

Report Information				
Award Type	Award Number	Prime DUNS	Calendar Year / Quarter	Final Report
Grant	1R21AI083852-01	066470972	2011 / 2	No

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

Project / Award Information	
<b>Funding Agency Code</b> 7529	<b>Total Number of Sub Awards less than \$25,000/award</b> 0
<b>Awarding Agency Code</b> 7529	<b>Total Amount Sub Awards less than \$25,000/award</b> 0.00
<b>Program Source (TAS) Code</b> 75-0900	<b>Total Number of Sub Awards to Individuals</b> 0
<b>Sub Account Number for Program Source</b>	<b>Total Amount of Sub Awards to Individuals</b> 0.00
<b>CFDA Number</b> 93.701	<b>Total Number of Payments to Vendors less than \$25,000/award</b> 240
<b>Amount of Award</b> 410905.00	<b>Total Amount of Payments to Vendors less than \$25,000/award</b> 78374.25
<b>Award Date</b> 05/29/2009	
<b>Award Description</b> 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	Quarterly Activities/ Project Description	Activity Codes (NAICS or NTEE-NPC) (up to 10)
Evaluation of Novel Antimicrobial Agents and a Novel Shuttle Vector	<p>1) Each metagenomic clone was sequenced &amp; annotated, and submissions made to GenBank database</p> <p>2) Seven isolates, and 28 metagenomic clones, have shown consistent activity against MRSA strains derived from clinical patients. LC/MS completed for some isolates with anti-MRSA activity. Work continues on structural determination on anti-MRSA compounds, including a recently determined novel antimicrobial compound with 436 mass that has activity against MRSA. 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 a potentially novel structure.</p> <p>3) The bacterial culture and antibiotic extraction conditions have been evaluated for many</p>	<p><b>Activity Code 1</b> B43 - NTEE</p> <p><b>Activity Code 2</b></p> <p><b>Activity Code 3</b></p> <p><b>Activity Code 4</b></p> <p><b>Activity Code 5</b></p> <p><b>Activity Code 6</b></p> <p><b>Activity Code 7</b></p> <p><b>Activity Code 8</b></p> <p><b>Activity Code 9</b></p> <p><b>Activity Code 10</b></p>

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clones/isolates  
 4) Identified polyketide synthase pathways have been sequenced, annotated and deposited in GenBank  
 5) Two new soil metagenomic libraries have been constructed and screened for antimicrobial activities  
 6) Articles published in Gene, Soil Biology & Biochemistry, and FEMS Microbiology Ecology

**Project Status** Completed 50% or more  
**Total Federal Amount ARRA Funds Received/ Invoiced** 300069.71  
**Number of Jobs** 0.67  
**Description of Jobs Created** Graduate Research Assistants  
**Total Federal Amount of ARRA Expenditure** 307611.69  
**Total Federal ARRA Infrastructure Expenditure** 0.00  
**Infrastructure Purpose and Rationale**

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**Infrastructure Contact**

<b>Name</b>	<b>Street Address 1</b>
<b>Email</b>	<b>Street Address 2</b>
<b>Phone</b>	<b>Street Address 3</b>
<b>Ext</b>	<b>City</b>
	<b>State</b>
	<b>ZIP Code + 4</b>

**Primary Place of Performance**

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

**Recipient Highly Compensated Officers**

<b>Prime Recipient Indication of Reporting Applicability</b>	No	<b>Officer 3 Name</b>	
<b>Officer 1 Name</b>		<b>Officer 3 Compensation</b>	
<b>Officer 1 Compensation</b>		<b>Officer 4 Name</b>	
<b>Officer 2 Name</b>		<b>Officer 4 Compensation</b>	
<b>Officer 2 Compensation</b>		<b>Officer 5 Name</b>	
		<b>Officer 5 Compensation</b>	

**Report Audit Trail**

<b>Created By</b>	Cindy Selman
<b>Date Created</b>	07/06/2011 11:06 AM
<b>Last Updated By</b>	Cindy Selman
<b>Last Updated On</b>	07/06/2011 11:06 AM

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**Sub Recipient Information**

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

**Sub Award Information**

**Sub Award Number** 09-BS-219031-GSU  
**Amount of Sub Award** 86625.00  
**Total Sub Award Funds Disbursed** 36070.50  
**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**

<b>Prime Recipient Indication of Reporting Applicability</b>	No	<b>Officer 3 Name</b>	
<b>Officer 1 Name</b>		<b>Officer 3 Compensation</b>	
<b>Officer 1 Compensation</b>		<b>Officer 4 Name</b>	
<b>Officer 2 Name</b>		<b>Officer 4 Compensation</b>	
<b>Officer 2 Compensation</b>		<b>Officer 5 Name</b>	
		<b>Officer 5 Compensation</b>	

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