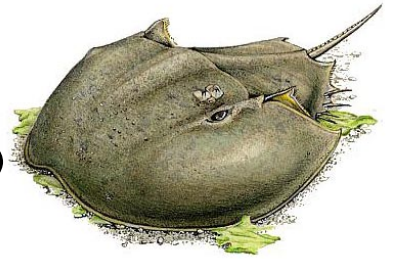


# Limulus



## NEWSLETTER

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

Volume 2012, Issue Spring-03

March, 2012



The most senior and the most junior faculty member of the Science Building at the same table: Left, Dr. Rath (Physics), right, Professor Corbo (Biology), middle, Dr. Fulop (Biology): CONGRATULATIONS Professor Corbo for the appointment to Assistant Professor!

### TABLE OF CONTENTS

Biology Staff and Faculty News	2
Curriculum News	2
Student News	2
News from Clubs and Societies	3
Experiences	3
News in the Biosciences	5
Opportunities	5
Publications, Presentations and Professional Meetings	5
Alumi	6
Cartoon	6

### LETTER FROM THE EDITOR

The most exciting news in the department is certainly that Professor Corbo accepted the tenure-track position as an Assistant Professor of Microbiology. Also, two students from the department, Gina Auricchio and Gregory Balaes, are running for SGA presidency. You will read news of clubs and societies, and of a new frog species discovered on Staten Island.

I hope you enjoy the March Limulus!

Best regards,

Dr. Horst Onken, The Editor





## BIOLOGY STAFF AND FACULTY NEWS

### CONGRATULATIONS TO PROFESSOR CORBO



Christopher Corbo, an alumnus who graduated in 2008, has been selected for the tenure-track position as Assistant Professor of Microbiology at Wagner College.

“He is an absolute fantastic individual and a very good scientist. I have had many good students, but I’ve never had anybody as diligent and close to me as Chris. I am very excited for

him being named Assistant Professor,” said Dr. Zoltan Fulop, Professor of Neurophysiology & Histology.

Corbo obtained his Bachelors Degree in Biology from Wagner in 2006 and completed graduate school in 2008 with a Masters Degree in Microbiology again from Wagner. Currently, Corbo is simultaneously teaching at Wagner while finishing his PhD in Neuroscience at the City University of New York. His research at the City University of New York incorporates various difficulties and issues associated with Alzheimer’s disease. In his spare time, Corbo teaches and conducts research on traumatic brain injuries in collaboration with Dr. Fulop at Wagner College.

“Chris is a likeable person by students and professors. Anyone you talk to knows how approachable he is, and we only hear good and positive things,” said Dr. Fulop.

As a second-year undergraduate student at Wagner, Corbo became fascinated with Dr. Fulop’s work with electron microscopy and became eager to learn its operation. “We worked day and night and Chris never complained of late hours, or that he had to take a break,” said Dr. Fulop.

“Chris was a volunteer electron microscope laboratory technician for graduate-level courses,” said Dr. Fulop. “He was only a sophomore, but the graduate students respected him, because he had already learned how to use the electron microscope.” Today, Corbo uses the electron microscope frequently in his research.

To say the Wagner community is happy to have Corbo as an Assistant Professor is very much an understatement. Students and faculty alike are extremely honored and are pleased with Corbo’s commitment to students, research, and teaching and they look forward to seeing him at Wagner on a regular basis. “Chris is genuinely concerned with his student’s success,” said William Rivera, a Third-Year Microbiology undergraduate student.

“I met Chris five years ago as an undergraduate biology major,” said Michael Gutkin, a Fifth-Year Microbiology graduate student. “He is a hands-on professor with a diligent work ethic, who pushed me to reach my potential in the laboratory component of my class. His knowledge and enthusiasm in the class led to me working in Dr. Fulop’s research lab, where I gained extensive experience in electron and confocal microscopy,” said Gutkin. “I am excited for Chris and I have no doubt he will have the same positive impact on other Wagner students as he did for me.”



