The 2018-2019 Faculty Research, Creative Activity & Scholarship (RCAS) program is an internal grant opportunity offered by the Office of Research & Sponsored Programs (ORSP). Funding is made possible through a grant from the Arthur Vining Davis Foundations that provides support for student and faculty initiated research. The Faculty RCAS provide seed funding to support faculty-initiated research, scholarship, and creative activity. Competitive grants are awarded to assist faculty in developing new lines of inquiry, which may include collecting pilot data, exploring innovative forms of creative expression, writing and publishing original scholarship, and/or developing proposals for external funding. **A total of $16,361 was awarded for the following proposals:**

Name	Department / College	Title	Amount
Dr. Nisse Goldberg	Biology & Marine Science / CAS	Red Mangrove Rhizophora Mangle Recruit Survivorship in Guana Tolomata Matanzas National Estuarine Research Reserve, NE FL	$1,384
Abstract: Persistence and expansion of Rhizophora mangle (red mangrove) populations at the northern extent of its range is a function of dispersal success and survivorship of recruits to reach adulthood. Dispersal is dependent on tidal currents, and recruitment is dependent on the combination of microhabitat conditions and biological interactions with other species. The aims of this study are to compare growth and survivorship of seedlings that are exposed to two microhabitat conditions (presence of mangrove and saltmarsh grass canopy) that vary with exposure to sunlight. The study is to be conducted at Guana Tolomata Matanzas National Estuarine Research Reserve, near St. Augustine. The results from this year-long study will provide much-needed information of the dynamics between existing saltmarsh communities and the invading red mangrove during the early stages of the mangrove's life cycle.			
Dr. William Penwell	Biology & Marine Science / CAS	Characterizing the role of the bauF gene in the human pathogen Acinetobacter baumannii	$2,497
Abstract: Acinetobacter baumannii is a bacterial pathogen that cause severe hospital-acquired infections in immunocompromised patients. One important virulence factor needed to cause a successful infection is the acinetobactin-mediated siderophore system, which functions to acquire iron under iron-limited conditions imposed by the human host. The acinetobactin-mediated system is well characterized, with the exception of how iron is released from the siderophore after acquisition. The bauF gene, which is located within the acinetobactin gene cluster, has similarity to genes encoding esterases from other siderophore-mediated systems. These esterases have been shown to be needed for the release of iron from their respective ferric-siderophore complexes. Therefore, it is hypothesized that the bauF gene encodes a putative esterase that is involved in the release of iron from a ferric-acinetobactin complex. To test this hypothesis, the bauF gene will first be disrupted by allelic exchange and the resulting mutant will be tested for a reduced growth phenotype under iron-limiting conditions. The bauF protein will also be overexpressed and purified to determine if the BauF protein is involved in releasing iron from the ferric-acinetobactin complex. If successful, this project will provide further insight into how this pathogen causes a successful infection in the hospital setting.			
Dr. Bryan Franks	Biology & Marine Science / CAS	An examination of shark species utilizing the coastal waters surrounding a Georgia Barrier Island with a spatio-temporal focus on sites of parturition and nursery use	$2,480

