OMB Number: 0690-0032 Expiration Date: 10/31/2024



## DEPARTMENT OF COMMERCE RESEARCH PERFORMANCE PROGRESS REPORT (RPPR)

For instructions, please visit

http://www.osec.doc.gov/oam/grants management/policy/documents/RPPR%01July%2018.pdf

AWARD INFORMATION	
1. Federal Agency:	2. Federal Award Number:
3. Project Title:	
4. Award Period of Performance Start Date:	5. Award Period of Performance End Date:
PRINCIPAL INVESTIGATOR/PROJECT DIRECTOR	
6. Last Name and Suffix:	7. First and Middle Name:
8. Title:	
9. Email:	10. Phone Number:
AUTHORIZING OFFICIAL	
11. Last Name and Suffix:	12. First and Middle Name:
13. Title:	
14. Email:	15. Phone Number:
REPORTING INFORMATION	
Signature of Submitting Official:	
16. Submission Date and Time Stamp:	17. Reporting Period End Date:
18. Reporting Frequency:	19. Report Type:
Annual	Not Final
Semi-Annual	Final
Quarterly	
RECIPIENT ORGANIZATION	
20. Recipient Name:	
21. Recipient Address:	
22. Recipient DUNS:	23. Recipient EIN:

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ACCOMPLISHMENTS
24. What were the major goals and objectives of this project?
25. What was accomplished under these goals?
26. What opportunities for training and professional development has the project provided?
27. How were the results disseminated to communities of interest?
28. What do you plan to do during the next reporting period to accomplish the goals and objectives?
PRODUCTS
29. Publications, conference papers, and presentations
30. Technologies or techniques
33. 135/Hologist of teeliniques
24 Inventions notant applications and/arlianness
31. Inventions, patent applications, and/or licenses
32. Other products

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PAI	RTICIPANTS & OTHER COLLABORATING ORGANIZATIONS
33.	What individuals have worked on this project?
34.	Has there been a change in the active other support of the PD/PI(s) or senior/key personnel since the last
	reporting period?
25	What other erganizations have been involved as northers?
<i>ა</i> ၁.	What other organizations have been involved as partners?
36.	Have other collaborators or contacts been involved?
	PACT What was the impact on the development of the principal discipline(s) of the project?
37.	what was the impact on the development of the principal discipline(s) of the project?
38.	What was the impact on other disciplines?
39.	What was the impact on the development of human resources?
40.	What was the impact on teaching and educational experiences?
	<b>3</b>
41.	What was the impact on physical, institutional, and information resources that form infrastructure?
40	What was the impact on technology transfer?
42.	What was the impact on technology transfer?

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43. What was the impact on society beyond science and technology?
44. What percentage of the award's budget was spent in foreign country(ies)?
CHANGES/PROBLEMS
45. Changes in approach and reasons for change
46. Actual or anticipated problems or delays and actions or plans to resolve them
47. Changes that had a significant impact on expenditures
47. Changes that had a significant impact on expenditures
48. Significant changes in use or care of human subjects, vertebrate animals, biohazards, and/or select agents
49. Change of primary performance site location from that originally proposed
49. Change of primary performance site location from that originally proposed
PROJECT OUTCOMES
PROJECT OUTCOMES  50. What were the outcomes of the award?

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## Gender: (Select all that apply) Female Male Transgender, non-binary, or another gender Prefer not to answer Do you identify with any of the following groups that the federal government, in Executive Order 13985, has identfied as underserved? Check all that apply. Members of religious minorities Lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons Persons with disabilities Persons who live in rural areas Persons otherwise adversely affected by persistent poverty or inequality No, I do not identify with any of these groups What is your race and/or ethnicity? Check all that apply. American Indian or Alaska Native Asian Black or African American Hispanic or Latino Middle Eastern or North African Native Hawaiian or Pacific Islander White **Disability Status:** Deaf or serious difficulty hearing Yes Blind or serious difficulty seeing even when wearing glasses Serious difficulty walking or climbing stairs Other serious disability related to a physical, mental, or emotional condition No Do not wish to provide

**DEMOGRAPHIC INFORMATION FOR SIGNIFICANT CONTRIBUTORS (VOLUNTARY)**