



Elizabethtown College

Biology Newsletter

Fall 2007

**Dedication of the Masters Center for Science, Mathematics
and Engineering slated for October 20th**



The Biology Department moved into the Lyet Wing for Biological Sciences in the new Masters Center for Science, Mathematics and Engineering in May and spent the summer getting laboratories ready for the start of the fall semester. Although further renovations are still underway in other parts of the Center and will continue for the next year, the Lyet Wing is almost complete and the students are taking advantage of all the new facility has to offer. The new laboratories offer our students and faculty new state of the art technology, including wireless connections throughout the building.

From the Chair...



Dr. Thomas E. Murray

Greetings Biology Alumni!

Another exciting year has begun on campus. We have moved into the Lyet Wing for Biological Sciences – the most recently completed phase of the Masters Center for Science Mathematics and Engineering. It is a tremendous improvement from our home in Esbenshade Hall, and for those who may remember, very different from the early days in Gibble Science Hall. Our new building features nine teaching labs and ten student faculty research labs. We now also have a constant temperature room, microscopy room, animal care facility, and an aquarium room. All of the labs are designed for safe and modern biological instruction, including wireless computer access and state of the art audio-visual technology. I hope that many of you can come by at Homecoming to see our new home.

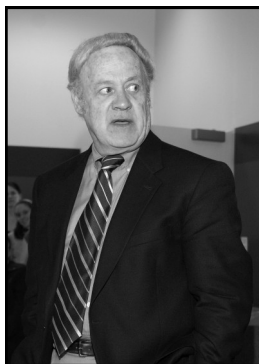
There have been other changes too. Last spring, Drs. Jim Dively and Frank Polanowski retired after a combined 64 years of service to the College. We are grateful to them both, and wish them well as they begin their retirements. I know that many of you were also grateful for their expectations of you in the classroom and their support and mentoring outside the classroom. Although Jim and Frank will be missed, we are fortunate to have been able to fill their positions with two new faculty. Dr. Jodi Yorty and Dr. Khristy Thompson are both beginning tenure track appointments this fall, and we are pleased to have them join us.

With over 70 incoming students, the Biology department now has more than 200 majors, and as you can see, those students are pursuing a wide variety of exciting opportunities both inside and outside the classroom. We are proud of their efforts and pleased that students like Angela Mitchell '08 are getting the national recognition they deserve.

As always, your feedback and support are vital to the Department. I'd like to thank those of you who contributed to make our new building possible. Others of you have supported our students directly with shadowing and internship opportunities, and support for our student research endowment. It is that support that makes our job as faculty members much easier. I look forward to seeing many of you this October 20th.

TE Murray

A word of thanks....



Dr. Polanowski bids a farewell to students and alumni

On April 20, 2007, The Biology Department celebrated the careers of two outstanding faculty members, Dr. James L. Dively and Dr. Frank Polanowski who retired after the spring semester. In 1973, Jim began his career at Elizabethtown College, and he was joined by Frank in 1977. For over thirty years, the two have engaged well over 9,000 students in their classes and laboratories. Many more students were influenced by them through their counsel and advice. Through excellent advising and their work on the Health Professions Advisory Committee, they set in motion the careers of countless physicians, dentists, veterinarians and other health professionals. Although they are unique individuals, there are things they shared during their time together at Elizabethtown. Both are dedicated to academic rigor, academic excellence and high expectations for students in their classrooms.

As our alumni attest, both asked much and received the best from their students. Both have been good colleagues, good campus citizens, and strong advocates for the Biology programs and our students. Never satisfied with the status quo, both always looked for ways to strengthen the Biology Department. Their service and leadership to the Biology Department, the College, and generations of our students is most gratefully appreciated.



