**Director’s Message** by Carrie-Ann Miller

Welcome WISE students, faculty, staff and corporate sponsors to the fall semester of 2011. Our new students arrived on August 26 and the first day of class was canceled due to Hurricane Irene! This was certainly a memorable way to start the academic year.

WISE has 50 new students this year. We have a very diverse group of engineering majors including: Biomedical Engineering, Chemical and Molecular Engineering, Mechanical Engineering, Computer Science, and Engineering Science. The average GPA of the new class is 96 and the average math score on their SAT’s was 703!

Very impressive! Most importantly the class is full of positive energy and already very engaged in WISE and Stony Brook. They were welcomed by 156 upper division WISE students.

We are pleased to welcome back our returning instructors of WISE-ITS 101, Introduction to Stony Brook. Dr. Harvard Lyman, Mary Bernero and Doreen Aveni. In addition to her other roles, Giuseppina Licata is working on her masters in Public Health, and is also instructing a section of 101. WISE is extremely grateful for all of the time and energy they put into making this class meaningful. In addition, Sharon Pavulaan, is teaching our WISE 242 Class, Social Dimension of Science and Engineering.

I continue to strive to collaborate with as many community and university partners as are willing. We worked very hard last year with administrators in the Office of the Vice President for Brookhaven National Laboratory Affairs (OVPBNLA) and Brookhaven National Laboratory to strengthen and formalize our relationship. We established several new scholarships and research opportunities at BNL. This spring, for the second time, all first year WISE students will perform one of their rotations for WISE 187 at BNL. This is very exciting as it will expose the students to the wealth of research being done out there. It will give graduate students an opportunity to teach while allowing the faculty and researchers to experience first-hand how great our students are! In addition several students were chosen to do research over this past summer through Science Undergraduate Laboratory Internships (SULI) administered through the Office of Educational Programs at BNL.

WISE has been invited by the Director of the Honors College to attend their round table. WISE has been invited by the Director of the Honors College to attend their round table. I would like to remind everyone that my door is always open for you! I am available for appointments for one-on-one advising as needed, and am glad to accommodate walk-ins! If you find yourself in Engineering and would like to stop by for any reason, I welcome the chance to answer your questions. Even if you do not have a problem or need advice, come by to say hello!

In addition to one-on-one advising, I also plan large academic advising events where we get key faculty together to answer all of your academic questions.

Academic Advising is being held on November 9, 2011 in the Wang Center. Come for expert advice about majors and classes. Planning worksheets and class schedules will be provided. Lunch will be served!
Research Experiences of WISE Women (continued from page 4)

contains the shiga toxin, and the second was a validation study of molecular serotyping of Salmonella. This was my third summer working in the USDA and my second working in Outbreaks, and I plan on returning to work there next summer.

Solange Abbate, (Alum)
Here’s what I’ve been doing since graduating in 2007: I have been working as a contractor for the past year and a half for Procter & Gamble in Cincinnati, OH. I have been doing some research into human demal skin equivalents. My research is in the global biotech division and has the potential to be implemented by the beauty division to develop better products. This past Memorial Day weekend, I married my boyfriend of 6 years at a beautiful location in Cincinnati. We have some beautiful River view shots of us with our bridal party. I am currently taking my first Master’s level course in Biochemistry. I plan on using this to transition to the PhD program in the near future.

Sara Goldgraben (Alum) I graduated from Stony Brook in 2006. I recently graduated medical school in May 2011 from New York Medical College with my M.D. I’m currently a preliminary intern for a year at Flushing Hospital, NY. I will then start a 4 year residency program for my specialty in Radiation Oncology at Wayne State in Michigan starting July 2012.

WISE: The Right Choice
by Jennifer Muscarello (Alumna)

WISE or Honors College? This is the decision I was faced with before entering Stony Brook in the fall of 2007. I was unfamiliar with WISE and a junior in the program was kind enough to contact me, convince me of its benefits, and even bring me as her guest to the first ever WISE banquet. I was sold. I didn’t realize at the time that the benefits I would receive from this program would reach beyond the stretch of my imagination.

I still remember the first time I called the WISE office in a desperate plea for help. It was a month into my first semester. I had a math exam that night and the location was nowhere on the Stony Brook map. Naturally, I called the WISE office where Doreen was there to answer my call. I explained how I needed to be in the Old English Building in an hour, and remember the panic I felt when she responded that there was no such thing. She told me that it was actually in Old Engineering and explained to me that the next time I see ENG, I should be aware that it stands for engineering and not English.

