LETTER FROM THE EDITOR

Since Dr. Onken has been on sabbatical, I’ve been collecting articles and photos for this newsletter, which he established for Biological Sciences back in 2007!

Please accept this edition of Limulus which includes events from summer of 2013 through summer 2014.

We will continue to collaborate with faculty, students and staff to publish our academic, civic and social occasions for your enjoyment.

Sincerely,
Stephanie Rollizo, Faculty Secretary, Biological Sciences
Senior Class Completing Research in Fall 2013

Seated: Meghan Brown, Dr. Zoltan Fulop, Pakinam Mekki
Standing: Ashley Aanonsen, Laura Amorosa, Daniel Cimilluca, Joseph Cuomo, Pierre Yuzon, Kymberlie Vargas, Paul Miceli

Living the Good Retired (?) Life!
BIOLOGY STAFF AND FACULTY NEWS

Sabbatical for Dr. Donald Stearns

Dr. Stearns was awarded sabbatical leave for fall, 2013. Most of his leave time was used to educate himself regarding the important new (in the past 20 years) findings in cognitive science and neuropsychology showing how the human brain thinks, as well as how humans typically make decisions. He also focused on critical thinking—what it is, how it works, how it can be taught as a skill, how it can be assessed. Dr. Stearns also served as the first author (with Adam Houlihan, Christopher Corbo, and Roy Mosher) in analyzing data and preparing, then revising drafts of a manuscript (“Teaching Critical Thinking and Civic Thinking in a College Freshman Course”), which is about to be submitted to The Journal of Excellence in College Teaching.

Photograph by Anna Mulé

Sabbatical for Dr. Horst Onken

During the spring semester 2014, Dr. Onken was on sabbatical. He spent the time from February to August at Washington State University (Pullman, WA), at the Scripps Institute of Oceanography (San Diego, CA), and at the University of Manitoba (Winnipeg, Canada). In Washington State, Dr. Onken forwarded his research with mosquitoes and extended his work with insects to a larger animal, Manduca sexta. As larva, these animals are known as tobacco hornworms and are one of the major model organisms for insects. As adults, the animals are large moths. In San Diego, Dr. Onken participated in a major conference of Experimental Biology and started a new collaboration with a faculty member from the Scripps Institute. In Winnipeg, Dr. Onken collaborated on a project with crustacean gills.

Photograph by Anna Mulé

New Award and Dedication of Plaque in Memory of Dr. Roy Mosher

Beginning May 2013, The Roy H. Mosher Memorial Award in Microbiology is presented annually to a graduate student in the BS/MS five year program in Microbiology who in the judgment of the faculty has excelled in independent research in the field of microbiology and who is also conscientious and cooperative. The first award was presented to Ms. Julia Mullins, pictured below.

Photograph by Anna Mulé

The plaque is located by the Microbiology Graduate Student Office.

Contributed, with photographs, by Stephanie Rollizo
Dr. Ammini Moorthy Retires!

After teaching her special brand of biology and genetics for 33 years at Wagner, Professor Moorthy reluctantly announced her retirement. Co-workers and students alike experienced mixed emotions as she was twice feted at gatherings hosted by her science colleagues and President Guarasci. Ammini is very proud to have positively influenced so many young minds who have gone on to outstanding careers in medicine and research. Dr. Moorthy envisioned and brought to fruition the “Alumni Fund for Undergraduate Research in Biological Sciences,” a project made possible by her long term relationships and keen memory of the many students she taught, advised and did research with of the years. (Please see the acknowledgement of fund donors in this edition.)

We are happy to announce that Dr. Moorthy was approved for Emeritus by her department, colleagues and board of directors of Wagner!

175 Years and Counting!

Dr. Otto Raths, Physics, began his career at Wagner in 1963, left for four years to finish his PhD, and now has 47 years!

Dr. Kathleen Bobbitt started in Bacteriology, now the Microbiology Program, in 1975, completing her 39th year!

Dr. Ammini Moorthy got to Wagner in 1981, and recently finished her 33rd year. (See article on Dr. Moorthy’s retirement.)

Dr. Mohammed Alauddin, Chemistry, joined Wagner in 1984, having completed 30 years!

Dr. Zohreh Shahvar, Math and Accelerated MBA professor, got here in 1983, now celebrating 30 years!

