



Undergraduate Student Research Support Program AY 2018-19 Report

The COAST Undergraduate Student Research Support Program provides \$2,500 annually to every campus to stimulate undergraduate student engagement in faculty-mentored marine, coastal and coastal watershed related research. Through this program, COAST aims to increase the number of CSU undergraduate students participating in research and provide them with the opportunity to obtain the skills necessary to join a highly skilled and technologically advanced workforce. COAST also encourages faculty members to use the program to meaningfully engage first and second year undergraduate students as well as historically underrepresented minority, low-income and first-generation college students.

In AY 2018-19, a total of 84 students throughout the system were supported. COAST relied upon officially appointed Campus Representatives to implement the program on their campuses. The Representatives at each campus created their own application process, accepted applications and allocated funding. Some awards may include unspent funds from previous years. Campuses marked with an * provided match funding.

AY 2018-2019 Undergraduate Student Research Support Awards

Campus	Recipient	Program/ Major	Advisor	Project Title	Award Amount (Campus Match)
Channel Islands	Jacob Cornelson	Environmental Science & Resource Management	Dr. Sean Anderson	Testing for microplastics and glyphosate contamination levels throughout the conventional and organic brewing processes	\$350
	Avarie Hager	Environmental Science & Resource Management	Dr. Sean Anderson	Wildlife monitoring in California State University Channel Islands Regional Park: a restoration study post-wildfire destruction and succession	\$1,800
	Elisa Pearson	Environmental Science & Resource Management	Dr. Sean Anderson	Testing for microplastics and glyphosate contamination levels throughout the conventional and organic brewing processes	\$350
Chico	Brooke Hoffe	Microbiology	Dr. Cawa Tran	Establishment of symbiosis in the model sea anemone <i>Exaiptasia pallida</i> : analyzing host specificity of dinoflagellates under heat stress	\$1,250
	Cora Piper	Biological Sciences	Dr. Cawa Tran	Asexual reproduction of sea anemone <i>Exaiptasia pallida</i> under varying light conditions	\$1,250

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Dominguez Hills	Eric Thai	Geography	Dr. Parveen Chhetri	Mapping erosion along Rancho Palos Verdes coast using geospatial technology	\$2,500
East Bay*	Krista Klinefelter	Environmental Science	Dr. Patty Oikawa	The influence of conductivity on methane and carbon dioxide fluxes in a California tidal wetland	\$2500 (\$350)
Fresno	Kiana Cabasa	Biology	Dr. David Lent	Moray eel neuroanatomy and spatial cognition: cross species examination of <i>Rhinomuraena quaesita</i> and <i>Anguilla anguilla</i>	\$313
	Miguel Estrada	Biology	Dr. Brian Tsukimura	The effects of ocean acidification on the developing larval stages of the crab, <i>Petrolisthes cinctipes</i>	\$313
	Jordyn Kamitono	Biology	Dr. Dermot Donnelly	Investigating the impact of zoo-inquiry projects for marine exhibits in introductory chemistry laboratories	\$313
	Titus Patton	Biology	Dr. Brian Tsukimura	The effect of ocean acidification on the growth and development of <i>Artemia franciscana</i>	\$313
	Robert Seward	Biology	Dr. Joshua Reece	Invertebrate surveys of Morro Bay	\$313
	Lillian Vang	Biology	Dr. David Lent	A cross-species comparison of the lateral pallium in <i>Gymothorax saxicola</i> and <i>Gymnothorax undulatus</i> to determine spatial cognitive development	\$313
	Lexi Walker	Biology	Dr. Joshua Reece	The impacts of dredging on Morro Bay biodiversity	\$313
	Daisy Xiong	Biology	Dr. Joshua Reece	Western pond turtle captive breeding genetics	\$313
Fullerton	Shannon Chou	Biological Science	Dr. Ryan Walter, Dr. Jennifer Burnaford	Something in the water: environmental DNA profiling of tide pool biodiversity	\$500
	Andrew Jaramillo	Biological Science	Dr. Kristy Forsgren	3-Dimensional reconstruction of surfperch reproductive anatomy using a medical diagnostic tool	\$600
	Jacob Javier	Biological Science	Dr. E. Misty Paig-Tran	Filtration along a reticulated mesh, anatomy predicts feeding ecology in neonatal whale sharks, <i>Rhincodon typus</i>	\$600

