Limulus

NEWSLETTER

Department of Biological Sciences, Wagner College, Staten Island, NY

Volume 2011, Issue Spring-01 **January, 2011**

LETTER FROM THE EDITOR

Welcome to twenty eleven and the spring semester at Wagner College. As usual, the LIMULUS opens the new year and the spring semester with a review of the last fall semester. For those of you who regularly follow our newsletter there is nothing new but some remembrance and review. For those new at Wagner College this issue offers a chance to get to know what happened during the months before your arrival on Grymes Hill.

Before I let you read on, let me give you a little preview on what to expect in our next issue at the end of February. As you read in the November/December issue, Dr. Moorthy is spending her sabbatical in the spring semester in India. We already received many photographs and the first part of a "dateless diary". Of course, this will considerably enrich our coming newsletter. Moreover, I was contacted by Dr. Allan F. O'Connell, who graduated in 1976 from Wagner College, and who works now as a research scientist for the U.S. Department of Interior. Dr. O'Connell's activities concentrate on federal lands to address issues of wildlife conservation. We will highlight Dr. O'Connell and his book "Camera Traps in Animal Ecology", recently published together with his coauthors James D. Nichols and K. Ullas Karanth.

Together with the editorial staff, I wish everybody a very successful spring semester 2011.

Dr. Horst Onken
The Editor

BIOLOGY STAFF AND FACULTY NEWS

CONGRATULATIONS

This year, Dr. Palestis is one of the recipients of a Faculty Award for Exceptional Performance in the Area of Scholarship. His research addresses certain aspects of the biology of terns. However, he is also very engaged in behavioral studies with zebra fish. All recipients of faculty awards will be honored at the Faculty Awards Dinner on Tuesday, November 16th. More will be reported in the next newsletter after the awards dinner.

Contributed by Dr. Onken.

ONE MORE PAPPAW AT WAGNER

On behalf of the Limulus staff, and the entire biology department, we welcome the latest papaw of the college: Congratulations to Dr. Donald Stearns on the birth of his twin grandchildren, John Edison (right) weighing 7 lbs, and Lucy Grace (left) weighing 6 lbs 13 oz.

Contributed by Gregory Balaes

DR. MOORTHY SPENDS HER SABBATICAL IN INDIA

Dr. Moorthy will be going on sabbatical this coming spring 2011 semester. She will be spending a good part of her sabbatical in Kerala, India where she will be teaching courses on "Applications of Bio Technology," and " Ethical, Legal and Social Implications (ELSI) of the Human Genome." Her coursework will be taught in the Teacher's College, who is involved with keeping college and university professors updated on current events in their fields. The Teaching College is housed under the Kerala University Campus at Kariavattam, Trivandrum in Kerala, India.

While Dr. Moorthy is in India, she will be meeting a Wagner Alumni, Ms. Christina Lamb, a graduate from the Biology Department. Christina is currently studying for her PH.D in public health at the University of North Carolina, Chapel Hill. Dr. Moorthy would like to remind the campus that she will be checking her email, and can be reached at asmoorth@wagner.edu.
Contributed by Gregory Balaes

CURRICULUM NEWS

BIOLOGY MAJOR:
Students can now count any 300-level or higher microbiology course with a lab as one of the three upper-level electives in the biology major.
The list of upper-level electives in the biology major will now read (changes in italics):
"Any 300-level or higher biology *or microbiology* course(s) with a laboratory or BI493 or CH517 or the second Capstone Course..."

ENVIRONMENTAL STUDIES MINOR:

- BI 110 *Environmental Biology* is now a required course for the minor. It is the only required course.
- HI 237 *Environment: History, Society and Change in the Modern World (I)* is now an elective for the minor. However, because History is in the Humanities, the course will not satisfy the Social Sciences requirement of the minor.

COURSE FREQUENCY CHANGES:

- BI306 *Neuroanatomy and Neurophysiology* will now be taught every spring.
- BI323 *Basic Medical Histology* will move to fall of even-numbered years.

Contributed by Dr. Palestis

BIOLOGY STUDENT NEWS

SENIOR ACCEPTED BY TOP SCHOOLS

Senior Biology major and psychology minor Peter Pisano recently received acceptances from two prestigious dental schools. Peter was accepted to the University of Medicine and Dentistry of New Jersey (UMDNJ) and New York University's College of Dentistry.
On the behalf of the Limulus staff, I would like to congratulate Peter on his acceptances to two great dental schools!

