscular sensitivity to hydrogen sulfide in the marine invertebrate *Urechis caupo*. *Journal of Experimental Biology* 201, 1393–1403.

Julian D, Passman WE^G and Arp AJ (1996). Water lung and body wall contributions to respiration in an echiuran worm. *Respiration Physiology* 106, 187–198. (Journal continued as *Respiratory Physiology & Neurobiology*)

Arp AJ, Menon JG and **Julian D** (1995). Multiple mechanisms provide tolerance to environmental sulfide in *Urechis caupo*. *American Zoologist* 35: 132–144. (Journal continued as *Integrative and Comparative Biology*)

Bickler PE and **Julian D** (1992). Regional cerebral blood-flow and tissue oxygenation during hypocapnia in geese. *American Journal of Physiology* 263, R221–R225.

Arp AJ, Hansen BM and **Julian D** (1992). Burrow environment and coelomic fluid characteristics of the echiuran worm *Urechis caupo* from populations at 3 sites in Northern California. *Marine Biology* 113, 613–623.

Julian D and Arp AJ (1992). Sulfide permeability in the marine invertebrate *Urechis caupo*. *Journal of Comparative Physiology B—Biochemical Systemic and Environmental Physiology* 162, 59–67.

Education Products

Model Builder. HHMI BioInteractive. Darkow J, **Julian D**, and Nielsen M, Producers. <https://www.biointeractive.org/classroom-resources/model-builder>. June 2023.

Data Explorer. HHMI BioInteractive. Yao L and **Julian D**, Producers. <https://www.biointeractive.org/classroom-resources/data-explorer>. May 2021.

Sex Verification Testing of Athletes. HHMI BioInteractive. Bonetta L and **Julian D**, Producers. <https://media.hhmi.org/biointeractive/click/testing-athletes>. July 2018.

Book Chapters

Joyner–Matos J and **Julian D** (2011). Oxidative Stress in Sulphidic Habitats. In: D. Abele, J. P. Vázquez–Medina, T. Zenteno–Savín. *Oxidative Stress in Aquatic Ecosystems*. Wiley–Blackwell. UK. ISBN: 978–1–4443–3548

Julian D. Echiura. In *Encyclopedia of Tidepools*, MW Denny and SD Gaines, editors. The University of California Press, Berkeley CA. 2007.

Non-refereed Publications

Fisher CR, Bergquist D, Freytag J, Ward T, **Julian D**, Andras J, Begly B, van Horn M (1999). A conceptual model of seep community physiological ecology: growth, persistence, and successional patterns. In: MacKay M, Nides J, and Vigil D, eds. Proceedings: Twentieth Annual Gulf of Mexico Information Transfer Meeting, December 1999. US Dept. of the Interior, Mineral Management Service, Gulf of Mexico OCS Region, New Orleans, LA. OCS Study MMS 2001–081. 530pp.

Miscellaneous Publications

Bergquist DC, Baker SM, **Julian D**, Joyner J^G, Beals C^G (2004). Sulfide Concentrations in the Sediments and Water Column of the Suwannee River Estuary and Its Influence on Hard Clam Survival. Florida Shellfish Aquaculture Extension, http://shellfish.ifas.ufl.edu/toxic_sulfide.htm.

Bergquist DC, Baker SM, **Julian D** (2004). Hydrogen sulfide in the sediments of hard clam *Mercenaria mercenaria* field aquaculture systems and its effect on hard clam survivorship. Technical report prepared for Florida Sea Grant, Gainesville FL, 21 pp.

Julian D (1998). Life Has Evolved & Thrived Where Least Expected. The Ark (Tiburon, CA community newspaper), October 7, 1998.

Contributed Papers, Talks, and Posters at National or International Conferences

Presenting author underlined. ^Ggraduate student, ^Uundergraduate student, ^Hhigh school student.

Education Research

Julian D and Waschewsky G. The X-Lab: Finding Common Ground in Biology, Chemistry and Physics Laboratory Learning Outcomes. Workshop at the AAC&U Transforming STEM Higher Education conference. Seattle WA (November 2015).

Julian D. Replacing the Standard Introductory Biology, Chemistry and Physics Laboratories: Implementing a Single Cross-Disciplinary Course. AAC&U Transforming STEM Higher Education conference. Atlanta GA (November 2014).

Julian D and Waschewsky G. The X-Laboratory: Integrating biology, chemistry and physics. Poster presented at Vision and Change in Biology Undergraduate Education: Chronicling Change, Inspiring the Future working conference. Washington DC (August 2013).

Livengood D^G, Waschewsky G and **Julian D**. This Lab Bites: A freshman, cross-disciplinary laboratory module integrating science process skills, physics, biology and modeling through an investigation of bite force biomechanics. Poster presented at the ASBMB Special Symposium: Student-Centered Education in the Molecular and Life Sciences. Seattle WA (August 2013).

Waschewsky G and **Julian D**. The X-Lab: A cross-disciplinary, inquiry-based, two-semester laboratory program for freshmen that merges biology, chemistry and physics curricula. Poster presented at the ASBMB Special Symposium: Student-Centered Education in the Molecular and Life Sciences, Seattle WA (August 2013).

Livengood E^G, **Julian D**. The X-Lab: A cross-disciplinary STEM laboratory program targeted to lower-division pre-health majors. Poster presentation at the Florida Statewide Symposium on Engagement in Undergraduate Research. University of Central Florida (October 2011).

Scientific Research

Donertas B, Malphurs WL, Baekey D, **Julian D**, Sirmagul B, and Zubcevik J. Central administration of hydrogen sulfide alleviates rodent angiotensin II hypertension. Poster at Experimental Biology 2019 (May 2019).

Crombie T^G and **Julian D**. Heat and oxidative stress synergize to reduce survival and inhibit expression of stress response genes in the nematode *Caenorhabditis elegans*. Oral presentation at Society for Integrative and Comparative Biology Annual Meeting, West Palm Beach FL (January 2015).

Vasquez MC^G, Murillo A^U, Brockmann HJ and **Julian D**. Multiple stressor interactions delay horseshoe crab embryo development. Oral presentation at 42nd Benthic Ecology Annual Meeting, Savannah GA (March 2013).

Lanza A, Scarpa J, Laramore S and **Julian D**. Interactions between crude oil, dispersant, and salinity affect hard clam *Mercenaria mercenaria* embryonic development and survival. Poster at 42nd Benthic Ecology Annual Meeting, Savannah GA (March 2013).

Murillo A^U, Vasquez MC^G and **Julian D**. Effect of Multiple Stressors on Embryo Development of *Limulus polyphemus* from Slaughter Beach, DE. Poster at 42nd Benthic Ecology Annual Meeting, Savannah GA (March 2013).