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Fullerton	Radwan Muthala	Geology	Dr. Sinan Akciz	Distribution of surficial slip along the Santa Cruz Island fault based on Lidar measurements	\$600
	Holly Suther	Biological Science	Dr. Kristy Forsgren	Size matters: comparative morphology of rockfish urogenital papilla	\$200
Humboldt*	Cassidy Alves	Biology	Dr. John Steele	Heat shock proteins in <i>Tigriopus californicus</i>	\$0 (\$300)
	Kyra Anderson	Biology	Dr. Paul Bourdeau	Do <i>Tegula</i> react to different predators based on their history of exposure to those predators?	\$500
	Melanie Dominquez	Biology	Dr. Paul Bourdeau	Is the predator-avoidance response of <i>Nucella lamellosa</i> impaired while in low pH conditions?	\$0 (\$100)
	Keely Haussler	Fisheries Biology	Dr. Rafael Cuevas-Urbe	Creating a maraponics system to effectively grow <i>Salicornia pacifica</i> and remove nitrogenous wastes	\$440
	Victoria Heller	Biology	Dr. Paul Bourdeau	Presence of <i>Portunion conformis</i> in Humboldt Bay	\$0 (\$100)
	Crystal Hofer	Biology	Dr. Paul Bourdeau	Acclimation response of <i>Mytilus californianus</i> to increased air temperature	\$70 (\$30)
	Jasmine Iniguez	Fisheries Biology	Dr. Rafael Cuevas-Urbe	Use of induced spawning to determine sex chromosome in red lionfish (<i>Pterois volitans</i>)	\$490
	Sierra Jarriel	Biology	Dr. Paul Bourdeau	Testing the mechanisms of bubble nets	\$500
	Michelle Lofus	Fisheries Biology	Dr. Rafael Cuevas-Urbe	Acute toxicity of ammonia to <i>Alitta brandti</i>	\$500
Long Beach	Bailey McCann	Biology	Dr. Darren Johnson	Estimating growth and mortality rates of <i>Megastrea undosa</i> in Southern California	\$500
	Mariah Meyer	Marine Biology	Dr. Chris Lowe	Tagging and identifying white sharks at Guadalupe Island	\$500
	Erin Pierce	Marine Biology	Dr. Chris Lowe	Size estimates of white sharks (<i>Carcharodon carcharias</i>) in Guadalupe Island, Mexico	\$500
	Joseph Porges	Marine Biology	Dr. Erika Holland	Polyaromatic hydrocarbons and their oxygenated metabolites target ion channels	\$500
	Christine Uy	Biology	Dr. Darren Johnson	Effects of micro-plastics on feeding rates of California grunion larvae, <i>Leuresthes tenuis</i>	\$500

