

The Reading Frame

Official newsletter of the Department of Biological Sciences
York College of Pennsylvania



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Biology Welcomes Increasing Number of New Students

We are delighted to welcome our newest members of the Department of Biological Sciences to York College!

Last Fall (2004), 72 new majors joined our program. This, in addition to increased enrollment in allied health areas, resulted in a 30% increase in total departmental enrollment, our highest since 1998!

This exciting trend parallels growing national interest in biological sciences, biochemistry, and biotechnology. According to one source, twice as many freshman are now indicating an interest in these fields in comparison with students in the late 1980's.

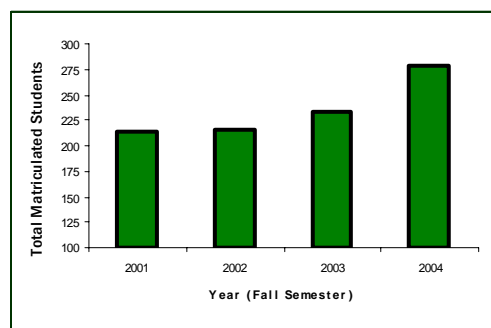
In addition, freshman interest in allied health careers, such as pharmacy, nuclear medicine (see page 7), and respiratory care, are also on the rise.

With this growth comes an increasing demand for our courses and the need to plan for future Departmental growth and development. This year, Biology faculty identified specific goals and objectives for our program in four key areas: Enrollment, Facilities, Curriculum, and Faculty.

This long-range strategic plan will help guide our continued growth through the year 2012.



Fall 2004 Biology Freshman Picnic

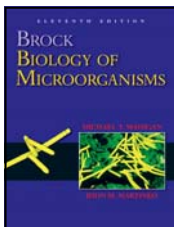


The number of Freshman entering our Biology program each Fall has steadily increased.

New Courses Approved for Majors & Nonmajors

Three new courses now join the exciting line-up of biology classes available for York College students.

For majors, a new course entitled **Biology of Microorganisms** (BIO330) offers students an intensive study of both the basic and applied areas of microbiology. While the previous microbiology course (BIO230) dealt primarily with medical/allied health issues, the new course



focuses more on topics such as the experimental use of microorganisms, microbial genetics, virology, and biotechnology. Prof. Carolyn Mathur teaches this lecture/lab course beginning in the Fall 2005 semester.

Two new 200-level courses for nonmajors have also been approved, both of which fulfill Area III Distribution requirements.

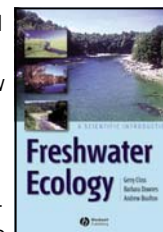
Biology of Animals, designed and taught by Prof. Brad Rehnberg, focuses on the basic biology and behavior of many spectacular animals, both invertebrate and vertebrate. Topics such as animal migration, find-

ing food, parental care, and sociality are explored. How evolution works to shape animals in ways that promote their survival is also addressed. This non-dissection course begins in the Fall 2005 semester.

Finally, **Freshwater Ecology** focuses on such interesting habitats as rivers, lakes and streams, all of which are in close proximity to the York



College campus. Students explore how rivers & lakes form, what animals live within them, and how these animals interact with each other and their environment. Special emphasis is placed on how human activities are impacting freshwater environments and the steps necessary to help restore these habitats. Prof. Jessica Nolan designed and will instruct this new lecture/lab course.



Clark Lecture Series Features Four Biology Alumni

The 2004-05 Clark Lecture Series, funded in part by the Hardinge Colloquium, hosted six speakers, four of whom are YCP Biology alumni.

In the Fall, speakers were:

Christopher Cunningham: *ENVIRONMENTAL MONITORING FOR CHEMICAL AGENTS: HD-MUSTARD, GB-SARIN AND VX*



Chris received a B.S. degree in Biology from York College. He is currently employed at the General Physics Corporation at the United States Army's Chemical Demilitarization Training Facility, Analytical Laboratory, in Aberdeen, MD.

Billie Jo Wood: *SEX AND CONSEQUENCES: RECENT RESEARCH BY AN INTERNATIONAL SEXUALLY TRANSMITTED INFECTIONS LABORATORY*



Billie Jo received a B.S. degree in Biology in 1999 from York College. She is currently a Laboratory Coordinator at Johns Hopkins University School of Medicine (Baltimore, MD) in the International Chlamydia Laboratory.