As silly as it felt afterwards, I knew that I could always go to the WISE office for any reason. And I did. When I explained to them how I was interested in veterinary medicine, and that I wanted an internship at Atlantis Marine World (a very nontraditional choice), they set me up with contacts at a neighboring facility, and I was interning at the aquarium by the summer. The WISE office was a place where I could have scheduling issues resolved within minutes. WISE events taught me the importance of networking, and helped me in obtaining a faculty mentor who later became a key asset throughout my college career. Carrie-Ann was always there to listen to me vent about the frustrations of veterinary applications, and encourage me to keep at it. When I got interviews at schools, WISE immediately set me up with a mock interview. At the veterinary interview, I could see my interviewer nodding in approval as I explained how being a WISE mentor expanded my leadership skills more than any other personal experience.

I remember how excited I was when I could tell Carrie-Ann and Doreen each time I got accepted into a veterinary school. I knew that they were just as excited as me and could understand what my success meant to me. The lessons and experiences that this program has given me over the past four years is something I will take with me when I attend the top veterinary school in the country, at Cornell University in the fall of 2011.

WISE High School Program by Sharon Pavulam

Mentor Spotlight on Steven Leigh, Department of Biomedical Engineering (BME)

I met Steve Leigh when he was a sophomore student at Comack High School (NY), where I was working as an assistant in the science research program. After Steve graduated from high school, Steve came to Stony Brook University where he completed his undergraduate degree in Biomedical Engineering and Applied Mathematics and Statistics (AMS). Over those years, he became a regular staple in our Physics WISE office and became the first unofficial WISE GUY.

Steve has decided to continue his graduate career at Stony Brook in the biomedical engineering department and specializes in biomedical optics. He works with Professor Jonathan Liu whom he initially met at the annual BME Research day, which is held every August on campus.

Steve has participated in various WISE activities over the years, but this past spring he took on a mentoring assignment with the assistance of his lab mates. WISE high school juniors from the Shorham-Wading River School district learned basic lab techniques for testing novel contrast agents that would be used during surgery for tumor removal. Novel contrast agents have the potential to improve image contrast which can help surgeons decide on a tissue’s disease status before it is removed from the body. This interactive educational experience helped to build on Steve’s interest in tutoring and teaching while offering local high school students access to a university laboratory, part of the goal of our high school program.

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TechPREP by Pina Licata

Last summer TechPREP wrapped up its third year, and graduated its first cohort! We are very sad to see our first group go, but very happy to see how much they have learned and matured!

We are very happy to announce that this year TechPREP will not only be moving into its fourth year, but it will be growing! TechPREP has received expanded funding from the Motorola Solutions Foundation. This year in addition to having the TechPREP program, we are happy to offer the new STEM Tech program!

STEM Tech is a collaborative project which will be implemented in four school districts across Suffolk County. One will be Brentwood and one will be Longwood in order to continue serving our TechPREP population. Another area will be Commack, this was born out of our collaboration with the Girl Scouts of Suffolk County. We will host a STEM Tech club in conjunction with the Girl Scouts at their Commack Center. The fourth location we are targeting is the Middle Country Public Library; this will target the Selden and Centerport school districts. STEM Tech clubs will be implemented with the guidance of a WISE mentor, as well as an industry personnel from the Connect To Tech organization. The girls in the clubs will be presented with the task to choose an environmental problem in their community. They will then have to design a solution to this problem. They will need to research, plan out, and present their solution. At the end of the school year, the clubs will present their solution to the environmental problem they choose at a capstone event.

Paul Siegel, Co-Director of TechPREP and I wrote and received Motorola Solutions Foundation grant. We are very excited to plan and implement our new high school program called STEM Tech. STEM Tech is designed to continue the pathway for girls interested in STEM (Science - Technology- Engineering-Math) careers and bridge the gap between TechPREP (our middle school program) and the High School WISE program that begins in 10th grade. We are partnering with the Suffolk County Girls Scouts, the Society of Women Engineers, the Long Island Regional Service Learning Network, ConnectTo Tech and the Department of Technology and Society to start STEM Tech, a service learning program that explores issues on Long Island related to the environment. We are grateful for the support and opportunities WISE receives from the College of Engineering and Applied Sciences, the College of Arts and Sciences, the Office of the Provost and the School of Marine and Atmospheric Sciences.

We are proud to say we now serve girls from 6th grade through college. This year we are hiring a total of 24 college WISE mentors: 10 mentors were hired to be Junior Mentors. They work very hard to help our first year WISE students adjust to college life. 10 mentors were hired for the TechPREP program. These mentors are called Sisters in Science, Technology, Engineering and Research (SISTER Mentors). Four mentors were hired to help with the STEM Tech.

We are also fortunate to welcome back Kristine Horvat, a WISE graduate as our Coordinator of WISE 187 and special events. Natalie Grey returned to coordinate our Junior Mentor Program. We have a new social work intern, Stephanie Reed, who is working as our STEM Tech Assistant Coordinator as well as making herself available to counsel WISE students. Giuseppina Licata has returned in a new role… as our Coordinator of STEM Tech and TechPREP. We are in the process of hiring an Assistant Coordinator for TechPREP as well. All of these mentoring opportunities give WISE students the chance to gain valuable leadership experience, use the knowledge that they acquire in the classroom in real life settings and earn some funds to help ease any financial hardships they might have.