Fourth-year undergraduate student and Biology major, Max Lucci said, “Corbo has escalated my experience at Wagner to new levels. His guidance has not only assisted me in the laboratory, but also as a more confident, inquisitive individual. For that, I am extremely grateful.”

On behalf of the Limulus team, we wish Professor Corbo the utmost luck as he opens this new chapter in his life.

*Contributed by Gregory Balaes.*

## CURRICULUM NEWS

### 2012 SUMMER COURSES AND INTENDED AUDIENCE

#### **BI 120 Human Biology.** Runs May 14-May 25

Non-science majors

#### **BI 209/209L Human Anatomy and Physiology I.** Session A Nursing and Physician Assistant majors

#### **BI 210/210L Human Anatomy and Physiology II.** Session B Nursing and Physician Assistant majors

#### **BI/MI 213/213L Cells, Genes and Evolution.** Session A Biology, Biopsychology and Microbiology majors, Pre-health students

#### **BI 335/335L Natural History of the Mid-Atlantic States.** Runs May 15-May 31

Biology majors and Environmental Studies minors

#### **BI/MI 400E Experiential Component of the Senior RFT.** Session B

Biology and Microbiology majors , Biopsychology majors focusing on biology

#### **MI 200/200L Microbiology.** Session A

Microbiology, Nursing, and Physician Assistant majors

#### **MI 597 Research.** Session B

Microbiology 5-year program students

#### **MI 797, 798, 799 Research.** Session B

Microbiology graduate students

*Contributed by Dr. Palestis.*

## STUDENT NEWS

### ANOTHER SGA PRESIDENT FROM THE SCIENCES?



As Violeta Capric will graduate from Wagner to continue her studies in public health, the seat for SGA Presidency is open. Gina Auricchio (Microbiology, '13) and Gregory Balaes (Biology and minor in Chemistry, '13) are students who have been SGA senators for three years, are in the Biological Sciences Department, and are running for SGA

president.

It is no coincidence that Auricchio and Balaes having studied the natural sciences, would run for presidency. Being that Auricchio is pre-med she said, "It is given me the determination to be prepared for the tasks undertaken as SGA president". Balaes noted that, "Majoring in the sciences challenged me to remain up-to-date with new discoveries, which became exciting and interesting for me". Both qualities are necessary when reflecting upon the concerns of Wagner students.



After running for Vice President last year, Auricchio wanted to take it a step up and run for president this year. Being in SGA for the past three years, Auricchio explained that is has helped her "to understand the necessary attributes to be SGA president, especially approachability as she is concerned with the students apparent indifference to SGA. In fact, Auricchio described that if

she's elected she wants to see, "SGA becoming more interactive with the students and making it more connected with the student body; allowing students to have more input and the opportunity to make suggestions and not just the senators alone. Moreover, having more students present in Senate meetings and making decisions with the senators." Auricchio says that a major problem is getting the attention to the students and that is a problem that she will resolve if elected, even if it is through more frequent announcements or more prevalent twitter updates.

As an SGA senator for three consecutive years Bales has said that, "I've learned the importance of listening and problem solving. I became very noble in identifying student concerns and working with administration for a solution. Actually, finding an agreeable solution had to be the most exciting and rewarding part of all. If elected, I'm very much interested in strengthening communication between SGA and the student body via more frequent updates of our hard-earned progress. I truly believe SGA has been a very influential student-administration link that, if used correctly, could positively influence Wagner's experience for current and prospective students alike. After committing three years as a senator, I'm experienced and eager to be the voice of the student body if elected as SGA President."



The biological sciences department wishes the best of luck to Gina Auricchio and Greg Balaes!

*Contributed by Philip Fomina.*

## NEWS FROM CLUBS AND SOCIETIES

### BIOLOGY CLUB

This month, the Biology Club is taking their annual trip to the Bodies Alive Exhibition in New York. Visiting Bodies Alive is a perfect opportunity for students to witness state-of-the-art dissections that directly relate to a variety of biology classes offered at Wagner College. If you are interested in visiting the exhibit, please email [janna.denisenko@wagner.edu](mailto:janna.denisenko@wagner.edu) for more information.

