Dear WISE Women,

Now in my second year as the Executive Director of WISE, I think back to what an exciting first year I had. It started off with national recognition for our program, as WISE was nominated to appear in a national directory of model programs that encourage the participation of women in science, math, and engineering. In October at our annual Anne Sayre Event, we hosted a fascinating talk by Noble Prize Winner Sir Aaron Klug on the groundbreaking work of Rosalind Franklin on the structure of DNA. In the spring, students had the opportunity to hear about research going on right here at Stony Brook with talks by WISE Faculty Amanda Stent of Computer Science and Clare Grey of Chemistry.

Also in the spring, I had the pleasure of getting to know our WISE sophomores in my Social Dimensions of Science course. What an impressive group, and what a pleasure to teach! WISE women are high-achieving, motivated women. It was no surprise to me when at the end of the semester, nine of the twenty-two Stony Brook Undergraduate Achievement Awards in Expanded Learning went to WISE students this year, as well as many other prestigious awards and scholarships.

In Fall 2003 I took the plunge and taught a section of SBU 101 Becoming a Scientist, for the first time. It gave me the opportunity to get to know some of our new students very well, and get a better understanding of what it is to be a Stony Brook Student. We had some interesting events this past Fall, including a panel discussion of women engineers from Symbol Technologies. This spring, I look forward to seeing you all at the annual Anne Sayre Award Dinner.

Robyn Stein DeLuca, Ph.D.
Executive Director of WISE

Diverse Summer Experiences of Wise Women in 2003

One mission of the WISE Program is to let students know about all of the opportunities to gain experiences outside the classroom through internships, volunteering, and research. During the first WISE meeting of the fall semester, upperclasswomen shared their summer experiences with first year students.

Diana David was funded by NASA to do research at Los Alamos National Laboratory. She worked on the detection of transients, such as gamma ray bursts, on the RAPTOR project. By the end of the summer, she discovered five eclipsing binary systems previously unknown to mankind.

Julia Kolmakova did an internship at Harvard Medical School. The program was called Summer Honors Undergraduate Research Program (SHURP for short). She worked in the Pathology Department under the guidance of Dr. J.C. Aster and Dr. French. Her research project focused on the study of a novel fusion protein, NUT1, involved in epithelial transformation in humans. The program also involved a free trip to the Leadership Alliance Conference in Virginia, where she met other undergrads interested in medical research.

Christina Arisio spent 2 months participating in an REU (Research Experience for Undergraduates) program at the University of Notre Dame. She worked for the Environmental Molecular Science Institute (EMSI), ad her research involved adsorption of uranium onto Bacillus subtilis.

Madeline Galac did molecular research on phytoplankton at Woods Hole Oceanographic Institution with an REU internship through BUMP (Boston University Marine Program) and MBL (Marine Biological Laboratory). This involved living on board a research vessel and collecting daily samples of phytoplankton despite the adverse weather conditions.

Karen Lin did an internship for Citigroup with the Equity Research Application Support team where she was given materials to learn Visual Basic Applications language to implement Microsoft Excel macros. She also tested a variety of in-house software under a staging environment before it was globally deployed throughout the firm. On top of the internship, Karen also took summer courses at the local city college. She enjoyed both working and studying at the same time.

WISE students Wendy Qi, Michelle Tse and Liliya Simakhaya were also at Citigroup this summer doing internships as well.
WISE Alumnae Part I: An Interview with Kealey Dias

1. Would you give us a short description about yourself and what you do in your field?
   I recently graduated last May with a double major in mathematics and applied math and statistics. I have admission to Penn State for next fall, but I have recently become interested in getting my master's at Denmark's Technological University concentrating in Dynamical Systems. That's why I am now organizing a move to Denmark.

2. As a woman scientist/engineer, do you encounter a "glass ceiling" as you climb up the ladder to obtain higher education in science fields?
   Well, no. I can't say that I have. In fact, I think that being a woman in mathematics has actually helped me. People take notice more quickly when a woman excels in a subject such as math and so you are singled out as being special. The faculty at Stony Brook always treated me with respect. I can say, though, that I have encountered a few (very few) male peers that were quite condescending—this didn't bother me much, since I eventually realized that they knew less than I did and were only trying to protect their fragile egos.

3. Did the WISE program influence your plans after college?
   The WISE program helped me make connections with intelligent and insightful people at Stony Brook who, through my interactions with them, altered my perception of myself and of the world, ultimately influencing what I choose to do.

4. What advice do you have for current WISE students?
   Keep an open mind and go with what holds your interest. Just because you have always envisioned yourself as a scientist doesn't mean that you are obligated to fulfill this vision that your past self created. The worst thing a scientist could do is only follow tried-and-true paths—outstanding scientists are willing to take chances and to use tactics that are out of the ordinary, and sometimes they discover something extraordinary. I believe that the same applies to one's career and life.

WISE Events Spring 2003*

**Ann Sayer Award Dinner**
Monday, March 22nd 2004, 6 - 9 p.m.
University Club

**Academic Advising**
Wednesday, April 14th, 2004,
12:40 - 2:00 p.m.
Wang Center

**Medical School and Beyond**
Wednesday, April 28th, 6 - 8 p.m.

**WISE Experience Day**
Monday, April 19th, 2003 7 - 9 pm
Wang Center Rm. 401

*Required for all first-year WISE students
**Volunteers needed. Please contact the WISE office

WISE Members Scholarships and Awards

Congratulations to the following WISE members for being selected for the following special scholarships and awards!