Together, these professors represent all the five areas in science.

Dr. Moorthy on her Wagner Rocking Chair!

For more information, please see:
http://wagner.edu/wagnermagazine/?p=3270
An Open Letter from Dr. Ammini Moorthy:

Most of you already know that I am no longer at Wagner College, but you could be forgiven if you had perceived me as a permanent fixture in the Biological Sciences Department. I wish the latter were true, but due to health-related issues, I was forced to take early retirement. My mind is still working pretty well and I am still in love with all aspects of genetics and my students. Over the last 33 years of teaching at Wagner and holding part time jobs at NYU, Montclair State College, Middlesex County College and Visiting Professorship at Kerala University in India, I must have taught more than 10,000 students and in one way or other all of you have taught me something also. I have enjoyed teaching and being with you all. I do admit that I have annoyed some of you and have been perceived as a tough teacher but I have always cared for you and your successes have brought smiles on my face.

Teaching is both very rewarding and frustrating. Other than your family, a teacher is one who always likes to see the best in you and who cherishes all your successes. Like the commercial used to say, “When you look good, we look good,” and many a teacher lives for that gratification. Over the years, I have been blessed with students who are talented in different ways, students who are caring and compassionate and who are curious. I can still remember many of you by your names and many more of you by your face. My teaching career was really the most glorious period in my life.

At Wagner, I was instrumental in establishing the “Alumni Fund for Undergraduate Senior Thesis Research in Biological Sciences,” totally sustained by contributions from biological sciences alumni. The funds are solely used for research by undergraduate students doing their senior thesis research. This fund has enabled many students to do meaningful research and present the results in various conferences. This in turn has enabled them to enhance their chances of getting into professional and graduate programs. This is one way to give back to your school, and to your fellow alumni. (See how to contribute and the current donor listing at the end of this newsletter.)

Now it is time for me to say “Good Bye,” wish you all the very best in life, and tell you that I love you. Please feel comfortable in contacting me to say hello. I can be reached at asmooirth@wagner.edu or at asmoorthy@att.net

BIOLOGY STUDENT NEWS

Staten Island Zoo – Summer 2013

I spent this past summer as a Staten Island Zoo intern. As a zoo intern, I was able to gain valuable experience in the field of animal care and veterinary medicine. My duties included preparing animal diets in the zoo’s commissary, feeding animals and maintaining exhibits in the zoo’s children’s center, and assisting in the zoo’s animal hospital. I was able to work alongside the zookeepers and the zoo’s veterinarian and curator, Dr. Marc Valitutto. Dr. Valitutto was always eager to teach and allowed me to observe some procedures that took place over the summer. I observed procedures such as two necropsies on rattlesnakes that were inflicted with cancer, a sonogram on a potentially pregnant anteater, a routine examination on a chinchilla, and an examination on an alligator snapping turtle. I was also able to assist and learn from the zoo’s veterinary technician, who allowed Pat and I to intubate and administer antibiotics to an armadillo. The zookeepers were also extremely friendly and allowed me to interact with some of the animals, like the rheas, which Pat and I frequently took for walks around the zoo. Overall, I was able to immerse myself not only in the field of veterinary medicine, but zoo medicine, a specialty uncommon to even some veterinarians. I know this unique experience will separate me from other applicants when applying to veterinary school and I am grateful to be a part of it.

Contributed by Karina Roinestad 8/28/13

More Staten Island Zoo – Summer 2013

As a pre-veterinary student, the opportunity to work at the Staten Island Zoo this summer was a truly rewarding and unique experience. Through this internship I was able to gain insight into animal nutrition as well as the diverse world of zoological medicine. Over the course of the summer I was given the opportunity to observe and assist with the medical treatment of several exotic species including a necropsy of a rattlesnake with cancer and a sonogram of an anteater. I was also taught to intubate and give injections to an armadillo that had an infected lower jaw and had lost the ability to eat on its own. Working with these exotic species, such as fennec fox, sulcata tortoises and rheas, was incredible and an opportunity not experienced by many. This was an invaluable experience for my future goal of becoming a veterinarian as I was able to see what it takes to be a veterinarian in a different setting than I am used to, where the animals are not domesticated pets but instead wild species that all have very different care and medical needs necessary to survive in captivity.

