



Undergraduate Student Research Support Program AY 2020-21 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.

Since the program was launched in AY 2014-15, it has supported 535 undergraduate students, including 69 this year at 19 different campuses. COAST relies upon officially appointed Campus Representatives to implement the program on their campuses. The Representatives at each campus create their own application process, accept applications and allocates funding. Some awards may include unspent funds from previous years. Campuses marked with an * provided match funding.

AY 2020-2021 Undergraduate Student Research Support Awards					
Campus	Recipient	Program/ Major	Advisor	Project Title	Award Amount (Campus Match)
Bakersfield	Julian Jordan	Biology	Dr. Antje Lauer	Searching for <i>Coccidioides</i> on the Channel Islands, California	\$2,911
	Kaitlin Macaranas	Biology	Dr. Rae Mcneish	Landscape features impact atmospheric deposition of microplastics and nutrients	\$2,911
Chico	Andrea Villegas-Fregoso	Environmental Science	Dr. Sandrine Matiassek	Continuous monitoring of water quality in Big Chico Creek	\$2,489
Dominguez Hills	Kelsie Kaufman	Biology	Dr. Samantha Leigh	Pervasiveness of microplastics in the Southern California Bight	\$1,250
	Kevin Mosqueda	Microbiology	Dr. Samantha Leigh	Microplastic pervasiveness in Southern California marine ecosystems	\$1,250

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East Bay	Sharn Basi	Health Sciences	Dr. Patty Oikawa	Carbon cycling in tidal wetlands at the Eden Landing Ecological Reserve	\$417
	Sarah Fukushima	Biological Sciences	Dr. Patty Oikawa	Quantifying spatial and temporal patterns of coral bleaching	\$417
	Tiffany Hopkins	Environmental Sciences	Dr. Patty Oikawa	Effects of compost application on soil carbon dioxide, methane, and evapotranspiration on Concord, CA, grazed grassland	\$417
	Jackelyn Marroquin	Health Sciences	Dr. Patty Oikawa	Methane synthesis	\$417
	Marcus Powell-Ford	Biological Sciences	Dr. James Murray	Effects of <i>Tritonia</i> toxin on helminths	\$417
	Raquel Sandoval	Biological Sciences	Dr. James Murray	Magnets change <i>Tritonia</i> navigation	\$417 (\$800)
Fullerton	Kathryn Eckholdt	Biological Sciences	Dr. Danielle Zacherl	Talking trash: will a trash interceptor in Newport Bay, CA, intercept wrack subsidies, too?	\$450
	Nicolina Jurkiewicz	Biological Sciences	Dr. Danielle Zacherl	Tidal influence on mudflat foraging locations of shorebirds in restored and unrestored habitats	\$444
	Jada Smith	Biological Sciences	Dr. Jennifer Burnaford	Exploring the mechanisms behind patterns of epiphyte infection for the seaweed <i>Pelvetiopsis californica</i> under conditions of sea-level rise	\$900
	Julia Teeple	Biological Sciences	Dr. E. Misty Paig-Tran	Tiny teeth in mega filter-feeders - vestigial or functional?	\$326
	Veng Hout Ty	Biochemistry	Dr. Stevan Pecic	In vitro selection of DNA aptamers for the detection of the agricultural insecticide imidacloprid	\$400
	Angela Xia	Biological Sciences	Dr. Amybeth Cohen	Traditional mating of wild type <i>Chlamydomonas reinhardtii</i> to improve protein-lipid content for use as an aquaculture food source	\$825
Humboldt	Alex Bairstow	Biology	Dr. Sean Craig	Copper tolerance in an invasive bryozoan cryptic species complex	\$500
	Peter Bright	Chemistry	Dr. Matthew Hurst	Copper in the Smith River plain	\$500
	Marzia Fattori	Biology	Dr. Rick Zechman	Establishing a bull kelp nursery at Telonicher Marine Laboratory	\$500
	Noah Jenkins	Fisheries Biology	Dr. Rafael Cuevas Uribe	Effects of probiotic diet on white sturgeon growth and microbiome	\$500