Vasquez MC^G, Murillo A^U, Brockmann HJ and **Julian D**. Multiple stressor interactions delay horseshoe crab embryo development. Oral presentation at Society for Integrative and Comparative Biology Annual Meeting, San Francisco CA (January 2013).

Duarte M^U, Dunn WA, Wohlgemuth SE, **Julian D**. Hydrogen sulfide reduces GFP-tagged autophagosomes in vitro. Poster at Experimental Biology Annual Meeting, San Diego CA (April 2012).

Crombie TA^G, **Julian D**. Synergistic interaction between juglone-induced oxidative stress and high-temperature stress in the nematode *C. elegans*. Poster at Experimental Biology Annual Meeting, Washington DC, (April 2011).

Vasquez MC^G, Gravois L^U and **Julian D**. Lysosomal autophagy as a response to anoxia stress in the mudflat polychaete *Glycera dibranchiata*. Oral presentation at the 39th Benthic Ecology Annual Meeting, Wilmington NC (March 2010).

Julian D (2009). Survival of *D. grandis* after acute exposure to abiotic stressors: Choanoflagellates as models for environmental stress responses. Oral presentation at the 2009 International Choanoflagellate Workshop, Berkeley CA (June 2009).

Predmore BL^G, Whidden MA, Erdos B, Tumer N and **Julian D**. (2009). Rat thoracic aorta and mesenteric artery show a multiphasic contraction-relaxation-contraction response to sodium sulfide and sodium hydrosulfide. FASEB J. 23: 628.11 (poster presented at Experimental Biology Annual Meeting, New Orleans LA, April 2009).

Ortega JM^U, Kagan CL^U and **Julian D** (2009). O₂, hypersalinity, and Cu²⁺ potentiate the toxicity of H₂S in erythrocytes of a marine invertebrate. FASEB J. 23: 598.8 (poster presented at Experimental Biology Annual Meeting, New Orleans LA, April 2009).

Alendy MJ^U, Predmore BL^G, Ahmed K^U, Leeuwenburgh C and **Julian D** (2009). Cystathionine {gamma}-lyase and cystathionine β-synthase expression and activity change with age and caloric restriction. FASEB J. 23: 776.7 (poster presented at Experimental Biology Annual Meeting, New Orleans LA, April 2009).

Ortega JA^U, Moorthy S^U and **Julian D** (2009). H₂S induces lysosomal rupture in erythrocytes from an H₂S-tolerant marine polychaete. FASEB J. 23: 778.2 (oral presentation at Experimental Biology Annual Meeting, New Orleans LA, April 2009).

Rodriguez SR^U and **Julian D** (2009). Survival of a choanoflagellate following acute exposure to abiotic stressors. FASEB J. 23: 778.3 (poster presented at Experimental Biology Annual Meeting, New Orleans LA, April 2009).

Julian D, Rollins A^U and Predmore BL^G (2008). Mitochondrial movement is random and increased by hyposalinity in coelomocytes from an estuarine worm. Poster presentation at Experimental Biology Annual Meeting, San Diego (April 2008).

Misiak KL^U, Dunlap KJ^U, Rodriguez SS^U, and **Julian D** (2008). Tolerance of a choanoflagellate to environmental stressors. Poster at Experimental Biology Annual Meeting, San Diego (April 2008).

Ortega JA^U, Ortega JM^U, and **Julian D** (2008). Hypotaurine protects against H₂S–induced oxidative stress and cell death in erythrocytes from an H₂S–tolerant marine worm. Poster at Experimental Biology Annual Meeting, San Diego (April 2008).

Ortega JM^U, Ortega JA^U, Stein JR, and **Julian D** (2008). H₂S toxicity via oxidative damage in erythrocytes of a sulfide–tolerant marine invertebrate. Poster at Experimental Biology Annual Meeting, San Diego (April 2008).

Predmore BL^G, Alendy MJ^U, Olson KR and **Julian D** (2008). Inhibition of NO, K_{ATP} and prostanoids decreases hypoxia–induced, but not H₂S–induced, contractions in rat aorta. Oral presentation at Experimental Biology Annual Meeting, San Diego (April 2008).

Andrzejewski JE^U, Briggs LE^U, Joyner–Matos JL^G, **Julian D** (2006). Functional responses to high temperature, hypoxia, and hyposalinity in the stress–tolerant clam *Mercenaria mercenaria*. Integrative and Comparative Biology 45(6):1106. Poster at Society for Integrative and Comparative Biology Annual Meeting, Orlando FL (Jan 2006).

Joyner–Matos JL^G, Chapman LJ and **Julian D**. Elevated dissolved oxygen level influences fingernail clam (*Sphaerium* sp.) stress protein expression and population distribution in a Ugandan papyrus swamp. Integrative and Comparative Biology 45(6):1022. Oral presentation at Society for Integrative and Comparative Biology Annual Meeting, Orlando FL (Jan 2006).

Stein J^U Hofer T, Leeuwenburgh C and **Julian D**. Cellular oxidative stress in hydrogen sulfide–exposed erythrocytes from a sulfide–tolerant marine polychaete. Integrative and Comparative Biology 45(6):1198. Poster at Society for Integrative and Comparative Biology Annual Meeting, Orlando FL (Jan. 2006).

Spertus M^U and **Julian D**. Cellular oxidative stress during *in vitro* exposure to multiple abiotic stressors in polychaete coelomocytes. Integrative and Comparative Biology 45(6):1197. Poster at Society for Integrative and Comparative Biology Annual Meeting, Orlando FL (Jan 2006).

Skinner DL^U, **Julian D**, Dunn WA Jr, Leeuwenburgh C. Doxorubicin exposure leads to increased mitochondrial superoxide production in cultured rat cardiomyocytes. Scheduled oral presentation at Annual Biomedical Research Conference for Minority Students, Atlanta GA (Nov 2005).

Joyner–Matos JL^G, Chapman LJ, **Julian D**. Dissolved oxygen level as a predictor of the distribution of the fingernail clam (*Sphaerium* sp.) in a Ugandan papyrus swamp. Poster presented at Ecological Society of America Annual Meeting, Montréal, Canada (Aug 2005).

Hance J^U and **Julian D** (2005). Hydrogen sulfide induces cell death both *in vitro* and *in vivo* in coelomocytes from a mudflat polychaete worm. FASEB Journal 19 (5): Part 2 Suppl. S., A1672–A1672. Poster presented at International Union of Physiological Sciences Congress, San Diego CA (April 2005).

Joyner–Matos JL^G Downs CA and **Julian D** (2005). Stress protein expression in the surf clam *Donax variabilis* following exposure to normoxia, hypoxia, hyperoxia, and hydrogen sulfide. FASEB Journal 19 (5): Part 2 Suppl. S., A1210–A1211. Poster presented at International Union of Physiological Sciences Congress, San Diego CA (April 2005).

