

ACS Interdisciplinary Opportunities
Interim Reporting
For Mini-Grants Awarded April 2006 and October 2006

Name(s) of Person(s) Submitting Report Min-Ken Liao and Sarah Worth

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Institution Furman University, Biology Department (Liao) and Philosophy Department (Worth)

Title of Project Development of an interdisciplinary First Year Seminar Course on "Disease and Culture—Why You are a Walking Petri Dish"

Date(s) of Project January 2007 – January 2008

Amount Awarded \$8486.50

1. Original goals and objectives

We proposed to develop and teach an interdisciplinary First Year Seminar course on Disease and Culture. The primary objectives of this interdisciplinary course are (1) to use the study of significant diseases to arouse students' curiosity and interest in the scientific bases and cultural, historical, and societal impacts of diseases, (2) to enhance students' understanding and appreciation of the research process, and (3) to use established scientific knowledge as background to critically and ethically evaluate preconceptions and assumptions.

The goal of this summer is to be each other's student. Dr. Worth will spend time in Dr. Liao's laboratory in summer 2007 in Dr. Liao's research laboratory learning microbiology/molecular biology techniques and helping pre-run the kits to be used for the course. Both Drs. Worth and Liao will select books and films and review them over the summer. Dr. Liao will engage herself in extended humanistic and ethical dialogues with Dr. Worth during the summer and throughout the year.

2. Any changes made in goals/objectives to date

Our original plan was for Dr. Worth to work in Dr. Liao's research laboratory for 2.5 weeks. However, Dr. Liao has two inexperienced student researchers to supervise this summer and Dr. Worth has scholarly activities of her disciplines demanding her attention. Hence, it is difficult to commit 2.5 weeks to each other fully. What we have

done is to schedule the laboratory exercises for just a few hours each day instead of two full weeks. While we waited for the reactions to take place, we discussed books and exchanged ideas. This approach has worked better than we had anticipated. We will continue to do so for the whole summer. This way we will get all of our experimentation done as we are able to read and view the films more slowly.

3. Activities underway and/or completed to date

Laboratory exercises:

Six laboratory exercise kits have been purchased and four have been tried. The kits are:

“pGLO bacterial transformation kit” from Bio-Rad

“What is an epidemic and how does an infection spread?” from Edvotek

“How does a doctor test for AIDS?” from Edvotek

“In search of kissing disease” from Edvotek

“Anthrax-biology of bacterial sporulation” from Edvotek

“Identification and characterization of simulated human infectious bacteria” from Edvotek

Most of these kits are designed for AP biology course/first year introductory biology course so they are at the appropriate level for first year college students. However, not all the first year students have solid biology background or are interested in becoming biology majors so we need to decide which kits are truly first year student friendly. We believe we will be able to do so by the end of the summer.

Books:

We have purchased and are reading four relevant books for the summer: “Survival of the sickest: a medical maverick discovers why we need disease” by Moalem, “Why we get sick: the new science of Darwinian medicine” by Neese, “My own country: a doctor’s story” by Verghese, and “The magic mountain” by Mann. We hope to read more books and decide which are most appropriate for first year students. We have also checked out a number of films from the Furman library and will be working on augmenting Furman’s collection of infectious disease related films (documentary and feature films).

Course development:

We have selected seven diseases to discuss in our class: tuberculosis, AIDS, plague, anthrax, syphilis, and malaria. We have developed several ideas for writing assignments relevant to the diseases.

4. Any snags or unanticipated delays encountered

We anticipate no delays.

5. Approved budget

\$8486.50

6. Financial Accounting from receipt of funds through June 30, 2007, showing amounts spent to date and for what it has been spent.

Please see attached document (in pdf format.)

7. Any other information you think will be helpful to include or that has affected progress.

We participated in a workshop for teachers interested in developing First Year Seminar courses with a writing emphasis (FYW). In the seminar we worked separately and together on generating objectives and goals for the course, we developed a few specific assignments that will be appropriate for the course, we generated a prototype syllabus for the course, we had a course website developed for us by the Furman librarians, and we have a much better idea through talking to each other and the other seminar participants what this class might actually turn out to be.