The Student Leadership Council is already working on the Banquet. The date of which will be April 26, 2012! Mark your calendar.

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series. Many of these lectures will be of interest to our students. We are very appreciative. It is always fruitful to get together with the other scholars and faculty on campus.

The students, along with WISE staff and faculty continue to meet for lunch once a month with the WISE Staff and Faculty. We plan to continue our open discussion forum. We met this past month and it was wonderful to have the upper division students there to answer the first year students’ questions. It’s another way for us to get feedback and to be sure that the programs we are offering are interesting to the students.

The Friends of WISE, the WISE Working Group, Motorola Solutions, the Goddard Foundation, Pall Corporation, ITT and Northrop Grumman have all given support for the WISE Program in the form of scholarships or programmatic funding.

It is through the implementation of the STEM Tech clubs and the generosity of the Motorola Solutions Foundation that we plan to keep our TechPREP graduates engaged, as well as engage other local High School girls in Science, Technology, Engineering, and Math fields!
Research Experiences of WISE Women

Edwine P. Lauture (Class of 2008) This summer I helped a Dr. Dianna Padilla, a professor in the Ecology and Evolution Department at Stony Brook University with her research on gastropod phenotypic plasticity. Currently I am working on an independent project in her lab along with another lab intern examining respiration rates of these marine snails. I intend on presenting a poster at a scientific conference in Florida next year. I am also helping a PhD candidate in the Ecology and Evolution Department, Niamh B O’Hara with research on the field mustard Brassica rapa and its genomic responses to fungal infection and environmental stress. I intend on presenting a side project conjoined to her research at the URECA conference in 2012. Both research experiences are amazing opportunities and have given me insight to the real world of science and exploration, making me more appreciative of the path I am about to take into the future as a scientist.

Briana Brown (Class of 2014) This past summer I interned at Sikorsky Aircraft, a helicopter company based in Stratford, CT. I was tasked to develop the architecture to enable thorough investigation and analysis for internal and external product failures with the goal of zero post-sales failures by 2015. I also implemented database enhancements and completed data analysis of failure trends for serious product failures from 2008-2011. This internship allowed me to not only understand the functionalities of a company but also that every business is team oriented. As a result, I am now a better team leader and returning to Stony Brook as secretary of Stony Brook Motorsports and a Commuter Assistant on behalf of Commuter Student Services. I feel more prepared to lead. In addition, I was also offered a position in Professor Lei Zuo’s Mechanical Engineering undergraduate research team studying energy harvesting and incorporating our advances into the aviation field. Our team has just begun researching and it is very exciting. I also received the Construction Advancement Institute Scholarship and the Office of the Vice President for Brookhaven National Laboratory Affairs Scholarship.

Farha Islam (Class of 2008) This summer I had the opportunity to conduct research with Dr. Molly Frame in Biomedical Engineering Department. I monitored a phenomena called preconditioning; during which blood supply is redistributed to protect regions from lethal ischemia. Preconditioning is induced during progressive injuries such as burn and also during ischemic attacks such as myocardial infarctions. Aside from researching, I took summer classes and volunteered in the Stony Brook University Medical Center Blood Bank.

Lourdes Bermeo (Class of 2008) This summer I had the chance of being a mentor and mentor coordinator for the Stony Brook University CSTEP program. I also served as a TA for their research class.

Hilda Ding, MD (Alum) I graduated in 2003. So it’s been quite a while. I have since graduated from medical school at Stony Brook in 2009 and am completing my residency in pediatrics this coming June at University of South Carolina. After graduation, I will be starting a pediatric hematology oncology fellowship at Rainbow Babies and Children’s Hospital at Case Western Reserve in Cleveland. School and residency has been quite hectic. I truly had a wonderful time with WISE throughout college, especially as a mentor.

Rose Slupski (Alum) I am attending graduate school in the Neuroscience program at University of Michigan, Ann Arbor.

Anita Cheruvansky (Alum) I’m finally done with medical school graduated class of 2011 from SUNY Downstate. I started my residency training in Internal Medicine, July 2011 at Robert Wood Johnson University Hospital at Case Western Reserve in Cleveland. School and residency has been quite hectic. I truly had a wonderful time with WISE throughout college, especially as a mentor.

Gayatri Setia (Class of 2010) This summer I worked in the Outbreaks Section Eastern Laboratory (OSEL) of the Food Safety and Inspection Services (FSIS) in the United States Department of Agriculture (USDA). I assisted in two verification studies: the first was a study of non-O157 serotypes of E. Coli that...