Jessica Thorpe: *AROUND THE WORLD IN 100 DAYS; A SEMESTER AT SEA*



Jessica received a B.S. degree in Biology from York College and was fortunate to spend one of her undergraduate semesters at sea completing courses in history & foreign culture.

In the Spring, speakers were:

Alisa Davis: *THE DIVERSE FUNCTIONS OF STRUCTURAL ZINC (II)*

Alisa is a doctoral candidate in the Program of Molecular and Computational Biophysics at Johns Hopkins University. She received a B.A. in Biophysical Chemistry from Dartmouth College.

Kimberly Valentino: *TAKING BIOLOGY FROM SCHOOL TO WORK; AN ALUMNUS PERSPECTIVE*

Kim received a B.S. degree in Biology from York College. She is currently a research laboratory manager in the Anatomy & Neurobiology Department at the University of Maryland, Baltimore, School of Medicine. Kim's research involves HIV and neurobiology.

Marilyn Daly: *AN AFRICAN ODYSSEY*



Prof. Daly teaches Human Anatomy & Physiology at York College. Her research on South African plants, as well as her inspiring personal experiences on sabbatical, were presented. She is currently completing a book for Timber Press on South African plant species.

93% of Senior Thesis Students Conduct Original Research in 2004-2005

During the summer months and semester breaks, when many students opt for relaxing by the pool, most Biology majors are in the lab or field pursuing original research projects in preparation for Senior Thesis.

During the 2004-2005 academic year, 93% of students enrolled in Senior Thesis completed original research projects, with the remaining 7% completing extensive research proposals. This is a dramatic increase from last year, when 75% of students conducted original research.

The 27 Senior Thesis projects presented during the 2004-2005 academic year were as follows:

Laura Bednar: Are microorganisms present on commonly used coin currency?

Laura Bever: The effects of ethanol-based amido black solution on DNA.

Josh Burton: Effect of creatine on total insulin receptor levels, phosphorylation and PEPCK gene expression.

Samantha Christy: The role of sulfur-reducing bacteria at the Rio Icacos watershed in the Luquillo Mountains of Eastern Puerto Rico.

Jessica Dortch: Evaluation of fragment foliage in a 2003 plant trial.

Gina Filippelli: Presence of iron related bacteria from the saprolite core of the Luquillo Mountains in Puerto Rico.

Kelly Galvean: Oyster reef restoration in the Chesapeake Bay.

Les Gough: Selected stages of megasporogenesis and megagametogenesis in *Arabidopsis thaliana* (L.) Heynh Colombia ecotype.

Brandi Jones: The linking of CAG polymorphisms of the androgen receptor gene to masculinity and femininity.

Jason Lamontagne: Tardigrade identification and distribution at York College using molecular techniques.

Melissa Leeper: Effect of altered glucose \pm advanced glycation end products (AGE) on the activity of superoxide dismutase (SOD) and glutathione peroxidase (GPx) in retinal pigment epithelium (RPE) cells.

Robert Metz: Possible optimization of the efficiency of HIV-1 entry into genetically modified human erythrocytes that bare multiple helper T-cell markers.

Rachel Orobono: Aggression in anubis baboons (*Papio anubis*): Initiation and duration of social grooming in lactating and non-lactating females and the establishment of male friendships.

Donald Pyle: Utility of blood cultures in pneumonia patients admitted to the emergency department.

Jason Schafer: Effect of arsenic (III) on the estrogen responsiveness of vitellogenin in chick embryos.

Ken Schlichting: Long-term effects of salinity on bone mass and ion levels in blood serum of the Killifish, *Fundulus heteroclitus*.

Matthew Schultz: Microbial biomass as a function of depth in a tropical watershed, Luquillo Mountains, Puerto Rico.

Carrie Shaw: Phylogeographic analysis of migrating Northern Saw-Whet Owls.

Ryan Shaw: Resistance of salmonella in frozen chicken nuggets to microwave cooking.

Gwen Smith: The effect of four early-successional Pennsylvania tree species on soil bacterial communities.

Ben Stewart: Protection of mesospore-adsorbed tyrosine from microbial degradation by *Pseudomonas aeruginosa*.

Jamie Stum: Comparison among selected megagametophytic stages of *Arabidopsis thaliana* (L.) Heynh Landsberg Erecta & Colombia ecotypes.

Jessica Thorpe: Reduced gene

expression of hTERT subunit of telomerase by siRNA treatments.