Dr. Dively gives us all a thumbs up as he says goodbye

We Welcome New Faculty



Dr. Jodi Yorty

Jodi Yorty joins the Biology Department as an Assistant Professor. She earned her bachelor's degree in biochemistry from Lebanon Valley College and her doctorate in the integrative bioscience program in Immunobiology from The Pennsylvania State University College of Medicine in Hershey, Pa. Her graduate research on maternal stress is published in a variety of scholarly journals and she was invited presenter at the National Institute of Allergy and Infectious Diseases. Dr. Yorty was postdoctoral scholar in the Department of Microbiology and Immunology at the Pennsylvania State University College of Medicine where she researched cancer immunotherapy. Last year, Dr. Yorty was a visiting assistant professor in the department of biology and now joins us as a tenure-track faculty member.

Khristy Thompson joins the Biology Department as an Assistant Professor. Most recently, Dr. Thompson was a research associate in the Department of Genetics and Complex Diseases at Harvard School of Public Health. She also has done research as a postdoctoral scholar at The Pennsylvania State University College of Medicine and as a research assistant at Penn State's main campus. She has been an invited presenter at a variety of colleges and universities and at national and international conferences. Her research – which has been published in a variety of scholarly publications – has been recognized with honors and awards. She earned a bachelor's degree in biology from Saint Vincent's College and her doctorate in neuroscience from The Pennsylvania State University College of Medicine. She is a member of the American Society for Nutrition, the Society for Neuroscience, and the Society of Toxicology.



Dr. Khristy Thompson

Congratulations!



Angela M. Mitchell, '08

We are proud to announce that **Angela M. Mitchell, '08** has been selected as a 2007 Barry M. Goldwater Scholar. Angela is from Corning, New York and is a senior Biotechnology major. The Barry M. Goldwater Scholarship and Excellence in Education Program was established by Congress in 1986 to honor Senator Barry M. Goldwater, who served his country for 56 years as a soldier and statesman, including 30 years of service in the U.S. Senate. The purpose of the Foundation is to provide a continuing source of highly qualified scientists, mathematicians, and engineers by awarding scholarships to college students who intend to pursue careers in these fields. The 2007 Goldwater Scholars were selected on the basis of academic merit from a field of 1,110 mathematics, science, and engineering students who were nominated by the faculties of colleges and universities nationwide.

RESEARCH



Kate Heberlein '07, Angela Mitchell '08 and Rose Garr '07 present at the PAS Annual Meeting

2007 PAS Presentations

Eleven biology students presented the results of their research projects at the 2007 Annual Meeting of the Pennsylvania Academy of Science that was held in Pittsburgh, Pa. this past spring.

Summer 2007 Student Research Activity

Seven students and alumni performed research this summer with Elizabethtown faculty at Elizabethtown College. Their research was gratefully supported by the Lyet Research Endowment, the National Science Foundation (Dr. Bridge's grant), National Institutes of Health (Dr. Cavender's grant) and the continuing generosity of Dr. E. Jane Valas. The students share their experiences below.

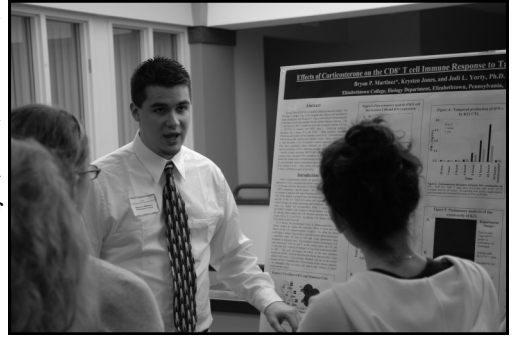
Michele Saul '08 and Wilmirlandy Besson '08—Over the summer, these students worked in Dr. Bridge's lab for 10 weeks creating a vector containing a vascular endothelial growth factor (VEGF) gene and a green fluorescent protein gene. They studied the effects of VEGF in the simple invertebrate *Hydra* by studying its effects on and regulation of other genes in the organism. Wilmirlandy focused on the effects of VEGF on *Hydra* matrix metalloproteinase, while Michele focused on the effects of VEGF on a receptor for VEGF. Throughout the summer they looked at the areas of expression of all the genes and worked on creating this vector so that *Hydra* can be injected with it and the effects studied.