*Contributed by Gregory Balaes.*

### MICROBIOLOGY CLUB

#### Microbiology Club Receives National Accreditation

The Microbiology Club at Wagner is an up and coming scientific organization that has undergone a significant change, presenting itself as a high academic association with driven scholars. In fact, the Microbiology Club has been recognized by the American Society of Microbiology (ASM) as a student chapter.

Because the club has been recognized by the ASM, not only has their name changed, but also their reputation. The Microbiology Club is now not only a student organization but it is also an outlet of academic recognition and networking for undergraduate microbiology majors, a scholarly society that makes its students nationally noticed. Membership goes through an extensive process in which the hopeful student chapter submits their constitution to the ASM branch in the area which votes upon sponsorship after review. If the branch approves, the Branch Councilor will settle approval of the student chapter with the Student Subcommittee and the ASM Membership Board Chair by the ASM council during the ASM general meeting (taken from [www.asm.org](http://www.asm.org)). However, even more impressive is how quickly the Wagner's ASM student chapter became nationally accredited. It was just last semester that the club got up and running.

The Microbiology Club will be involved in three events this semester. Many of the chapter's members will be attending the Eastern Colleges Science Conference and Relay for Life. Students can find the Microbiology Club at Wagner's Health Fair in April as they will be hosting an STD awareness table.

*Contributed by Philip Fomina.*

### TRI-BETA BIOLOGY HONORS SOCIETY

Tri-Beta is excited to induct its new invited members into the honors society on April 20<sup>th</sup>. Also, Tri-Beta will host an informational table at the April 19th Health Fair on the Sutter Oval explaining the effects of improper sun exposure and how to prevent skin cancer. Their efforts to motivate the Wagner Community in maintaining proper sun exposure do not stop there. Tri-Beta will be handing out free sunscreen lotion to get you started on the quest against skin cancer.

*Contributed by Gregory Balaes.*

### FATE OF BIOPSYCHOLOGY HONORS SOCIETY:

#### CALL TO BIOPSYCHOLOGY STUDENTS

As the Biopsychology Honor Society's entire e-board will graduate from Wagner in May, potential leaders have new shoes to fill. Started by Amy Marin (Nursing '11) and currently lead by Deeksha Chawla (Biopsychology '12), they have laid the foundation for the Honor Society, but now it will take determined and ambitious biopsychology students to keep the Biopsychology Honor Society alive.

Under the presidency of Deeksha Chawla, the Biopsychology Honor Society had a prominent presence on campus last semester. They have worked with Res-Ed and the health center to make students aware of the health services available to them and where they are located. Both freshman and upperclassman attended, reporting that the seminar was informative and gave them greater comfort. However, because Wagner's SGA had to decrease the budget for all





clubs in the new semester, it has become difficult to meet the society's own standards it had made last semester. Purchasing T shirts and catering events to have more attendance have become increasingly expensive. As the semester comes to a close, it is up to the incoming class and the new potential e-board to use the experience and information gained from Chawla to organize what they can do to raise more money to keep events going next semester and to increase membership. Currently, there are fifteen members, but as biopsychology is becoming a more popular major at Wagner, there is incentive join.

Marin's goal in forming the Honor Society was to recognize biopsychology scholars just as Tri Beta, the Biology Honor Society, recognizes Wagner's Biology students. She wanted the Biopsychology students to have their own honor society so biopsychology students at Wagner could be recognized for their hard work and for studying a unique up and coming major across the country.

