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Canisius Chemistry and Biochemistry Newsletter • Fall 2016

## Alumni Return for 2<sup>nd</sup> Annual Summer Research Symposium

The Department of Chemistry and Biochemistry held its second annual Summer Research Symposium on Wednesday, July 27 in Horan O'Donnell. This year, 13 students presented posters describing results from their research carried out under the guidance of the chemistry and biochemistry faculty. Conceived as a celebration of the accomplishments of our student researchers, the Symposium gives them a chance to share the results of their work with friends, family, and alumni. Indeed, the Symposium is the best opportunity for alumni to witness first-hand the positive effects their financial contributions have on the Department. We could not afford to fully fund a research program of this size without your support; thus, the Symposium and the results presented here are testament to the generosity of our donors. We and the presenting students were thrilled that more than 20 alumni could return for this event. Overall, more than 80 students, alumni, family members, faculty, and administrators attended.

After the symposium, attendees continued their conversations outside during a picnic dinner in the Koessler Plaza. Based on pleased comments from alumni during and after the Symposium, we think the event was a great success.

To see all the photographs of the Symposium and other activities in the Department, please look us up on Facebook ("Scacs Canisius"). We hope you can attend the 3rd annual Symposium on July 26, 2017! For additional photographs and a complete list of this year's students and their presentations, please see page 3.



## A Message from the Chair

Greetings, all Griffin Chemists and Biochemists, to our 2016 Newsletter!

My first bit of news is of “biblical proportion,” fortunately in a good sense. As you might recall, in my message last year I used the Polish proverb, “Even Solomon cannot pour wine from an empty pitcher” to describe a very small CHM/BCH class of 2018. However, while there are only eight CHM/BCH juniors, there are over 20 sophomores and over 20 freshmen. Thankfully, we did not need to bother King Solomon again.

Department faculty members continue to develop new courses and secure grants. Specifically, Jeremy Steinbacher has created a new Materials Chemistry laboratory course and continues his research using funds from an NSF grant. Also, the organic faculty have significantly revised the organic chemistry laboratory course. On another note, Phil Sheridan, with enthusiastic support from the Department, was promoted to the position of Full Professor.

As all Newsletter readers are aware, this past year we started our fundraising campaign to support student research by providing operating revenue and growing the endowment fund. I am happy to report that the campaign thus far is a success. Over the last several years, donations to the Department averaged \$11,000 per year, but this past year, our generous alumni donated \$29,000 to the campaign. On behalf of the entire Department, I would like to thank all alumni who contributed. Because of your generosity, our endowment fund is currently sufficient to pay stipends to four research students each summer. Our goal is to increase the endowment to fund ten student stipends and their research supplies per summer. I hope that this newsletter shows how your contributions make an immediate, major, and lasting impact on our students. I sincerely hope that you continue to support our fundraising efforts. In addition, I am very pleased to thank Gerald Zon, Ph.D. ('67), who once again volunteered to provide extra funding for the stipends of research students this past summer.

And now a special message for the class of 2016. I believe it was the first time at Canisius that a chemistry professor was asked to deliver “The Last Lecture” to all graduating seniors. I have no idea how you managed to pull it off. I was terrified at first, but I really enjoyed talking about the Polish-Lithuanian King Wladyslaw Jagiello, his influence on my scientific career, and about lessons we can all learn from Thornton Wilder’s play “Our Town.” I was thrilled to see how several seniors were trying to hide their true emotions at the end of my lecture by wiping tears from their happy senior faces. Well, I do like to make students laugh, but occasionally even I can be serious.

At this time, as always, I am reminding all readers that the Department would not exist as a community without the wonderful interactions we have with our alumni. Please keep us up to date by sharing your updates with your Griffin Chemists and Biochemists community; this year’s Alumni Notes are on page 5.

We often think of our alumni and we are proud of your accomplishments.

Keep in touch!

A handwritten signature in black ink that reads "Maura Keen".

This issue of Periodical, the Canisius Chemistry and Biochemistry Newsletter, was prepared under the guidance of our editors, Phil Sheridan and Jeremy Steinbacher.

