

Summer Undergraduate Research Fellowship Program (SURF) at Dartmouth

Waves!

Volume 1, Number 1

September, 2003

Welcome to the first issue of the **Waves!** We've decided to celebrate this year's phenomenal program by inaugurating a semi-annual newsletter that will keep past and present participants informed through text and photos of the progress of their colleagues in the program. Several new additions to this year's schedule and curriculum made summer 2003 our best yet, and we're excited to tell you about them.

Waves! will be published on September 20 and May 20. If you have news about yourself and what you've been doing since you were here, please email it to either of us by the first of September or May for inclusion in that month's issue.

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Co-Editors, **Waves!**

2003 Dartmouth summer research program participants pose in downtown Hanover after dinner with Gary Hutchins, Assistant Dean of Graduate Studies; Kerry Landers, Assistant Dean of Graduate Student Affairs; and Ben Parsons, 2003 Program Activities Coordinator.



From left to right: (front row) Andrea Arias, Nel Venzon, Maaza Mahzun, Donald Jolly, Gladys Mouton, Erica Leung. (back row) Parsons, Landers, Hutchins, and Ricky Fok.

2003 Program Participants

This year the summer research program in molecular and cellular biology grew to six students. Their support came from a variety of funding sources: The National Institutes of Health, The National Science Foundation, The Leadership Alliance, the The E.E. Just Program for Students in the Sciences, Kaplan, the Thayer School of Engineering at Dartmouth College, and the Departments of Biochemistry and of Microbiology & Immunology at Dartmouth Medical School. In addition, the Master of Arts in Liberal Studies Program at Dartmouth provided support for two students in the Departments of English and Sociology. Our heartfelt thanks to all of these organizations for allowing us to provide such an excellent range of experiences and networking opportunities.

Here is the roster of the 2003 participants, their undergraduate institutions, and their Dartmouth mentors:

Andrea Arias, University of Pennsylvania	Misagh Parsa, Sociology
John Delacruz, Dartmouth College	George Langford, Biological Sciences
Ricky Fok, Northwestern University	William Green, Microbiology & Immunology
Donald Jolly, Dartmouth College	William Cook, English
Erica Leung, McMasters University	Ed Usherwood, Microbiology & Immunology
Maaza Mehzun, Dartmouth College	Tillman Gerngross, Thayer School of Engineering
Gladys Mouton, Grambling State University	Lloyd Kasper, Microbiology & Immunology
Nel Venzon, University of Hawaii at Manoa	George O'Toole, Microbiology & Immunology

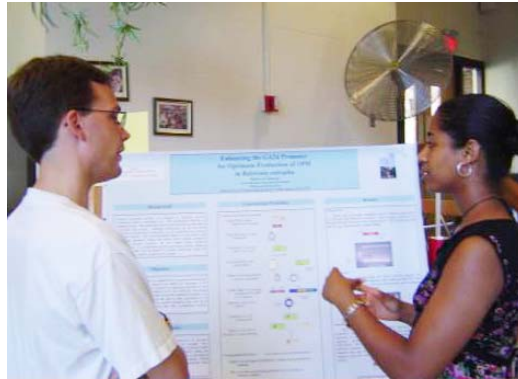
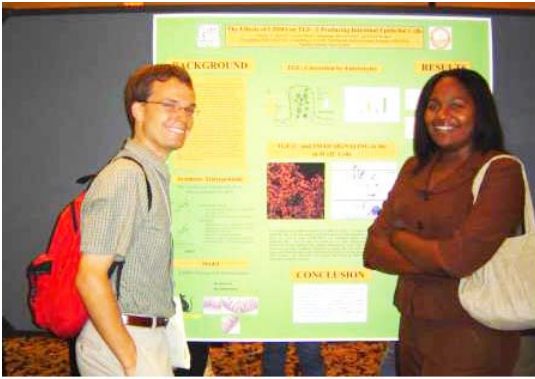
Tried It, Liked It, and Plan to Do It Again!

This year we asked mentoring departments to contribute a little extra in financial support, and we were able to add some new components to the SURF experience.

GRE Prep Class: Thanks to a very generous discount from Kaplan, we were able to provide a custom-scheduled GRE prep class to the students. We're happy to report that the average increase in GRE scores from the diagnostic test taken at the first class meeting to the final practice test taken after the course ended was 198 points per student. For the three students who elected to sit for the GRE test at nearby Lebanon College, their official scores were an average of 250 points higher than their diagnostic test scores. Very impressive!