Jonathan Trager: The mechanism of suppression of tumorigenicity in B16F10 mouse melanoma cells by the steroid saponin Holothurin A.

Lindsay Venditti: Construction, transformation, and prokaryote expression of a fused GFP and mutant human IL-13 gene sequence.

Vimal Vyas: Inhibitory effects of heated spices on growth of *Salmonella* and *Staphylococcus aureus*.

Jennifer Winemiller: Dose dependent effect of advanced glycation end products on human retinal pigment epithelial cell viability.

To view a complete listing of student Senior Thesis projects, visit our webpage:

<http://goose.ycp.edu/~brehnber/SENIORTHESSESINBIOLOGY.htm>

It is the mark of an educated mind to be able to entertain a thought without accepting it.

Aristotle

Score Reports for ETS Major Field Test in Biology and MCAT

The Department of Biological Sciences utilizes the ETS Major Field Test in Biology to assess student knowledge in key scientific areas. Historically, our students have scored near or above national averages in each evaluative category. And, the 2004-05 academic year was no exception!

This year, YCP Biology majors obtained a total score (154.4 ± 2.3) that exceeded the national average (153.2 ± 8.0). Although student scores in the Organismal category were slightly lower than national data, other evaluative categories, including Cellular, Genetics, and Ecology were at or above nationally averaged scores (Table 1).

This accomplishment continues to demonstrate the thorough academic preparedness of our majors!

In addition to the ETS exam, many Biology majors take the Medical College Admission Test

TABLE 1: Major Field Test Results for York College Biology Majors (2002-2005) Compared to National Results (2001-03)

Category	YCP 2004-05 ¹ n=27	YCP 2003-04 ¹ n=16	YCP 2002-03 ¹ n=27	National 2001-03 ¹ (342 institutions)
TOTAL	154.4 ± 2.3	155.9 ± 11.9	156.6 ± 10.2	153.2 ± 8.0
Cellular	54.7 ± 2.4	58.0 ± 10.6	57.9 ± 11.0	55.2 ± 6.6
Genetics	58.0 ± 1.8	59.4 ± 10.6	59.2 ± 10.6	54.6 ± 6.1
Organismal	49.7 ± 2.8	49.6 ± 11.5	51.6 ± 10.1	52.0 ± 7.6
Ecology	56.3 ± 2.3	57.2 ± 8.4	57.2 ± 4.2	52.8 ± 8.0

(MCAT) in preparation for medical school. The MCAT exam, which is offered each April and August, evaluates student knowledge in four areas, including Biological Science. Table 2 compares MCAT scores for YCP Biology majors to nationally obtained data. The most recent data for York College biology majors (April 2005) shows that our students earned very competitive scores on the MCAT exam and, in turn, receive favorable consideration for medical school admission.

TABLE 2: MCAT Results for YCP Biology Majors (2002-2005) vs. National Results (2004)

Category	YCP Apr '05 ¹ n=8	YCP Aug '04 ¹ n=6	YCP Apr '04 ¹ n=8	YCP Aug '02 ¹ n=5	National 2004 ² n=61,973
Verbal Reasoning	8.8 ± 0.9	7.3 ± 0.7	8.6 ± 0.5	8.6 ± 0.7	8.0 ± 2.5
Physical Science	8.3 ± 0.5	6.5 ± 0.7	7.5 ± 0.4	6.8 ± 0.6	8.1 ± 2.4
Writing Sample ²	M-N	N	O	O	O
Biological Science	8.8 ± 0.7	6.7 ± 1.0	8.9 ± 0.4	7.2 ± 0.8	8.5 ± 2.5

¹ Mean ± SEM

² Median Score

Student Awards for 2004-05

Each year, the Department proudly recognizes those Biology majors who demonstrate outstanding academic and professional achievements. The awards and this year's recipients are as follows:

Departmental Recognition is awarded to those students who have shown outstanding academic achievements and service to the department.

The student receiving this honor in Fall 2004 was **Jessica Thorpe**. Students recognized in Spring 2005 were: **Laura Bednar, Jessica Dortch, Natalie Mowery, Carrie Shaw, and Jonathan Trager**.



Laura Bednar



Jessica Dortch

The Bruce B. Smith Seminar Award is given to the Biology Senior Thesis student presenting the best original research as determined by the Biology faculty. The recipient of the Fall 2004 award was **Gina Filippelli**. The Spring 2005 Smith Seminar Award was given to **Matthew Schultz**.