Patel SB^U, Wohlgemuth SE, **Julian D** (2003). Mitochondrial injury induced by sulfide exposure in coelomocytes from a sulfide–adapted marine invertebrate. Integrative and Comparative Biology 43 (6): 886–886. Poster presented at Society for Integrative and Comparative Biology Annual Meeting, New Orleans LA (Jan 2004).

Joyner–Matos JL^G, Bhalla R[†], Downs CA, **Julian D** (2003). Antioxidant protein expression during anoxia–reoxygenation in marine polychaete (*Glycera dibranchiata*) coelomocytes. Integrative and Comparative Biology 43 (6): 886–886. Poster presented at Society for Integrative and Comparative Biology Annual Meeting, New Orleans LA (Jan 2004).

Hance JM^U, Wohlgemuth SE, **Julian D** (2003). Survival of coelomocytes from the intertidal polychaete *Glycera dibranchiata* during exposure to H₂S and the effects of MPTP inhibitors to reduce cytotoxicity. Integrative and

Comparative Biology 43 (6): 886–886. Poster presented at Society for Integrative and Comparative Biology Annual Meeting, New Orleans LA (Jan 2004).

Turner A^U, Arp AJ, Wohlgemuth SE, **Julian D**. The effect of hydrogen sulfide on the mitochondrial membrane potential in coelomocytes of the bloodworm *Glycera dibranchiata*. Poster presentation at Annual Biomedical Research Conference for Minority Students, New Orleans, LA (Nov 2002).

Durand K^U, Lavakumar M^U, **Julian D**. Expression of estrogen receptor protein in the skin of embryonic rainbow trout *Oncorhynchus mykiss*. Poster presented at Society for Environmental Toxicology and Chemistry Annual Meeting, Vienna, Austria (May 2002).

Goodwin CR^U and **Julian D** (2002). Free radical scavengers protect cultured cells from hydrogen sulfide exposure. *The Toxicologist* 66, Number S–1, 96–96. Poster presented at Society of Toxicology Annual Meeting, Nashville, TN (March 2002).

Osovitz CJ^U and **Julian D** (2001). Burrow irrigation rate of *Urechis caupo* in its natural habitat. *American Zoologist* 41, 1547–1547. Poster presented at Society for Integrative and Comparative Biology Annual Meeting, Anaheim CA (January 2002).

Wohlgemuth SE, **Julian D** and Arp AJ (2001). Induction of sulfide–oxidizing bodies in the epidermis of the annelid worm *Branchioasychis americanus* after sulfide exposure. *American Zoologist* 41, 1628–1628.

Goodwin CR^U, Denzel SA^U, Aman SA^U, Wohlgemuth SE and **Julian D** (2001). Free radical scavengers decrease toxic effects of hydrogen sulfide in vitro. *American Zoologist* 41, 1458–1459. Society for Integrative and Comparative Biology Annual Meeting, Anaheim CA (January 2002).

Statile J, Arp AJ and **Julian D** (1999). Production of H₂S in marine invertebrate tissues. *Comparative Biochemistry and Physiology* 124A: S146. Presented at: Fifth International Congress of Comparative Physiology and Biochemistry. Calgary, Alberta, Canada (1999).

Julian D and Arp AJ. The physiology of marine invertebrates thriving in toxic environments. Presented at: Pacific Division AAAS Annual Conference, "The Biology of Life in Extreme Environments" symposium. San Francisco, CA (1999).

Julian D, Gaill F, Arp AJ and Fisher CR (1999). Can roots be used for hydrogen sulfide uptake by cold seep vestimentiferans? *American Zoologist* 38 (5). Presented at: Society for Integrative and Comparative Biology Annual Meeting, Denver, CO (1999).

Julian D, Roepke T^G, Statile J^G, Wood E^U and Arp AJ (1998). Sodium nitroprusside potentiates hydrogen sulfide–induced muscle contractions in a marine invertebrate. *FASEB Journal* 12(5): A1037–A1037. Presented at: FASEB Conference, San Francisco, CA (1998).

Julian D, Lang OA^U and Arp AJ (1998). Cytochrome–independent hydrogen sulfide toxicity in muscle. *American Zoologist* 37(5): 123A. Presented at: Society for Integrative and Comparative Biology Annual Meeting, Boston, MA (1998).

Julian D, and Korenbrodt JI. Cell proliferation in the mature inner nuclear layer of the fish retina. *Investigative Ophthalmology and Visual Science* 37 (3): 3163–3163. Presented at: Association for Research in Vision and Ophthalmology Annual Conference, Fort Lauderdale, FL (1996).

Fisher CR, Urcuyo IA, **Julian D**, and Arp AJ (1996). Cold seep vestimentiferans live very long lives with deep roots. *American Zoologist* 35 (5).

Fisher CR, Urcuyo IA, **Julian D** and Scott KM (1996). Hydrothermal vent and cold seep vestimentiferan tube worms: very similar symbiotic associations, very different physiological ecologies. *Symbiosis* 96: 30.

Passman WE^G, **Julian D** and Arp AJ (1994). Regulation of oxygen uptake across two respiratory surfaces in the marine worm *Urechis caupo*. *The Physiologist* 37:88A.

Judd JR, Bogan M, Christensen R, Encomio V, **Julian D**, Manika J, Passman WE, Seto S and Arp AJ (1993). Abiotic and biotic factors limiting distribution of *Urechis caupo*. *American Zoologist* 33:47A.

Passman WE, **Julian D** and Arp AJ (1993). Neuromuscular activity of *Urechis caupo* tissues in vitro shows low sulfide sensitivity. *American Zoologist* 33:96A.

Julian D, Menon JG and Arp AJ (1991). Structural and functional adaptations to hypoxia and sulfide in *Urechis caupo*. *American Zoologist* 31:73A. *American Zoologist* 30:69A. Presented at: American Society of Zoologists Annual Meeting, San Antonio, TX (1991).

Julian D, Mansour S^U and Arp AJ (1990). The effect of hindgut inflation on oxygen uptake and sulfide diffusion in *Urechis caupo*. Presented at: American Society of Zoologists Annual Meeting, Atlanta, GA (1990).

Arp AJ, Hansen BM and **Julian D** (1989). Seasonal sulfide concentrations of the burrow habitat of *Urechis caupo*: hematin mediated sulfide tolerance in situ. *American Zoologist* 29: 69A.

Julian D (1989). The permeability of *Urechis caupo* tissues to hydrogen sulfide. *American Zoologist* 29: 69A.