Alex Theofiles, '07— While I graduated in May of 2007, I remained at Elizabethtown for the summer to continue work on a project with Dr. Bridge. I spent 10 weeks attempting to characterize the regulation in *Hydra* of a transcription factor called FoxO, which has been implicated in the regulation of aging. Because *Hydra* do not appear to age, they may be an interesting system in which to study the activity of this protein. During this project, I created *Hydra* which expressed a form of this protein that was tagged with EGFP, a fluorescent molecule that allowed us to track the localization of the fusion protein, and thus suggest the extent of its activity within cells of the animal. While working at Elizabethtown for the summer I applied and was accepted to the National Institutes of Health Intramural Research Training Award Program, which allows recent college graduates to spend one to three years in the resource-rich environment of NIH, doing biomedical research. There, my lab's focus is the mechanism by which Anthrax bacteria cause disease. One of my current projects is centered on the interaction of anthrax bacteria and immune cells.

Sara Deysher '09, Megan Gowens '06, Stacey Lehman '09, Angela Mitchell '08—Participated in research on the Simian T antigen oncoprotein with Dr. Cavender. The overall goal of all the research was to determine what regions of T antigen are necessary to transactivate the ribosomal promoter. T antigen is a viral oncoprotein that transforms cells in culture by binding to the host's regulatory proteins and altering their activity. Stacey's project specifically focused on making continuous cell lines with either the rat ribosomal promoter or a temperature sensitive T antigen mutant. Angela's research involved removing T antigen, or portions thereof from cell lines and determining the effects of this on their growth. All of the students learned techniques of bacterial transformation, restriction endonuclease digestion, agarose gel electrophoresis, mammalian cell culture, DNA transfection and luciferase assay. They will be continuing their research this semester.

Elizabethtown Rho Lambda Chapter Beta Beta Beta hosts Northeast District 2 Regional Convention

Elizabethtown College Rho Lambda chapter of the Beta Beta Beta Biological Honor Society hosted the Northeast District 2 Regional Convention on March 24, 2007. The Regional Convention is a place where students may present their completed or ongoing research in either poster or oral presentation formats. There were 54 presentations. In addition to Elizabethtown students, presenters from other schools in attendance included The College of New Jersey, College of Saint Elizabeth, Drew University, Lincoln University, McDaniel College, Monmouth University, Moravian College, Mount St. Mary's University, Wagner University, Washington College, Widener University and York College. The Keynote Speaker was Dr. Bernard C. Courtney, Scientific Director for the National Biodefense Analysis and Countermeasures Center (NBACC).



Bryon Martinez, '08 defends his research to convention attendees

Student Summer Experiences

Many of our students spend the summer in research laboratories, pursuing internships, gaining experience “on the job” and volunteering in biology-related fields. Here are some personal accounts of what our students learn and experience from these opportunities. If you have openings for students, please let us know.

Ariana Tan '08, I am currently a senior Environmental Science major. This previous summer I went back home to Lima- Peru, where I had the wonderful opportunity to intern at two institutions alternately for a period of 10 weeks. One of them was the International Potato Center, one of the 15 research centers of the Consultative Group on International and Agricultural Research (CGIAR), where I interned 3 days a week. There I carried out some practical training on laboratory work at the Germplasm Enhancement and Crop Improvement Division, under the supervision of Dr. Merideth Bonierbale. The laboratory work of everyday at this Division involved working with Simple Sequence Repeat (SSR) molecular markers to find out isolated sequences flanking the SSR from potato species in study. Also at the International Potato Center I had the opportunity to learn about some important International Conventions in charge of designing Environmental policies, with Dr. Enrique Chujoy. The two remaining days of the week I interned at one of the entities of the Department of Health of Peru. This entity is called DIGESA by its acronym in Spanish, which can be translated into “the General Direction of Environmental Protection.” This institution provides the legal frame for protecting human health and the environment in my country. There I acquired invaluable experience on environmental issues such as the importance of basic sanity of our waters, our air, food, and measures to prevent and deal with insects-transmitted diseases. The overall experience at both places served to apply concepts learned in college and gave me a clearer view of my career.