In fact, more and more research is being devoted to the biological processes of the brain and its effects on behavior. NYU and Binghamton University have majors that are similar to Wagner's Biopsychology program and CSI also has a program concentrated in neuroscience. Wagner's biopsychology program is top level. Not only does the biopsychology program prepare students for Medical and Dental school with its wide variety in classes, many research opportunities at Wagner are available for biopsychology students to gain practical experience, especially if they want to pursue neuroscience. For instance, students can do research with Dr. Nolan, studying sleep and behavior and food habits if they are interested more in the psychology of biopsychology. Or, if a biopsychology student is more interested in biology, they can study the optic tectum of zebra fish with Dr. Fulop. Students researching with Dr. Fulop have the opportunity to use a confocal microscope to study the brains of the zebra fish. The field of biopsychology is advancing and Wagner is following the pace.

Wagner's Biopsychology Honor Society is a promising scholarly organization that needs to be kept alive. Although it is still striving for national accreditation to be part of Psi Epsilon Alpha, current biopsychology students and biology students alike can keep the effort going especially if they want the opportunity of leadership on campus.

*Contributed by Philip Fomina.*

#### PRE-DENTISTRY SOCIETY

In February, Dentist Dr. Albicocco, a graduate of Wagner and local Staten Islander, generously donated his time to present "Determining Identity Through Dental Forensics." Dr. Albicocco exposed pre-dental students to the dentist's crucial role in determining the identity of individuals in natural disasters, for example. "I never knew dentistry could be applied to a field such as forensics and it was exciting to see how teeth could be used to identify missing people," said Rayna Silva, a sophomore Biology Major and pre-dentistry student. In dental forensics, the individual's postmortem (after death) teeth are compared to antemortem (before death) x-rays, obtained from dental records



Students of the Pre-Dentistry Society have been hard at work for their involvement in the April 19th Health Fair on the Sutter Oval. They will be raising awareness of the importance of flossing and its link to endocarditis, including how to maintain proper oral care. Dr. Rocco DiAntonio, a graduate of the New Jersey Dental School will be donating his time to provide oral cancer screenings, free of charge. The Pre-Dentistry Society is looking forward to seeing the Wagner Community and local Staten Islanders at their Health Fair tables on April 19th from 9am to 4pm.

If your club or organization is interested in participating in Wagner's first annual Health Fair, please email the Health Fair Founder, Gregory Balaes at [gregory.balaes@wagner.edu](mailto:gregory.balaes@wagner.edu).

Both the Pre-Dentistry Society and Pre-Health Society are partnering with Wagner's Center for Academic and Career Development (CACD) for their first annual Health Careers Networking Reception. Students will have the opportunity to meet with alumni, local physicians, dentists, physical therapists, pharmacists, and many more, to learn about their specialties and their career choices. In addition, they will network and learn tips and tricks for surviving graduate school.

"I would like to send a special thank you to Natalie Johnson of CACD and to Dr. Heather Cook and Dr. Nicholas Richardson of the Pre-Health Program for countless hours in planning this event," said Gregory Balaes, Pre-Dentistry Society President.

The Health Careers Networking Reception will take place at Wagner on April 23rd and is highly anticipated amongst the pre-health students. For more information, please contact [gregory.balaes@wagner.edu](mailto:gregory.balaes@wagner.edu).

*Contributed by Philip Fomina.*

#### PRE-HEALTH SOCIETY

This semester is an exciting one for the Pre-Health Society. On Tuesday, April 17, 2012, PHS will welcome Maureen Cullins, the Director of the Multicultural Resource Center at Duke University Medical School, who will visit Wagner College. She will lead a presentation regarding the process of applying to medical and dental schools as well as what students should expect their first year of professional school.

In addition, on Monday, April 23, 2012, the Pre-Health and Pre-Dentistry Society are hosting their first annual Pre-Health Alumni Networking reception, featuring members of New York City's medical and dental community. Students are invited to welcome Wagner alumni as well as local physicians, dentists, physical therapists and other health-related professionals to learn about their specialties as well as the reason behind their career choices. The prerequisite to attending the event is to upload your resume onto WICS, the Wagner Internship and Career Search system, at <http://wagner.experience.com/er/security/login.jsp>.

To RSVP to either event, please email [kymberlie.vargas@wagner.edu](mailto:kymberlie.vargas@wagner.edu), the Pre-Health Society's secretary.