LECTURES, SEMINARS, AND WORKSHOPS

Invited National/International Presentations

Integrating physiology simulations into physiology teaching. Dept of Physiology, University of Melbourne (November 2022, via videoconference).

The X-Lab Project: Replacing the General Biology, Chemistry, and Physics Laboratories with a Single Cross-Disciplinary Course. Biology Leadership Community Meeting (Pearson Education). New Orleans, LA (March 2016).

The X-Laboratory. Grand Canyon University, Phoenix, AZ (February 2015).

The X-Laboratory. Seattle Pacific University, Seattle, WA (February 2014).

Understanding the Limits of Species' Ranges: from Ecological Models to Model Organisms. Jackson Laboratory–Mount Desert Island Biological Laboratory Symposium, Bar Harbor, ME (September 2010).

The Ecophysiology of Oxidative Stress. New Bolton Center, University of Pennsylvania (April 2008).

The Ecophysiology of Oxidative Stress in Aquatic Invertebrates: Free Radical Biology from African Swamps to the Deep Sea. Hawaii Pacific University (Dec. 2007).

Making a living by living with radicals: aquatic invertebrates in hypoxic habitats. Univ. of Central Florida, Dept. of Biology (Sept. 2006).

Ecological Physiology of Free Radical Stress in Coastal Invertebrates. Univ. of South Florida, Dept. of Biology (Sept. 2004).

Injury, Death and Suffering in Sulfidic Habitats. Univ. of California, Santa Barbara, Dept. of Ecology, Evolution, and Marine Biology (Nov. 2003).

A Radical View of Sulfide Adapted Animals. Univ. of Alabama at Birmingham, Dept. of Biology (June 2002).

A Radical View of Sulfide Adapted Animals. San Francisco State Univ., Romberg Tiburon Center for Environmental Studies (March 2002).

A New View of Sulfide Adapted Marine Invertebrates. Univ. of Iceland, Dept. of Biology, Reykjavic, Iceland (Nov. 2001).

A New View of Sulfide Adapted Marine Invertebrates. Univ. of Copenhagen Marine Biological Laboratory, Helsingør, Denmark (Nov. 2001).

Invited Regional/Local Presentations and Panels

Creative Assessment Panel. UF Center for Teaching Excellence (March 2019)

Two-stage Collaborative Assessment. Beyond the Podium Podcast Series, UF Center for Teaching Excellence (April 2018)

Integration of Research and Teaching Program Panel. CALS Teaching Enhancement Symposium (August 2018)

The University of Florida General Education Assessment Framework. Florida State University System Academic Assessment and Accreditation Conference. Gainesville, FL (August 2015)

The Ecological Physiology of Multiple Stressor Interactions. Department of Physiology, UF School of Veterinary Medicine (Nov 2014)

Developing Online Science Courses (Facilitator and Workshop Co-organizer). Online Learning and the Future of Higher Education Conference, UF (December 2013).

Landing on Your Feet in the Flipped Classroom. CALS Teaching Mini-Symposium (March 2013)

The Flipped Classroom. 13th Annual CALS Teaching Enhancement Symposium (August 2012)

Focusing STEM Education by Blurring STEM Disciplines. Department of Biomedical Engineering (Sep. 2011)

Focusing STEM Education by Blurring STEM Disciplines. Santa Fe College (June 2011)

The Ecophysiology of Oxidative Stress. Department of Physiology, UF School of Veterinary Medicine (Feb. 2010)

Secrets From the Deep: What Marine Biologists Know About the Hottest New Signaling Molecule. Department of Physiology and Functional Genomics, UF School of Medicine (Sept. 2008)

Living with Sulfide While Your Mitochondria are Dying. UF Animal, Molecular and Cell Biology (AMCB) seminar series (Sept. 2005)

Exploitation of Hydrogen Sulfide by Marine Invertebrates. Whitney Laboratory (April 2001)

Presented Workshops

Integrating models into physiology teaching and assessment with HHMI BioInteractive's Model Builder. D. Julian and H. Basta. Human Anatomy and Physiology Society, Annual Meeting, Albuquerque, NM (May 2023)

Developing effective, outcomes-based tests. UF Center for Teaching Excellence (Sept 2019)

HHMI: Designing Course Modules from Learning Outcomes to Assessment. IRACDA 2019 Annual Conference, Ann Arbor, MI (July 2019)

Extending HHMI BioInteractive's Sex Verification of Athletes Click & Learn to Discuss Biological Sex and Gender. H. Basta and D. Julian. National Association of Biology Teachers, Annual Meeting, San Diego, CA (November 2018)

HHMI BioInteractive Resources for Inquiry-based Active Learning in the Anatomy and Physiology Classroom. M. Csikari and D Julian. Human Anatomy and Physiology Society, Annual Meeting, Columbus, OH (May 2018)

Using JustPhysiology to Promote Active, Team-Based Learning in Undergraduate and Medical School Classrooms. D. Julian and R. Hester. Human Anatomy and Physiology Society, Annual Meeting, Columbus, OH (May 2018)

JustPhysiology: An Online Simulation of Human Physiology for Experiential Learning. D. Julian and R. Hester. Human Anatomy and Physiology Society, Annual Meeting, Salt Lake City, UT (May 2017)

HHMI BioInteractive Resources for Teaching Cancer Biology and Quantitative Skills. M. Csikari and D. Julian, Human Anatomy and Physiology Society, Annual Meeting, Salt Lake City, UT (May 2017)

HHMI BioInteractive Cancer Workshop. M Csikari, D Julian, and A Kleinschmidt. American Society for Cell Biology Annual Meeting, San Francisco, CA (December 2016).

JustPhysiology: An Online Simulation of Human Physiology for Experiential Learning. Human Anatomy and Physiology Society, Annual Meeting, Atlanta, GA (May 2016)

CONTRACTS AND GRANTS

Extramural Awards

Current Projects

Administrative Supplement for Training Activities to Enhance Wellness and Resiliency at UF. PI **D. Julian**. Supplement to NIH/NIGMS T34GM145447. Period: 08/01/2023-07/31/2024. Total award: \$80k.

MARC at the University of Florida. PIs: **D Julian** (contact PI) and T Martins. Agency: NIH T34GM145447. Period: 06/2022-05/2027. Projected budget: \$2.4M.

SF2UF: The Bridges to the Baccalaureate partnership between Santa Fe College and the University of Florida. PIs: **D Julian** (contact PI), Y Cruz-Almeida, V Moody. Agency: NIH/NIGMS T34GM137869. Period 8/1/2021-7/31/2026. Projected budget: \$1.9M.

GATORAADE: Gators Advancing Through Opportunities in Research for Aging and Alzheimer's Disease Education. PIs A. Maurer, K. Alviña. Agency: NIH R25AG086095. Period: 05/2024-04/2029. Projected budget: \$1.6M. Role: Co-Investigator.