Ariana Tan '08 in the laboratory

Student Summer Experiences continued...

Laura Sheridan '08—This summer, I was an Emergency Medical Research Intern at North Shore University Hospital on Long Island, NY. The summer was spent rotating positions as a Manager, Observer, and Patient Advocate in different ER areas; for me, this was primarily in the waiting room. Studies are being conducted in order to decide if Patient Advocates are a necessity to the comfort of patients and organization of the hectic emergency rooms nationally. I also helped with studies in Smoking Cessation. The organization as a whole worked on studies ranging from sepsis to overall hospital statistics in the New York area. The experience was invaluable and very rewarding. It gave me greater insight into a working hospital environment where I was able to watch MD's and DO's at the most critical moments.

Rebecca Day '08—This summer, I had an internship with the PA Department of Environmental Protection in Harrisburg. I worked with the lead ban program, traveling across Pennsylvania and checking retail stores for compliance with the lead ban act. A final report of this year's lead ban surveillance activity will be made available to the public on the DEP's website, www.depweb.state.pa.us.

Kristen Zamietra '09— This summer I worked in Dr. Robert Levenson's lab at the Penn State College of Medicine in Hershey. I worked closely with one of the graduate students on a side project of his which involved making mutants of the dopamine receptor (D2) to see if the mutations had any effect on where the receptor was trafficked to in the cell, whether it be the plasma membrane or the internal organelle membranes. The trafficking of this receptor is thought to have implications in schizophrenia. Work on the project will be picked up by a graduate student rotating in the lab. While I was in the lab, I learned many basic molecular biology research techniques which can be applied elsewhere during my career.

Sarah Campbell '09—This summer, as an intern with Pennsylvania's Department of Environmental Protection, I got an inside look of what the black fly suppression program is like in our state. Black flies are considered to be a nuisance to humans; in order to make life outdoors a little more comfortable, DEP runs the world's largest black fly program. As a member of a five person team (including the program director, a seasonal biologist and two other interns), I spent my days traveling through Huntingdon, Mifflin, Juniata, Perry and Cumberland Counties to collect either larvae samples or adult samples. I worked in many different rivers and creeks collecting the larvae and went to many different parks and recreational areas to collect adults. My samples were then returned to Harrisburg where they were identified and monitored. Based on the type of black flies in the samples, DEP would then schedule sprays on the rivers and creeks as they deemed necessary.

Jasmine Myers '08—I had the wonderful opportunity this summer to intern at the Penn State College of Medicine in nearby Hershey in Dr. M. Judith Tevethia's Microbiology laboratory. As part of over 25 years of ongoing research, I worked closely with SV40 Tag, a tumor virus protein. I performed the following assays on varying cell lines: immunoprecipitation and western assay to determine the presence of the varying protein constructs, soft agar assays to determine anchorage dependence, and cell growth assays to determine the immortality of varying clones. Additionally, I performed DNA isolation to extract the DNA from bacterial cells with Tag constructs, DNA restriction enzyme digests to determine if the desired DNA was in fact isolated, and PCR to amplify particular genes within the DNA.

Stephanie Triner '09—During this past summer, I was a student intern at Nazareth Hospital in Philadelphia, PA. I worked in the Radiology Department where I helped the doctors and technicians perform MRIs. In addition to the hospital, I shadowed Dr. Emerita Gueson at her Women's Health Inc. practice in Philadelphia, PA. I also volunteered at Immaculate Mary Home in Philadelphia, PA. My experiences this summer were very interesting and I learned a great deal from them.

Study Abroad

Laura Quigley '09. This summer I spent four weeks in South Caicos Island, British West Indies at the School for Field Studies. While there I studied Marine Protected Areas (MPAs) by taking a rigorous class as well as conducting field research. The research included laying transect lines in the ocean and counting different types of fish, sea urchins, and coral cover inside and outside MPAs to determine the effectiveness of the MPA in question. As well as learning a lot about different aspects of marine biology, I also experienced a different culture than my own. I had a great experience and thoroughly enjoyed my time in South Caicos.