## Faculty & Staff

Mariusz Kozik, Ph.D.  
Chair, Inorganic Chemistry

Mary O’Sullivan, Ph.D.  
Organic Chemistry

Peter Schaber, Ph.D.  
Analytical Chemistry

Phillip Sheridan, Ph.D.  
Physical Chemistry

Timothy Gregg, Ph.D.  
Organic Chemistry

Roberto Gregorius, Ph.D.  
Chemical Education

Steven Szczepankiewicz, Ph.D.  
Analytical Chemistry

Sarah Evans, Ph.D.  
Biochemistry

Jeremy Steinbacher, Ph.D.  
Materials Chemistry

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Organic Chemistry

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General Chemistry Laboratory

James Maul, Ph.D.  
Organic Chemistry Laboratory

Frank Dinan, Ph.D.  
Professor Emeritus

Joseph Bieron, Ph.D.  
Professor Emeritus

Thomas Stabler, M.S.  
Director of Chemistry Laboratories

Alice Steltermann  
Administrative Associate

Contact the department office at:  
stelter@canisius.edu  
or call us at 716-888-2340

## Summer Research Symposium



### *Student Presenters and Poster titles:*

**J. Iannuzzelli**, and T. M. Gregg, "Allenylsilane Cyclopropanation."

I. Kozik, **F. Gentile**, and T. M. Gregg, "Substituent Effects in Aldol Reactions."

**W. B. Swanson**, **J. Verde**, and M. Kozik, "New 2D NMR and Computational Evidence Demonstrating Oligomerization by Transition-Metal Substituted Polyoxotungstates in Nonpolar Solvents."

M. Dudek, **W. B. Swanson**, and M. Kozik, "Gravimetric Analysis of Polyoxotungstates."

**G. Johal**, **K. Murphy**, and P. M. Schaber, "Method Development and Determination of Heavy Metal Concentration in the Waterways of Western New York (WNY) Soil"

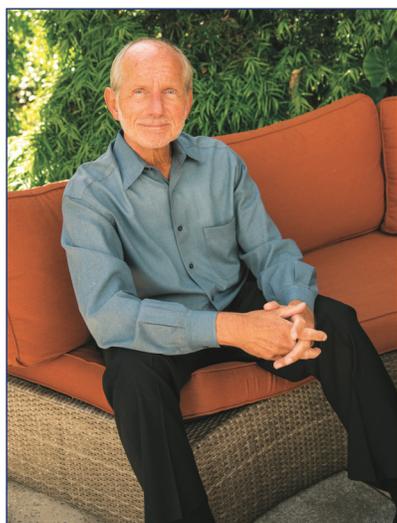
**B. Russ**, **C. Tumieli**, and P. M. Sheridan, "Gas Phase Laser Excitation Spectroscopy of Calcium Monoisocyanate."

**A. J. Berardi** and J. L. Steinbacher, "Functionalization of  $\beta$ -Cyclodextrin and Mesoporous Silica Nanoparticles with Fluorinated Molecules."

**J. J. Rutowski** and J. L. Steinbacher, "Functionalizing Silica Nanoparticles with Fluorinated Molecules for MRI."

**J. Canavan**, **N. Fusco**, and S. Szczepankiewicz, "Protons on Tungstates in Aprotics."

**T. Tumieli** and S. Szczepankiewicz, "Photochemical Reduction Mechanism of  $\text{SiW}_{11}\text{Co}_6^-$  in Nonpolar Solvents."



## Gerald Zon ('67) Scholarship in Chemistry and Biochemistry

The Department would like to announce that Gerald Zon, Ph.D. (CHM '67) has provided a generous gift to create an endowed scholarship for students pursuing a degree in chemistry or biochemistry at Canisius College. The scholarship targets students who are traditionally under-represented in science disciplines, with priority given to applicants who reside in Buffalo or Niagara Falls and who demonstrate significant financial need. Scholarship recipients must maintain a minimum GPA of 3.0, participate in summer research, and take part in SCACS and other Department activities.

