

T H E N I C H E

LETTER FROM THE CHAIR



My neighbors know that I am an educator of some kind. Around mid-May they start asking me, “When is school out?” or saying things like, “It must be nice having the summers off.” I used to get aggravated, because it is in May that I start thinking of all the work I want to get done while classes are not in session, and then I despair because it is always more than humanly possible (see below how I learned to cope with this).

The things I love about my job are the very things that I hate about my job. At DePaul, faculty get to teach great students AND do research with great students (AND a number of administrative tasks nobody warned us about). The variety of what we do makes the job interesting, but we can also feel pulled in too many directions. Summer is a wonderful time when we can focus on fewer things. Maybe it is finishing a set of experiments, finishing a manuscript, or starting a new set of experiments that require one’s full focus and extra time for the “surprises” any new research project brings. Usually it is all of the above and hopefully it involves working with undergraduate and graduate students more intensively than we have time for during the school year.

Preparations for summer actually start in fall quarter of the previous year when faculty are writing grants to support their research over the summer. This year the following faculty applied for and were awarded Faculty Summer Research Grants by the College of Science and Health: Drs. Jason Bystriansky, Jingjing Kipp, Dorothy Kozlowski, Jalene LaMontagne, and Beth LeClair. As chair, I read and comment on all the proposals. I was impressed by the quality and the diversity of research done in our department. These five projects run the gamut from salamander physiology, mouse ovary development, rat responses to concussion, songbird behavior, to immune responses in zebrafish. Faculty can apply for these grants every other year. There are more projects going this summer, supported by university funding and external grants.

One of my first summers at DePaul, I listed all my plans for the summer to the then department Chair Dr. Sid Beck. Unimpressed he sniffed, “Well, if it is not done by July 4th, you might as well forget about getting it done.” Now I say this lovingly, but Sid was always one to keep you, how should I say, humble? For years I was oppressed by this arbitrary deadline. Then one year I made the perceptual shift that anything I got done after July 4 was pure gravy! So now when my neighbors ask if I have to go into work at all during the summer, I smile and say, “Yes, I get to go in and work on my research.”

I probably shouldn’t admit this, but as a kid, I wasn’t waiting for school to start in the fall. I love summer and time to focus. But I also have to admit that it is exciting when all the students return in the fall and I will get to read research proposals for next summer’s research! ■

Margaret Silliker

Professor and Chair of Biological Sciences

DARWIN DAY SEMINAR: DR. THOMAS SANGER



This February, we celebrated what would have been Charles Darwin's 209th birthday. To honor Charles Darwin, we had a department reception with a delicious cake and other tasty treats. We were also joined by Dr. Thomas Sanger, Professor at Loyola University here in Chicago. Dr. Sanger earned his Ph.D. at Washington University in Evolutionary and

Development Biology. His seminar was titled, "From the embryo to anatomy to the Caribbean forest: Integrative analyses of anatomical diversity in Anolis lizards," discussing the fascinating evolution of a wide range of small lizards. Our annual Darwin Day celebration was once again a great success, and we are so glad Dr. Sanger could join us to celebrate and inspire us with his expertise! ▣



1. Dr. Windsor Aguirre, our own Evolutionary Biology faculty member with Darwin Day Speaker, Dr. Thomas Sanger.
2. Undergraduate biology majors, Jillian Sterman and Jessica Barton enjoying our Darwin Day Celebration.

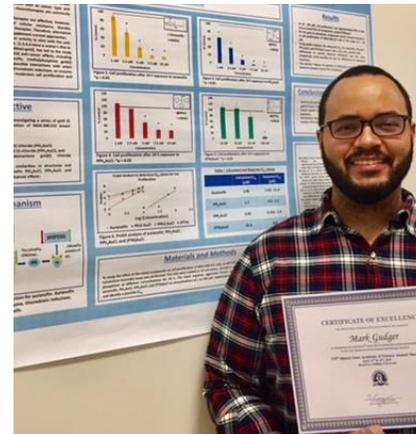


3. Biology graduate students, Joe Forberg, Taylor Mitchell, and Sara Teemer are all smiles for Darwin Day.



4. It wouldn't be Darwin Day at DePaul without a birthday cake for Charles Darwin.

DEPARTMENT NEWS



Mark Gudger placed 2nd for his graduate poster presentation in the Cell, Molecular and Developmental Biology Division at the 110th Illinois State Academy of Science Annual Meeting held at Milliken University, April 13-14, 2018.