Completed Projects

Development of training FAIR AI/ML training modules. PI **D Julian**. Supplement to NIH/NIGMS T34GM118272. Period: 08/01/2021-05/31/2022 (no-cost extension through 05/2023). Total award: \$77K.

GatorSTAR: A New MARC U*STAR Program at the University of Florida. PI **D Julian**, Co-PIs C Miller, R Duffy, D Miller. Agency: NIH/NIGMS T34GM118272. Period: 6/1/16-5/31/22 (currently in no-cost extension through 05/31-2023). Total award: \$2.4M.

SF2UF: A new Bridges to the Baccalaureate program between Santa Fe College and the University of Florida. NIH/NIGMS 1R25GM115298-01. PI **D Julian**, Co-PIs B Gonzalez and D. Miller. Award period: 08/01/2015-07/31/2020 (currently in no-cost extension through 05/31-2022). Total award: \$1.5M.

The Bioscience Scholars Program: Bringing the Master's Degree Within Reach. PI: **D Julian**. Co-PIs: WE Spencer, R Snyder, CM St Mary, R Kimball. Agency: NSF DUE S-STEM 1259498. Award Period: 09/2013-08/2018 (no-cost extension through 07/2020). Total award: \$620k

Development of a simulation-based application for teaching human physiology through guided discovery, pure discovery and authentic research. NSF DUE-IUSE 1504792. PI **D Julian**, Co-PIs P Antonenko and M Lineberry. Award period: 08/01/2015-07/31/2017. Total award: \$250k.

Science for Life: Preparing Students for the New Biology. PI: BM Dunn. Co-PIs: C Emihovich, **D Julian**. Howard Hughes Medical Institute, Undergraduate Science Education Program. Period: 09/2010-08/2014. Total award: \$1.2M.

Molecular mechanisms of oxidative stress in aging muscle. Principal Investigator: C. Leeuwenburgh. Co-PIs: Hofer T, **Julian D**, Seo A, Servais S and Wohlgemuth SE. National Institutes of Health RO1AG017994. Period: 7/2006-08/2011. Total award: \$1.8M (\$150k to D. Julian).

Visiting Scientist Fellowship. PI: **D Julian**. Agency: Mount Desert Island Biological Laboratory. Period: 06/2010-09/2010. Total award: \$7k.

Science for Life: Enhancing undergrad and pre-collegiate student experiences in the life sciences. PI: RS Duran. Co-PIs: BM Dunn, **D Julian**, C Emihovich, W Ditto. Howard Hughes Medical Institute, Undergraduate Science Education Award. Period: 08/2006-08/2010. Total award: \$1.5M.

Chemistry and Life: A Chemistry/Zoology REU site. PI: RS Duran. Co-PIs: **D Julian**, M Scott, M Miyamoto, and D Evans. Agency: National Science Foundation CHE 0552785. Type: REU site award. Period: 03/2006–03/2009. Time commitment: 1%. Total award: \$360k.

A second look at sulfide toxicity: intracellular inclusions, mitochondrial damage and cell death in sulfide-adapted annelids. PI: **D Julian**. Co-PI: AJ Arp. Agency: National Science Foundation IBN 0422139. Period: 09/2004–08/2007 (no cost extension to 08/2008). Time commitment: 10%. Total Award: \$360k.

Apoptosis and life-long caloric restriction. PI: C Leeuwenburgh. Co-PIs: **D Julian**, SK Powers and S Dodd. Agency: National Institutes of Health 1R01AG021042. Time commitment: 15%. Period: 8/2003–08/2008. Total award: \$2.2M.

A critical evaluation of two approaches to biomonitoring: functional assays and stress protein biomarkers in *Mercenaria mercenaria* (hard clam). PI: **D Julian**. Co-PI: J Joyner-Matos (doctoral student). Agency: Department of Commerce, National Sea Grant NA16RG2195. Type: Industry Fellowship Award to J. Joyner-Matos. Award Period: 09/2004–09/2006. Time commitment: 5%. Total award: \$60k.

A critical evaluation of two approaches to biomonitoring: functional assays and stress protein biomarkers in *Mercenaria mercenaria* (hard clam). PI: **D Julian**. Co-PI: J Joyner-Matos (doctoral student). Agency: Florida Sea Grant. Type: Program Development Award. Time commitment: 2%. Award Period: 04/2004–09/2004. Total award: \$5k.

Toxic sulfide concentrations in the sediments and water column of the Suwannee River estuary and its influence on hard clam survival. PI: D Bergquist. Co-PIs: S Baker and **D Julian**. Agency: Florida Sea Grant. Type: Program Development Award. Award Period: 06/2003–01/2004. Time commitment: 2%. Total award: \$5k.

Hydrogen sulfide sensitivity: free radicals, mitochondrial damage and cell death. PI: **D Julian**. Agency: Mount Desert Island Biological Laboratory. Type: New Investigator Award. Period: 06/2002–09/2002. Time commitment: 15%. Total award: \$6k.

Physiological indicators of ecosystem condition and stress across multiple trophic levels in the San Francisco estuary. PI: **D Julian**. Agency: San Francisco State University. Type: Subcontract from EPA STAR. Period: 7/2001–9/2003. Time commitment: 5%. Total award: \$50k.

Other Completed Projects

Facultative feeding by planktotrophic larvae of echinoids. PI: **D Julian**. Agency: NSF OCE–9819593. Period: 03/2001 to 02/2003. Total award: \$111k. Originally funded to LR McEdward; transferred to D Julian 08/2001 after the death of Dr. McEdward.

Pending Proposals

None

Intramural Awards

Completed Projects

Mitochondrial damage and intracellular inclusions in sulfide-adapted animals. PI: **D Julian**. Co-PI: WA Dunn Jr. Research Opportunities Fund. Period: 06/2002–10/2003. Total award: \$25,000.

