

Report Information

Award Type	Award Number	Prime DUNS	Calendar Yr/Qtr	Final Report
Grant	1R21AI083852-01	066470972	2011 / 4	No

Award Recipient Information

Recipient DUNS Number 066470972	Recipient Address 1 107 SAMFORD HALL
Recipient Account Number 219031	Recipient Address 2
Recipient Congressional District 02	Recipient City AUBURN
Parent DUNS Number 066470972	Recipient State AL
Recipient Type 2U.G6.M8.OH.VW	Recipient ZIP Code + 4 368490001
Recipient Legal Name AUBURN UNIVERSITY	Recipient Country USA
Recipient DBA Name	

Project / Award Information

Funding Agency Code 7529	Total Number of Sub Awards less than \$25,000/award 0
Awarding Agency Code 7529	Total Amount Sub Awards less than \$25,000/award 0.00
Program Source (TAS) Code 75-0900	Total Number of Sub Awards to Individuals 0
Sub Account Number for Program Source	Total Amount of Sub Awards to Individuals 0.00
CFDA Number 93.701	Total Number of Payments to Vendors less than \$25,000/award 255
Amount of Award 410905.00	Total Amount of Payments to Vendors less than \$25,000/award 80328.12
Award Date 05/29/2009	
Award Description The purpose of this project is to identify new antibiotics that can be used to treat infections by bacterial pathogens. Most antibiotics are derived from microbial species in pure cultures, but since a small proportion of microorganisms have been cultured in a laboratory there is a need to use methods such as microbial community genomics (?metagenomics?) to attain new antibiotics from natural environments. In metagenomics, the genomic analysis is applied to entire microbial communities. This project will allow the characterization of antibiotics discovered through screening metagenomic libraries, to identify those antibiotics that are best able to kill bacterial pathogens. Furthermore, this project will develop new methods (i.e., a cloning vector that can be used in different	

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bacterial hosts) that will increase the frequency of discovering new antibiotics or other drugs that can be identified from metagenomic libraries and be developed for human therapeutic application.

Project Information

Project Name or Project/ Program Title	Activity Codes (NAICS or NTEE-NPC) (up to 10)
<p>Quarterly Activities/ Project Description Evaluation of Novel Antimicrobial Agents and a Novel Shuttle Vector</p> <p>1) Each metagenomic clone was sequenced & annotated, and submissions made to GenBank database</p> <p>2) 7 isolates, and 28 metagenomic clones, have shown consistent activity against MRSA strains derived from clinical patients.</p> <p>3) LC/MS completed for some isolates and clones expressing anti-MRSA activity. Work continues on structural determination on anti-MRSA compounds, including a recently determined novel antimicrobial compound with activity against MRSA.</p> <p>4) Subcloning of some anti-MRSA clones has been accomplished and genetic analysis is ongoing</p> <p>5) In another isolate, recent genome sequencing indicated the presence of a biosynthetic pathway similar to that of the lantibiotic mersacidin, but with only 40% similarity. Biochemical studies confirm the presence of a low molecular weight peptide antibiotic produced from this isolate, with</p>	<p>Activity Code 1 B43 - NTEE</p> <p>Activity Code 2</p> <p>Activity Code 3</p> <p>Activity Code 4</p> <p>Activity Code 5</p> <p>Activity Code 6</p> <p>Activity Code 7</p> <p>Activity Code 8</p> <p>Activity Code 9</p> <p>Activity Code 10</p>

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a potentially novel structure.
 6) The bacterial culture and antibiotic extraction conditions have been evaluated for many clones/isolates
 7) Identified polyketide synthase pathways have been sequenced, annotated and deposited in GenBank
 8) Two new soil metagenomic libraries have been constructed and screened for antimicrobial activities
 9) Articles published in Gene, Soil Biology & Biochemistry, and FEMS Microbiology Ecology. Another article is in preparation.

Project Status Completed 50% or more
Total Federal Amount ARRA Funds Received/ Invoiced 379626.07
Number of Jobs 0.50
Description of Jobs Created Graduate Research Assistants
Total Federal Amount of ARRA Expenditure 383343.92
Total Federal ARRA Infrastructure Expenditure 0.00
Infrastructure Purpose and Rationale

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Infrastructure Contact

Name	Street Address 1
Email	Street Address 2
Phone	Street Address 3
Ext	City
	State
	ZIP Code + 4

Primary Place of Performance

Address 1 Department of Biological Sciences
Address 2 107 Rouse Life Sciences Building
City Auburn University
Country Code US
State AL
ZIP Code + 4 36849 - 0001
Congressional District 02

Recipient Highly Compensated Officers

Prime Recipient Indication of Reporting Applicability	No	Officer 3 Name
Officer 1 Name		Officer 3 Compensation
Officer 1 Compensation		Officer 4 Name
Officer 2 Name		Officer 4 Compensation
Officer 2 Compensation		Officer 5 Name
		Officer 5 Compensation

Report Audit Trail

Created By Cindy Selman
Date Created 01/03/2012 04:25 PM
Last Updated By Cindy Selman
Last Updated On 01/11/2012 09:26 AM

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Sub Recipient Information

Sub Recipient DUNS Number	837322494	Sub Recipient Address 1	30 COURTLAND ST STE G 74
Sub Recipient Congressional District	05	Sub Recipient Address 2	
Sub Recipient Type	A8.BZ.VW	Sub Recipient City	ATLANTA
Sub Recipient Legal Name	GEORGIA STATE UNIVERSITY RESEARCH FOUNDATION, INC.	Sub Recipient State	GA
Sub Recipient DBA Name		Sub Recipient ZIP Code + 4	303031213
		Sub Recipient Country	USA

Sub Award Information

Sub Award Number 09-BS-219031-GSU
Amount of Sub Award 86625.00
Total Sub Award Funds Disbursed 86625.00
Sub Award Date 07/29/2009

Sub Recipient Place of Performance

Address 1 30 Courtland Street
Address 2
City Atlanta
Country Code US
State GA
ZIP Code + 4 30302 - 3999
Congressional District 05

Sub Recipient Highly Compensated Officers

Prime Recipient Indication of Reporting Applicability	No	Officer 3 Name	
Officer 1 Name		Officer 3 Compensation	
Officer 1 Compensation		Officer 4 Name	
Officer 2 Name		Officer 4 Compensation	
Officer 2 Compensation		Officer 5 Name	
		Officer 5 Compensation	

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