Print Form

DEPARTMENT OF MATHEMATICS

VIGRE Funding Report

(due 30 days after semester of support)

Semester/Summer and Year: Spring 2007

Name: Mark Robertson-Tessi

List the graduate courses you have taken this semester (including independent studies), your grades, and the instructors:

Course	Title	Grade	Instructor
Math 697B	Applied Mathematics Lab	A	Tabor
Math 596A	Biomath Seminar	A	Watkins
Math 900	Independent Research	S	Goriely

List the title, date and location of any talks you have given, either here or elsewhere:

Various talks on poroelasticity and mixture theory in RUMMBA seminar, a research group that includes Drs. Tabor and Goriely as well as four other graduate students.

If you are working on your dissertation, include a one paragraph description of your research progress. If you have not yet begun dissertation research, describe your progress toward finding a dissertation topic and advisor and beginning that research.

This semester I worked with Dr. Goriely and Dr. El-Kareh of physiology on incorporating chemotherapeutic treatment and immune system response to tumor growth. The research focused on understanding the key immune system elements that would apply to a model, and incorporating appropriate parameters to the model. The model we are creating uses regulatory T-cells, which has not been mathematically modeled in any published literature as far as we can tell. Regulatory T-cells appear to be key in the tumor's ability to avoid detection by the immune system, and thus may be an important avenue of treatment.

List publications, if any.

None this semester.

Check all activities you completed during the funded period:

Academics:

- [x] Independent Study
- [ ] Oral Comprehensive Exam
- [ ] Commence Thesis Research
- [ ] Conference attendance
- [ ] Conference participation
- [ ] Complete PhD

Professional development and outreach:

- [ ] AP Calculus Visit
- [ ] High School Workshops
- [x] Undergraduate Research Project
- [ ] Undergraduate Research Seminar
- [ ] Super TA
- [ ] Mentoring junior graduate students for the qualifying exams
- [ ] RTG (help organize)
- [x] Research Seminar (help organize)

- [ ] Other (please specify)

Attach a brief statment about your academic progress and professional development during the period of support.