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14. ADDIKAUI The instrument proposal was for acquisition of a Trinla Quadrumale CC/MS (CC QQQ) to markedly increase								
throughput, method development, and current stable isotope analysis conchilities. Using the CC OOO purchased								
we have made progress in establishing sensitive approaches to assessing both metabolism and stress resistance								
using a variety of models (in vitro animal and human subjects) to address our hypotheses. The expanded								
instrumenta	tion in our lab	poratory has le	ed to new collabora	tions,	new prope	osal	submissions including 2 in review at	
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Instrumentat	ion, Triple Quad	rupole GC/MS, i	sotope analysis, metab	olism,	stress resista	ince,	resilience	
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Report Title

Final Report: Analysis of Stable Isotopes by Triple Quadrupole GC/MS (GC-QQQ) for the Determination of Metabolic Flux and Stress Resistance (Resiliency)

ABSTRACT

The instrument proposal was for acquisition of a Triple Quadrupole GC/MS (GC-QQQ) to markedly increase throughput, method development, and current stable isotope analysis capabilities. Using the GC-QQQ purchased, we have made progress in establishing sensitive approaches to assessing both metabolism and stress resistance using a variety of models (in vitro, animal, and human subjects) to address our hypotheses. The expanded instrumentation in our laboratory has led to new collaborations, new proposal submissions including 2 in review at ARO, 6 new publications, and many more in preparation/review. We now provide expanded student research training including those via HSAP/URAP mechanisms.

Enter List of papers submitted or published that acknowledge ARO support from the start of the project to the date of this printing. List the papers, including journal references, in the following categories:

(a) Papers published in peer-reviewed journals (N/A for none)

Received

TOTAL:

Number of Papers published in peer-reviewed journals:

Paper

(b) Papers published in non-peer-reviewed journals (N/A for none)

Received Paper

TOTAL:

Number of Papers published in non peer-reviewed journals:

(c) Presentations

	Non Peer-Reviewed Conference Proceeding publications (other than abstracts):
Received	Paper
TOTAL:	
Number of Non	Peer-Reviewed Conference Proceeding publications (other than abstracts):
	Peer-Reviewed Conference Proceeding publications (other than abstracts):
Received	Paper
TOTAL:	
Number of Peer	-Reviewed Conference Proceeding publications (other than abstracts):
	(d) Manuscripts
Received	Paper
TOTAL:	
Number of Man	uscripts:
	Books
Received	Book
TOTAL:	

TOTAL:

Patents Submitted

Patents Awarded

Awards

Graduate Students

NAME

PERCENT_SUPPORTED

FTE Equivalent: Total Number:

Names of Post Doctorates

<u>NAME</u>

PERCENT_SUPPORTED

FTE Equivalent: Total Number:

Names of Faculty Supported

NAME

PERCENT_SUPPORTED

FTE Equivalent: Total Number:

Names of Under Graduate students supported

NAME

PERCENT_SUPPORTED

FTE Equivalent: Total Number:

Student Metrics This section only applies to graduating undergraduates supported by this agreement in this reporting period
The number of undergraduates funded by this agreement who graduated during this period: 0.00 The number of undergraduates funded by this agreement who graduated during this period with a degree in science, mathematics, engineering, or technology fields: 0.00
The number of undergraduates funded by your agreement who graduated during this period and will continue to pursue a graduate or Ph.D. degree in science, mathematics, engineering, or technology fields: 0.00
Number of graduating undergraduates who achieved a 3.5 GPA to 4.0 (4.0 max scale): 0.00 Number of graduating undergraduates funded by a DoD funded Center of Excellence grant for Education, Research and Engineering: 0.00
The number of undergraduates funded by your agreement who graduated during this period and intend to work for the Department of Defense 0.00
The number of undergraduates funded by your agreement who graduated during this period and will receive scholarships or fellowships for further studies in science, mathematics, engineering or technology fields: 0.00

Names of Personnel receiving masters degrees

<u>NAME</u>

Total Number:

Names of personnel receiving PHDs

<u>NAME</u>

Total Number:

Names of other research staff

NAME

PERCENT_SUPPORTED

FTE Equivalent: Total Number:

Sub Contractors (DD882)

Inventions (DD882)

Scientific Progress

This grant funded the purchase of a piece of equipment that continues to play a vital role in analyses that have resulted in submission of two new proposals that are currently in some stage of consideration (proposals 70737LS, 66274LS).

Technology Transfer