

## I. Abstract

Name(s):

Name of Faculty Collaborator/Mentor:

Department and Division:

Title of Project:

DV PDMRU UHHI EXLOGLQJ VSHFLHV DUH UHSODFHG E\ 3ZHH  
XQGHUZD\ WR VDYH RU UHKDELOLWDWH FRUDO FRPPXQLWLI  
JHQHWLF GLYHUVLW\ RI VWDJKRUQ FRUDO KDP SHUV VHOHF  
DQG UHORFDWLRQ 7KH JRDO RI WKLV UHVHDUFK SURMHFW  
FRUDO 7KLV NQRZOHGJH ZLOO DOORZ WKH 5RDWDQ ,QVWL  
GLIIHUHQW 3VWUDLQV RI VWDJKRUQ JURZLQJ LQ SURWHFW  
JHQRW\SHV EHVW DEOH VXUYLYH WKH KDUVK HQYLURQPHQV  
HVWDEOLVK WUDQVSODQW SRSXODWLRQV WKXV IDYRULQJ J

## II. Project Proposal

Name:

E-mail address:

Student Mailbox (UC applicants - mailing address):

Major:

Year:

(Please provide information for all students involved.)

Name of Faculty Collaborator/Mentor:

Department and Division:

E-mail address:

Title of Project:

\$FURSRUD FHUYLFRUQLV

Amount Requested:

Date:

Period of performance: (Start date) \_\_\_\_\_ (End date) \_\_\_\_\_

**Have you previously received a grant from the Student-Faculty Collaborative Research Fund?**

**What other funding sources may be available to you?**    None

**Does the research involve the use of human subjects?**    No

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**Title of Proposal:**

\$ F U R S R U D   F H U Y L F R U Q L V

**Amount Requested:**

**1. Describe the purpose of your scholarship (research or creative endeavor).**

**Coral reefs cover less than 1% of Earth's surface and provide approximately \$97 billion worth of goods and services. A key factor of the coral reefs, biodiversity, could lead to the discovery and development of drugs to cure cancer, arthritis, and many other diseases (\_\_\_\_\_**

\$ F U R S R U D   F H U Y L F R U Q L V

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**2. Describe your preparation for pursuing this project. Include both formal and informal training and relevant experiences.**

This past summer, I traveled to Roatan, Honduras, on a 2-week faculty study abroad program (BIO 3740: Applied Marine Biology) with Dr. Bricker. During those weeks, I studied the Mesoamerican reef system and its marine life. While in Roatan, I experienced the Jewel of the Caribbean firsthand during a SCUBA dive in the staghorn coral forest at Cordelia Bank. Prior to the Honduras trip, I took an oceanography and marine biology class (BIO 3730: Principles of Oceanography and Marine Biology) which introduced me to the geology and biology of coral reefs. I have also completed a bioinformatics class that enabled me to analyze and understand DNA sequences. This past summer, I was also involved in a 4-week research program that allowed me to become familiar with prep. work and how to set up and run PCRs to amplify DNA.

**3. Describe how you intend to accomplish your project, the project steps and timeline, the methods) or processes chosen and how they are appropriate for the discipline. Explain the feasibility of your activity. (Consider time and funding restraints as well as other factors.) If more than one student is involved, please describe exactly what each student will do.**

*Location*

*Recognizing that \$ FURSRUD FHUYLFRUQLV*

*Sample Analysis*

*As necessary laboratory work will be performed on the NE East Campus in the laboratory of Dr. Isj  
Dr. (Dr. Driscoll) research collaborator during his sabbatical leave.*

*DNA extraction*

*DNA will be extracted from living coral samples obtained from the Henry Doorly Co. We will use a DNA extraction kit purchased from B&B Scientific and will follow the manufacturer's recommendations when developing our own protocol.*

*PCR*

*A PCR-based method for assessing variation among genes in \$ FURSRUD FHUYLFRUQLV*



**1. Equipment**

*Provided in the laboratory of Dr. Lsj Dr. ML Plant Pathology Department. Dr. Dricar is on sadtical leave for the year 2021; academic year and is spring in Dr. Drro lachn other genomic analysis projects. All loan Dr. Drro lachn and jax access to the necessary equipment needed to complete my project.*

**2. Supplies**

*See the provided Excel spreadsheet (note ordering MLs are provided for each item). All items are priority supplies*

**B. BUDGET JUSTIFICATION**

\$(TXLSPHQW 3OHDVH LQGLFDWH WKH GHSDUWPHQW V FR RI SHUPDQHQW HTXLSPHQW RU VRIWZDUH

% 6XSSOLHV

& 7UDYHO  
5RXQG WULS IURP WKH 1:8 FDPSXV WR 2PDKD =RR P  
FRUDO VDP SOHV WKHVH PXVW EH REWDLQHG IUHVK DQ  
7UDYHO UHLPEXUVH PHQW WR DOORZ WUDYHO DW  
VHYHQ PRQWKV

' 2WKHU