## Donors

*We would like to express our sincere gratitude to all those listed here who have made a recent financial contribution to the Department:*

Danielle N. Puglisi ('16), Carly E. Andriaccio ('15), Ashley E. Gluszek ('15), Joseph M. Schnitter ('15), Caressa A. Trueman ('15), Adam J. Dannenhoffer ('14), John A. Heck ('14), Elisabeth A. Geyer ('13), Jamie E. Hitro ('13), Elora I. Supersad ('13), Jessica L. Stachowski ('12), Christopher R. Mekelburg ('10), Conor R. Thomas, Ph.D. ('10), Jane K. Arcadi, M.D. ('09), Chantal B. Bartels, M.D. ('09), Kristina B. Garcia ('08), Andrew D. Minkel ('08, MBA'10), Joseph T. DeLuca, D.D.S. ('03), Jeffrey M. Rose, Ph.D. ('03) & Lindsay Rose, Ph.D., Aaron B. Godert ('02), Stephanie L. Soehnlein, M.D. ('02), Amy A. Godert, Ph.D. ('01), David B. Berman ('00), Mary T. Peinkofer ('97), Kevin A. Peinkofer ('97), Thomas W. Kermis, Ph.D. ('96), Steven H. Szczepankiewicz, Ph.D. ('96), Maureen A. Kane, Ph.D. ('95), Edward P. Clinch ('94), Louis G. Norton, Ph.D. ('94), Nadine G.

Norton ('94), Kimberly J. Reynolds ('94), Scott M. Gordon ('93), James H. Pawlow, Ph.D. ('92), Karen M. Nuwer ('91), Eileen V. Klubek ('90), James J. Klubek ('90), Kristen M. Kulinowski, Ph.D. ('90), Lori A. Spadinger ('90), Michael ('88) & Colleen Becht, Carolyn K. Weinreb, Ph.D. ('88), Terrence R. Burns, M.D. ('87), Ronald A. Stepien ('87, MSED'10), Werner R. Brehm ('86), Robert H. Kosakowski ('86), Andrew Spadinger, D.D.S. ('86), Charles E. Hartke ('84), Laurie E. Lynch, Ph.D. ('84), Diane B. Baisch ('83), Barbara A. McDonald ('83), Joseph J. McDonald, Ph.D. ('83), Joanne M. Huber ('82), Roseanne Oliverio, M.D. ('80), Diane M. Ray ('78), Rev. James J. Hederman ('76), Michael J. Cubera ('75, MBA'83), Peter M. Schaber, Ph.D. ('75), David G. Hangauer, Ph.D. ('74), Donald B. MacMillen ('74), David Nalewajek, Ph.D. ('74), Daniel E. Rega ('74), Richard R. Stroh ('73), Michael V. Darby, Ph.D. ('72), Mark J. Kramer, M.D. ('72), Paul L. Piciulo, Ph.D. ('72), Peter J. Carrillo, M.D. ('71), Dennis G. Winecki, D.P.M. ('71), Paul A. Backlas ('70, MBA'80),

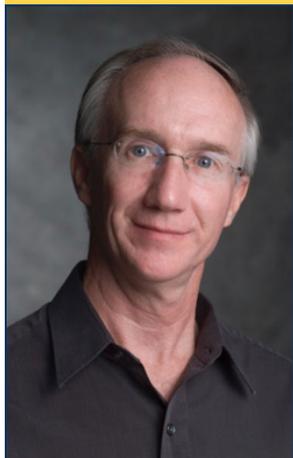
Lynn S. Wieser ('70), Thomas B. Safford ('69), Patrick J. Mudd ('68), Paul M. Nagel, Ph.D. ('68), Thomas R. Stabler ('68, MS'73), Simon W. Ulmer Jr., Ph.D. ('67), John D. Wieser, Ph.D. ('67), Gerald Zon, Ph.D. ('67), Michael D. Scanlon ('66), Daniel J. Delecki ('65), Joseph P. Laforanara, Ph.D. ('64), Joseph A. Kuczowski, Ph.D. ('63, MS'66), Kenneth F. Pompei, Ph.D. ('63), William N. Knopka, Ph.D. ('61), Raymond J. Lange, Ph.D. ('61), James J. Maul, Ph.D. ('60), Joseph F. Bieron, Ph.D. ('59, MS'61,) James J. Duffy, Ph.D. ('59), Norbert J. Mruk, Ph.D. ('59), Jessica L. Childs-Disney, Ph.D., Raymond Dannenhoffer, Ph.D., Rebecca Francisco, M.B.A. ('16), Timothy M. Gregg, Ph.D., Mariusz M. Kozik, Ph.D., Mary C. O'Sullivan, Ph.D., Phillip M. Sheridan, Ph.D., Jeremy L. Steinbacher, Ph.D., Alice Steltermann, William S. & Meri Swanson