Contributed by Patrick Connelly 8/28/13
NEWS FROM CLUBS AND SOCIETIES

TRI-BETA BIOLOGY HONORS SOCIETY

Annual Darwin Day Celebration

The department held their annual Darwin Day on 2/12/14. Darwin was born on Feb. 12, 1809 and so was Abraham Lincoln! Tri Beta’s assistance in setting and cleaning up was greatly appreciated!

Photo contributed by Erik Francomano

A new sign for the Research Garden!
Located adjacent to the Megerle Science Building Parking Lot.

Garden Work: Daniel Cimilucca, Enri Citozi, Philip Fomina, Mahdey Tallat, Lynn Tay

Photographs by Stephanie Rollizo →

Tri-Beta Plants a Butterfly Garden!
What a wonderful occasion (May 2), and how beautiful the outcome of the efforts of our students! Here are some photos that show the beginning, middle and result of the planting in the Biological Sciences Research Garden. Tri Beta Biological Honor Society, joined by the Microbiology Club, got their hands dirty early in the morning before classes began. Much thanks to our head grounds keeper, who shared his knowledge and skills. It was an experience that we will remember for a long time, and certainly will think of every time we see the beautiful plants growing because of you!
FOCUS ON Graduating Senior –

Pakinam Mekki, ‘14

THIS THANK YOU LETTER WAS WRITTEN BY PAKI TO PROVOST LILY McNAIR, November 2013

Last week, I attended the 13th Annual Biomedical Research Conference for Minority Students (ABRCMS) in Nashville, Tennessee. There, I attended many professional development seminars, like sessions on how to successfully network for jobs and careers. In addition, I networked with students and faculty representative from wonderful graduate programs, and I established contacts with well-known schools, including the University of Pittsburgh College of Medicine and Columbia University College of Physicians and Surgeons! I even got a job offer to work at the University of Oregon as a research technician in an ion transporter lab!!

I also met the grandson and daughter-in-law of Henrietta Lacks, whose cervical cancer cells were taken without her consent but revolutionized biomedical research. Hearing them speak about their desire to cooperate with the NIH and Johns Hopkins to propel research and medicine forward was an incredibly humbling experience.

Finally, I had a chance to present my poster on my research conducted at Hopkins to students, judges, and faculty members from all over the country. I actually won an award and a prize for outstanding poster presentation!!

I would also like to thank the Biology Department, especially my advisor, Dr. Cook, who has been there for me from my first day of college. I probably would not have made it this far without the department's amazing support and their commitment to their students!! I would especially like to thank Ms. Rollizo and Ms. Stapleton for helping me coordinate my trip to Nashville and back!

Post Script –

Washington, D.C. (January 30, 2014)

The Annual Biomedical Research Conference for Minority Students (ABRCMS) congratulates ten students who received awards for cell biology research presented at the 2013 conference, held November 13-16 in Nashville, Tennessee.

A total of 1,600 of the attending students participated in poster and oral presentations in 12 sub-disciplines of the biomedical and behavioral sciences.

CONGRATULATIONS to Paki for being one of the 10 students receiving an award for their research, out of 1600 students!!
FOCUS ON Graduating Senior –

Kristiana Kalibat, ‘14

Kristiana will be attending University of Florida College of Dentistry this August and could not be happier or more excited!

EXPERIENCES

M.A.C.U.B. – October 26, 2013

Congratulations again to Pakinam Mekki who won first place in the neurobiology/physiology, four-year-college category for her poster presentation at the 46th Annual Meeting of the Metropolitan Association of College and University Biologists, held at Bergen Community College. Paki presented the research she conducted earlier this year as part of the Johns Hopkins School of Medicine Summer Internship Program. Her presentation was titled, “The Effect of Na+/H+ Exchanger 6 on Tau Protein Aggregation.” Wagner student Melanie Krongold also presented her work from Johns Hopkins in a presentation titled, “Composite Gel Electrophoresis Resolves Large Human Lung Glycoproteins (Mucins) that Control Lung Inflammation.”

Photograph contributed by Kristiana Kalibat

Photographs by Stephanie Rollizo
35 Wagner College undergraduates participated in the 68th annual Eastern Colleges Science Conference, held this year on the campus of Marist College in Poughkeepsie. They gave eight platform presentations and 20 poster presentations of their empirical research.