Contributed by Nidhi Khanna

BIOLOGY CLUB NEWS

The Biology Club completed their off-campus community service event at the annual Breast Cancer Walk on Sunday October 17th at Cloves Lake Park. The Biology Club is in the process of ordering club T- shirts. The 'Biology Club Raises Awareness for Breast Cancer Pork Roast' held on October 6th was a huge success (see below for further details). During this on-campus community service event club members were able to raise a grand total of $482 for a great cause!
Contributed by Farha Rashid

The Biology Club planned a "Biology Club Bake Night" last month. Due to unexpected events, the event was cancelled, but will be postponed until next semester. Lastly, please look out for the Biology Club on Facebook. Member Melanie Krongold created the Wagner College Biology Club group on Facebook, so make sure you keep yourself updated on upcoming club news!
Be on the look out for upcoming events during the spring 2011 semester, including Metric System Bake Night (which was postponed), and a trip to the Bodies Alive Exhibit in New York City. Biology Club t-shirts are now in. Please contact Janna Denisenko, the club's secretary, at janna.denisenko@wagner.edu. Meetings will resume after break. Leonid Denisenko, the club's president, would like to wish everyone has a safe winter, a happy holiday. New members and ideas are always welcome. Please email leonid.denisenko@wagner.edu if interested.
Contributed by Gregory Balaes and Nidhi Khanna

TRI-BETA NEWS

Tri-Beta held their first meeting of the semester on Wednesday September 22th. Members completed their off-campus community service by participating in the Breast Cancer Walk that took place at Cloves Lake Park on October 17th. Tri-Beta members plan to do community service in the garden later in the semester
Contributed by Farha Rashid

PRE-HEALTH SOCIETY

This semester, the Pre-Health Society has a new president. Senior Biology major Felicia Giunta serves as the club's president. The organization will have its next meeting on Wednesday, November 10th at 3pm. The club is hosting a guest speaker from the New York College of Osteopathtic Medicine. Students interested in obtaining a DO degree are encouraged to attend this meeting to learn more about NYCOM. The location is TBD. For more information, please contact Felicia.Giunta@wagner.edu.
Contributed by Nidhi Khanna

TRI-BETA & PRE-HEALTH SOCIETY

TEAMING UP TO RAISE MONEY

Tribeta president Medije Mashkulli and Pre-Health Society president Felicia Giunta teamed up to complete their respective organization's community service requirement for the semester. The organizations conducted a joint donation drive for the Ovarian Cancer Research Fund (OCRF). The items that were donated will be sold by the OCRF to for-profit wholesalers. The profits from the donations are used by the OCRF to develop new methods of detecting, preventing, and treating this deadly disease that affects many women.
Contributed by Nidhi Khanna

PRE-DENTISTRY SOCIETY

Congratulations to the *Pre-Dentistry Society*, who is now a Student Government recognized organization established during this Fall 2010 semester. President and founder of the *Pre-Dentistry Society*, Gregory Balaes, referred to the society as, "an environment where pre-dentistry students are able to come together in one common place."

The first annual *Dental Health Promotion Day* was held September 29th, in the Union building. The society handed out 144 toothbrushes, as well as information, and tips on oral hygiene. Donations were also collected for Operation Smile, an organization who focuses their efforts on raising money for surgeries to surgically correct cleft palate and cleft lip. Thank you to all who donated!

The society has partnered with the American Red Cross, and will be offering a CPR Certification class on Saturday, November 6th. Certification is being offered at a discounted cost for all those who are interested. In an interview, Vice President Lenny Giordano stated, "By offering and setting up a CPR certification class available for pre-dental students, as well as all students interested, the Pre-Dentistry Society is making small steps by giving students tools that will aid them in the field, and when applying for jobs."

For more information, please email gregory.balaes@wagner.edu, or pre-dental@wagner.edu.

Contributed by Gregory Balaes

Dental Health Promotion day was once again a great success. The Pre-Dentistry Society held this event on November 29th in the Union Building, where club members handed out toothbrushes, floss, and information regarding dental health. A total of $95.49 was raised to benefit cleft palate and cleft lip surgeries through the Operation Smile organization. The Pre-Dentistry Society would like to send a "thank you" to all those who donated and participated.