- **Diana David**, a junior CS major and mentor for WISE students, was awarded the Barry M. Goldwater Scholarship.
- **Sara Goldgraben** received the Sam and Rose Berezin Scholarship.
- **Karen Lin** received the Samuel and Connie Frankino scholarship.
- **Rosana Lee** received the Yetta Brandwine Perker Scholarship.
- **Christine Rosario** received a scholarship from CEAS and NY Lotto.
- **Kimberly Wong** received the Symbol Technologies scholarship and the Frances & Velio Marsocci scholarship.
- **Lilya Simkhayaeva** and **Yana Kleyner** received Diamond Awards, which are awarded to undergraduate women who excel in science and technology by the Women in Technology Forum of the Long Island Technology and Software Network.
- **Natalia Gutierrez** received the MARC fellowship from Long Island Group Advancing Science Education.
- **Vanessa Capanzano** received the Symbol Technologies scholarship and the Dayton T. Brown scholarship.
Many Thanks to Peter Kahn by Diane Abraham

From the minute you meet Professor Kahn, you know you’re in for an interesting time. He speaks about everything, not just science, with enthusiasm and conviction. It’s easy to see why he has been a favorite among students taking physics for so long. Prof. Kahn retired in the spring of 2003, having taught at SB for 41 years in the Physics department. Of his long career, he said teaching was the most fulfilling part. Seeing students learn and grow as individuals and as scientists has been a very rewarding experience. He believes the key to being a good teacher is showing students that you care about them. He did this by learning his students’ names and interacting with them as much as possible. In fact, Prof. Kahn has been a dedicated mentor, providing encouragement and support for many students over the years, including WISE students.

When asked what advice he would give to women in science, he said that it’s important for students to learn not to doubt themselves and not to take failures personally. Failure is a natural part of the learning process and shouldn’t be feared. In addition, he emphasized the importance of having mentors and role models to look up to. As a child, he became interested in science through reading. Books provided him with his early scientific role models as well as something to “chew on”. To become a scientist is to develop a way of thinking about and questioning the world around us. Therefore, he believes it’s important to spend time thinking about the age old questions posed by the earliest scientists as well as the current issues of science today. He also encourages the use of imagination when thinking about scientific questions.

Prof. Kahn’s love of science is contagious. During our interview, I think he asked me more questions than I asked him, in an attempt to show me the beauty and intrigue of Physics. It gave me a glimpse of how inspiring he must be to his students. We would like to extend many thanks to Prof. Kahn for his long involvement in WISE. His dedication to teaching and his recognition of the needs of women science students is greatly appreciated by all.

Changes at the WISE office by Diane Abraham

Every organization has someone who holds it together, who makes sure things happen on time and in the proper way. For the last 4 years in the WISE Program, that person has been Dolores Bilges. Some of you may have noticed that her familiar face hasn’t been around the office as much as usual. While the staff here at WISE are sad to lose D. as a full-time co-worker, we are also happy to announce that she has decided to continue on with her academic career. As of this fall, D. has reduced her status at WISE to part-time, since she has enrolled as a full time student at Dowling College majoring in English. It’s been a difficult adjustment for the rest of us, and that is why we would like to take this opportunity to recognize her past and ongoing contributions to WISE.

Over the years, D. has constantly sought to improve the WISE program and to insure that everything runs smoothly – not an easy task. When students or faculty members have had questions about WISE, D. has always made sure that they’ve gotten their answers. Whenever there have been opportunities to support WISE students or the WISE program – award ceremonies, events, lectures, etc. – D has been there. Despite all the paper work that she effortlessly handles, students have never been just an ID number to D. In short, D. has always gone above and beyond what has been expected of her in an effort to advance the goals of the WISE program. With her reduced hours we have all come to appreciate how much we have relied on her technical expertise and knowledge, not to mention her sense of humor.

Good luck at school D.!
WISE Alumnae Part II: An Interview with Diana Murray

1. Would you give us a short description about yourself and what you do in your field?
   I obtained my B.S. and Ph.D. degrees in physics from Stony Brook. I did my thesis work with Prof. Peter Kahn in the area of computational physics. After two postdoc positions, I became an asst. professor in the Dept. of Microbiology and Immunology at Weill Medical College of Cornell University in Manhattan. Currently my lab uses computational approaches to examine the molecular and physical bases of protein-membrane interactions that contribute to the localization of proteins in cells. We are dissecting two processes: the flow of information through the calcium-phospholipid second messenger system and the assembly of new retroviral particles in infected cells. We have found that simple physical factors are manifested as sequence and structural patterns that coordinate the membrane localization of proteins involved in these processes. Our calculations have been used to describe a wide range of biological phenomena.

2. How did the WISE program help you in making decisions regarding your career?
   While many of the issues related to being a scientist are not gender-specific, there are a number of personal challenges that I believe most women share. Being part of WISE has introduced me to different models for organizing my life and career that have been very helpful. After graduating, I was uncertain as to whether to pursue an advanced degree. Prof. Kahn was most instrumental in guiding me in this direction, and the WISE program served to reinforce my decision.

3. What advice do you have for current WISE students?
   In the post-genomic era, biology is full of exciting opportunities for physicists, mathematicians, computer scientists and engineers. More than ever, biology is a data-rich science, and new innovations are needed at all levels, from leveraging DNA and protein sequence information to understanding how biological macromolecules interact to describing biochemical pathways. I encourage WISE students to explore some of the new fields currently developing in biology, e.g. bioinformatics and systems biology, and to consider graduate or postdoctoral work in this field.