The conference was attended by 350 participants from 16 institutions of higher education, mostly undergraduates in the physical, chemical, biological and social sciences.

“I thank every Wagner College student who participated in this conference,” said Dr. Donald Stearns, the college’s ECSC coordinator for many years. “For many, it was the first time they had presented their research in a scientific meeting.”

Five Wagner students won excellence awards for their presentations:

**Noura Hassan** (Economics major, Chemistry minor)  
“Pilot Study of Science Apathy Intervention in Public Elementary Schools on Staten Island” (platform presentation)  
Faculty research mentors: Dr. Jennifer Lauria (Education), Dr. Valeria Stepanova (Chemistry)

**Carrie Holt** (Physics major)  
“Missing High Energy Afterglows of Gamma-ray Bursts” (platform presentation)  
Research mentors: Drs. J. Racusin and D. Kocevski of the National Aeronautics and Space Administration

**Anthony Spano & Brandon Kocurek** (Microbiology majors)  
“Use of Morphological Techniques to Detect and Analyze Listeria monocytogenes in the Optic Tectum of Adult Zebrafish” (poster presentation)  
Research mentor: Dr. Christopher Corbo (Biology)
Melanie Krongold (Microbiology major)

“Composite gel electrophoresis resolves large human lung glycoproteins (mucins) that control lung inflammation”
(posteter presentation)

Research mentor: Dr. Ronald Schnaar, Johns Hopkins University School of Medicine

Salma Metwally (Biopsychology major)

“Phototactic Responses of the Water Flea Daphnia magna to Different Light Intensities of 520-nm and 690-nm Light”
(posteter presentation)

Research mentor: Dr. Donald Stearns (Biology)

Thanks to Interim Provost Jeffrey Kraus and the Provost’s Office for funding the college’s participation.

Photographs by Stephanie Rollizo

American Museum of Natural History

In June 2013, we had a wonderful day at the AMNH, a memory none of us will ever forget. Dr. Robert DeSalle, Curator of Entomology at the Museum, graciously treated us to a behind the scenes look at the museum. Dr. DeSalle is affiliated with the Division of Invertebrate Zoology and works at the Sackler Institute for Comparative Genomics, where he leads a group of researchers working on molecular systematics, molecular evolution, population and conservation genetics, and evolutionary genomics of a wide array of life forms ranging from viruses, bacteria, corals, and plants, to all kinds of insects, reptiles, and mammals.

By far, the "Hall of Human Origins" was our favorite exhibit! Having Dr. DeSalle as our personal guide, with his highly knowledgeable and friendly way of explaining things, was truly an honor for each of us!

Contributed, with photograph, by Stephanie Rollizo

CORRECTION FROM PREVIOUS ISSUE:

Correction: The Spiro family supports the summer research internships at Johns Hopkins University.

The programs housed within the Megerle Science Building have the support of the Anonymous Donor, whose generosity has allowed for the continued renovations of labs and open spaces within the facility.

Many heartfelt thanks to both the Spiro family and our Anonymous donor!
Dr. Stearns Takes African Civic Leaders to Toms River, New Jersey  
July, 2014

During summer 2014, Wagner College was selected to participate in a U.S. State Department-sponsored, six-week, civic leadership program (Young African Leaders Initiative) that prepared 25 promising Sub-Saharan Africans, from 19 countries, to take on effective civic leadership roles in their home countries.

The first week of the project focused on theories of civic leadership; the following four weeks focused on civic leadership pertaining to a different area each week (economic development, health care, education, the environment). During the sixth week, the participants prepared civic action proposals to address different issues in their home countries. The general goal was to guide the participants towards becoming effective civic leaders.

Dr. Donald Stearns, Professor of Biology, organized and delivered the curriculum for the fifth week of the project, dealing with environmental and human health issues. As part of that week, he shaped off-campus, outside-the-classroom experiences to demonstrate how a responsible citizen works within the U.S. democratic system to address community concerns as effectively as possible.