*Thank you to all the generous donors who gave on Canisius Giving Day. We met our goal of 25 donors, unlocking an anonymous bonus donation!*

## Why do you donate to the Department?

**David G. Hangauer, Ph.D. (CHM '74), CEO, Athenex Inc., Emeritus Professor of Medicinal Chemistry and Chemistry, University at Buffalo**

"I was fortunate to have the opportunity to do research projects with Profs. Frank Dinan and Phillip Heffley. The projects they allowed me to do were of my own design and greatly inspired me to continue a career in chemistry research. This career direction has led to a decade of drug discovery research at Merck, starting three biotech companies, and over two decades of academic research. I am happy to now contribute back so as to help provide the same opportunity for current Canisius College chemistry and biochemistry majors."



**Kristen Kulinowski, Ph.D. (CHM '90), Board Member at United States Chemical Safety and Hazard Investigation Board**

"I switched my major to chemistry midway through my sophomore year after the first semester of organic chemistry. It was clear to my 19-yr-old self that this was where I belonged. Canisius chemistry professors, especially Profs. Bieron, Dinan, and Stanton, set me on a path toward the Ph.D. and demonstrated what skillful teaching and caring mentorship looks like. I'm happy to lend support to a strong and vital undergraduate research program as a way of recognizing the critical role the Department played in building the foundation of my career."



## Alumni Notes

**Stephanie Frankenger (CHM '15)** is a QA Analyst at Lactalis American Group, Inc. in Buffalo, NY.

**Brittney Tomani (BCH '15)** is a Research Associate at HarkerBIO in Buffalo, NY.

**Jamie Hitro (CHM HT '13)** enrolled in the Physician Assistant Program at Northwestern University.

**Michael Brignone (CHM ACS '11)** is a Technical Service Chemist, Crosslinkers, at Evonik Industries in Philadelphia, PA.

**Caitlin Loftus (BCH '11)** graduated from the Physician Assistant program at D'Youville College and is employed by Catholic Health System in the Neonatal ICU between Sisters of Charity Hospital Level III NICU and Mercy Hospital of Buffalo Level II NICU.

**Rob Stewart, Ph.D. (CHM ACS '11)** earned his Ph.D. in physical chemistry from Pennsylvania State University and is now employed as a Staff Scientist at Honeywell International Inc. in Buffalo, NY.

**Stephanie Krull (CHM ACS '10)** is employed as a chemist at Niacet Corporation in Niagara Falls, NY.

**Ian Horner, Ph.D. (CHM '08)** earned his Ph.D. in chemistry from the University at Buffalo and is now employed as an analytical chemist for PeroxyChem in Tonawanda, NY.

### **Jane Arcadi, M. D. (CHM ACS '09), Anesthesiologist**

“My summer as a research apprentice at Canisius was a truly awesome experience. Working hands on in the field of chemistry was invaluable to my education. I was fortunate enough to present my research at the 2007 ACS meeting in Chicago. This was an amazing opportunity which advanced my confidence and communication skills. This apprenticeship continues to help me today as a resident physician. Becoming familiar with experimental design as an undergraduate, I have a much better appreciation for all the hard work that goes into medical research and clinical trials.”



**Elizabeth (Gruber) Brém, M.D. (BCH '06)** has completed her fellowship in Hematology/Oncology at Beth Israel Deaconess/Harvard Medical School in Boston and has accepted a position at UC Irvine working with patients with lymphoma and other hematologic malignancies.