UNIVERSITY GOVERNANCE AND SERVICE

Department Service

Current

Biology Major Executive Committee (2022-present); Representative to Common Prerequisites Disciplinary Committee (2014-present)

Completed

Merit Pay Committee (2016-2018, 2022-2023); Neuroscience and Brain Faculty Search Committee (2015-2016); Department Chair Search Committee (2013-2014); Associate Department Chair (2009-2011); Advisory Committee (2009-2011); Curriculum Committee (2006-2008, Chair 2009-2011); Developmental Biology Lecturer Search Committee (Chair, 2009); Budget Committee (2008-2009); Animal Physiology Faculty Search Committee (Chair, 2008); Physiology Lecturer Search Committee (Chair, 2008); Undergraduate Committee (ad hoc, 2007-2009); Undergraduate Coordinator for Zoology Major (2006-2009, ca. 220 students); Co-coordinator, Chemistry-Zoology REU program (2006-2009); Executive Committee (2004-2006); Executive Committee (ad hoc, 2007-2009); Integrative Biology Search Committee (2004); Undergraduate Committee (2002-2006); Undergraduate Curriculum Task Force (2002-2003); Strategic Planning Committee (2001-2002); Evolutionary Developmental Genetics Search Committee (2001); Evolutionary Genomics Faculty Search Committee (2000)

*University Service***Current**

Faculty Committee on UF Core Curriculum (2024); GATORAADE Advisory Committee (2024-present); R25 NEURON-Aging Advisory Committee (2023-present); Research Training in Vision Science T-32 Program Advisory Board (2020-present); UF McNair Scholars Program Advisory Council (2015-present)

Completed

Electronic Laboratory Notebook Committee (2022-2023); UF Provost Fellow (2021-2023); UF Aspire/SEA Change Team (2020-2023); UF Inclusive Excellence Committee (2019-2021); College of Public Health External Advisory Committee (2016-2022); Director, Cross-Disciplinary Laboratory (X-Lab) Project (2006-2021); UF Combined Degree Task Force (2019-2020); UF CTSA Diversity and Inclusion Working Group (2018-2020); IFAS Teaching Evaluation Committee for SM Baker, external member (2017, 2020); UF Consultant to W. Lee and D. Knight, Virginia Tech, NSF EAGER (NSF 1704350, 2018-2020); UF Learning Analytics Advisory Committee (2015-2018); UF Core Third-Experience Task Force (2016-2017); UF Master Data Management and Governance Task Force (2015-2017); Director of Curriculum, Office of the Associate Provost for Undergraduate Affairs (2014-2016); UF-HHMI Science for Life Program (2008-2016, Director 2016, Co-director 2013-2015, Executive Committee 2006-2016); General Education Committee (2009-2016, co-chair, 2011-2012); UF Graduation Rate Task Force (2014-2015); Marine Sciences Committee (2012-2015); Co-Director (2014-2015) and Associate-Director (2006-2014), UF-HHMI Science for Life Program; Cross-College Biology Major Committee (2011-2013, Director, 2012-2013); Co-Director, Animal Molecular and Cellular Biology Graduate Program (2011-2013); University Curriculum Committee (2009-2012, co-chair 2011-2012); Academic Policy Council (2011-2012, ex officio); Joint Biology Major Degree Committee (2007-2011); Florida Teach Steering Committee (2007); Seahorse Key Marine Laboratory Advisory Council (2005-2011); Mentor, Beckman Scholars Program (2004-2013); Provost's Undergraduate Curriculum Task Force (2008-2009); CLAS Curriculum Committee (2006-2008, Chair 2007-2008); Undergraduate Coordinator for CLAS Biology (2007-2008, ca. 850 students); CLAS College Assembly Steering Committee (2007-2008); Search Committee for Director of Electron Microscopy/Bioimaging Core (2007); Search Committee for Graduate School Dean (2006); Mentor, University Minority Mentor Program (2003-2005); UF-SFCC NIH Bridges *ad hoc* committee (2002-2005); Biology Degree Committee (2002-2003)

TEACHING, ADVISING AND/OR INSTRUCTIONAL ACTIVITIES*Classroom Teaching*

Special Courses – Statistics & Experimental Design, Summer Short Course (UF Graduate School BOE Fellows Program, 2022, 2023)

Program and Course Development – Developed Integrated Biomedical Science course (UF, fall 2016); led development of Cross-Disciplinary Laboratory (X-Lab, 2012-present); developed Cellular & Systems

Physiology, for Biomedical Engineering major (2012–2013); led development of CLAS B.A. in Biology (2012–2013); led development of CALS/CLAS IDS Major in Marine Sciences (2011–2012); co-developed BSC 4936, Critical Analysis of Life Science Research, with Dr. Rebekka Darner (2011–2012)

Undergraduate Courses – Research Scholarship Seminar (2017 – present), Integrated Biomedical Science (Fall 2016, spring 2018); Cross-Disciplinary Scientific Teaching (fall 2016, with G. Waschewsky); Advanced Human Physiology Seminar (spring 2013); Cellular and Systems Physiology (2012–present); Integrated Principals of Biology (2002–2011); Physiology and Molecular Biology of Animals (formerly Animal Physiology; 2000 to 2012); Animal Physiology (SFSU, 1997–1998, co-instructor)

Graduate Seminars – Venoms, Poisons and Toxins (2008, with Ryan McCleary as primary); Ecological Physiology (SFSU 1998); Extreme Biology (SFSU 1998); Adaptations to the Coastal Environment (SFSU 1997); Organ Systems Physiology Group Conference (UCSF Medical School 1994, 1995).

Laboratory Classes – Animal Physiology Laboratory (SFSU 1996, 1997, 1999); Physiology Laboratory and Discussion (UCSF Physical Therapy Program 1994)

Board Reviews – Physiology Board Review (UCSF Dental School 1994–1997); Cardiovascular Physiology Board Review (UCSF Medical School 1995); Respiratory Physiology Board Review (UCSF Medical School 1995)

Professional Development

National Academies Special Topics Summer Institute on Quantitative Biology, North Carolina State University, Raleigh (June 2016); AccessCyberlearning Capacity Building Institute, Seattle, WA (March 2016); Biology Leadership Community Meeting (sponsored by Pearson Education), New Orleans, LA (March 2016); HHMI/National Academies Summer Institute on Undergraduate Education in Biology, University of Wisconsin-Madison (June 2010)

GRADUATE COMMITTEE AND MENTORING ACTIVITIES

Note: ^{UR} member of underrepresented group

Chair, PhD Committees

Tim Crombie (Zoology, 2009–2015, now post-doc, Northwestern Univ); Maria Christina Vasquez ^{UR} (Animal Molecular and Cellular Biology Program, 2009–2013, now Assistant Professor, Loyola Marymount College, CA); Benjamin Predmore (Zoology, 2005–2009, now Lecturer, University of South Florida); Joanna Joyner-Matos (Zoology, 2003–2007, now Professor, Eastern Washington University); Andreas Heyland (Zoology, 2000–2004, now Associate Professor, University of Guelph, co-advised with L McEdward)

Chair, Master's Committees

Vanessa Muhl (Zoology, 2020–2022, now a laboratory technician at UC Berkeley); Ibeth Andrea Martinez ^{UR} (Zoology, 2003–2006, now in private veterinary practice); Adam Reitzel (Zoology, 2000–2002, now Associate Professor, UNC Charlotte, co-advised with L McEdward)