As the centerpiece of the week, Dr. Stearns and Dr. Jason Fitzgerald (Academic Coordinator for Wagner College Washington Fellowship Program), brought the African civic leaders to Toms River, New Jersey, the subject of Dan Fagin’s 2014 Pulitzer-prize winning nonfiction book, Toms River: A Story of Science and Salvation, dealing with water pollution and cancer in children living there.

During their first visit, the students listened to Ms. Linda Gillick, a civic leader and co-founding director of Ocean of Love, a nonprofit organization, directly addressing the needs of Ocean County families affected by childhood cancer. She described her personal involvement as a responsible citizen in facing this major environmental/human-health concern.

During the second meeting, the participants presented Ms. Gillick with letters of appreciation for her civic efforts, after which they visited the memorial site for the Toms River children who have died of cancer. There, they paid tribute to Ocean of Love and to Nelson Mandela International Day by cleaning up the site, hand-decorating planters, stuffing them with treats for children, and giving them to Ocean of Love, as a community service project.

The water utility, United Water Toms River, enthusiastically hosted the two meetings for the group at their facility.

Contributed by Dr. Donald Stearns
Photos by United Water Toms River
FOCUS ON ALUMNA - Ryan Rogers, ’09

Ms. Rogers Speaks to Wagner Students!

On October 31, 2013, Tri Beta hosted Ms. Ryan Rogers ’09 for her presentation, “It Takes Guts: Intestinal Homeostasis Promotes Longevity in Drosophila.” At the time, Ryan was a Ph.D. candidate focusing on biomedical science at the University of Connecticut Health Center.

Ryan Runs the N.Y.C. Marathon!

In November, Ryan participated in the New York City Marathon and successfully completed the whole run.

Dr. Rogers Graduates and Gets Hired!

February 2014 - Ryan accepts a tenure track teaching position at Wentworth Institute of Technology in Boston! It is an engineering school and she will be in the sciences, working closely with the biomedical engineering department. The newly degreed Dr. Rogers will be teaching General Biology, Genetics, Molecular Biology and will develop interdisciplinary courses as part of a new Biotechnology major that is launching in Fall 2015.

Ryan Comes to Visit Old Friends!

In May, old friends got together to celebrate Dr. Moothy’s birthday at a local restaurant. Best wishes to Ryan as she begins her professional academic career and to Ammini and she ends one distinguished path and begins on another.

Sitting: Prof. Raths, Dr. Moorthy, Dr. Rogers
Standing: Mrs. Rollozzi, Dr. Fulop, Dr. Blaize, Dr. Corbo

Photos contributed by Ammini Moorthy
OPPORTUNITIES

RESEARCH IN 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.

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 *Daphnia*. However, other animals like the brine shrimp (*Artemia salina*) or larval mosquitoes (*Aedes aegypti*) have been investigated in the laboratory of Dr. Stearns. Please, contact Dr. Stearns for further information at dstearns@wagner.edu.

RESEARCH WITH DROSOPHILA
Dr. Cook offers research opportunities for students in the frame of a project with the classical insect model organism, *Drosophila melanogaster*. At this time, research in Dr. Cook’s lab focuses on endocrine disruptors and their effects on fruit fly development. Please, contact Dr. Cook for further information at heather.cook@wagner.edu.

RESEARCH WITH ZEBRA FISH BRAINS
Dr. Fulop offers research opportunities for students with an interest in vertebrate neuroanatomy and physiology. Zebrafish *Danio rerio* has become an important model organism for vertebrate anatomy and physiology. Dr. Fulop is an expert in using microscopic techniques for anatomical and physiological research. Please, contact Dr. Fulop for further information at zfulop@wagner.edu.

RESEARCH WITH MICROBES
Dr. Bobbitt and Dr. Corbo offer a variety of research opportunities with microorganisms for students. Both follow different aspects of microbiological research, using a wide array of experimental techniques. Please, contact Dr. Bobbitt and Dr. Corbo for further information at kbobbitt@wagner.edu or at ccorbo@wagner.edu.

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*).

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. Please, contact Dr. Onken for further information at horst.onken@wagner.edu.

WORK IN THE GARDEN OR GREENHOUSE
Students interested in collaborating in the greenhouse and/or garden should contact Dr. Onken (horst.onken@wagner.edu).

