



Undergraduate Student Research Support Program
AY 2019-20 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.

Since the program was launched in AY 2014-15, it has supported 466 undergraduate students, including 78 this year at 21 different campuses.

All awardees are listed even though some were not able to conduct any research due to COVID-19. We believe it is important to recognize their achievements in being awarded funds.

Table with 6 columns: Campus, Recipient, Program/Major, Advisor, Project Title, Award Amount (Campus Match). It lists awards for Bakersfield campus recipients including Stephanie Abarca, Joshua Annis, Drake Floyd, and Sean Fontes.

## AY 2019-2020 Undergraduate Student Research Support Awards

Campus	Recipient	Program/ Major	Advisor	Project Title	Award Amount (Campus Match)
Bakersfield	Jocelyn Lopez	Human Biological Sciences	Dr. Antje Lauer	Searching for coccidioides on the Channel Islands, California methods to be employed	\$1,052
	Kaitlin Macaranas	Biology	Dr. Rae McNeish	Seasonal deposition of atmospheric microplastics and nutrients	\$2,103
	Miguel Navarrete	Computer Science	Dr. Chengwei Lei	Elephant seal migration tendencies	\$199
Channel Islands	Aren Antounian	Anthropology	Dr. Emily Fairfax	Understanding the economical and nutritional effects of Southern California Marine Protected Areas on recreational fishers of Ventura County	\$503
	Jennifer Bays	Environmental Science and Resource Management	Dr. Jamie Matera	I see ci – Santa Rosa Island vr	\$457
	Alyssa Connaughton	Environmental Science and Resource Management	Dr. Emily Fairfax	I see ci – Santa Rosa Island vr	\$457
	Leonel Martinez Vallin	Environmental Science and Resource Management	Dr. Clare Stelle	Risk and impacts of sea level rise on the Port of Hueneme	\$624
	Jennifer Shirhall	Environmental Science and Resource Management	Dr. Emily Fairfax	I see ci – Santa Rosa Island vr	\$458
Chico	Will Dowell	Biological Sciences	Dr. David Stachura	Examining the effect of chemicals generated by the Camp Fire on the immune system of fishes	\$625
	Aleeza Namit	Biological Sciences	Dr. David Stachura	Examining the effect of chemicals generated by the Camp Fire on the immune system of fishes	\$625
	Cora Piper	Biological Sciences	Dr. Cawa Tran	Asexual reproduction of the sea anemone <i>Aiptasia</i> under artificial moonlight	\$1,200
Dominguez Hills	Nicholas Anaya-Licea	Biology	Dr. Charlene McCord	How are hagfish morphologically adapted to burrowing?	\$2,500
East Bay*	Hamed Jalala	Biological Sciences	Dr. James Murray	Investigation into magnetic orientation and turning neurons in the sea slug <i>Tritonia tetraquetra</i>	\$2,500 (\$1,500)

## AY 2019-2020 Undergraduate Student Research Support Awards

Campus	Recipient	Program/ Major	Advisor	Project Title	Award Amount (Campus Match)
Fresno	Kiana Cabasa	Biology	Dr. David Lent	Development of histological procedure for cross species comparison of the lateral pallium in <i>Muraenidae</i>	\$1,250
	Robert Seward	Biology	Dr. Joshua Reece	Variation in beach width in Morro Bay as a function of sea-level rise	\$1,250
Fullerton	Katya Beener	Geology	Dr. Joseph Carlin	Documenting changes in terrestrial sediment sources to Monterey Bay over decadal and centennial time scales	\$750
	Nicholas Markle	Biological Science	Dr. Ryan Walter	Nanopore sequencing of giant seabass mitochondrial DNA genome using minion and long range PCR	\$680
	Nathalie Munoz	Biological Science	Dr. Ryan Walter	Phylogenetic analysis of the California and Gulf grunion using complete mitochondrial genomes	\$682
	Madison Panzino	Biological Science	Dr. Kristy Forsgren	Sexual dimorphism of male surfperch anal fins	\$936
Humboldt*	Evan Baron	Fisheries	Dr. Rafael Cuevas-Uribe	Supplementing soybean meal and effluent bioremediation by the polychate worm <i>Alitta brandti</i>	\$466
	Cody Baughn	Fisheries	Dr. Rafael Cuevas-Uribe	Production of sablefish and seaweed in an IMTA system	\$500
	Sally Gammie	Biology	Dr. Brian Tissot	How temperature, light and nutrition effects symbiotic zooxanthellae in <i>Anthopleura artemisia</i>	\$460
	Daniel Raemer	Biological Sciences	Dr. Brian Tissot	Effect of flow rate on microplastic ingestion by <i>Mytilus edulis</i>	\$460
	Michael Tovar	Fisheries	Dr. Rafael Cuevas-Uribe	Seahorse spawning	\$500
	Taylor Zenobia	Fisheries	Dr. Jose Marin Jarrin	The integrated culture of rock weed <i>Mastocarpus jordinii</i> in a recirculating land-based system with red abalone <i>Haliotis rufescens</i>	\$0 (\$500)
Long Beach	Jhen Cabasal	Marine Biology	Dr. Dessie Underwood	Microplastics in diatoms along an urban estuary	\$1,250
	Jennifer Dreschler	Marine Biology	Dr. Bruno Pernet	DNA barcoding of echinoderm larvae in Southern California	\$1,250
Maritime*	Tiernan Fackler	Marine Engineering Technology	Dr. Kaylan Randolph	Designing and prototyping accessory optical imagery device for aid in data collection	\$625 (\$275)
	Jacob Flores	Mechanical Engineering	Dr. William Tsai	Low-cost imaging instrument for harmful algal bloom detection	\$625 (\$175)