**Jared Paul, Ph.D. (CHM '00)**, Associate Professor of Chemistry at Villanova University, was a guest editor for a special issue on Undergraduate Research in Inorganic Chemistry for the journal *Polyhedron* (volume 114).

**Ronald Szumigala ('98)** is the Associate Director, Oncology Regulatory Affairs - North America Regulatory Lead, at Janssen Pharmaceutical Companies of Johnson & Johnson.

**Maureen Kane, Ph.D. (CHM '95)** is an Associate Professor in the Department of Pharmaceutical Sciences at the University of Maryland School of Pharmacy and is the Executive Director of the School of Pharmacy Mass Spectrometry Center.

**Cynthia Allen (CHM '90)** is the co-owner of Evolution Consulting and OIG Compliance NOW.

**Mark Barvian (CHM '90)** is a member of a team of scientists at Pfizer who have been named Heroes of Chemistry by the American Chemical Society for the development of IBRANCE (palbociclib).

**W. Eric Cline (CHM '90)** is currently employed as a chemist-associate at Reichhold, LLC in Durham, North Carolina where he works as a synthesis chemist in the alkyd-polyester group, specializing in waterborne alkyd latexes and their coatings.

**Christopher Kane, Ph.D. (BCH '90)** is a senior research scientist at the U.S. Army Medical Research Institute of Infectious Diseases, Fort Detrick, MD.

**Kristen Kulinowski, Ph.D. (CHM '90)** was nominated by President Obama and confirmed by the U.S. Senate as a member of the U.S. Chemical Safety Board.

**Joseph McDonald, Ph.D. (CHM '83)** is Director, Informatics and Drug Design, at Celgene.

**Barbara McDonald (CHM '83)** is a Research Associate at Sanofi Genzyme.

**Timothy Baker, Ph.D. (CHM '79)** is a Research Fellow, Corporate Functions Analytical, at Proctor & Gamble in Cincinnati, OH.

**Simon “Skip” Ulmer, Ph.D. (CHM '67)** is the owner and President of SIMON SAYS Consulting in Denver, CO.

## Crowdle Award Dinner Honoring David Nalewajek '74

On Friday, February 26, 2016, the Student Chapter of the ACS and the Department presented the 10th James H. Crowdle Award for Distinction in Chemistry to David Nalewajek, Ph.D. (CHM '74). Dave was recognized for his outstanding achievements in the field of fluorine chemistry and his devotion to science education outreach in Western New York. Dave presented a seminar on his research entitled, "A Successful Response to a Global Environmental Issue: The Montreal and Kyoto Protocols and Non-Ozone Depleting, Low Greenhouse Warming CFC Replacements." The Crowdle Award and Medal were presented to Dave at a dinner ceremony held in Grupp Fireside Lounge at Canisius with over 50 friends, students, alumni, and faculty in attendance.



Nalewajek and SCACS President, Lauren Evans



## 9<sup>th</sup> Annual Western New York ACS Undergraduate Research Symposium

The Western New York section of the American Chemical Society held its 9th annual Undergraduate Research Symposium on Saturday, April 9, 2016 at Canisius College. Chaired by Tim Gregg, the symposium was attended by students and faculty from 13 institutions and featured 44 presentations on widely ranging research topics. The Symposium keynote address, "Things that Roll Around and Do Stuff: Biological and Chemical Nanoparticles with Function," was presented by Prof. M. G. Finn, Chair of the Georgia Tech School of Chemistry and Biochemistry and Editor-in-Chief of ACS Combinatorial Science. Canisius students presenting posters included G. Johal and K. Murphy (P. Schaber) and C. Binns, G. Budziszewski, D. Krasinski, and D. Xenos (S. Evans). Canisius students giving oral presentations were W. B. Swanson (M. Kozik) and J. J. Rutowski (J. Steinbacher), who received an Outstanding Oral Presentation Award.