Gina Filippelli



Matt Schultz

The **Student Scholars Day Award** is presented to the Biology Senior Thesis student who develops the most original research idea and delivers the paper with the greatest poise, confidence and clarity. This Spring, three awards were given for first, second, and third place. First

place recognition was given to **Jonathan Trager**. Jonathan was also the recipient of the **Denoncourt Award for Excellence and Service in Biology**,



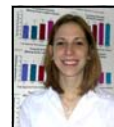
John Trager

which is given to the graduating Biology major who exhibits outstanding academic ability in Biology and a sense of service to others.

The second place Student Scholars Day Award was given to **Carrie Shaw**. Third place honors were given to **Gwen Smith**.



Carrie Shaw



Gwen Smith

The **York Water Company Award**, given to the sophomore Biology

major who has earned the highest grade point average in biology courses, was awarded to **Matthew Luckenbaugh**.



Matt Luckenbaugh

Rachel Orobono received the **Jeffrey Zeigler Memorial Award**, which is presented to an official member of the Biology Club who has been active for at least one semester prior to being chosen and has shown dedication to and worked toward the betterment of the student club.



Rachel Orobono

Congratulations to all of our award recipients. We are very proud of you!



New Equipment for Biology Labs

One of the many strengths of our Department is the availability of state-of-the-art laboratory facilities. Towards this end, we are proud to announce the purchase of the following equipment during the 2004-05 academic year. These items will undoubtedly benefit our students and better prepare them for careers in today's advancing technological job market.

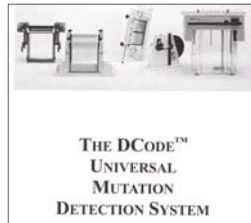
Ten new **Nikon dissecting microscopes** were purchased for the Biology II labs in LS208. This purchase completes our three year goal of replacing all light and dissecting microscopes in this lab.



Three **electronic Rainin pipettors** were purchased for the Department. Some have the benefit of multichannel pipetting, which is essential when using 96-well plates. Additional features include rapid, as well as repeat pipetting options.



A **mutation detection system** was purchased from Bio-Rad. This instrument will significantly enhance our molecular studies by allowing faculty & students to detect small point mutations in select gene sequences. This will benefit many of our cell/molecular courses, as well as faculty and student research.

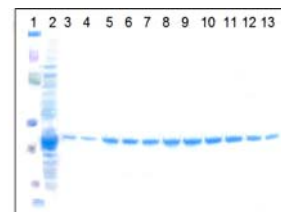


An automated **column chromatography apparatus**, complete with automated fraction collection system, was purchased from Bio-Rad. This system will be used in numerous classes, including Biochemistry, to isolate and purify select proteins from various cells and organisms.

Additional equipment purchased this year included: microscopy attachments and field equipment for ecology and marine biology. Items to facilitate our existing wireless computer capabilities in the laboratories 0000 were also purchased.



Jeff Thompson works with new chromatography equipment.



Coomassie stained results from ion exchange chromatography of *E. coli* lysate. Lane 1- Molecular Wt. standard, Lane 2-Total *E. coli* lysate, Lanes 3-13-Fractions containing proteins purified from lysate

Biology Club News

It's been another active year for the York College Biology Club. In addition to their continued hosting of Weinie Wednesday, the club organized a Logo Contest. The logo will be displayed on new Club T-shirts.

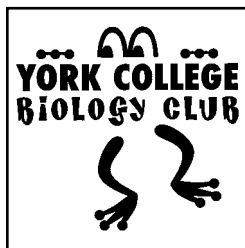


Jenna Miller, Lauren McClure, Carlee Kaisen, and Seth Ilgenfritz grill hot dogs for Biology Club Weinie Wednesday.

The Biology Club also organized another successful Plant Sale this Spring. Beautiful plants grown by both the Club and RKS Orchids were offered for sale. This year's event earned an estimated \$1400.00!

2004-05 Biology Club Officers:

President: Rachel Orobono
Vice-President: Katie Fessler
Secretary: Marissa Menzel
Treasurer: Brandon Birth
Historian: Carlee Kaisen



The new Biology Club logo.