Abstract: Due to the importance of nursery areas to the life history of sharks and anthropogenic impacts in these systems, there is a need for research to define essential fish habitat for juvenile sharks and specifically to locate and characterize pupping grounds. A clearer understanding of the habitats that serve as nursery areas for sharks will aid in the conservation and management of sharks (Heupel et al., 2007). As shark nursery habitats are typically discrete areas of coastlines, frequently estuarine habitats, many are undergoing rapid urbanization with associated negative impacts from these activities. As these discrete nurseries are usually smaller in area with higher shark densities, degradation of the habitat can have proportionally more of a negative effect on populations. We aim to understand the potential for Little St. Simons Island, Ga., and its surrounding waters to serve as EFH for sharks in particular its role in nursery function. Understanding use of this region by a multi-species assemblage of sharks can help to protect and manage these species. With our research we aim to answer some of the questions regarding the species using this region with a specific focus on pupping areas and nursery areas, and habitat use/partitioning by these species in the southeastern U.S.			
Dr. Ashley Parcells	History / CAS	Land of Cetshwayo's Children: Ethnic Categories and State-Building under Apartheid	$2,500
Abstract: This project investigates the formation of legal categories of ethnicity in apartheid South Africa. As former colonies across Africa became independent, the apartheid state attempted to create "independent" homelands fashioned after post-colonial African states in order to justify continued racial segregation.			
Dr. Sandra Brown	Occupational Therapy / BRCHS	Investigation of Challenging Behaviors in Pediatric Occupational Therapy	$2,500
Abstract: Nationally, the prevalence of children with special needs who have emotional and behavioral problems and also attend specialized therapy is very high. Successful reduction of behaviors has been reported in the literature, however the emphasis has been on the behaviors themselves, not the functional implications of behavioral change. Additionally, the impact of these behaviors on therapy participation and goal attainment has not been extensively explored in the literature. The purpose of this research is to probe occupational therapists and therapy assistants to explore challenging behaviors demonstrated by children in therapy sessions. This will be a national, anonymous survey distributed through the occupational therapy professional membership online community, public licensure email lists, and word-of-mouth (snowball). The survey will include open- and closed-ended questions to probe and explore such areas as frequency and types of behaviors demonstrated by children, perceived impact on therapy outcomes, and current strategies implemented. Quantitative and qualitative analysis of survey responses will be conducted. These data not only will provide information on the therapeutic impact but also will be utilized for the development of a continuing-education course that will incorporate evidence-based behavioral strategies to target challenging behaviors in order to maximize therapy participation and outcomes.			
Dr. Matthew Unangst	History / CAS	Disclaiming Colonialism: Tanzania and the Two Germanys, 1964-1989	$2,500
Abstract: Historians have recently begun studying Cold War politics beyond the U.S.A. and USSR. Existing studies, with their focus on military alliances and interventions, however, ignore the ways in which the Cold War functioned for most of the world. This project analyzes West and East German aid initiatives in Tanzania for how nations used history to "fight" the Cold War and establish their legitimacy as new nations. History was not merely an academic endeavor in divided Germany and decolonizing Africa. It was fundamentally political. By claiming connections between their opponents and discredited colonialism, states could position themselves as supporters of justice and their ideologies as on the right side of history. East and West Germany rhetorically battled for legitimacy by constructing historical narratives that would justify their own vision of Germany's past and future. The two Germanys competed for the claim of which had more fully overcome Germany's past through its work in independent Tanzania. Tanzania's president, Julius Nyerere, built Tanzania's international			

legitimacy as a new nation through his own narratives of colonial exploitation and Tanzanian agency in overcoming it. Nyerere played the two Germanys against each other to earn recognition for his rule and Tanzania's position as a regional power.			
Dr. John Enz	Biology & Marina Science / CAS	Effects of Urbanization on the Flight Distance of the Bonaire Whiptail Lizard, Cnemidophorus murinus ruthveni	$2,500
Abstract: The Caribbean island of Bonaire, next to Aruba, contains a species of lizard found nowhere else on Earth (known as an endemic species), the Bonaire whiptail lizard, Cnemidophorus murinus ruthveni. Studies on this lizard are sparse, and no studies have been done on the human impacts from urbanization to its natural flight-distance behavior. Flight distance is the minimum distance animals will allow between them and a predator before they perceive a threat and flee. Alteration of natural flight distance also impacts other behaviors, which in the negative extreme can cause extinction. The goal of this project is to determine the effects of urbanization on the Bonaire whiptail lizard's flight distance by comparing the flight distances between lizard populations in the human-impacted urban areas versus the lizard populations in remote natural areas. This study will be the first of its kind on these lizards, and the results are needed in order to make informed decisions based on scientific data regarding the management of protected conservation areas versus urbanization. The results of this study could also be broadly applied to other island systems with endemic lizards.			