## AY 2019-2020 Undergraduate Student Research Support Awards

Campus	Recipient	Program/ Major	Advisor	Project Title	Award Amount (Campus Match)
Maritime*	Kyle Hebert	Marine Transportation	Dr. Jennifer Murphy	The relationship between ammonium concentrations and tidal current fluctuations through the Carquinez Strait	\$625 (\$500)
	Mitchell Peevler	Mechanical Engineering	Dr. Tomas Oppenheim	High resolution wave-following spatial buoy array to collect small turbulence scale boundary layer wave dynamics statistics in San Francisco Bay Estuary for validation of physical oceanography numerical models	\$625 (\$1,175)
Monterey Bay	Mariah Daniel	Marine Science	Dr. Alison Haupt	Applying stomach content and stable isotope analysis to determine diet and trophic ecology of <i>Hydrolagus colliei</i> along the U.S. West Coast Border	\$422
	Samantha Miller	Biology	Dr. Nathaniel Jue	Functional genomics of pyrethroid remediating bacteria	\$500
	Maggie Seida	Marine Science	Dr. Steve Moore	An evaluation of scaling and composition techniques of ROV collected video data applied in 3D photogrammetry via Structure-from-Motion	\$485
	Ethan Switzer	Marine Science	Dr. Steve Moore	An evaluation of scaling and composition techniques of ROV collected video data applied in 3D photogrammetry via Structure-from-Motion	\$485
	Emily Tate	Marine Science	Dr. Steve Moore	Effects of sand grain size on the abundance and distribution of market squid egg mops	\$105
	Katherine Tinsman	Marine Science	Dr. Steve Moore	Effects of sand grain size on the abundance and distribution of market squid egg mops	\$105
	Silvia Vasquez	Marine Science	Dr. Cheryl Logan	Climate change effects on coral reefs	\$453
Pomona	Raul Flamenco	Biology	Dr. Andrea Bonisoli- Alquati	Effects of contaminant cocktail on California least tern egg quality	\$500
	Matthew Kim	Biology	Dr. Ángel Valdés	Molecular and morphological investigation of <i>Aldisa</i> from New Caledonia, with potential descriptions of new species	\$610
	Kairi Tanaka	Biology	Dr. Ángel Valdés	A phylogenetic analysis of <i>Bullinidae</i> and the possibility of a new species	\$610

## AY 2019-2020 Undergraduate Student Research Support Awards

Campus	Recipient	Program/ Major	Advisor	Project Title	Award Amount (Campus Match)
Pomona	Gabrielle Yang	Biology	Dr. Jeremy Claisse	Quantifying adult yellow tang, <i>Zebrasoma flavescens</i> , abundance inside and outside protected areas in Hawaii	\$780
Sacramento	Chelsea Brown	Biological Science	Dr. Lani Gleason	Southern California <i>Tegula</i> thermal tolerance species comparison	\$625
	Haley Courser	Geology	Dr. Amy Wagner	Cold water corals as recorders of intruding circumpolar deep water along the Antarctic Margin	\$625
	Gloria Edejer	Biological Science	Dr. Lani Gleason	Southern California <i>Tegula</i> thermal tolerance species comparison	\$625
	Ethan Roberts	Biological Science	Dr. Timothy Davidson	Do wood burrows formed by an invasive isopod <i>Ameliorate desiccation</i> stress in intertidal invertebrates?	\$625
San Bernardino	Alison Conner	Biology and Kinesiology	Dr. Tomasz Owerkowicz	Effect of calcium carbonate supplementation on lactate buffering and bone quality in the American alligator	\$2,420
San Diego	Emily Bews	Environmental Science	Dr. Matthew Edwards	The potential of <i>Ulva lactuca</i> in bioremediation under varying salinities	\$800
	Dillon Dolinar	Biology	Dr. Matthew Edwards	Respiration of purple urchins, <i>Strongylocentrotus purpuratus</i> , in kelp forests and urchin barrens	\$470
	Emma Kerr	Biology	Dr. Elizabeth Dinsdale	Skin microbiome of the round stingray, <i>Urobatis halleri</i> , in Southern California	\$995
	Alaina-Licea Perun	Biology	Dr. Kevin Hovel	Prey selection of California spiny lobsters	\$430
San Francisco	Mariel Avila	Biology	Dr. Karen Crow	Variation in anal fin morphology in surfperches within and between species	\$750
	Natalie Avila	Biology	Dr. Sarah Cohen	Characterizing the population structure of the invasive species <i>Watersipora subtorquata</i> in rocky intertidal communities	\$644
	Riley Jones	Biology	Dr. Karen Crow	The evolution of variation in vertebrate paired appendages	\$380
	Noelle Kaslly	Biology	Dr. Karen Crow	The role of HOXA11 and HOXA13 expression in the development of a novel gut feature in the Catalina goby <i>Lythrypnus dalli</i>	\$750
	Ernestina Ramirez	Biology	Dr. Sarah Cohen	<i>Leptasterias</i> spp: treatments to slow sea star wasting disease	\$500