Tri-Beta News

During the 2004-05 academic year, the Theta Epsilon chapter of Beta Beta Beta was involved in a community service program to provide at-risk children extracurricular exposure to science and biology. This endeavor, entitled the "Science Appreciation & Career Development Program" was conducted in conjunction with the Crispus Attucks community center in York.



Approximately 10 children, ages 9-15 years old, were enrolled in the program. Participants conducted hands-on experiments in the Biology labs at YCP related to microbiology, anatomy, physiology, genetics, marine biology and ecology. Students were also introduced to basic research practices and were allowed to offer presentations of their work to their peers.

The overall goal of this program is to get kids interested in and excited about science, and to promote the option of higher education. Numerous Biology majors were involved, including Biology/Secondary Education majors. Feedback from all participants was overwhelmingly positive and Tri-Beta intends to continue this program next year.

For more information about Tri-Beta or the Science Appreciation & Career Development Program, please contact Prof. Brad Rehnberg at brehnber@ycp.edu.

2004-05 Tri-Beta Officers:

President: Jonathan Trager
Secretary: Marissa Menzel

Vice-President: Brittany Elicker
Treasurer: Elizabeth Straney
Historian: Donald Pyle



THE DEPARTMENT OF BIOLOGICAL SCIENCES

WILL HOST THE SPRING 2006

Mid-Atlantic Regional Tri-Beta Meeting!

WATCH THE WEBSITE FOR FURTHER DETAILS!



Seniors Laud YCP as “...one of the best Biology programs around!”

Once again, the Biology Senior Exit Survey, administered to all students enrolled in the capstone Senior Thesis course, revealed many positive attributes of our program. From computer and lab equipment to advising, seniors give our Biology program high marks.

Below is a list of the survey questions (**BOLD** font) to which students responded prior to graduation from our Biology program. Following each question (*Italics*) is a summary of their responses. Question 7, which required quantitative responses, contains mean and standard error data.

1. WHAT DID YOU LIKE MOST ABOUT THE BIOLOGY MAJOR?

The people; a wonderful department full of wonderful people!

Working with many aspects of biology; well-rounded experience; diverse classes.

Hands-on research & lab work; Senior Thesis research.

Knowledgeable, approachable, friendly faculty.

Everything!

The challenge.

Small class size; personal attention.

2. WHAT DID YOU LIKE LEAST ABOUT THE BIOLOGY MAJOR?

Writing papers.

Scheduling; Courses offered only in Fall or Spring semesters or alternate years.

Not being able to take all the courses.

Organic Chemistry.

Grading differences.

Labs are viewed as only 1 credit.

Curriculum should be expanded.

That one organismal/population course and Ecology is required

3. HOW WELL DID THE MAJOR HELP PREPARE YOU FOR YOUR CHOSEN CAREER?

Research experience was very valuable.

Good foundation for medical school.

Helped me choose a career path.

Quality classes & research exposure helped prepare for graduate school.

Will be able to use a variety of lab skills & experiences.

I learned to write on a professional level.

Provided a strong foundation that I can build from.

4. WHAT ARE YOUR POST-GRADUATION PLANS?

Graduate school

Medical school

Teacher/Education

Work in a lab

Dental school

5. WHY DID YOU INITIALLY SELECT THE BIOLOGY PROGRAM AT YORK COLLEGE FOR YOUR UNDERGRADUATE EDUCATION?

Biology fascinated me; Biology is fun.

Entered as a premedical scholar.

Premedical interest

I heard the Biology program at YCP was one of the best around.

Location.

Cost; value

Small class size; the professors know your name and can hunt you down!

Encouraged by advisor.

Other majors didn't challenge me.

6. NOW HAVING COMPLETED YOUR DEGREE, HOW HAVE THESE INITIAL IMPRESSIONS / PERCEPTIONS CHANGED (IF AT ALL)?

I still love it!

The whole program gets better as you go through it.

Initial impressions haven't changed.

A ton better than I imagined it would be.

I respect all those involved in the Biology program.

Has helped me realize I do not want to be a scientist.

Very happy with the experience.

I got the challenge I wanted.

7. RATE EACH OF THESE SUPPORT SERVICES BASED ON THE FOLLOWING SCALE:

ADVISING	3.86 (0.35)
COUNSELING SERVICES	3.25 (0.72)
LAB EQUIPMENT	3.43 (0.49)
COMPUTER TECHNOLOGY	3.71 (0.45)
TUTORING	3.00 (0.71)

4 = EXCELLENT
3 = GOOD
2 = FAIR
1 = POOR

AVERAGE RATINGS (± SEM)

8. WHAT ADVICE WOULD YOU OFFER PROSPECTIVE STUDENTS WHO ARE CONSIDERING THE BIOLOGY PROGRAM AT YORK COLLEGE?

Study hard; work hard.