Lillian Schemadovits-Norris '08—When I told everyone that I was going to spend 3-4 months living and studying in the Australian rainforest, I was mostly met with looks of confusion and exclamations of “Australia has a rainforest?” and “you’re crazy”. I however was extremely excited and could not wait for this unique experience. Through the School for Field Studies I lived, ate, breathed, and completely devoted myself to the endangered Australian rainforest on the Atherton Tablelands in Queensland, Australia from January to May 2007.

My family became the other 15 students from schools all over the US, my 3 professors who lived onsite, the center director, our Scottish groundskeeper, and our beloved onsite cook. My home became the Center for Rainforest Studies quietly nestled in the Wet Tropics World Heritage Area, over 500 hectares (oh, that metric system) of protected rainforest. My pets became the friendly neighborhood bandicoot, ‘Cooter’, the 4 meter carpet python, ‘Monty’, the giant huntsman spiders, the deadly small-eyed snakes, the cute pademelons, and the countless rainforest birds that woke everyone up on cue promptly at 6:04 am every morning.

Most of my nights were spent collecting data in the heavily fragmented rainforest with nothing but my headlamp and a tape measurer. The majority of my time during the day was spent studying, roaming the rainforest onsite, or out in the field where we all learned hands-on how the microclimate of a rainforest functions, what threatens it, and what we can do to help it survive.

Experiences like the one I had are hard to fully explain to those who were not there. Everything from meeting the Aboriginal elders to doing field work in the rainforest for 13 hours a day to being deathly afraid of a lethal plant known as the Stinging Tree to being wet and muddy for 3 months and permanently smelling like deet. There were times when I thought that what I was doing was insane and too difficult for me. Then there were times when I would look up at the Southern Cross constellation, only visible in the southern hemisphere, and fully comprehend how wonderful, positive, and life-changing the experience really was. My semester in Australia gave me more than I ever thought or expected it to, and as a result I now know the importance of carbon sequestration, the dietary requirements of arboreal folivores, how to identify over 50 rainforest tree species. Most importantly however, I had a unique opportunity to immerse myself in an environment and culture that is foreign to most of the world’s population and to gain hands-on experience in the field of ecology, of which I love so much.



Aboriginal Elder, Doug Stewart, tells a group overlooking a rainforest valley how his tribe respected the rainforest and lived off the land.



Rebecca with a Chelonia Mydas (green sea turtle) caught while doing research

My semester culminated in the completion of a research project exploring the relationship between *Chelonia mydas* sea turtles and their associated barnacle, *Chelonibia testudinaria*.

Rebecca Day '08—I had the amazing opportunity to spend spring semester of 2007 studying with the School for Field Studies in Puerto San Carlos, Mexico. Eighteen students from across the county met for the first time in this small fishing community, and together we studied and traveled across the Baja peninsula. It was an amazing semester, and I learned more about the ecosystem and culture in which I lived than I had ever expected.

Melissa Jones '09—This summer I had the amazing opportunity to participate in the School for Field Studies first ever five week, dual country study abroad program. I was able to spend two and a half weeks each in Australia and New Zealand learning about the natural resource management techniques of each country. In addition to learning about the flora and fauna of each country, we also observed the socio-economic impacts that humans have on the environment and environmental policies. I had so many incredible experiences while I was there including spotlighting in NZ forests and OZ rainforests, snorkeling in the Great Barrier Reef, and visiting the Daintree Rainforest. We also had the opportunity to meet and live with a Maori family for 2 days while in New Zealand. I cannot imagine a better way to have spent my summer!