## Senior Awards

**WNY ACS Student General Excellence Award:** Highest award given by the Department; the recipient is acknowledged for outstanding achievement and significant research accomplishments.

**American Institute of Chemists Chemistry Award:** Recognition on the basis of a demonstrated record in leadership ability, character, scholastic achievement, and advancement potential in the chemical professions.

**Gerald Zon Undergraduate Research Award:** Recognizes significant research accomplishments.

**V. A. Ruszkiewicz Award:** Recognition of superlative academic achievement demonstrated by the highest GPA in the Department.

**Gabrielle Budziszewski**  
American Institute of Chemists Biochemistry Award  
Gerald Zon Undergraduate Research Award

**Nicole Fusco**  
American Institute of Chemists Chemistry Award  
Gerald Zon Undergraduate Research Award

**Lauren Evans**  
V.A. Ruszkiewicz Award  
WNY ACS Student General Excellence Award in Biochemistry  
Gerald Zon Undergraduate Research Award

**Korry Wirth**  
Gerald Zon Undergraduate Research Award

## Class of 2016

**Husain Ahmad (CHM HT):**  
Pharmacy School, University at Buffalo

**Gabrielle Budziszewski (BCH):**  
Ph.D. Program, Biological and Biomedical Sciences Program, University of North Carolina, Chapel Hill

**Nicole Carroll (BCH)**

**Andrew Dobmeier (BCH, BUS minor):** Dental School, University at Buffalo

**Lauren Evans (BCH ACS, PHI minor):** Ph.D. Program, Human Genetics and Molecular Biology Program, Johns Hopkins University

**Nicole Fusco (CHM ACS):** Jesuit Volunteer Corps, San Francisco, CA

**Anthony Gengo (CHM HT):** MBA Program, Canisius College

**Katlyn Holt (BCH):** Physician Assistant Program, Daemen College

**Corrine Kickel (BCH):** Medical School, LECOM

**Melanie Nguyen (CHM HT):**  
Pharmacy School, University at Buffalo

**Emily Post (BCH, BUS MGNT minor):** Analyst, AMD Environmental

**Danielle Puglisi (CHM HT):** QC Technician, Quad Pharma

**Kenny Vu (BCH):** M.S. Program, Department of Biochemistry, University at Buffalo

**Korry Wirth (BCH):** Medical School, University of Rochester



## Student Researchers

**Sarah Evans:**

Christian Binns (BCH ACS '17), David Krasinski (BCH '18),  
Demetria Xenos (BCH '17)

**Tim Gregg:**

Jacob Iannuzzelli (BCH ACS '17), Filippo Gentile (CHM ACS '19),  
Isabelle Kozik

**Mariusz Kozik:**

Ben Swanson (CHM HT '17), Jack Verdi (BCH '19), Max  
Dudek (HS)

**Peter Schaber:**

Gurkaran Johal (BCH '18), Kayla Murphy (CHM '19)

**Phil Sheridan:**

Connor Tumiel (CHM HT '17), Benjamin Russ (CHM ACS '19)