Next semester, the society will vote on candidates for an available treasurer position. Candidates were selected at the final meeting, and include Radislav Meylikh, Sara Mfarrej, and Adriana Castillo. Also, the society would like to remind members that the Pre-Dentistry Society t-shirts have arrived. If you have not yet received your t-shirt, please email pre-dental@wagner.edu. Any student is always welcome to join the society, please email Gregory Balaes, the club's President, at gregory.balaes@wagner.edu, or pre-dental@wagner.edu if interested.

Contributed by Gregory Balaes

OPPORTUNITIES

RESEARCH WITH MOSQUITOES AND CRABS

Dr. Onken offers research opportunities for students in the frame of a project in which he collaborates with scientists from Washington State University, the University of Idaho, and the University of Alberta (Edmonton, CA). The project is funded by the National Institute of Health and studies the physiology of the midgut of larval yellow fever mosquitoes (*Aedes aegypti*). Mosquitoes are vectors of a number of parasites, transmit devastating diseases like malaria, yellow fever and dengue, and are a major threat to the health of billions of people on our planet. The principal investigators of this project address larval mosquitoes, because it appears more straightforward to fight these vectors as long as they are confined in an aquatic habitat.

In collaboration with colleagues from the U.S. (Mt. Desert Island Biological Laboratories, Maine), Brazil (University of São Paulo in Ribeirão Preto, University of Paraná in Curitiba) and Canada (University of Manitoba in Winnipeg) Dr. Onken pursues research with Crustacea related to the osmoregulatory capacities and mechanisms of crabs. Together with Dr. Alauddin (Chemistry) and Professor Beecher (Biology), an ecophysiological study is in an early stage of planning.

Dr. Onken can offer research opportunities for two to three students. If interested contact Dr. Onken in his office (Megerle Science Hall Room 411), lab (Megerle Science Hall Room 406) or via e-mail (horst.onken@wagner.edu) or phone 420-4211.

For the spring semester Dr. Onken offers a work study position related to his work with mosquitoes.

Contributed by Dr. Onken

WORK IN THE GARDEN

Students interested in collaborating in the greenhouse and/or garden during the fall and winter of 2010 are encouraged to contact Dr. Onken (horst.onken@wagner.edu). There is also an official student job for collaboration in greenhouse and garden.

Contributed by Dr. Onken

BE A LIMULUS ASISTANT EDITOR

We just welcomed the third assistant editor for the LIMULUS: Gregory Balaes. The more students actively contribute, the better the newsletter becomes. Proficient student writers are invited to become assistant editors for the newsletter of the Department of Biological Sciences. If you are interested, please, contact Dr. Onken (horst.onken@wagner.edu).

LIMULUS WELCOMES STUDENT ASSISTANT EDITOR

Gregory J. Balaes is a second-year student at Wagner College. He is a Biology major and is double minoring in Spanish and Chemistry. Greg has been an active member of the Wagner community and has served as a senator in SGA since his first year. He is currently a member of both the Biology Club, and the Pre-Health Society. Additionally, he helped found the Pre-Dentistry Society this year, and currently serves as President of the society.

Before moving on to a career in orthodontics, he aspires to pursue biomedical research at the graduate level. On behalf of

the Limulus staff, I would like to welcome Greg to the Editorial Board!
Contributed by Nidhi Khanna

EXPERIENCES

BIOLOGY CLUB'S FIRST ANNUAL PIG ROAST

The Biology Club made strides against breast cancer by raising $482 in the first annual *Breast Cancer Awareness Pig Roast* on Wednesday, October 6th. Roasted pork, kielbasas, veggie burgers, chicken burgers, and pasta salads were served buffet style, as students, faculty, and staff gathered on Guild Patio.

President of the Biology Club, Leonid Denisenko, would like to thank "Sabrina Slater from Co-curricular for helping us put it all together, SGA for providing the resources, and all the members of the Biology Club for working very hard. It was a lot of fun, and we hope to do it again." As for future prospects of the club, Leonid continued in saying, "The Biology Club is evolving as an organization on campus. I will work very hard in conjunction with our members to bring educational and interesting events to Wagner College. We will show that Science can be a lot of fun."

Photos from the event:

Ribbons distributed after donation, and pamphlets with information on how to detect breast cancer.

Wagner students, as they enjoy the pulled pork, and the turkey burgers.

Members of the Wagner Community gathered on Guild Patio to spread awareness, and to enjoy the food.