Melissa holding a Koala at the Cairns Tropical Zoo in Cairns, Australia

Student Club News

MEDICUS is excited as always for this upcoming school year. We are making plans for many activities. The Juvenile Diabetes Research Foundation appreciated our help at last year's 5K walk, and has asked us back to help again this year. The Child Life Department at Hershey Medical Center always enjoys us coming in to clean the toy room, and of course students enjoy a trip back to childhood by playing with the toys as much as we clean. The Ronald McDonald House breakfast for Into the Streets is always a pleasure, and we will continue that tradition this year. Unfortunately our "Hair-A-Thon" had some issues last year, but we are hoping to make it work this year. Our participation in this past summer's Think BIG camp was greatly beloved by the kids, so we are always looking for new participants and support for the camp. Between speakers from medical schools, volunteering opportunities, and regular schoolwork Medicus is going to have a busy and very productive year. We are excited for visiting alumni at Homecoming as well as our newest members in the First Year class. Feel free to email us at medicus@etown.edu to be kept up to date!

BIOLOGY CLUB The Biology Club is a student run organization focusing on the biological sciences. This year Biology Club will continue with past years efforts in wetland and stream restoration. The club will also assist in the planning of events both enjoyable and educational for students and faculty to enjoy including a club trip, movie nights, and partnering with Chemistry Club for an Earth Day activity. The club will continue to provide community service opportunities and relaxing activities throughout the year.

TRI BETA The Elizabethtown Chapter of $\beta\beta\beta$, Rho Lambda, was founded in 1996 as a local chapter of the national biological honor's society. Rho Lambda's members are those biology students who excel at their work and are eager to participate in the department through tutoring, research, or other service activities. Last year we successfully hosted the Northeast Region 2 Convention and look forward to attending this year's event. This year we will have tutoring for both major's and non-major's general biology courses and will host a speaker on a biology related topic. Questions regarding Tri-beta may be directed to RhoLambda@etown.edu.

Medicus Co-Hosts Fifth Annual Think B.I.G. Summer Camp

This summer Medicus held its fifth annual science and business camp, Think B.I.G. (Believing, Inspiring, Guiding), in conjunction with SIFE (Students In Free Enterprise). The camp was held for third through fifth grade children from inner city elementary schools in Lancaster and Harrisburg. Six students from Elizabethtown College's biology department volunteered this summer to help teach science lessons for each day of the camp: Matthew Barr, Jessica Besecker, Bryon Martinez, Allison Rahtes, Anthony Rizzardi, and Michele Saul. The elementary students would have science lessons the first half of the



Tony Rizzardi, '08 catching some specimens in Lake Placida

day and then business lessons the second. During that week, students learned about gravity and how to make egg drop devices on physics day, and about polymers and how to make "goo" on chemistry day. On biology day, they learned about anatomy by studying fetal pigs. They even learned how to use microscopes to examine plankton caught from the College's Lake Placida on ecology day, while the fifth and final day of the week was used for review before graduation in the afternoon. The camp is designed to give inner city children the chance to explore the fields of science and business while getting them interested in the opportunities college has to offer by hosting the camp here at Elizabethtown College.



Matt Barr, '10 helps students focus the microscope to identify types of plankton

A Special Thank You

*to the Biology
Students and faculty
who contributed their
summer research,
work, volunteering,
and internship
experiences for the
Newsletter*

Newsletter Editors

Janice Davis
Tom Murray

Biology Faculty and Staff

Helen Bartlett
Diane Bridge
Michelle Bucks
Jane Cavender
Jonathon Coren
Janice Davis
Ron Laughlin
Tom Murray
Jessica Petko
Khristy Thompson
Debra Wohl
Nicole Woll
Jodi Yorty

How to Contact Us:

Biology Department
One Alpha Drive
Elizabethtown, PA 17022
Phone: (717) 361-1389
FAX: (717) 361-1243
Email: biology@etown.edu
Web: www.etown.edu/biology

Biology, Chemistry & Biochemistry Research Presentations and Alumni Reunion

The Annual Biology & Chemistry Research Symposium and Alumni Reunion took place on Friday, April 20, 2007. The following biology students made presentations: Valerie Bawell, Robert Burke, Rosemarie Garr, Krysten Jones, Katherine Heberlein, Joseph Hines, Christina Hurst, Bryon Martinez, Angela Mitchell, Curtis Nolt, Yasunori Nagahama, Alexander Theofiles, Amy Valkovec and Emily Ward. This annual event gives students the opportunity to showcase their research and interact with alumni. *Please mark your calendars to join us for this year's symposium on April 22nd.* More information will be mailed about this event during the spring semester.

