

Idaho Incubation Fund Program
Progress Report Form

Proposal No. 1F14-002
Name: Dr. Greg Hampikian
Name of Institution: Boise State University
Project Title: Liposome Nullomer Peptides
Reporting Period: January 1, 2014 to June 23, 2014

Information to be reported in your progress report is as follows (attach additional information as needed):

1. Summary of project accomplishments for the period just completed and plans for the coming reporting period:

- a. We have solved the problem of solubilizing the Nullomer peptides. We tried several liposome protocols, but got best results with a 1 Part Tween (detergent) to 9 parts dimethylsulfoxide (DMSO); or a 1 molar Trehalose solution.
- b. We developed two new Nullomer drugs with increased cancer killing strength (down to the 5 micromolar concentration).
- c. At the request of potential investors, we have expanded cancer testing from 5 cancer lines to 60—the National Cancer Institute’s NCI-60 panel that includes several drug-resistant human tumor cell lines.

2. Summary of budget expenditures for the period just completed (include project burn rate):

Salaries and Fringe Benefits	\$ 371.65
Operating Expenses (Supplies)	\$29,720.39
Travel	\$ 1,574.47
Total Expenses This Period	\$31,666.55

Burn Rate of 84%

3. Numbers of faculty and student participation resulting from the funding, including internships:

3 Faculty: 1 graduate student in computer science who is perusing a Master’s thesis on Nullomers, 1 computational-linguistics/computer science student using the Nullomer programs to study The Epidemiology of Memes, 1 undergraduate in computer science working to identify Nullomers common to human and retroviral sequences, 4 undergraduate researchers who had independent studies and presented their original Nullomer cancer findings at the undergraduate research symposium.

4. List patents, copyrights, plant variety protection certificates received or pending:

Through this HERC funding we have filed disclosure on 6 new anticancer compounds, which BSU will add to its patent application on the 198 Nullomer peptides, and expanded the numbers of cancers that Nullomers can kill, including

drug-resistant ovarian, lung and colon cancer.

5. List technology licenses signed and start-up businesses created:

We have begun using CompGenomics (a company established by the PI) as a local business entity, in order to attract and interact with investors. Licenses or other agreements on the Nullomer peptides developed with HERC funds will be negotiated and approved by BSU.

6. Status of private/industry partnerships (include enough information to judge level of engagement):

- a. We have begun discussions with Pelion Venture Partners in Salt Lake City, a major technology venture firm interested in the Nullomer Technology.
- b. Jeremy Brehmer of Middlebrook and Brehmer has visited the lab, and met with the PI over three days in Boise. The investors he represents are also interested in developing the Nullomers.
- c. We continue to partner with WestVet on animal models for future testing.
- d. Several other business entities have expressed interest in the Nullomer technology.

7. Any other pertinent information that will indicate to the council that the project is meeting satisfactory progress.

We have started testing the Nullomer peptides as antimicrobials using a panel of 10 test organisms represent a diverse group of pathogenic genera.