Contributed by Gregory Balaes

ANNUAL BREAST CANCER WALK

The American Cancer Society Making Strides Against Breast Cancer is an annual event that takes place just down the hill from Wagner, in Cloves Lake Park. Hundreds of individuals walk around the park in order to raise money and show their support for the women and men who are diagnosed with breast cancer every year. The Biology Club, Tri- Beta, and Pre-Health society participate in this walk as their off campus community service event each year.

Contributed by Farha Rashid with photographs from Nidhi Khanna

LC 17: BACTERIA, HUMAN HEALTH, AND SURVIVAL

It is no secret that Wagner College focuses education on both learning inside and outside the classroom. In a recent interview with Dr. Stearns, and Dr. Houlihan, the backbone to LC 17 was revealed: the experiential learning component. As part of this component, students become actively involved during the semester in field trips and other exercises that demonstrate microbiological processes in the "real world."

Fieldtrips began almost immediately in the semester, and include the Joint Meeting of Essex and Union Counties Wastewater Treatment Facility. Students have also traveled to a quality control center of Microbiology, ImClone Systems in Branchburg, NJ, as well as to the Northeast Regional Laboratory, U.S. Food and Drug Administration in Jamaica, NY. Moreover, students participate in a 5-6 week research experiment titled the "Bioremediation Project: Using Bacteria to Destroy Pollutants."

Each year, chemicals that are not normally found in nature are manufactured, sold, and used for specific purposes. These chemicals include pesticides designed to kill weeds, insects, and crop parasites. Some of these industrial chemicals linger in the environment for long periods (years, decades) and accumulate with repeated use. This lingering occurs because manufactured chemicals do not decompose as quickly as most chemicals made by living creatures. After all, what are the odds that a completely unnatural molecule discarded in a natural environment would be quickly broken down when such decomposition requires the presence of particular enzymes that specifically degrade that unnatural molecule?

The Bioremediation Project is designed to identify specific species of bacteria that can degrade certain compounds that are presently manufactured in industrial laboratories, sold in the marketplace, and thus introduced into the environment. After selecting a manufactured chemical from a provided list, students spent the majority of the semester researching information. With training, and supervision, students used the scientific method and standard procedures to culture bacteria in the presence (and absence) of the chosen chemical, to determine which species of bacteria decompose that compound. With different students using different compounds, the group results should indicate which of the tested chemicals are particularly resistant to degradation, and which are easier to break down. Group results should also indicate which species of bacteria are better at decomposing specific chemicals than other species of bacteria.

One may question why this information may be beneficial to the community. The answer is simple: this information helps the larger community by pointing out which species of bacteria should be applied to which chemicals to speed up the bioremediation process. The same bacteria will thus reduce each chemical's possible impact on human health and the environment. Research in LC 17 has not only become a major component of the course, comprising of ¼ of the students overall GPA, but functions in exposing students to research at the college level during their very first semester at Wagner College.

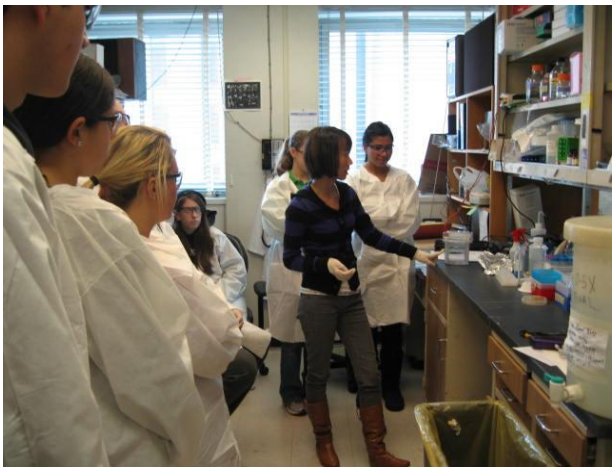
Contributed by Gregory Balaes

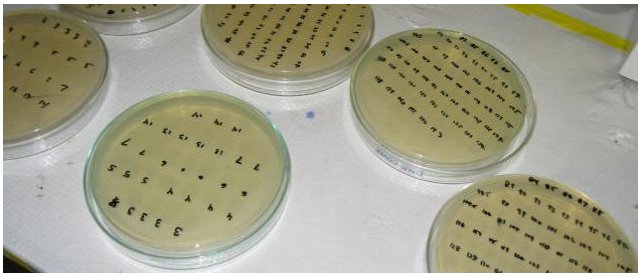
CHEMICAL DEGRADTION OF BROMOXYNIL

On December 15th, 2010, the students and faculty of LC 17 invited the Wagner community to the Spiro building to view their research findings through presentations. In particular, a presentation by Ashley Anonsen and Laura Amorosa highlighted the bioremediation process of a pesticide called Bromoxynil. Bromoxynil's purpose serves in inhibiting photosynthesis by binding to electron transport components of photosystem II and respiration to eventually kill weeds, and other unwanted plants. Ashley and Laura traveled to a farm in Pennsylvania to collect dirt samples from a farm, and ultimately successfully grew gram-negative bacteria called *Pseudomonas putida* from this soil bacterium.
Contributed by Gregory Balaes