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Long Beach	Haylee Kramer	Marine Biology	Dr. Chris Lowe	Training AI in the recognition of desired objects using drone footage	\$750
	Mariah Meyer	Marine Biology	Dr. Chris Lowe	Effect of water turbidity on white shark prey detection monitored by AUV video	\$250
	Erin Pierce	Marine Biology	Dr. Chris Lowe	How does size affect human and juvenile white shark interactions along the Southern California coast?	\$250
	David Reoyo	Biology	Dr. Douglas Pace	Determining the metabolic cost of growth in larval stages of the deep water sea urchin, <i>Strongylocentrotus fragilis</i>	\$1,250
Los Angeles	Celeene Gomez	Biology	Dr. Andres Aguilar	Extracting mitogenome sequences from rockfish genome data	\$500
	Mayra Lopez	Biology	Dr. Patrick Krug	Population genetic analysis of the sea slug <i>Elysia pusilla</i> , a Pacific gastropod with unprecedented phylogeographic structure	\$1,460
	Rania Mamo	Biology	Dr. Andres Aguilar	Phylogenomics of the eelpouts (<i>Zoarcidae</i>) using whole mitochondrial sequences	\$500
Maritime	Sophie Scopazzi	Marine Transportation	Dr. Alejandro Cifuentes-Lorenzen	Multipurpose discus buoy, for use in measuring narrow or shallow estuarine ecosystems (along with future students/faculty projects)	\$1,450
	Dominic Terrusa	Oceanography	Dr. Kaylan Randolph	Planning, construction, and deployment of an oceanographic buoy for monitoring physical forces and water quality near an eelgrass bed in the San Francisco Bay estuary	\$1,050 (\$55)
	Aurora Thomas	Global Studies and Maritime Affairs	Dr. Alejandro Cifuentes-Lorenzen	Atmospheric measurements from an oceanographic buoy for monitoring atmospheric forcing near an eelgrass bed in the San Francisco Bay estuary	\$0 (\$1,000)
Monterey Bay	Vanessa Garcia	Biology	Dr. Nathaniel Jue	Investigating the seascape genetics of <i>Mytilus californianus</i> using a coalescent sampler	\$500
	Kaiku Kaholoaa	Biology	Dr. Cheryl Logan	Comparing species-specific vital rates in Hawaiian corals <i>Porites ligulata</i> and <i>P. lichen</i>	\$500
	Silvia Vasquez	Biology	Dr. Cheryl Logan	Coral thermotolerance	\$500

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Monterey Bay	Gretchen Wichman	Environmental Science, Technology, and Policy	Dr. John Olson	The influence of salinity on leaf breakdown rates in tidal streams	\$300
Northridge	Emily Rukstales	Marine Biology	Dr. Kerry Nichols	Microplastic accumulation in tidepools	\$1,000
Pomona	Samantha Hooverson	Biology	Dr. Jayson Smith	Analyzing data regarding human visitation on rocky intertidal zones located in Laguna Beach	\$500
	Whitney Jones	Biology	Dr. Jeremy Claisse	Analysis of fish life stages (body size) on oil and gas platform depths	\$500
	Michael Joyce	Biology	Dr. Jeremy Claisse	Methods for studying <i>Hypsypops rubicundus</i> eggs and larvae in relation to ecological factors	\$500
	Skylar Windnagle	Environmental Biology	Dr. Jayson Smith	Documenting a range shift for the brown seaweed <i>Colpomenia tuberculata</i> in Southern California	\$500
Sacramento	Haley Courser	Geology	Dr. Amy Wagner	Cold water corals as recorders of intruding circumpolar deep water along the Antarctic Margin	\$500
	Amanda Croteau	Earth Science	Dr. Amy Wagner	Consequences of rising sea-level on the carbon cycle of coastal ecosystems	\$500
	Gloria Edejer	Biology	Dr. Lani Gleason	Southern California <i>Tegula</i> thermal tolerance species comparison	\$500
	Cassandra Rodriguez	Biology	Dr. Timothy Davidson	A meta-analysis on the effects of nutria as a globally invasive species to inform wildlife management of impacts to native species and ecosystems	\$500
	Bear Waymire	Biology	Dr. Ronald Coleman	Survey of breeding locations of intertidal fish	\$500
San Bernardino	Justin Matthew Baisa	Biology	Dr. Joseph Heras	Evolutionary analysis of hemoglobin genes across multiple species of rockfishes (genus: <i>Sebastes</i>)	\$2,500
San Francisco	Breana Goldman	Biology	Dr. Karen Crow	Egg production of bluebanded gobies in artificial reef environments	\$1,170
	Chris Seng	Biology	Dr. Karen Crow	Risky business: the effect of predation on goby feeding behavior	\$1,170
	Jahnvi Shaw	Biology	Dr. Karen Crow	Scrambled eggs: effects of tank enrichment on zebrafish fecundity	\$180

