SINGLE SOURCE JUSTIFICATION
(UNDER SAT)

JOINT ADMINISTRATIVE OPERATIONS
Acquisitions Operations

Pursuant to FAR subpart 13.106-1(b)(1)(i) and (ii), for purchases not exceeding the Simplified Acquisition Threshold (SAT), Contracting Officers may solicit from only one source if the circumstances deem only one source is reasonably available (e.g., urgency, exclusive licensing agreements, brand name, or industrial mobilization).

Instructions: The information in the text boxes are provided as sample language or to indicate a needed fill-in. Sample language should be removed from the final document. All text boxes require information and shall not be left blank.

1. Description of Need

The Pacific Islands Fish and Wildlife Office (PIFWO) requires specialized genetic analysis of coral specimens collected in American Samoa as part of the Deep-CRES project. This work directly supports Hypothesis H03, which seeks to characterize scleractinian coral diversity and evaluate patterns across depth and geographic gradients, including comparison of phylogenetic relationships with morphological identifications.

The original project proposal included a coral phylogenetics component to resolve species boundaries and

2. Market Research Conducted

Market research was conducted to identify laboratories capable of performing high-resolution coral phylogenomic analysis, particularly for non-model organisms such as Acroporid corals. This included:
1) Review of academic and federal laboratories specializing in coral genetics and phylogenomics
2) Evaluation of capabilities for reduced-representation genomic sequencing methods
3) Assessment of expertise in Pacific coral systems and mesophotic coral ecosystems

Findings indicate that while some institutions conduct coral genetics research, very few possess:
1) Demonstrated expertise in phylogenomic resolution of coral species boundaries

3. Other Capable Sources

Although other institutions conduct coral genetics research, no other sources were identified that can provide the required level of expertise, efficiency, and methodological capability necessary for this work.

Alternative laboratories would require:
1) Development or adaptation of sequencing protocols
2) Additional time and cost for optimization of methods
3) Potential use of more expensive approaches (e.g., whole genome sequencing or bait capture)

4. Barriers to Competition

1. Proprietary Methodology (ezRAD)

Dr. Toonen developed the ezRAD technique, which is uniquely suited for this project. It provides:
1) Genome-wide data and SNP resolution
2) Recovery of ultra-conserved elements used in coral taxonomy
3) A cost-effective alternative to whole genome sequencing

No equivalent off-the-shelf method exists that provides the same balance of cost, efficiency, and resolution.

5. Contractor's Qualifications

Dr. Robert Toonen and the Hawai‘i Institute of Marine Biology are uniquely qualified to perform this work.

Technical Expertise
1) Developer of the ezRAD sequencing method widely used for non-model organisms
2) Extensive experience in coral phylogenetics, genomics, and biodiversity analysis

6. Determination of Fair and Reasonable Cost

The proposed cost is fair and reasonable based on the following:
1. Cost Efficiency of ezRAD
The ezRAD technique significantly reduces costs compared to:
1) Whole genome sequencing
2) Bait capture phylogenomics

7. Recommendation and Certification by Program Office

Based on the above justification, I recommend this acquisition to be conducted using sole source acquisition procedures. I hereby certify that this justification is accurate and complete to the best of my knowledge and belief.

ANTHONY MONTGOMERY Digitally signed by ANTHONY MONTGOMERY
Date: 2026.04.29 09:45:00 -10'00'

Program / Project Officer

8. Contracting Officer Certification and Approval: *Under SAT*

Based on the above justification, I hereby certify and approve the use of sole source acquisition procedures under FAR Part 13 for this purchase.

CHELSEA DEVIVO Digitally signed by CHELSEA DEVIVO
Date: 2026.07.01 13:30:09 -05'00'

Contracting Officer