Go to your teachers for help; the faculty are a valuable tool; pick their brains!

Always go to class & pay attention; get excited about this fascinating subject!

Excellent program with great professors; program is geared toward the individual student.

Be prepared for research and papers.

Plan ahead; schedule electives carefully.

fully.

Listen to your advisor.

It's the best program (with the best professors) at York College.

Plan your career (and courses) carefully.

9. DID YOU FEEL THAT THE SENIOR THESIS EXPERIENCE WAS A SIGNIFICANT PART OF YOUR UNDERGRADUATE BIOLOGY EDUCATION? PLEASE EXPLAIN.

Yes; I enjoyed working closely with the professors.

Yes; My name is on a published abstract which is good for the resume.

Invaluable; I feel much more comfortable having worked independently and experiencing real research.

Yes; it took a lot of hard work & dedication.

Yes; aided in preparing research for publication & presentation.

Yes; it made me realize all that goes into doing my own research.

Yes; it allowed me to come away with an individual project.

Yes; it originated my sophomore year and has been emphasized repeatedly on a long-term basis.

No; my field will not require independent research. My ability to locate information and prepare posters has been enhanced.

Yes; it puts together all of the pieces of the puzzle.

Yes; I have a dose-response curve to prove it! It has opened my eyes to an unbelievable number of potential areas of research.

Yes; not many of my friends from other schools do an undergrad thesis.

These results continue to confirm that the Biology program at York College is indeed achieving its mission of providing students with a solid and rigorous foundation in Biology. The data also demonstrates that students are predominately satisfied with the support services (identified in question 7), and, overall, very happy with their undergraduate experience in our Department.

Students Complete Summer Internships & Study Abroad

Junior Biology / Secondary Education major **Marissa Menzel** completed a summer internship volunteering for the Clearwater



Marissa Menzel

(Florida) Marine Aquarium's Education Camp. Students at the camp ranged in age from 5-15 years old. Marissa helped instruct classes and provided assistance for the students. Activities included snorkeling

in the intercoastal waterways of the Gulf of Mexico, and examining marine specimens such as sea urchins, octopus, conch. Rotating through different programs at the aquarium, Marissa was also able to participate in dolphin training exercises, and sea turtle care and res-



Marissa snorkeling with her students.

cue.

Biology major **Jason Aloisio** is spending the summer and Fall 2005 semesters studying abroad at the University of Otago in Dunedin, New Zealand. While there, he is completing courses in Biology of Plants, Dynamic Earth: A New Zealand Perspective, and New Zealand Politics.



Jason Aloisio

Thus far, Jason describes the experience as “one of the most valuable things that has ever happened to me!”. Outside the classroom, Jason is enjoying the novel plant and animal species of the region and he spends time hiking, skiing and participating in various local conservation efforts.



Vally, Greenstone Caples Track

Alumni Spotlight

One and five year alumni survey data reveals that increasing numbers of Biology alumni are pursuing graduate school. In recognition of this trend, this year, we chose to highlight the accomplishments of two York College biology alumni, both of whom have successfully pursued Ph.D. programs.

Julie Myers-Irvin

received her B.S. degree in Biology from York College in 2000. She took her interest in Biology and pharma-



Julie Myers-Irvin

cology to the University of Pittsburgh's medical school (ranked 15th in the country for medical research) to pursue her doctorate. Julie worked in the laboratory of Dr. Robert Getzenberg. In Dr. Getzenberg's lab, Julie's research sought to characterize nuclear matrix proteins (BLCA-1, BLCA-4) and their potential involvement in bladder cancer progression. Through this research, she helped develop a urine based assay for the detection of bladder cancer and cloned part of the cDNA that encodes a novel bladder cancer protein. In May, 2005, Julie suc-

cessfully defended her dissertation and received her Ph.D. Her future plans are to either remain in academic/medical research or work as a researcher in drug development for a government or private agency.