Send us your news:

If you have something significant going on in your personal or professional life that you would like to share with other Alumni, we would love to hear from you. Please send us your brief message, and we will try to include them in the next newsletter as space allows. You can reach us at biology@etown.edu or through snail mail at the address listed below left. Please indicate if you want your message included in the next newsletter. We look forward to hearing from you!

2007 Graduates

Twenty-four students received Bachelor of Science degrees from the Biology Department this past May. Fifteen in Bio-premed, four in Biotechnology, three in Bio-allied health and two in Biology. Among those who graduated, two graduated with the high distinction of Summa Cum Laude, four Magna Cum Laude and seven Cum Laude. Three students graduated through the Elizabethtown College Honors program and three graduated with Biology Department Honors. Among those who graduated approximately 19 students will continue their education this year and have been accepted at the following colleges and universities: Georgetown University School of Medicine, Pennsylvania College of Osteopathic Medicine, Edward Via Virginia College of Osteopathic Medicine, Pennsylvania State University College of Medicine, University of Virginia, Jefferson University, University of New England College of Osteopathic Medicine, State University of New York Upstate Medical University, New England College of Optometry, and the University of Miami. Students pursuing additional study have enrolled in programs for Medicine (MD) (DO) (PhD), Physical Therapy, Secondary Education and Optometry. Those seeking employment have been employed by the Department of Agriculture, Sanofi-Pasteur, the National Institutes of Health, Pennsylvania State University College of Medicine, and Teach for America. We congratulate our 2007 graduates and wish them well in their career and academic pursuits.



Elizabethtown College

DEPARTMENT OF BIOLOGY
ONE ALPHA DRIVE
ELIZABETHTOWN, PA 17022-2298

2007 Alumni Award Presentation



Dr. Albert Granger, '83

The *Dr. Charles S. Farver-Apgar and Dr. Bessie D. Apgar Biology Alumni Award* will be presented to the 2007 recipient **Dr. Albert Granger** at Homecoming on October 20th. Dr. Granger earned his Bachelor of Science Degree at Elizabethtown in 1983. He received a Doctorate of Dental Surgery at Howard University College of Dentistry in 1987. Dr. Granger completed his postgraduate training at Harlem Hospital/Sydenham N.F.C.C. where he served as Chief Resident from 1988-89. At Columbia University School of Dental and Oral Surgery, he earned his Certificate in Endodontics in 1993. In 2007 Dr. Granger is participating in the Medical College of Georgia's Implant Maxi Course. Dr. Granger is the owner and managing dentist of the Granger Endodontic Group that includes six full-time endodontists. Dr. Granger has teaching affiliations with Harlem Hospital Center and the Columbia University School of Dental and Oral Surgery. He has served as Director of Endodontics at the Harlem Hospital Center since 1993. At the Columbia University School of Dental and Oral Surgery, Dr. Granger has served as Assistant Clinical Professor of Endodontics since 1993. He has received numerous honors and awards throughout his professional career—Award to Chief Resident for Dedication and Service to the

Hospital and Community, 1989, Harlem Hospital; Award for Excellence in Oral Surgery, Department of Oral Surgery, 1989, Harlem Hospital. Dr. Granger served as City Councilman in his hometown of Glen Cove, NY from 1994 through 2005 and is a member of many professional and civic organizations including the Leadership Council of Elizabethtown College. He has just recently been asked to join the Board of Directors of the North Shore/Long Island Jewish Health System, the 3rd largest non-profit hospital system in the country.

We are looking forward to Dr. Granger's presentation on October 20th!