BE A LIMULUS ASSISTANT EDITOR
Student writers are invited to become assistant editors for the newsletter of the Department of Biological Sciences. If you are interested please contact the faculty secretary, Mrs. Stephanie Rollizo at stephanie.rollizo@wagner.edu.
AWARDS FOR ACADEMIC RECOGNITION

(1) Biological Sciences Award - Presented to the *underclass* (sophomore) student showing the highest academic promise in a major within the Department of Biological Sciences.
This year: Patrick Connelly

(2) Robert D. Blomquist Memorial Award – An award given in memory of Robert D. Blomquist, a 1967 Wagner graduate, presented to a student completing the junior year who is an outstanding biology student and of good moral character.
This year: James Ducey

SENIORS:
(3) Norman L. Freilich Memorial Award - Established in memory of Dr. Norman L. Freilich, a graduate of the Class of 1935, this is presented to a graduating student who has been accepted into medical, dental, veterinary or optometry school.
This year: Kristiana Kalibat

(4) Kevin Sheehy Memorial Award - Presented to a graduating senior in biology with the highest cumulative GPA in the major, in memory of Dr. Sheehy, Class of 1967, a Tottenville H.S. biology teacher and a Wagner College trustee.
This year: Amanda Spira

(5) Microbiology Award (at the undergraduate level) - Presented to a graduating student whose scholastic achievement in the field of microbiology is outstanding. The award is given in memory of Dr. Natale Colosi, former chair of the department.
This year: Meghan Brown

(6) Roy. H. Mosher Award in Microbiology – The Award is presented annually to a graduating student in the BS/MS five year program in Microbiology, who has excelled in independent research in the field of microbiology and who is also conscientious and cooperative.
This year: Corey Gaylets

GRADUATE:
(7) Microbiology Award (at the graduate level) - Presented to a graduating master’s degree student in microbiology whose scholastic achievement in the field is outstanding, in memory of Dr. Natale Colosi, former department chair.
This year: Julianna Schipani

(8) Highest Academic Achievement (Microbiology Program):
This year split: Gina Auricchio & Sherry Browne

(9) Outstanding Academic Achievement (Microbiology Program):
This year: Meshari Binomar

Departmental Honors for outstanding work in biological sciences and/or microbiology were awarded to:
- Enri Citozi
- Philip Fomina
- Saad Idrees
- Samantha Kyvik
- Kristen Lee
- Pakinam Mekki
- Sara Mfarrej

UNDERGRADUATE THESES:

December 2013

Adaptation of the Comet Assay to assess DNA Damage Mediated by Cyclo-palladated Complexes
- Daniel J. Cimilluca

Assessment of Dolphin Intelligence
- Laura C.A. Amorosa

Effects Dissolved Carbon Dioxide in Water has on the Shoaling Ability of Zebra Fish
- Ashely Elizabeth Aanonsen

Effects of Palladium Compounds on Bacteria with a Focus on Listeria Monocytogenes
- Joseph D. Cuomo

Family Members as Long-Term Caregivers for a Relative with Dementia
- Kymberlie Nicole Vargas

Inhibitory Effects of UV Light Against Common Food Pathogens
- Paul M. Miceli

Pathological Human Tau Induces Apoptosis in Cultured Cells
- Meghan Brown

May 2014

Analyzing the Effect of Dimethyl phthalate on the Model Organism *Drosophila melanogaster*
- Amanda Spira

Analyzing the Effect of the Endocrine Disrupting chemical Dipentyl Phthalate on the Development and Viability of *Drosophila Melanogaster*
- Kristiana Kalibat

Antimicrobial Activity of Organometallic Palladium Compounds on *S. Aureus* and *E. Coli*
- Lynn Wan Shan Tay
Behavioral Changes in *Danio rerio* due to Temperature Modifications  
- Amanda Rose Setteducato

Biodiversity of Algae in Staten Island Lakes with Response to Seasonal Change, Lake Size, Lake Depth, and Sunlight  
- Gregory Michael Forsyth

Comparison of Photosensitivity of *Daphnia magna* to Light Cues using 430-nm and 550-nm Wavelengths  
- Daniel D. Zaccariello

Comparison of Photosensitivity of *Daphnia magna* to Light Cues using 450nm and 590nm Wavelengths  
- Thomas P. Maher