If you have any questions or concerns, please feel free to email Pre-Health Society's president, Paki Mekki at [pakinam.mekki@wagner.edu](mailto:pakinam.mekki@wagner.edu)!

Have a wonderful Easter break!

*Contributed by Paki Mekki*



## NEWS IN THE BIOSCIENCES

### NEW FROG SPECIES FOUND ON STATEN ISLAND



In 2009, while driving on the I-95, Jeremy Feinberg, an ecology and evolution Ph.D. candidate at Rutgers University, heard distinct frog croaks. Instead of hearing the familiar mating calls of New York City's southern leopard frogs, characterized by repetitive clucks, Feinberg heard single croak sounds.

This unique mating sound gave rise to an important question: Are these frogs southern leopard frogs, or do they belong to a different species? Since 2009, Feinberg and his team of four scientists initiated a plethora of studies to answer this question.

Feinberg's frog specimens resemble the southern leopard frogs found on Staten Island. To truly assay if these frogs are unique, Catherine Newman, an evolutionary biologist, performed a DNA analysis of Feinberg's frog specimens, northern leopard frogs and southern leopard frogs. Surprisingly, Newman's results showed that these frogs are genetically distinct, and therefore, belong to a different species.

As the lead scientist of this study, Jeremy Feinberg will have the honor of naming the new frog species.

Contributed by Pakinam Mekki.

## OPPORTUNITIES

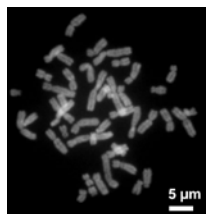
### RESEARCH WITH ANIMAL BEHAVIOR AND ECOLOGY

Dr. Palestis offers research opportunities for students in the frame of his research project with common terns (*Sterna hirundo*) in southern New Jersey. Apart of his work with terns, Dr. Palestis is interested in animal behavior and has forwarded numerous student research projects with zebrafish in the past. Please, contact Dr. Palestis for further information at bpalesti@wagner.edu.



Contributed by Dr. Onken

### RESEARCH IN GENETICS



Dr. Moorthy offers research opportunities for students with an interest in genetics. In the past, Dr. Moorthy has forwarded student research in genetics with plants and animals. Dr. Moorthy is an expert in using numerous techniques for genetic research. Please,

contact Dr. Moorthy for further information at asmoorth@wagner.edu.

Contributed by Dr. Onken



## RESEARCH ABOUT LIGHT PERCEPTION

Dr. Stearns offers research projects to determine the light sensitivity of animals. Currently, Dr. Stearns is interested in the characteristics of the eyes of larval mosquitoes. However, other animals like the brine shrimp (*Artemia salina*) have been investigated in the laboratory of Dr. Stearns. Please, contact Dr. Stearns for further information at dstearns@wagner.edu.

Contributed by Dr. Onken



## WORK IN THE GARDEN

Students interested in collaborating in the greenhouse and/or garden during the spring of 2012 should contact Dr. Onken ([horst.onken@wagner.edu](mailto:horst.onken@wagner.edu)).

Contributed by Dr. Onken

## BE A LIMULUS ASISTANT EDITOR

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](mailto:horst.onken@wagner.edu)).

Contributed by Dr. Onken

## PUBLICATIONS

Moffett, D. F., Jagadeshwaran, U., Wang, Z., Davis, H. M., **Onken, H.** and Goss, G. G. (*in press*). Signaling by intracellular  $Ca^{2+}$  and  $H^{+}$  in larval mosquito (*Aedes aegypti*) midgut epithelium in response to serosal serotonin and lumen pH. *Journal of Insect Physiology*, available online at <http://dx.doi.org/10.1016/j.jinsphys.2011.11.019>

**Palestis, B.G.**, J. Cabrero, R. Trivers, and J.P.M. Camacho. 2010. Prevalence of B chromosomes in Orthoptera is associated with shape and number of A chromosomes. *Genetica* 138: 1181-1189.