LC 17 VISITS FISCHETTI LAB

On November 22, the Freshmen Learning Community of Dr. Houlihan and Dr. Stearns visited the laboratory of Dr. Vincent Fischetti at Rockefeller University. Dr. Fischetti is an alumnus of Wagner (1962) who received an honorary doctorate in spring of 2010. For students and instructors a visit of a laboratory of a renowned microbiologist like Dr. Fischetti is certainly a special experience. The photographs below were kindly provided by Laura Barlament, editor of the Wagner Magazine and member of the Communications Department of Wagner College:

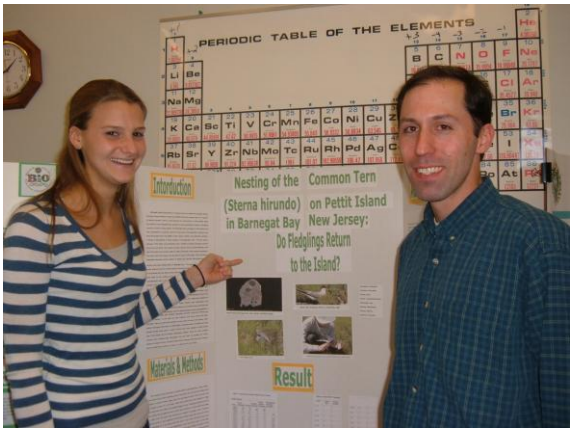


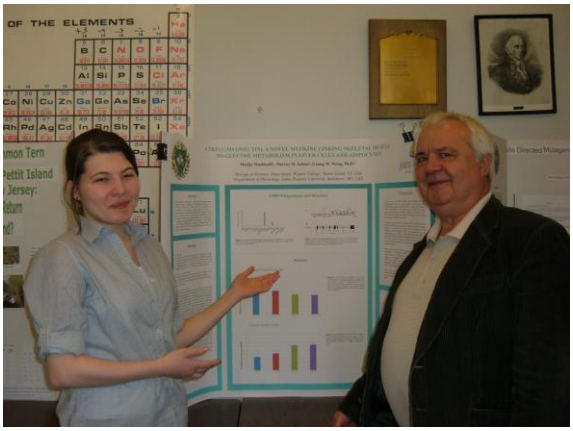


Contributed by Dr. Onken with photos from Laura Barlament

SENIOR POSTER PRESENTATION

On December 8, the seniors presented their work in a poster presentation. Professional discussions were accompanied by coffee, soda and snacks. Congratulations to our seniors Kaitlin Eppinger, Medije Mashkulli, Alex Molesan, and Caroline Mroz.





Contributed by Dr. Onken with photographs from Stephanie Rollizo

HOLIDAY CELEBRATION 2010

In the early afternoon of December 8, a number of science faculty and graduate students met in the Espana Royal in Richmond Road for the meanwhile traditional Holiday Celebration. Special thanks go to Stephanie Rollizo who again organized the event. What would we do without our Stephanie?!

A special event was the birthday celebration for Lisamarie Alba, a long-term adjunct professor of the Biology Department. Once more: Congratulations Lisamarie!

Contributed by Dr. Onken with photographs from Stephanie Rollizo

PUBLICATIONS

Jagadeshwaran, U., **Onken, H.**, Hardy, M., Moffett, S. B. & Moffett, D. F. (2010). Cellular mechanisms of acid secretion in the posterior midgut of the larval mosquito *Aedes aegypti*. *Journal of Experimental Biology* **213**: 295-300.

Moffett, D.F. and **Onken, H.** (2010). The Cellular Basis of Extreme Alkali Secretion in Insects: A Tale of Two Tissues. In: *Epithelial Transport Physiology* (ed. George A. Gerencser), pp. 91-112 . Totowa, New Jersey: Humana Press. ISBN: 978-1-60327-228-5.