ERRATA

The editors would like to make a correction regarding Mary Alice McWhinnie that appeared in the last edition of the Niche (Volume 6, Issue 1). Mary Alice and Dolores were meticulous about their facts and we do not want to make any false claims! Mary Alice McWhinnie, was not the first woman to overwinter in Antarctica, but she was the first female scientist (of any country) to conduct research in Antarctica and the first female scientist to overwinter (1974). Edith "Jackie" Ronne and Jennie Darlington were the first women to overwinter in Antarctica (1947) as part of the Finn Ronne Antarctic Expedition. Thanks to Mary Alice's former student Dennis Schenborn for finding our error!

SCHOLARSHIP RECIPIENTS- 2017/2018

Each year, the Department of Biological Sciences is able to award scholarships to some of our outstanding students. This year, we were thrilled to award scholarships to eleven very deserving students, with deep gratitude for our donors.

THE MARY CHRISTINE MICKELSON MEMORIAL ENDOWED SCHOLARSHIP
Patty Delmedico and Samantha Evans.

THE JAMES T. & MARY K. SCHAEFER ENDOWED SCHOLARSHIP
Artur Hadas.

THE DIETER FAMILY ENDOWED SCIENCE SCHOLARSHIP
Michael Guerrero, Michaela Jacob, Taryn Rydbom, and Alexis Wright.

THE REV. JOHN CORTELYOU, C.M. (FRITCHLE), MEMORIAL SCHOLARSHIP
Tea Dimo, Monica Gonzalez, Evan Johnson-Ransom, and Anige'r Oriol.

Congratulations to all of our scholars! We are proud of your hard work and dedication to your studies. Current biology students are encouraged to apply for these scholarships through the Scholarship Connect portal.

ALUMNI SPOTLIGHT: DAN MARTINEZ

This month's alumni spotlight shows there is nothing minor about our minors. Daniel B. Martinez, graduated in 1990 with a major in Psychology and a minor in Biological Sciences. Daniel went on to get his M.D. from Loyola in 1995 and is Board Certified in adult and child psychiatry, certified by the American Board of Independent Medical Examiners, and completed his training in child psychiatry at Northwestern Children's Memorial Hospital in 2000. He currently serves as medical director for Lutheran Social Services of Illinois. Dedicated to giving the finest in psychiatric services, he is President of Comprehensive Clinical Services, P.C. (discoverccs.org), a multidisciplinary private practice whose mission includes "helping individuals, of all ages, attain their fullest potential through their individual expression of well-being." He has a faculty appointment as Associate Professor of Clinical Psychiatry at the University of Illinois at Chicago, and is the former Chair of the Child and Adolescent Committee for the Illinois Psychiatric Society. He participates on the IPS Telepsychiatry Committee and has been providing telemedicine for over 10 years. He belongs to numerous civic and professional organizations, including a founding board member of Casa Esperanza (a transitional housing program serving the women and children of the Chicagoland area) and the Catholic Association of Latino Leaders. He is a member of the Council on Minority and Mental Health Disparities for the American Psychiatric Association. He is also the first author of the APA position statement, in review, on how the U.S. government should deal with detained immigrants who have mental illness. His main areas of interest include: ADHD, Anxiety Disorders, Psychiatry and the Law, Community Psychiatry and Cultural and Spiritual issues in treatment. Although he was a minor in Biology, Daniel is someone who clearly has used his DePaul Biology and Psychology background in the continual helping of others, and we are proud to recognize his major contributions.