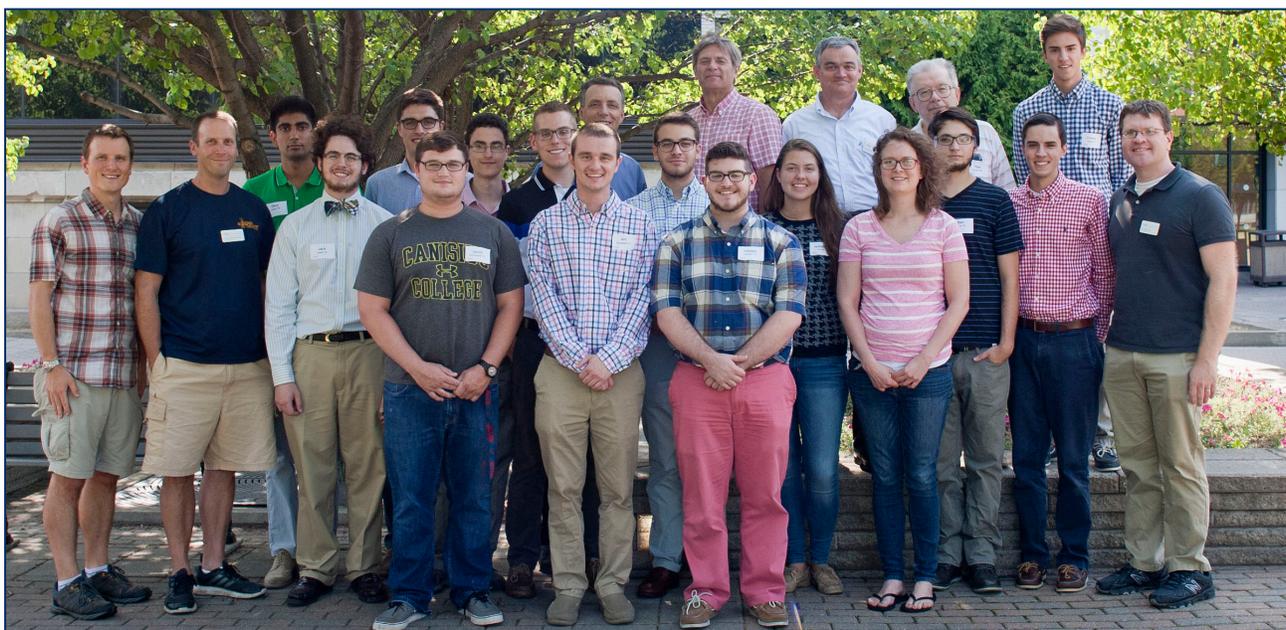
**Jeremy Steinbacher:**

James Rutowski (CHM ACS '17), Ryan Becht (BCH '18),  
Anthony Berardi (CHM ACS '19), Samantha Caico (BCH '19)

**Steve Szczepankiewicz:**

Trevor Tumiel (CHM ACS '17), Joshua Canavan (BCH '19)

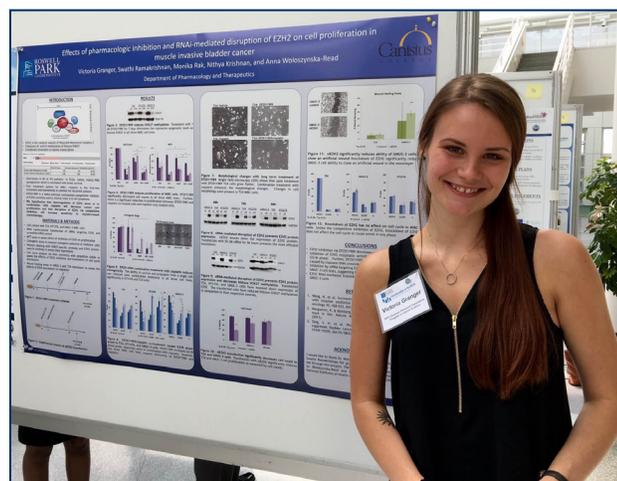
CHM/BCH: Chemistry/Biochemistry Major  
ACS: Degree certified by the American Chemical Society  
CHM HT: Chemistry, Health Professions Major  
HS: High School



Summer Research Group 2016

## Roswell Park Internship

Victoria Granger (BCH '17) was selected as an intern for the Summer Research Experience Program in Cancer Science at Roswell Park Cancer Institute (RPCI), in Buffalo, NY. Tori conducted research under the mentorship of Dr. Anna Woloszynska-Read and Dr. Swathi Ramakrishnan in the Department of Pharmacology and Therapeutics. At the end of the ten-week program, Tori presented a poster and a talk on her work entitled "Effects of Pharmacologic Inhibition and RNAi-Mediated Disruption of EZH2 on Cell Proliferation in Muscle-Invasive Bladder Cancer" at RPCI and received the Best Scientific Talk Award. In November, she will present her work at the Society for Basic Urological Research (SBUR) Symposium in Scottsdale, AZ. Tori plans to continue her research work at RPCI during the academic year.