Palestis, B.G., J. Cabrero, R. Trivers, and J.P.M. Camacho. *In press*. Prevalence of B chromosomes in Orthoptera is associated with shape and number of A chromosomes. *Genetica*.

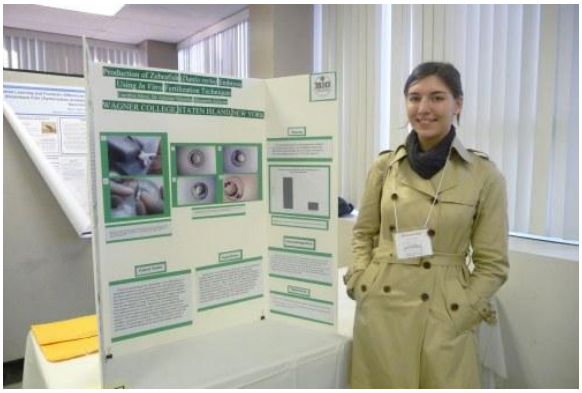
PROFESSIONAL MEETINGS

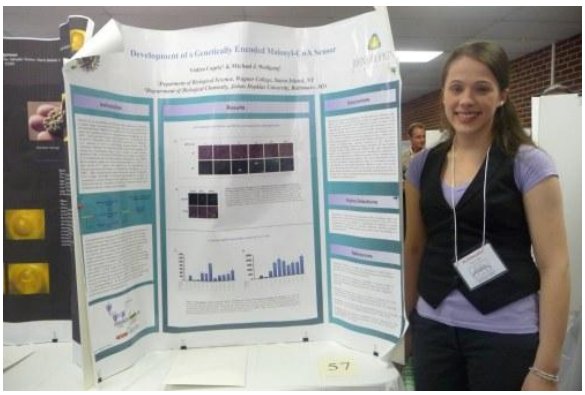
MACUB

On a Saturday morning, a handful of Biology students and faculty traveled to Molloy College where the annual Metropolitan Association of College and University Biologists Conference was held. The conference began with a keynote address made by Dr. Susan S. Kilham, a Professor of Environmental Science at Drexel University gave a lecture about global warming and the mountains of evidence that supports it. She does extensive research that deals with the effects of climate change on various ecosystems.

Biology undergraduate students and Microbiology graduate students gave poster presentations of their research at the conference. Graduate Assistant Michael Gutkin (Microbiology) received acknowledgment at the conference. Gutkin was awarded third place in the graduate category for his presenation that was titled, "Immunofluorescent Characterization of the Cellular Composition in Normal Adult Zebrafish (*Danio rerio*) Optic Tectum.". Professor Corbo, Dr. Alejandra Alonso (College of Staten Island), and Dr. Fulop advised Gutkin with his research. Additionally, Caroline Mroz (Senior, Biology major) was honored as a winner for the Benjamin Cummings/MACUB Student Research Award. The Limulus staff would like to congratulate Mike, Caroline, and all of the other Wagner students who participated in this prestigious conference.

Some photographs from the event:





Below is a list of all of the students and their presentations:

Undergraduate

"Chromosomal Aberrations Caused by the Chemotherapeutic Agent Mitoxantrone on In vitro Human Peripheral Leukocytes." Roseanna Valant (Senior Biology major) and Dr. Ammini Moorthy.

"Development of Genetically Encoded Malonyl-CoA Sensor." Violeta Capric (Junior Biology major), Dr. Michael Wolfgang (Johns Hopkins University). Wagner College faculty advisor: Dr. Onken.

"Production of Zebrafish (Danio rerio) Embryos using In Vitro Fertilization Techniques." Caroline Mroz (Senior Biology major), Dr. Ammini Moorthy.

Graduate

"Exploration of the Regulatory Effects of jadW1, jadW2 and jadW3 in the Biosynthesis of Jadomycin B in Streptomyces venezuelae ISP5230." Jeffrey Bertone (Microbiology) and Dr. Roy Mosher.

"Immunofluorescent Characterization of the Cellular Composition in Normal Adult Zebrafish (Danio rerio) Optic Tectum." Michael Gutkin (Microbiology(, Prof. Christopher Corbo, Dr. Alejandra Alonso (College of Staten Island) and Dr. Zoltan Fulop.

Contributed by Nidhi Khanna

ALUMNI

Dr. FISCHETTI AGAIN ON CAMPUS

Dr. Fischetti who graduated from Wagner College in 1962 received an honorary degree during the commencement ceremony in May 2010. He will return this week again to Wagner College in order to give a presentation in the frame of the Academic and Cultural Enrichment (ACE) lecture series.