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San José	Nhi Ly	Biological Sciences	Dr. Maya deVries	The effects of pH on the shell thickness of marine bivalves	\$300
	Alondra Sahagun-Cabrera	Geology	Dr. Ryan Portner	Grain-size analysis of key volcanic ash marker bed from Axial Seamount, Juan de Fuca mid-ocean ridge	\$1,100
	Daisy Zuno	Biological Sciences	Dr. Maya deVries	A comparative study of jaw length and microstructures in the purple sea urchin, <i>Strongylocentrotus purpuratus</i>	\$1,100
San Luis Obispo	Ashley Adams	Marine Sciences	Dr. Nikki Adams	Developing a long-term microplastics monitoring program in the Morro Bay Estuary	\$250 (\$2,750)
	Avery Ancell	Biological Sciences	Dr. Heather Liwanag	Human disturbance and haul out of harbor seals at Avila Beach	\$250
	Sarah Bartoloni	Chemistry	Dr. Emily Bockmon	Spatial distribution of seawater carbonate chemistry and hydrodynamic controls in a low-inflow estuary	\$60
	Megan Beymer	Biological Sciences	Dr. Crow White	Virtual reality lesson plan for dive beneath the surface K-12 marine science education project	\$250
	Chrissilda Brown	Chemistry	Dr. Kevin Johnson	Assessing the impact of hypoxia and low pH conditions on the survival of Pacific oyster larvae	\$75
	Elise Fiskum	Marine Sciences	Dr. Heather Liwanag	Comparing ground surveys and aerial surveys for estimating the northern elephant seal population at Piedras Blancas	\$250
	Alice Lin	Chemistry	Dr. Shanju Zhang	Amyloid intercalated graphene oxide membranes for coastal water treatment	\$250
	Mallory Merten	Marine Sciences	Dr. Nikki Adams	Comparing the methods of counterstaining dyes in the identification of microplastics	\$250 (\$2,750)
	Nikki Moallemi	Biological Sciences	Dr. Nikki Adams	Effects of titanium dioxide-based sunscreen on sea urchin egg fertilization	\$125
	Ryan Pierson	Biological Sciences	Dr. Nikki Adams	Effects of titanium dioxide-based sunscreen on sea urchin egg fertilization	\$250
	Emma Saenger	Marine Sciences	Dr. Heather Liwanag	The effect of male northern elephant seal behavior on harem structure at the Piedras Blancas rookery	\$275

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San Marcos	Mackenzie Pylant	Biological Sciences	Dr. Elinne Becket	Taxonomic and antibiotic resistance changes to coastal microbiomes in response to rainstorm runoff	\$1,250
	Davis Reis	Environmental Studies	Dr. Christina Simokat	Escondido Creek Conservancy: fire literature review	\$700
Sonoma	Maria Amador	Biology	Dr. Brent Hughes	Resilience of Northern California kelp forests	\$1,124
	Jack Gable	Biology	Dr. Daniel Crocker	Foraging behavior and stress hormones in northern elephant seals	\$1,000
	Marisa Guzman Peralta	Biology	Dr. Brent Hughes	Nursery function of leopard sharks in Drakes Estero	\$1,124
	Allysha Meza	Biology	Dr. Richard Whitkus	Resilience of Northern California kelp forests	\$1,124