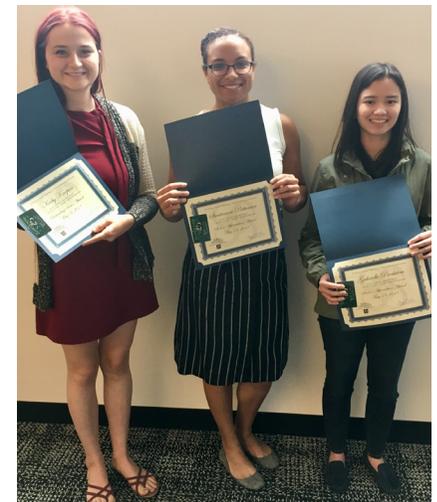
DAN MARTINEZ

BIOLOGY SENIOR AWARDS & SYMPOSIUM

Each year, the Department of Biological Sciences gathers for our Senior Research Symposium and awards ceremony. This year, we had one featured speaker and three poster presenters. Katherine Walker, a student researcher from Dr. Margaret Bell's lab, presented to us on the Effects of Perinatal Polychlorinated Biphenyls (PCBs) on Dopaminergic and Inflammatory Gene Expression in Adolescent Rat Hypothalamus and Prefrontal Cortex. Following her presentation, we acknowledged some of the graduating seniors with our Senior Appreciation and Outstanding Senior Awards. This year, our outstanding senior award went to Kirby Karpan and our three Senior Appreciation Awards went to Emily Baumgartner, Santanna Patterson, and Gabrielle Presbitero. Following our awards ceremony, we gathered in the atrium for a delicious spread and great poster presentations by seniors Timothy Cronin, Natasha Wierzal, and Kirby Karpan. We had a wonderful time celebrating all of our senior students!

Kirby Karpan OUTSTANDING SENIOR

Kirby joined the Aguirre lab in 2014 as a researcher and was also lab manager. She presented work on morphological variation in stickleback at the Science Showcase, and her work on genetic variation in freshwater fishes earned her a URAP fellowship and led to coauthorship on a publication. She served as a Bio 155 TA, Bio 192 SI Leader, and on the board of the DePaul Ecology, Evolution, and Physiology Club. She also completed summer internships in entomology research at the Shedd Aquarium and lichen research at the Field Museum, in addition to being an honors student with an outstanding GPA.



Pictured above: Karpan, Patterson, and Presbitero at the Senior Symposium

Emily Baumgartner SENIOR APPRECIATION AWARD

Emily was described as someone who always went the extra mile and exceeded expectations. She started working in Dr. LeClair's lab in January of 2016 and worked on multiple different projects. She was an active member of the DePaul Ecology, Evolution, and Physiology Club, and also volunteers at the Shedd Aquarium with the marine mammals.

Santanna Patterson SENIOR APPRECIATION AWARD

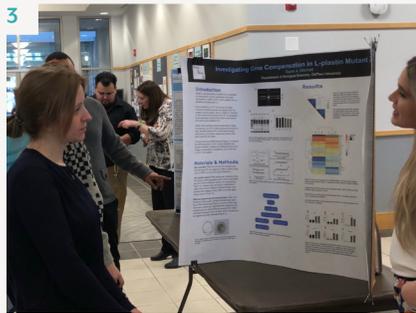
Santanna served as a teaching assistant for BIO 155 and BIO 206, and was described as organized, responsible, and compassionate with struggling students. Santanna was a member of the Honors Program, and was invited by a faculty member to provide feedback on a new Honors course in development. She was a Chicago Quarter Mentor and President of Women's Club Volleyball.

Gabrielle Presbitero SENIOR APPRECIATION AWARD

Gabrielle is a remarkable student who has achieved a uniformly exceptional GPA while both serving as a Supplemental Instruction leader and being actively involved in Dr. Gilliland's research lab. She presented her work twice at the Science Showcase, and recently gave a fantastic student TedX talk about the process of growth.