## PRESENTATIONS

**Palestis, B.G.** and **K.E. Eppinger**. 2011. Few happy returns: Low return rates of common terns banded at Pettit Island, New Jersey. Presented at the 35th Annual Meeting of the Waterbird Society, 9-12 November, Annapolis, MD.

**Rivera, W., C. Gaylets, J. Husic, R. Mosher, B. Palestis, and A. Houlihan**. 2011. Carriage of bacterial and protozoan parasites among common tern chicks on Pettit Island, Barnegat Bay, NJ. Presented at the 35th Annual Meeting of the Waterbird Society, 9-12 November, Annapolis, MD.

**Duncan, L., Emilio, J. and Cook, H.** 2011. Analyzing the Effect of Phthalates on the Development of *Drosophila melanogaster*. 44th Annual MACUB Conference, Seton Hall University, South Orange, NJ, October 29, 2011.

**Denisenko, L., Corbo, C.** (Wagner College) and Alonso, A. (CSI). 2011. Electron Microscopic Analysis of Cell Membrane Integrity when Expressing Tau Pseudophosphorylated at Positions T212, T213 & S262. 44th Annual MACUB



Conference, Seton Hall University, South Orange, NJ, October 29, 2011.

**Gutkin, M. C., Corbo, C. P., Raths, L. A. and Fulop, Z. L.** 2011. Identification of Proliferating and Immunologically Active Cells in Surviving Organotypic Culture of Adult Zebrafish (*Danio rerio*) Optic Tectum. 44th Annual MACUB Conference, Seton Hall University, South Orange, NJ, October 29, 2011.

**Auricchio, G. M.** (Wagner undergraduate), Bailly, J., McAllister, F., Maitra, A. and Leach, S. (Johns Hopkins University School of Medicine) 2011. Imaging Primary Cilia in Pancreatic Cancer Tumor Initiating Cells. 44th Annual MACUB Conference, Seton Hall University, South Orange, NJ, October 29, 2011.

**Memon, M. A.** (Wagner undergraduate), Fuchs, E., Bakshi, R. and Hendrix, C. (Johns Hopkins University School of Medicine) 2011. Measuring Distribution and Permeability of an HIV Microbicide Gel Vehicle using MRT, SPECT/CT and a Radiolabeled Small Molecule. 44th Annual MACUB Conference, Seton Hall University, South Orange, NJ, October 29, 2011.

**Palestis, B.G. and K.E. Eppinger.** 2011. A banding study of common terns on Pettit Island, NJ: Preliminary results. Greater New York/New Jersey Harbor Herons and Waterbirds Working Group. Staten Island, NY. January 12-13.

**Palestis, B.,** I. Nisbet, J. Hatch, J. Arnold, and P. Szczys. 2011. The importance of tail length for sexual selection in roseate terns. Waterbird Society. Grand Island, NE. March 13-16.

## PROFESSIONAL MEETINGS

EASTERN COLLEGES SCIENCE CONFERENCE 2012  
The 66<sup>th</sup> Eastern Colleges Science Conference and the 6<sup>th</sup> Undergraduate Research Symposium are being held together on Saturday, April 14, on the campus of William Paterson University, in Wayne, NJ. Approximately 40 faculty and students will be attending the event. Good Luck to those presenting their research!

*Contributed by Dr. Onken.*

## ALUMNI

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](mailto: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!

## CARTOON



The next step in executive efficiency – Microsoft PowerNap.

Cartoon from [www.lab-initio.com](http://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](mailto: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 20<sup>th</sup> 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.**

### **The Editorial Board:**

**Editor:** Dr. Horst Onken, *Associate Professor*

**Assistant Editor:** Stephanie Rollizo, Dept. *Secretary*

**Student Assistant Editor:** Gregory Balaes (Biopsychology)

**Student Assistant Editor:** Pakinam Mekki (Biology)

**Student Assistant Editor:** Philip Fomina (Biopsychology)

**Student Assistant Editor: WANTED!**