**AY 2019-2020 Undergraduate Student Research Support Awards**

<b>Campus</b>	<b>Recipient</b>	<b>Program/ Major</b>	<b>Advisor</b>	<b>Project Title</b>	<b>Award Amount (Campus Match)</b>
San José	Valerie Gracia	Biological Sciences	Dr. Maya deVries	The effects of pH on clams of the San Francisco Bay Delta Watershed	\$1,500
San Luis Obispo*	Kasey Cordova	Biological Sciences	Dr. Sean Lema	Opposing influences of fasting stress and IGF1 on skeletal muscle gene pathways for IGH-signaling and myofibrillar protein degradation in gopher rockfish	\$368
	Alicia Ellingson	Biological Sciences	Dr. Dean Wendt	Assessing standardized gear types on the catch on nearshore groundfish	\$500 (\$1,000)
	Alyse Handley	Marine Science	Dr. Kristin Hardy	Assessing IDH levels in response to hypoxic conditions in <i>B. glandular</i> across their vertical distribution	\$498 (\$1,000)
	Kaitlyn (Ellie) Kaiser	Biological Sciences	Dr. Heather Liwanag	Northern elephant seal harems	\$275
	Daniel Sandborn	Chemistry	Dr. Emily Bockmon	Improvement of ocean pH measurements with purified spectrophotometric dye	\$500
	Gabrielle Santos-Elizondo	Biological Sciences	Dr. Heather Liwanag	A study in elephant seal demographics: drone-driven aerial surveys of the <i>Piedras blancas</i> northern elephant seals	\$350
San Marcos	Madison Conte	Biological Sciences	Dr. John Eme	Oxygen consumption rate of Southern California notchbrow blenny ( <i>Hypsoblennius gilberti</i> )	\$500
	Gabrielle Diaz	Biological Sciences	Dr. Casey Mueller	Investigation of development rates of four <i>Tigriopus californicus</i> populations in response to different temperatures	\$500
	Keomony Diep	Biological Sciences	Dr. Darcy Taniguchi	Using machine learning to classify and estimate relative abundances of <i>Heterotrophic protists</i>	\$550
	Thi Huynh	Biotechnology	Dr. Betsy Read	Red light-blue light: alkenone production in <i>Isochrysis galbana</i> is enhanced by red light, while growth is optimal under blue light	\$500
	Anahita Rahimi	Biological Sciences	Dr. Elinne Becket	Analyzing the effects of rainstorm runoff on the Southern California coastal antibiotic resistome	\$500
	Dennis Zanesco	Biological Sciences	Dr. Elinne Becket	Development of a coastal microbial mock community standard to standardize coastal metagenomics workflows	\$500

**AY 2019-2020 Undergraduate Student Research Support Awards**

<b>Campus</b>	<b>Recipient</b>	<b>Program/ Major</b>	<b>Advisor</b>	<b>Project Title</b>	<b>Award Amount (Campus Match)</b>
Sonoma	Kylie Borello	Biology	Dr. Mackenzie Zippay	Understanding the physiological response of bull kelp under warming conditions	\$1,250
	Natasha Higuera	Biology	Dr. Brent Hughes	Adding resilience to kelp forests through the development of heat tolerant varieties for restoration	\$1,250
Stanislaus	Melina Cruz	Biological Sciences	Dr. Ritin Bhaduri	Extraction and detection of microplastics from water, sediment and biota (mole crabs) from Del Monte Beach, Monterey	\$800
	Devyn Lewis	Biological Sciences	Dr. Ritin Bhaduri	Extraction and detection of microplastics from water, sediment and biota (mole crabs) from Del Monte Beach, Monterey	\$800
	Dylan McAlister-Becker	Biological Sciences	Dr. Ritin Bhaduri	Extraction and detection of microplastics from water, sediment and biota (mole crabs) from Del Monte Beach, Monterey	\$800