Giardia is an important cause of diarrheal disease in humans and other animals. Safer and more effective therapies are needed. We propose in this research to evaluate several candidate compounds (in addition to SP 1020 - our lead compound). To date we have re-acquired isolates of Giardia and also samples of candidate drugs. We have arranged for delivery and placement of Giardia into Gerbils for propagation. We can then begin the encystment studies in vitro. As cysts become available, we can initiate the dose-finding studies in mice and then move to the Gerbil model. When these studies are complete, we will then be capable of determining whether the candidate drugs can be advanced to further (possibly pre-clinical) studies. The goal of this project is that, within one-year, a proof of
concept for the novel class of inhibitors (that affect both trophozoite growth and encystation in vitro) will be accomplished. A lead compound will be tested for efficacy in two in vivo models of Giardiasis, an initial pharmacokinetic/toxicology assessment will be performed, and a determination will be made whether the lead compound should be advanced into phase I clinical trials.

Giardia is an important cause of diarrheal disease in humans and other animals. Safer and more effective therapies are needed. Our plans are to evaluate SP 1020 (our lead compound) against trophozoites in vitro. To date we have re-acquired an isolate of Giardia and also samples of candidate drug. We have established methods for maintaining Giardia trophozoites in cell-free media.

A time extension was requested in Summer 2011, but not granted. Please consider this the final ARRA report.
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<th>Calendar Yr/Qtr</th>
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**Total Federal ARRA 0.00**

**Infrastructure Expenditure**

**Infrastructure Purpose and Rationale**
### Report Information

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### Infrastructure Contact

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<td>State</td>
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### Primary Place of Performance

- **Address 1**: Department of Pathobiology
- **Address 2**: 166 Greene Hall
- **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 1 Name**: Officer 1 Name
- **Officer 1 Compensation**: Officer 1 Compensation
- **Officer 2 Name**: Officer 2 Name
- **Officer 2 Compensation**: Officer 2 Compensation
- **Officer 3 Name**: Officer 3 Name
- **Officer 3 Compensation**: Officer 3 Compensation
- **Officer 4 Name**: Officer 4 Name
- **Officer 4 Compensation**: Officer 4 Compensation
- **Officer 5 Name**: Officer 5 Name
- **Officer 5 Compensation**: Officer 5 Compensation

### Report Audit Trail

- **Created By**: Cindy Selman
- **Date Created**: 01/03/2012 04:27 PM
- **Last Updated By**: Cindy Selman
- **Last Updated On**: 01/06/2012 03:08 PM