Composite Gel Electrophoresis Resolves Large Human Lung Glycoproteins (Mucins) that Control Lung Inflammation  
- Melanie Elizabeth Krongold

Effect of Bisphenol-A on Viability and Development of *Drosophila melanogaster*  
- Sydney M. Susino

Effect of Diethyl Phthalate on the Viability and Development of *Drosophila melanogaster*  
- Mahdey Tallat

Effect of Dissolved Carbon Dioxide on the Shoaling Behavior of Zebrafish (*Danio rerio*)  
- Radislav Meylikh

Effects of Diethyl Phthalate on Viability and Development of *Drosophila melanogaster*  
- Yamir Oritz

Effects of Dolasetron on the Feeding Behavior of Larval Yellow Fever Mosquitoes (*Aedes aegypti*)  
- Enri Citozi

Effects of Endocrine Disrupting Chemical Dimethyl Phthalate in the Model Organism *Drosophila melanogaster*  
- Deanna Elizabeth Lumley

Effects of Familiarity on Species Recognition in Zebrafish (*Danio rerio*)  
- Emily Afflitto

Effects of Potassium Alum Zebrafish (*Danio rerio*) Behavior  
- Kari Josephine Payton

Effects of Temperature Change on the Behavior of Zebrafish  
- Jacqueline Anne Nicholas

Electron Microscopic Imaging of Pap Immunolabeled Heparin in the Mast Cells of the Zebrafish, *Danio rerio*, Brain Following Traumatic Brain Injury  
- Hayley Marie Sullivan

Microphotographic Atlas of the Adult Zebrafish (*Danio rerio*)  
- Ashton Cline

Microphotographic Atlas of (*Danio rerio*) Cerebellum: Horizontal Series  
- Megan Beatrice Landy

Microphotographic Atlas of the Adult Zebrafish Cerebellum: Sagittal Series  
- Kristen Lee

Photosensitivity of the Water Flea *Daphnia magna* when Tested using 520 and 690nm Light and Selected Intensities  
- Salma Metwally

Phototaxis to Determine the Photosensitivity in *Daphnia magna* at two selected Wavelengths (470 and 630nm)  
- Rayna Ashley Silva

Serotonergic Influence on the Feeding Behavior of Larval Yellow Fever Mosquitoes (*Aedes aegypti*)  
- Edward Medina

Species-Area Relationship of Colonial Waterbirds Nesting on Barnegat Bay Saltmarsh Islands  
- Alexandria Mary Zummo

Species Recognition in Neon Tetras (*Paracheirodon innesi*)  
- Christina Theresa Centonzo

Spectral Sensitivity of *Daphnia magna* at wavelength of 490 and 650nm  
- Samantha Lee Kyvik

Spectral Sensitivity of the Water Flea *Daphnia magna* When Exposed to a Light Intensity of 1.0 uEm-2S-1  
- Anthony George Jebran

Study of Thermodynamic Properties of Cyclopalladated Complex Bearing Fatty Acid Auxiliaries  
- Saad Idrees
GRADUATE THESES:

December 2013

Conventional Culture-dependent Techniques Employed to Determine the Impact of Alkaline Midgut pH on Bacterial Colonization with the Diverticulum of Aedes aegypti Larval Mosquitoes
- Monica Georgette Bassous

Effects of a Plant Extract Trans-Cinnamic Acid on Three Different Brands of Cosmetics
- Krista Carbonara

Mast Cell Activity in Surviving Organotypic Culture in Adult Zebrafish (Danio rerio)
- Julianna Maniscalco

Molecular Detection of Listeria monocytogenes in Infected Zebrafish Brain Tissue
- Benjamin S. Bustamante

Molecular Identification of Listeria monocytogenes and ActA in Zebrafish Brain; a New Model of Listeria Pathogenesis
- Alex J. Molesan

May 2014

Antimicrobial Effects of Cosmetic Preservatives in Four Different Brands of Foundations
- Gina Auricchio

Assessing the Species-Area Relationship of Protists in the Lakes of Staten Island, New York
- Dina Benedetto

Castor Seed Oil & Tea Tree Oil Extracts Effects on the Growth of Methicillin Resistant Staphylococcus aureus
- Nimrod Philippe