Courtney Maus is a 1997 graduate of the York College Biology program. As an undergraduate, Courtney became very interested in the field of microbiology, and subsequently completed her Senior Thesis project with Prof. Carolyn Mathur examining the



Courtney Maus

contamination potential of saline solutions used for wound debridement. Following graduation, she earned her M.S. in Biotechnology at Johns Hopkins University in 2001, while working as a lab technician in the Department of Psychological and Brain Sciences. Currently, Courtney is a Ph.D. student at Emory University's Department of Biological and Biomedical Science. Her research, conducted at the Centers for Disease Control and Prevention in Atlanta, Georgia, has investigated the molecular mechanisms of drug resistance in *Mycobacterium tuberculosis*. She plans to defend her dissertation research in January, 2006.

Student Research Presented at State Science Conference

Ten York College biology majors recently attended the annual meeting of the Pennsylvania Academy of Science at Camp Hill, PA.

Student presenters and their projects were as follows:

Gough, L., and B. Smith. 2005. Quantification of selected stages of megasporogenesis and megagametogenesis in *Arabidopsis thaliana* (L.) Heynh Columbia ecotype. Abstract #94.

Dortch, J., and M. Daly. 2005. Evaluation of fragrant foliage plants in a 2003 plant trial. Abstract #181.



Jessica Dortch, Marilyn Daly, & Jen Moore

Moore, J., and M. Daly. 2005. Architectural foliage plant trial. Abstract #182.

Trager, J., and J. Thompson. 2005. The mechanism of suppression of tumorigenicity of B16F10 mouse melanoma cells by the steroid saponin holothurin A. Abstract #108.

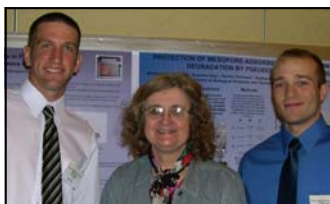


Jonathan Trager and Jeff Thompson

Stewart, B., and C. Mathur. 2005. Protection of mesopore-adsorbed tyrosine from microbial degradation by *Pseudomonas aeruginosa*.

Abstract #157.

Shaw, R., and C. Mathur. 2005. Resistance of Salmonella in frozen chicken nuggets to microwave cooking. Abstract #156.



Ryan Shaw, Carolyn Mathur & Ben Stewart

Thorpe, J., and R. Kaltreider. 2005. Inhibition of the human telomerase reverse transcriptase (HTRT) subunit of telomerase by siRNA. Abstract #175.

Ciacco, S., and R. Kaltreider. 2005. Identification of a possible chimera in a small sample of 20 individuals from York College.



Jessica Thorpe and Ron Kaltreider

Abstract #176.

Jones, B., and R. Kaltreider. 2005. Alternate day feeding does not increase plasma antioxidant potential in mice (C57Bl/6 *Mus musculus*). Abstract #177.

Each of these abstracts was published in volume 78 of the *Journal of the Pennsylvania Academy of Science*.

Department Joins York Biotechnology Resource Council

Established in October 2004, the York Biotechnology Resource Council (YBRC) is comprised of members from various agencies including, but not restricted to: life science industries and related businesses, educational institutions, clinical researchers, and State legislators. At the



present time, YBRC has approximately 21 organizational and/or individual members. The council was co-founded by John Sherwood, founder and CEO of Zerusum, Inc., and Prof. Debbie Ricker, Chair of the Department of Biological Sciences.

The overall goal of the YBRC is to create a strong, productive, and

positive network of individuals and agencies dedicated to the successful development and promotion of biotechnology and life science industry within the south-central Pennsylvania region. We seek to leverage regional interests and experience to create a valuable and visible resource for biotechnology education, development, and economic opportunities.

Monthly meetings are held at York College, and all interested individuals and organizations are invited to attend.

For more information, visit the YBRC website at:

www.yorkbiotech.org

Faculty News

Prof. **Brad Rehnberg** has been appointed the York College NCAA Faculty Athletic Representative. He has been a long-time fan and supporter of the York College athletic department and is present at many athletic contests. In addition, he serves the community as a girl's basketball and soccer coach for the York Youth League and Trojan Soccer Club. His understanding and appreciation of the benefits of athletic pursuits in conjunction with academic endeavors makes him a perfect choice for this role!