Member, PhD Committees

Lanlan Tang (Zoology, 2016), Veronica Garcia ^{UR} (Neuroscience, 2015), Cory Krediet (Ecology, 2012), Maria Padua ^{UR} (Animal Molecular and Cellular Biology Program, 2009), Kelly Hyndman (Zoology, 2008), Alison M. Roark (Zoology, 2008), Jeffrey Brower (Pathology, 2008), Laura Schroder (Anatomy and Cell Biology, 2007), Mark Gunderson (Zoology, 2005), Keith P. Choe (Zoology, 2005), Sharon P. Judge (Exercise and Sports Sciences, 2004), Benjamin Miner (Zoology, 2003)

Member, Master's Committees

Drew Joseph (MST in Botany), Cory Krediet (Ecology, 2009 bypass), Jennifer Statile (Biology, SFSU, 2004), Christine K. Apodaca (Zoology, 2003), Jennifer Brodeur (MST, Zoology, 2002), Jonathan Cowart (Zoology, 2002)

Graduate Interns Supervised

Divyajyoti Ukirde (Computer Science MS program, summer 2023)

Undergraduate Honors Theses Supervised

Jessica Ortega ^{UR} (2009), Jocelynn Ortega ^{UR} (2009), Kristen Dunlap (2007), Jenessa Andrzejewski (2007), Laura Briggs (2006), Jennifer Stein (2005), Mallika Lavakumar (2003), Courtney Rory Goodwin ^{UR} (2002)

Undergraduate Interdisciplinary Major Co-Sponsorship

Ann Coican (2017-2018, Coastal Biogeochemistry); Frantzie Anestin (2017-2018, Biochemistry and Molecular Biology)

Undergraduate Students Participating in Supervised Laboratory Research since Fall 2000

Research mentor to 55 undergraduates participating in research in my lab since fall 2000 (listed below), including 34 females and 17 students from racial and ethnic groups traditionally underrepresented in the sciences. Eight of these students received a University Scholars Program award for their research, and 13 have continued to PhD or combined MD/PhD or DVM/PhD programs.

Note: ^{UR} member of underrepresented minority group; graduate and professional degree programs entered after graduation noted when known.

Refat Roja (Sp 2022 – present); Joy Budiman (Fa 2022 – Sp 2023); Veronica Candreva (Sp 2022 – Fa 2022); Johnny Velasquez ^{UR} (Sp 2021 – Fa 2022); Raluca Velcu (Sp 2021 – Sp 2023); Abigail Thompson (Fa 2020 – Sp 2021); Alexandra Alberdi ^{DVM} (Sp 2015–Fa 2016, University Scholar); Thomas Brenner (Su 2013–Fa 2014); Stanley David Stupski ^{PhD} (Sp 2012–Sp 2014, Science for Life program); Michael Paonessa (Fa 2012–Fa 2013); Zachary I. Field ^{MD} (Fa 2011–Su 2013); Bo Idsardi ^{PhD} (Fa 2011–Fa 2012); Amy Umana (Fa 2011–Fa 2012); Andrea Murillo ^{UR PhD} (Fa 2010–Su 2014); Breanna Siple ^{PhD} (Fa 2009–Su 2010); Maria Jose Duarte ^{UR MD} (Su 09–Fa 2012); Lauren Gravois ^{RNP} (Su 09–Su 2010); Fatma Ayhan ^{PhD} (Su 2009); Adrian Alexis Ruiz ^{UR MD} (Su 08, NIH Minority Summer Research Fellow); Shhyam Moorthy ^{PhD} (Su 08, UF–LSU HHMI Summer Exchange Program); Khadija Ahmed ^{MD} (Su 08–Sp 09, Science for Life Program); Courtney Kagan (Burrows) ^{PhD} (Sp 08–Sp 10, Science for Life Program); Britt Garner ^{PhD} (Fa 07–Sp 08, 2008 HHMI Undergraduate Scholar); David Martinez ^{UR} (Su 07); Sara Rodriguez ^{UR MD} (Su 07–Sp 09, 2008 HHMI Undergraduate Scholar, 2008 Junior Honors Medical Program); Sherri Ebadian ^{PA} (Sp 07); Jessica Ortega ^{UR DP} (Su 06–present, 2007 HHMI Undergraduate Scholar, 2008 American Physiological Society Summer Undergraduate Research Fellow); Jocelynn Ortega ^{UR DMD} (Su 06–present, 2007 HHMI Undergraduate Scholar, 2008 University Scholar); Allman Rollins ^{UR MD} (REU, Su 06); Maikel Alendy ^{UR} (Sp 06–present, 2007 NIH Minority Summer Research Fellow); Kristen Dunlap ^{MD} (Sp 06 to Su 07); Michael Spertus ^{MD} (Su 05); Kristen Misiak ^{MD} (Sp 05–Sp 08, Beckman Scholar, University Scholar); Dorothea Skinner ^{UR} (Sp 05–Fa 05); Kelly April ^{PhD} (Fa 04–Su 05); Jeff Field (Fa 04–Sp 04); Jenessa Andrzejewski (Winston) ^{DVM PhD} (Fa 04–Su 07, University Scholar); Aunna Pourang ^{MD} (Fa 04–Su 06, 2005 Junior Honors Medical Program); Jennifer Stein (Su 04–Fa 06); Laura Briggs ^{MD PhD} (Su 04–Su 06); Joanna Fried ^{MD} (Sp 04–Su 04); Jennifer Rivas ^{UR} (Sp 04–Su 05); Anthony Cohen (Sp 04); Michaela Hogan ^{DNP} (Fa 03–Su 05, University Scholar); Vikash K. Singh ^{MD} (Fa 03–Su 05); Nicole Scheys (Fa 03–Sp 04); Lateef Opabola ^{UR MD} (Fa 03–Sp 05); Shiven Patel ^{MD} (Sp 03–Fa 04, Junior Honors Medical Program); Farvardean Abtahi ^{MD} (Fa 02); Angela Turner (Fa 02); John Hance ^{MD} (Fa 02–Sp 05, University Scholar); Raka Banerjee (Sp 02–Fa 02); Faithlore Gardner ^{UR MD} (Sp 02–Su 03); Jo–Elaine Amparado ^{UR} (Fa 01–Fa 03); Mallika Lavakumar ^{MD} (Fa 01–Fa 03, University Scholar); Kara Durand ^{MD} (Fa 01–Sp 02); Tammy Kenny (Fa 01); Stephanie Denzel ^{JD} (Su 01); Rosie Nwakanma ^{UR MEng} (Su 01); Shazia Asif ^{MD} (Sp 01–Fa 03); Courtney Rory Goodwin ^{UR MD PhD} (Sp 01–Su 02, University Scholar, NIH Minority Summer Research Fellow); Danielle King ^{UR} (Sp 01–Su 01); Kerry Bachista ^{MD} (Sp 01); Tom Lupoli ^{DO} (Sp 01); Christopher Osovitz ^{PhD} (Fa 00–Su 01).