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Los Angeles	Angelica Cortez	Geology	Dr. M. Hassan Rezaie Boroon	Monitoring water quality in Ballona Creek Lagoon: nitrate level fluctuation in low and high tide conditions	\$1,650
	Kanique Thomas	Psychology	Dr. Pat Krug	Investigating the origins of photomutualism by differential gene expression	\$1,012
	Ryan Yang	Biology	Dr. Andres Aguilar	Rockfish population genetics using whole mitochondrial genome sequences	\$1,000
Maritime*	Carson Alexander	Mechanical Engineering	Dr. Tomas Oppenheim	Collaborative effort: designing and building wave-following structures to study wave-driven turbulence in the San Francisco Bay area and Delta	\$697 (\$672)
	Ellanora Anastasi	Marine Engineering Technology	Dr. Alejandro Cifuentes-Lorenzen	Collaborative effort: designing and building wave-following structures to study wave-driven turbulence in the San Francisco Bay area and Delta	\$697 (\$265)
	Matthew DeJesus	Mechanical Engineering	Dr. William Tsai	Extraction of tidal stream energy using a tidal turbine	\$697 (\$1,267)
	Ainsley Manlapaz	Marine Engineering Technology	Dr. Ryan Storz	M/V <i>Cub</i> underway water quality data acquisition system	\$409
Monterey Bay	Olivia Boisen	Molecular Biology	Dr. John Goeltz	<i>In-situ</i> pH measurements using self-calibrating IrOx electrodes	\$500
	Emily Chui	Environmental Science, Technology & Policy	Dr. Alison Haupt	Affects of deuteration on deep eutectic solvents	\$500
	Dakota Jackson	Molecular Biology	Dr. Nathaniel Jue	Evolution of sex change	\$500
	Casey Juliussen	Biology	Dr. John Goeltz	Affects of deuteration on deep eutectic solvents	\$500
	Lilli Krier	Biology	Dr. Eric Crandall	Is Cape Mendocino a barrier to marine larval dispersal?	\$500
Northridge*	Elliot Bloom	Biology	Dr. Fritz Hertel	Ecomorphology of sympatric penguins	\$500 (\$250)
	Michael Jacobs	Environmental & Occupational Health	Dr. Gretchen Boria Perez	Occurrence and prevalence of <i>Vibrio cholerae</i> in copepods and seawater from Mother's Beach in Marina del Rey, California	\$750

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Northridge*	Maria Martone	Biology	Dr. Kerry Nickols	Phytoplankton biodiversity and chlorophyll concentration throughout a vertical gradient within a kelp forest	\$750
	Julio Rosales	Biology	Dr. Nyssa Silbiger	Comparison of methods for measuring tide pool volume	\$500 (\$250)
Pomona	Sydney Ghazarian	Biology	Dr. Ángel Valdés	A molecular study of <i>Julia mishimaensis</i>	\$612
	Meghan Jeffus	Biology	Dr. Jayson Smith	The effect of human rock overturning on intertidal community composition and recovery	\$1,080
	William Tran	Biotechnology	Dr. Ángel Valdés	Phylogenetic reconstruction of <i>Doridina</i> using RNA sequencing	\$808
Sacramento	Rachael Dal Porto	Chemistry	Dr. Justin Miller-Schulze	Particulate phase extraction of chemicals of emerging concern from human waste in water	\$500
	Alexandra Gama	Geology	Dr. Amy Wagner	Examining past climate conditions using trends in diatom speciation	\$500
	Danielle Nestler	Biological Sciences	Dr. Lani Gleason	Assessing phenotypic effects of heat stress and starvation in the economically important red abalone, <i>Haliotis rufescens</i>	\$500
	Ethan Roberts	Biological Sciences	Dr. Tim Davidson	Keeping cool in the rocky intertidal: do burrows formed by an invasive isopod ameliorate thermal stressors for marine invertebrates?	\$500
	Carissa Romero	Biological Sciences	Dr. Lani Gleason	Assessing phenotypic effects of heat stress and starvation in the economically important red abalone, <i>Haliotis rufescens</i>	\$500
San Bernardino	Anneke-Victoria Fischle	Anthropology	Dr. Kathleen Nadeau	The demand for seafood: discharged fishing gear, the Great Pacific Garbage Patch, and the reality of ghost fishing	\$805
	Sarah Handy	Biology	Dr. Tomasz Owerkowicz	Radiant heat absorption by skin with and without osteoderms in alligator	\$2,272
San Diego	Chelsea Bergman	Biology	Dr. Kevin Hovel	The impact of ocean acidification and increased temperature on eelgrass (<i>Zostera marina</i>) and associated fauna	\$530
	Caroline Bossert	Environmental Sciences	Dr. Arielle Levine	Exploring human perceptions and conflict surrounding human-seal use of beaches in La Jolla	\$885
	Dillon Dolinar	Biology	Dr. Matt Edwards	Respiration of purple urchins, <i>Strongylocentrotus purpuratus</i> , in kelp forests and kelp barrens	\$540