Construction of Armitage Baits for a Yeast Two-Hybrid Protein Interaction Screen
- Stacey Ceron

The Identification and Characterization of MET/MET Homologs in Dugesia dorotocephala/Dugesia tigrina
- Sherry J. Browne

Identification of Enterococcus Strains by Gas Chromatography of Cellular Fatty Acid Methyl Esters
- Joseph Reynolds

Inhibitory Effect of Biocides on Pseudomonas aeruginosa and Staphylococcus aureus Biofilms
- Alisa Ndokaj

Isolation and Characterization of Bacteriophages in Salmonella species
- Daniel Golembe

Isolation of Antibiotic Producing Bacteria and Fungi from Different Soils for Methicillin-Resistant Staphylococcus aureus (MRSA)
- Meshari Binomar

Molecular Detection of Listeria monocytogenes Proteins and Immunological Proteins in the Infected Brains of Zebrafish
- Corey Gaylets

PUBLICATIONS


PROFESSIONAL MEETING


PRESENTATION

Stearns, D. 2014 “Teaching critical thinking and civic thinking in a college freshman course.” Assessment Workshop, St. Francis College, Brooklyn Heights, New York, May 9, 2014

GUIDELINES FOR WRITERS:
Please e-mail to stephanie.rollizo@wagner.edu.
Please submit photographs as separate files (jpg is the preferred file format) attached to the e-mail.
All contributions will indicate the author's identity and are reviewed before publication. The editor reserves their right to edit contributions.
Editor: Stephanie Rollizo, Dept. Secretary
Assistant Editor: Student Assistant Editor:
BIOLOGICAL SCIENCES RESEARCH FUND

This is the sixth year of the “Alumni Fund for (Undergraduate Senior) Thesis Research in Biological Sciences” that was established in 2009 with donations from our alumni. Many of you have responded with generous gifts enabling over 60 seniors in the academic years 2013 and 2014 to complete their senior thesis research using this fund.

We want to thank each of you who support this worthy cause, and invite those of you who were unable to help last year to join the effort. All contributions are tax deductible, and will be recognized both in the Limulus and in the Wagner College Annual Report. Whatever you send will be earmarked solely for research by students. Personally, I feel that this is a very worthy endeavor; one that plays a crucial role in shaping the future of those who are following in your footsteps.

Our students exhibit the results of their research at several prominent events and receive accolades. Recently, Salma Metwally (Biopsychology major) was given an award of excellence at the Eastern Colleges Sciences Conference for her research in “Phototactic Responses of the Water Flea Daphnia magna to Different Light Intensities of 520-nm and 690-nm Light.” Her research mentor was Dr. Donald Stearns. Anthony Spano and Brandon Kocurek (Microbiology majors) received an excellence award for their research under the mentorship of Dr. Christopher Corbo entitled, “Use of Morphological Techniques to Detect and Analyze Listeria monocytogenes in the Optic Tectum of Adult Zebrafish.”

We are proud to have our graduates being accepted to medical, veterinary, optometry and dental schools, going on to graduate school, and beginning exciting careers in public and private industries. Kristiana Kalibat (’14) will be attending University of Florida College of Dentistry. In February 2014, our own Dr. Ryan Rogers (’09) accepted a tenure-track teaching position at the Wentworth Institute of Technology in Boston.

Having resources available to complete their theses research unquestionably facilitated their successes. You made it happen, and we are grateful for your support.

Hoping to hear from you soon.
Best Regards,
Dr. Ammini Moorthy

HOW TO CONTRIBUTE –

Donate online:
http://wagner.edu/alumni-friends/giving/

Please indicate “Biological Sciences Research Fund”
Account Number 1292

Donate by check:
“Wagner College Biological Sciences Research Fund”
Dept. of Biological Sciences
Wagner College, One Campus Road,
Staten Island, New York 10301

Please consider sponsoring one ($400) or two ($800) students today.

Editor’s Note:
“Alumni Fund for Thesis Research in Biology and Microbiology”
Beginning September 2014, the fund will expand to include thesis research in the graduate level. Donations will be accepted to assist our students in the Microbiology Graduate Program.

THANK YOU!
Alumni and friends support our students by giving to the “Research Fund.” Since its inception in 2009, the following people have given their very generous support. We thank you in advance for your continued support!

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