In the following find a copy of Dr. Fischetti's biosketch as it appeared on the Wagner College website and the announcement for his ACE presentation this coming week.

Vincent A. Fischetti, Ph.D.
Professor and Head, Laboratory of Bacterial Pathogenesis and Immunology, Rockefeller University, New York, NY

More than 90 percent of all infections begin at a mucous membrane site (oral, nasal, upper or lower respiratory, ocular, intestinal or urogenital). The Fischetti lab is working to understand the earliest events that occur when gram-positive bacteria interact with human tissues and cause disease. Its research is aimed at interfering with these events by: developing vaccines to induce a mucosal immune response; blocking the attachment of surface protein in the bacterial cell wall to prevent infection; and using phage lytic enzymes to

both remove colonizing pathogenic bacteria to prevent infection and treat established infections.

Dr. Fischetti works with gram-positive bacteria, such as streptococci, that do not contain a second cell membrane outside of the cell wall. In the fight against infectious disease, Dr. Fischetti investigates two nonantibiotic treatment strategies. This two-pronged approach involves blocking bacteria from attaching to cells and exploring the use of phage lytic enzymes to remove pathogenic bacteria once they have colonized in the host.

To infect their host, bacteria use their surface molecules to attach and invade human tissues, particularly those that line the nose and throat. Knowledge of the process bacteria use to anchor these molecules in their cell wall could lead to strategies to prevent infection. The M protein is a surface protein that is the major virulence factor of group A streptococci because of its ability to impede attack by human white blood cells. Analysis of this molecule by Dr. Fischetti's lab shows that the region used to attach the M protein to the cell surface is highly conserved in gram-positive bacteria, indicating that the mechanism for anchoring surface proteins in bacteria is also conserved. Since bacteria cannot cause infection without their surface proteins, a molecule that blocks surface protein attachment will be broadly applicable to different gram-positive bacteria.

Dr. Fischetti's lab has also shown that the M protein can be used to deliver the molecules to the surface of gram-positive bacteria to be used as a vaccine. A vaccine that employs this approach could be used against a variety of harmful pathogens and is currently being tested in clinical trials. Dr. Fischetti has also identified a membrane-associated enzyme responsible for cleaving the highly conserved anchor region of surface proteins. Inhibition of this enzyme prevents both cell wall assembly and the proper attachment of most surface proteins, resulting in nearly naked bacteria. Studies are under way to further define the role of this enzyme in cell wall assembly and the protein attachment process to identify inhibitors that may be used as a new class of antibiotic.

As new antibiotics are proving futile against resistant strains of bacteria, the Fischetti lab is investigating the efficacy of lytic enzymes, which are found exclusively in viruses called bacteriophages (or phages), viruses that infect bacteria.

Dr. Fischetti's lab has recombinantly produced lysins that will kill the major gram-positive pathogens — Streptococcus pyogenes, Streptococcus pneumoniae, Staphylococcus aureus, Enterococcus faecalis and Bacillus anthracis — and has used these proteins to destroy their respective bacteria in animal models of disease. The enzymes are extremely potent; only very small amounts are needed to destroy millions of organisms within seconds of contact. They are also highly specific and unlike antibiotics, only kill the disease-causing bacteria without harming the beneficial bacteria. Dr. Fischetti's studies have shown that when small amounts of the enzymes are administered to mice that have intentionally been infected with these bacteria, the disease-causing bacteria are rapidly destroyed. In an animal model of pneumococcus pneumonia, Dr. Fischetti has shown that systemic administration of the phage enzyme Cpl-1 can rescue mice infected with the pathogen and completely reverse lung tissue damage if given within 24 hours post-infection. Fischetti and his colleagues showed that when the enzyme is delivered to the brain of mice with pneumococcal meningitis, it effectively removes the organisms from the site. The lab has also shown that by removing colonizing S. pneumoniae from the nose of mice, they could completely prevent secondary ear infections triggered by influenza.

Using lytic enzymes as a tool, Dr. Fischetti's lab developed a method of drilling through the thick cell walls of gram-positive bacteria while keeping them intact. The technique enabled the Fischetti lab to access the bacterial cytoplasm with labeled antibodies to study intracellular molecules that were previously inaccessible.