Summer Student Researcher Fair: This event provided us a wonderful way not only to celebrate the successes of our SURF students, but also to bring together other research programs on campus for one positive display of the excellent research done by undergraduate researchers this summer. Ten posters were displayed and viewed by a group of about 50 faculty, associates, and students. Here is a list of the presenters and their projects:

John Delacruz	Classifying the Interactions Between Kinesin and Myosin-V in Squid Axoplasm
Jennifer N. Jaggi	Managed Care and the Medical Profession: A Study of the Attitudes of Medical Students and Residents
Gladys Mouton	The Effects of CDDO on TGF-b Producing Intestinal Epithelial Cells
Ricky Fok	Characterization of Classical vs Alternative Viral Reading Frames in Retrovirus Induced Immunodeficiency
Maaza Mehzun	Enhancement of the GA24 Promoter
Nel Venzon	A Role for Swarming in <i>P. aeruginosa</i> Biofilm Development
Erica Leung	Synergistic effects of TLR9 and CD40 stimulation induces protective immune responses against gamma herpesvirus infection
Maria Smith	Effects of Cross-Fostering on Development and Behavior of C47BL/6 and BALB/C Mice
Andrea Arias	A Comparative Democratic Study: The Effectiveness of Democracies to Imagine, Enact, and Enforce Human Rights Laws
Donald Jolly	Reading Delicate Subjects in the Spaces Left: Gender, Sexuality, and Eroticism in African-American Slave



MCB graduate student Niles Donegan visits the posters of Gladys Mouton (left) and Maaza Mehzun (right)

Tour of Marine Biological Laboratory in Woods Hole, MA: Because John Delacruz's project in the Langford lab was situated at the MBL, the group took an overnight trip to spend some time with John before taking the tour of the facilities at Woods Hole. We got to see John remove the giant axon from a squid and pre-

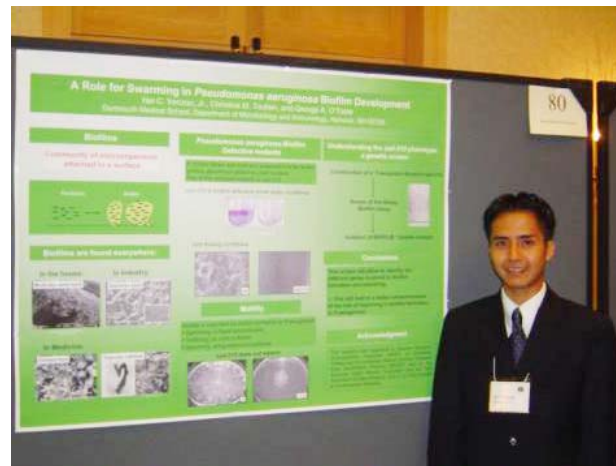
pare it and the orbital lobes for testing. In the opening video presentation for the MBL official tour, we saw some slides of microtubules and vesicles from the Langford work, and it was fun to impress the tour guide with our knowledge of vesicle transport in microtubules and actin filaments. It was a truly excellent trip!



The "touch tank" in the Marine Resource Room is home to a small lobster, several sea urchins, a star fish, a hermit crab, other small sea creatures, and a squid that succeeded several times in jumping out of the tank onto the floor, much to the surprise to visitors.

Leadership Alliance Symposium 2003: There's no bonding like the bonding that occurs when nine people spend 20+ hours driving from Hanover, NH, to Chantilly, VA, and back over the course of a weekend. Seven students presented their work at the conference and met with other researchers from all over the country. We are very proud of what they have achieved and how well they represented our program.

Nel Venzon and his poster in Virginia



News from the 2002 Group

Armando Villalta reports that he is doing very well and this past year has obtained a position at UCSF as a lab tech in which he has learned a great deal in terms of lab techniques and scientific thinking. After applying to various graduate programs, he has chosen UCLA for fall admission. "I'm really excited and on my way!"

Faith Okpotor presented this past November at the Annual Biomedical Sciences Research Conference for Minority Students in New Orleans the work she did last summer [in the Dartmouth REU Program]. She says, "Then, I took immunology last semester and I guess I am hooked." She is now doing another internship in a Transplantation Immunology lab at Stanford working on a project that will end up being part of

her Senior thesis. She plans to return to Hampshire in the spring, write and graduate, after which she expects to take a year off and then apply to MD/PhD programs.

Jeanine Traag revisited Dartmouth in June to be the guest of honor at the first group dinner of the 2003 SURF season. She talked with the newly-arrived student researchers about her experience here last year and accompanied them on a trip to the local Farmer's Market. Jeanine finished her degree requirements at St. Edward's University this past August and plans to work for a year while she applies to graduate programs. We're hoping that she will apply to Dartmouth so we can keep her in Hanover longer than just one term.

2004 SURF Applications

The selection process for next summer's SURF program is beginning. The deadline for submitting completed application packets is February 1, 2004. The URL for downloading forms and information is <http://www.dartmouth.edu/~surf>. Printed packets will be available also at the upcoming ABRCMS and SACNAS meetings in October. If you know of anyone who would be interested in our program, please tell them about these sources or suggest that they email George O'Toole (georgo@dartmouth.edu).

Want to Stay in Touch?

We will be setting up a networking page on the SURF web site where past and present participants may find each other's email and US postal addresses so that they may keep in touch both scientifically and personally. We will not list your information without your specific approval. If you wish to be included on this page, please email George O'Toole to confirm your permission to list your email and/or US postal address.

**Summer Undergraduate Research Fellowship
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REMINDERS:

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<http://www.dartmouth.edu/~surf>
Application Deadline
February 1, 2004**