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San Diego	Isabella Livingston	Biology	Dr. Liz Dinsdale	Environmental DNA dependent biodiversity survey of Chondrichthyes in Gujarat, India	\$640
	Abigail Turnlund	Biology	Dr. Liz Dinsdale	Skin microbiome: taxonomy and functional composition across sexes in Port Jackson sharks	\$689
San Francisco	Adedamola Adetayo	Computer Science	Dr. Tendai Chitewere	The political ecology of Richardson Bay	\$392
	Mariel Avila	Biology	Dr. Karen Crow and Dr. Katharyn Boyer	Knowing your customers: observing variation between fish assemblages and clientele of the Hawaiian cleaner wrasse	\$625
	Laura Herrera	Biology	Dr. Karen Crow	Elusive and endangered: comparing plankton abundance with the distribution of manta rays in Kaneohe Bay using eDNA	\$625
	Noelle Kassly	Biology	Dr. Karen Crow and Dr. Katharyn Boyer	Do zooplankton respond to distinct bio-acoustic soundscapes?	\$625
	Madeleine Martin	Environmental Studies	Dr. Tendai Chitewere	The political ecology of Richardson Bay	\$550
	Kaitlyn Sapkos	Biology	Dr. Sarah Cohen	A comparison of parental and larval genotypes of chimeric <i>Didemnum vexillum</i> colonies	\$1,034
	Keishae Vann	Biology	Dr. Karen Crow	Mangrove invasion is associated with reduced invertebrate diversity of assemblages in the invasive alga, <i>Gracilaria salicornia</i>	\$625
San José	Laura Mosqueda	Geology	Dr. Carlie Pietsch	Middle Triassic marine recovery	\$2,500
San Luis Obispo	Joscelyn De La Torre	Marine Sciences	Dr. Heather Liwanag	Education brochure creation for Piedras Blancas to increase public engagement with northern elephant seal research	\$500
	Mark Dizon	Microbiology	Dr. Alexis Pasulka	Assessing the applicability of bioorthogonal non-canonical amino acid tagging (BONCAT) to algal strains	\$500
	Kevin Label	Computer Science	Dr. Sean Lema	RNAseq analysis of mRNAs linked to IGF1 endocrine signaling pathways from cabezon liver	\$500
	Laura Lodolo	Biological Sciences	Dr. Alexis Pasulka	Molecular characteristics of marine microbial communities at the Cal Poly Pier	\$500

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San Luis Obispo	Gabriel Santos	Biological Sciences	Dr. Heather Liwanag	What's in a bite? Analyzing shark bite marks on northern elephant seals to provide insights into shark population dynamics	\$500
San Marcos	Thuy Tran	Biochemistry	Dr. Jacqueline Trischman	Structure determination of marine bacterial compounds that inhibit biofilm production in mycobacteria	\$1,250
	Bailey Young	Environmental Studies	Dr. Christina Simokat	Gap analysis of native small pollinator habitat in the San Dieguito and Carlsbad watersheds	\$700
Sonoma	Jessica Saavedra	Biology	Dr. Brent Hughes	Linking food webs to restoration in California estuaries	\$1,350
	Kaitlynn Wagner	Biology	Dr. Mackenzie Zippay	Characterizing the transcription and translation of hsp90 in purple sea urchin larvae	\$1,150
Stanislaus	Ana Ibarra Sotelo	Biological Sciences	Dr. Ritin Bhaduri	Effects of parasite infections on the fecundity of the sand crab <i>Emerita analoga</i>	\$1,865
	Sebastian Villegas	Biological Sciences	Dr. Ritin Bhaduri	Effects of parasitic infection on the fecundity of the Pacific mole crab <i>Emerita analoga</i>	\$1,865