CAREER

Dr. Fischetti grew up in New York City, receiving his B.S. in bacteriology from Wagner College in 1962 and his M.S. in microbiology from Long Island University in 1967. He received his Ph.D. in microbiology from New York University in 1970. Dr. Fischetti came to Rockefeller as a postdoc in 1970 and became assistant professor in 1973, associate professor in 1978 and professor in 1990. In 1987 Dr. Fischetti received a 10-year National Institutes of Health MERIT Award that was renewed in 1997.

USING WHAT PHAGE HAVE LEARNED TO CONTROL GRAM-POSITIVE BACTERIA

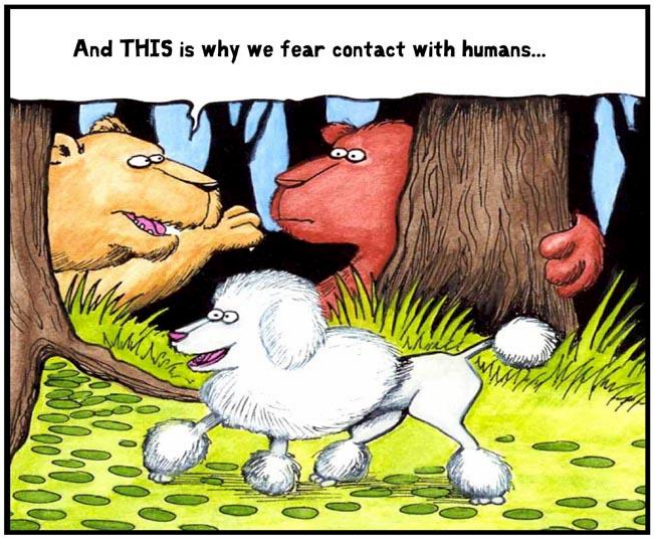
ACE Presentation by Vincent A. Fischetti, Ph.D. Laboratory of Bacterial Pathogenesis and Immunology, Rockefeller University, New York, NY

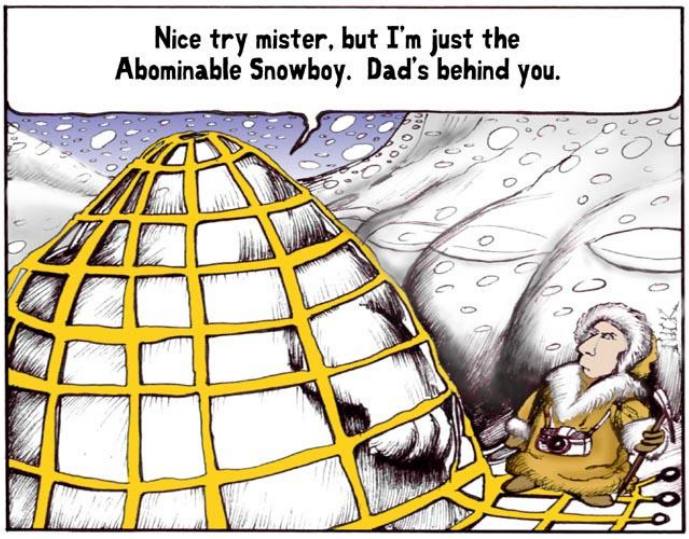
THURSDAY, NOVEMBER 4TH, 4:20 P.M., WAGNER COLLEGE, SPIRO HALL, ROOM 2

Dear Alumni,

If you are interested in contributing to our newsletter, you are very welcome to do so. Contact Dr. Onken by e-mail (horst.onken@wagner.edu) with your submission, comment, ideas or questions! We are excited to hear about where you are, how and what you do!

CARTOONS





Cartoons from www.lab-initio.com

GUIDELINES FOR CONTRIBUTORS

Authors in all sections should keep in mind that not all readers are specialized in their area of interest. Keep your contribution on a level that everybody can understand.
Contributions may vary in length between about 50 and 500 words and must be submitted by e-mail to horst.onken@wagner.edu.
Photographs or other images that accompany an article are very welcome, but must be submitted as separate files (high quality jpg is the preferred file format) attached to the e-mail. Be aware that photographs/images may be minimized in size.
Indicate the section of the newsletter where you want your contribution to appear.
The deadline for submission of a contribution is the 20th of the month. Contributions received later may or may not be considered.
The editor reserves his right to edit your contribution or post an immediate response.
Editing may involve to publish contributions in other sections as indicated by the author.
All contributions will clearly indicate the author's identity.
All contributions are reviewed and publication may be refused by the editor.