PHOTO GALLERY



1. CSH students Victoria Parrilli, Stevie Rodriguez, Michaela Jacob, and Santanna Patterson were invited to attend the Field Museum's "Women in Science" Luncheon with special guest speaker Dame Jane Goodall, DBE.
2. Tom Moran enjoying our annual Pi Day celebration.
3. Graduate student Taylor Mitchell shares her research with undergrad Katherine Walker.
4. Janine Kirin, Dr. Jalene LaMontagne, Dr. Carolyn Martineau, Dr. Margaret Bell, and Dr. Dorothy Kozlowski at the "Women in Science" luncheon.
5. Julia Petrescu and Grant Andersen enjoying some of Dr. Cohn's famous ice cream at our Senior Symposium Reception.
6. Katherine Walker was our featured speaker at our Senior Symposium. Katherine works in Dr. Bell's lab.

SENIOR SENDOFF

OUTSTANDING SENIOR: KIRBY KARPAN



Senior Kirby Karpan will leave the Department of Biological Sciences with nearly no opportunity untouched. Upon coming to DePaul from Minnesota, Kirby was initially an undecided major, but landed in the Biological Sciences Department by the end of her freshman year. President of DePaul Ecology, Evolution, and Physiology Club, Kirby's interest in evolutionary biology and ecology prompted her to organize quarterly events and talks for fellow students. In addition to working in professor Aguirre's lab for three years, Kirby found herself researching the correlation between

insect biodiversity and native plant density at the Shedd Aquarium in 2016 under the Dean's Undergraduate Research Fellowship. Aside from research, Kirby most enjoyed taking courses such as Concepts of Evolution and Field Studies in Marine and Estuary Studies. Of Chicago, Kirby says that her opportunities at museums are what she valued most in learning about evolution at an urban college. She mentioned that she was bummed to have to spend less time playing her standup bass in the orchestra once coursework picked up, but in the end her passion for ecology and evolution are well worth the dedication. She hopes you will check out her favorite reading spot; Montrose Point Bird Sanctuary which is along the lakefront off Lakeshore and Montrose Ave. She would love the opportunity to work in whale conservation, which would take her from Chicago to the Coast. Good luck in all that you do, Kirby! Thank you for your contributions to the Department of Biological Sciences!

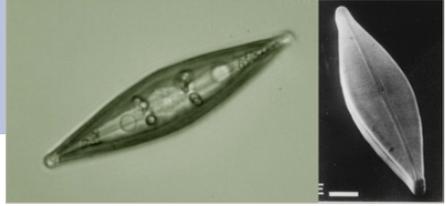
Written by CSH student and aspiring writer, Kristen Vosberg

DEPARTMENTAL BLOG

The Department of Biological Sciences launched its own blog this year. We have already had a variety of student writers elaborate on their experiences at DePaul, including blogs about the Dean's Undergraduate Fellowship and the Pre-Health Advising Committee Process. To view all of our blog posts from this year, visit the following web address: <https://blogs.depaul.edu/biological-sciences/> Check back monthly for more student experiences!

-  Find us on Facebook: facebook.com/depaulbio
-  Follow us on Twitter: [@depaulbiodept](https://twitter.com/depaulbiodept)
-  Follow us on Instagram: [@depaulbiodept](https://instagram.com/depaulbiodept)
-  Join our LinkedIn Network: linkedin.com/groups/12068610

RESEARCH IN ACTION



RESEARCH IN ACTION

The research in the lab of Stanley Cohn, Ph.D., is always on the move, literally. The Cohn Lab works on the movement of small single-celled algae known as diatoms. These cells are at the base of the food chain in almost all aquatic environments, and are crucial to the long-term stability of the food chain in ponds, streams, and oceans. They are one of the few organisms able to use silicon, using it to build their hardened glass-like cell walls. The diatoms in the open ocean are among the most important food sources for filter feeders, and their photosynthesis is thought to produce 20-30% of the world's oxygen. The Cohn Lab works with freshwater diatoms found in ponds and streams where their movement to regulate sun exposure (for energy) or into the sediment for refuge (for protection from predators) is important to their survival. The lab works on understanding the light, water, surface, and other external conditions that help regulate this movement, using microscopes to observe and measure their responses. For more information on some of their recent work on the relative responses of several different diatom species, check out the following link (but you get a move on!).

<https://www.tandfonline.com/doi/abs/10.1080/0269249X.2015.1058295> □