CONSULTATIONS OUTSIDE THE UNIVERSITY (COMPENSATED)

HC Simulation, LLC. Development of “Just Physiology” online education application (2013–present)

BioInteractive, Howard Hughes Medical Institute. Educational media development (2019–present)

EDITORIAL SERVICE

Editorial Service

Assistant Editor, Integrative and Comparative Biology (2016-2018)

Reviewer for Scholarly Journals since 2000

Advances in Physiology Education (2014); American Journal of Physiology (2x2004, 2006, 2x2007); Aquatic Biology (2011); Biochimica et Biophysica Acta (2009); Biological Bulletin (2005); Biology Letters (2006); Comparative Biochemistry and Physiology (2007, 2011); Deep–Sea Research (2007, 2008); Ecology Letters (2002, 2015); Extremophiles (2006); Functional Ecology (2012); Journal of Experimental Biology, (2000, '02, '04, '05, '06, '10, '11, '14); Journal of Chromatography (2009); Journal of Experimental Marine Biology and Ecology (2006); Marine Biology (2010); Marine Biology Research (2011, 2012); Marine Ecology–Progress Series (2006), Molecular Pharmacology (2008); Ophelia (2002); PNAS (2001)

SERVICE TO K–12 EDUCATION

Curriculum Review

College Board AP Biology Research Study (2010); K–2 Teacher Professional Development Modules, Florida PROMiSE Review Team (2008); Florida K–12 Science Standards Reviewer (2008)

High School Student Supervised Research

Carolyn Im (SSTP, 2014); Abeer ElTemtamy (SSTP, 2012); Sarosh Tamboli (SSTP, 2011); Kevin Huang (SSTP, 2011); Cristina Alvelo (SSTP, 2004); Rajat Bhalla (SSTP, 2003), Karen Hussein (SSTP, 2002), Sarasija Nagella (SSTP, 2001), Elizabeth Stinger (SSTP, 2001), Oscar Lang (SFSU, 1998)

MEMBERSHIP AND ACTIVITIES IN THE PROFESSION

Society Membership

American Physiological Society; Society for Integrative and Comparative Biology (1987-2010)

Grant Reviews (ad hoc)

Austrian Science Fund (2010), MJ Murdock Charitable Trust (2003), Medical Research Council of Singapore (2008), National Geographic Society (2009); Natural Sciences and Engineering Research Council of Canada (2011); NOAA East Coast National Undersea Research Program (2003, 2005), NOAA West Coast and Polar Regions NURP (2002, 2005), NSF Division of Ocean Sciences (2003, 2004, 2007), NSF Division of Integrative and Organismal Systems (2003-2009, 2014); William Patterson University (2004)

Grant Review Committees and Panels

NIH NIGMS Training and Workforce Development Review Committee (TWD-D; 2016-2022, Chair 2020-2022, Chair 2024 special panel); NIGMS Working Group of Council: Bridges to the Baccalaureate Evaluation (2023); NSF College of Reviewers for Undergraduate Education (2019-present); NSF Division of Undergraduate Education Panel (2016-2018); NSF Division of Integrative and Organismal Systems Panel (2005-2009, 2011-2012)

Education Resource Development

HHMI BioInteractive Faculty Mentoring Network (2016-2020)

Miscellaneous

Best Student Paper Judge, Society for Integrative and Comparative Biology (2006, 2015); Annual Biomedical Research Conference for Minority Students (ABRCMS) Judge (2002, 2017) and Abstract Reviewer (2002, 2005)

Reviews of textbook chapters and digital content for Benjamin Cummings Publishing (*Biology 7/e* by Campbell and Reece and GraphIt software), McGraw Hill Digital Media (digital content for general biology), McGraw Hill Publishing (*Biology 1/e* by Brooker et al.), Sinauer Associates (*Life*, by Purves et al., 2006)

HONORS

Siemens Westinghouse Competition in Math, Science & Technology, Outstanding Mentor (2004); German Academic Exchange Fellowship, Deutscher Akademischer Austauschdienst (1999–2000); ARCS Foundation Fellowship (1994); University of California Regents Fellowship (1992–1993); San Francisco State University Distinguished Achievement Award (1991)

Honors to Students

Doctoral student Tim Crombie received the “Best Student Talk Award” from the Division of Comparative Physiology and Biochemistry at the Society for Integrative and Comparative Biology Annual Meeting (January 2015).

Doctoral student Maria Christina Vasquez received the “Best Student Talk Award” and the “Adrian M. Wenner Strong Inference Award” from the Division of Invertebrate Zoology and the “Best Student/Post–Doc Presentation Award in the Multiple Stressors Symposium” at the Society for Integrative and Comparative Biology Annual Meeting (January 2013), and the “Best Graduate Student Oral Presentation” at the 39th annual Benthic Ecology Meeting (March 2010).

Post–Bacc student Alexis Lanza received second place in the “Best Student Poster Presentation Award” at the 42nd Benthic Ecology Annual Meeting (March 2013).

High school student Kevin Huang received second place in the “Biological” category of the San Francisco Bay Area Science Fair (March 2012).

Undergraduate student Jessica Ortega received the “David S. Bruce Award for Excellence in Undergraduate Research” from the American Physiological Society at the Experimental Biology Meeting (April 2009).

Undergraduate student Jocelynn Ortega received the “Scholander Award for Meritorious Research by an Undergraduate Student” from the Comparative and Evolutionary Physiology Section of the American Physiological Society at the Experimental Biology Meeting (April 2009).

Doctoral student Joanna Joyner–Matos received the “Dorothy Skinner Award for Outstanding Oral Presentation in Comparative Biochemistry and Physiology” at the Society for Integrative and Comparative Biology annual meeting (January 2006), and the “Best Student Paper Award” in the Department of Zoology at UF (2007).

High school student Rajat Bhalla was named a finalist in the National Siemens Westinghouse Competition in Math, Science & Technology (“Junior Nobels”) (2004).

Master’s student Adam Reitzel received the “Best Student Poster Award” in Ecology and Evolution at the Society for Integrative and Comparative Biology (January 2002), and a Fulbright Scholarship to conduct his research in New Zealand (2002, declined).

OCEANOGRAPHIC CRUISES

Participant in 7 oceanographic expeditions aboard the research vessels *Seward Johnson II* (2003), *Point Sur* (1988), *Edwin Link* (1994, 1995, 1997), *Atlantis II* (1997), and *Atlantis* (1998)

Participant in 7 deep-sea dives aboard the submersibles *Johnson Sea Link* (1994, 1995, 1997, 2003) and *Alvin* (1998)