Brad Rehnberg

Prof. **Karl Kleiner** has been selected as President-Elect of the Mid-Atlantic Chapter of the Ecology Society of America. At



Karl Kleiner

the annual society meeting in Baltimore last April, Prof. Kleiner also presented two posters; The effect of four early-successional Pennsylvanian tree species on soil bacterial communities (coauthored by student Gwen Smith), and Positive feedback on *Ailanthus altissima*: a generalized response? At the annual meeting of the Ecology Society of America, he will present his work on effects of tree species on soil bacterial communities and positive feedback on *Ailanthus altissima*.

Prof. **Debbie Ricker** is President-Elect of the Pennsylvania Academy of Science. She will assume the Presidency in April 2006. Prof. Ricker also presented two posters at the annual meeting of the Society for Developmental Biology in San Francisco, CA this summer. Her work described



Debbie Ricker

the design of two molecular lab activities for developmental biology courses.

Prof. **Jessica Nolan** is a co-investigator on a NASA grant initiative to examine biophysical interactions in ocean margin ecosystems (BIOME). The grant includes money for research in the Mid-Atlantic Bight as well as educational outreach.



Jessica Nolan

Prof. **Bruce Smith** attended the annual meeting of the Botanical Society of America in Texas.



Bruce Smith

Professors **Carolyn Mathur** and **Barb Taylor** attended the annual meeting of the American Society of Microbiology.

Prof. **Ron Kaltreider** participated in the Faculty Summer Training Program at Dartmouth College. The program was entitled

"Teaching the Ethical, Legal and Social Implications of the Human Genome Project". The sessions consisted of lectures from Dartmouth College and Howard University faculty members and other distinguished speakers.

Prof. **Jeff Thompson** received a patent (US Patent #**6,884,603**) for his novel mutant human interleukin-13 molecule, a molecule that delivers materials specifically into some cancer cells.



Jeff Thompson

Prof. **Marilyn Daly** continues to work on her book for Timber Press. She spent the summer in South Africa writing and researching. She also gave presentations at the Annual Colonial Williamsburg Garden Symposium, and at Longwood Gardens. Her research paper evaluating *Hebenstretia dura* was published in the latest issue of Acta Horticulturae.



Marilyn Daly

Nuclear Medicine Technology

by Elizabeth Hodgson, Program Coordinator



The Nuclear Medicine Technologist uses radioactive materials to diagnose and treat disease. This process allows clinicians to obtain information about not only the structure, but also the *function* of virtually every major organ system of the body without actually invading the body itself. This ability to characterize physiological func-

tion distinguishes Nuclear Medicine from all other imaging modalities.

Here at York College, our Nuclear Medicine Technologist (NMT) program is **booming!** We have record numbers of freshman (14 total) entering the program in the Fall 2005 semester! This is a

140% increase over Fall 2004 NMT enrollment! Five students will begin clinical rotations in the Fall, with the prospect of seven students entering clinical rotations in 2006. Our NMT graduates continue to get the best jobs and earn competitive salaries at the higher end of the pay scale.

This is what makes our program successful - our graduates!

If you would like more information about the Nuclear Medicine Technologist program at York College, please contact the program coordinator, Elizabeth Hodgson, at ehodgson@ycp.edu.

Biology Alumni Picnic

The first annual YCP Biology Alumni Picnic was held last October during Fall Fest Weekend. In attendance were former Biology majors and their families, as well as numerous faculty members.

Pictured here are: (Front L-R) Ben Rogers, Jenni Mover, Lindsay Pulliam, Amanda (Hitchens) Desmond, Paul Desmond, daughter Bryn Desmond, Kim Valentino, Back (L-R) Cody Cunningham, Dean Guy Calcerano, Chris Cunningham, Brian Posey, Prof. Brad Rehnberg, Mrs. Brian Posey, Prof. Ron Kaltreider

Thanks to all who attended!



Secret Santa is...



Dr. Thompson !



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York College of Pennsylvania
York, PA 17405

Phone: 717-815-1335
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Email: dricker@ycp.edu

Excellence & value in private education

We'd Like To Hear From YOU!

YCP BIOLOGY ALUMNI INFORMATION

NAME: _____

ADDRESS: _____

EMAIL: _____ YEAR GRADUATED: _____

POST YCP EDUCATION/TRAINING (Include dates): _____

CURRENT EMPLOYER & POSITION: _____

Detach & mail to: Debbie Ricker, Dept. of Biological Sciences, York College of Pennsylvania, York, PA 17405 or email dricker@ycp.edu

Remember to update your address info. on the Alumni Office webpage at <http://www.ycp.edu/alumni/1715.htm>