## Faculty and Student Presentations\*

**G. Johal, J. Congilosi,** and P. M. Schaber, “Adulterated Orange Juice: An Introduction to Analytical Chemistry Through Use of High Performance Liquid Chromatography (HPLC) and the Case Study Approach,” 251<sup>st</sup> ACS National Meeting, San Diego, CA, **2016**.

**J. Congilosi, G. Johal,** and P. M. Schaber, “Brewing vs. Super Critical Fluid Extraction (SFE) and High Performance Liquid Chromatographic (HPLC) Determination of Caffeine and Trigonelline in Roasted, Slightly Roasted, and Unroasted Coffee Beans,” 251<sup>st</sup> ACS National Meeting, San Diego, CA, **2016**.

**J. Lesh, T. Utz, J. Fodero,** and M. O’Sullivan, “Synthesis of Aryl-Guanidino Spermidine Conjugates as Potential Trypanothione Reductase Inhibitors,” 251<sup>st</sup> ACS National Meeting, San Diego, CA, **2016**.

**L. Evans, C. Binns,** and S. Evans, “What Makes Lyme Disease Tick: Impact of Mutations on Global Regulator BosR,” 251<sup>st</sup> ACS National Meeting, San Diego, CA, **2016**.

**J. Iannuzzelli, K. P. Vu,** and T. M. Gregg, “Investigation of Silver and Gold Catalysis for Cyclopropanation of Allenylsilanes,” 251<sup>st</sup> ACS National Meeting, San Diego, CA, **2016**.



Canisius Chemists and Biochemists in San Diego

**W. B. Swanson,** and M. Kozik, “Direct 2D DOSY NMR Evidence for Oligomer Formation by Transition-Metal Substituted Polyoxotungstates in Nonpolar Solvents,” 251<sup>st</sup> ACS National Meeting, San Diego, CA, **2016**.

**N. Fusco, T. Tumiel,** and S. Szczepankiewicz, “Photochemical Reduction Mechanism of  $\text{SiW}_{11}\text{Co}_6^-$  in Nonpolar Solvents,” 251<sup>st</sup> ACS National Meeting, San Diego, CA, **2016**.

**S. Fitzgerald, J. J. Rutowski,** and J.L. Steinbacher, “A Library of Fluorinated Electrophiles for Chemical Tagging – Toward a  $^{19}\text{F}$  MRI Contrast Agent Based on Mesoporous Silica Nanoparticles,” 251<sup>st</sup> ACS National Meeting, San Diego, CA, **2016**.

## Peer-Reviewed Publications\*

N. Waight, X. Liu, and R. Ma. Gregorius, “Understanding the Life Cycle of Computer-Based Models: The Role of Expert Contributions in Design, Development, and Implementation,” *Educ. Technol. Res. Dev.* **2015**, 63, 1.

L. Z. Miller, **J. J. Rutowski, J. A. Binns,** G. Orts-Gil, D. T. McQuade, and J. L. Steinbacher, “Flow-Based Surface Decoration of Microparticles with Titania and Other Transition Metal Oxide Nanoparticles,” *J. Flow Chem.* **2016**, DOI: 10.1556/1846.2016.00002.

**J. J. Kasper, J. E. Hitro, S. R. Fitzgerald, J. M. Schnitter, J. J. Rutowski, J. A. Heck,** and J. L. Steinbacher, “A Library of Fluorinated Electrophiles for Chemical Tagging and Materials Synthesis,” *J. Org. Chem.* **2016**, 81, 8095.

\*Canisius Undergraduates in Bold

## Outreach Notes

Outreach in the Western New York region is an important part of the Department. Many faculty and students freely donate their time to these activities to promote both chemistry and a love of learning in many K-12 environments.

**Chemistry Olympiad:** Honeywell's Buffalo research laboratory continued its support of the Chemistry Olympiad in WNY with a \$10,000 grant. Hosted by Mariusz Kozik, in collaboration with the local section of the American Chemical Society, this competition attracted 59 of the best students from over 20 local high schools this past spring. Eight students from the WNY region qualified to take the national exam, with these students hailing from five top area high schools: St. Joseph's Collegiate Institute, Williamsville North, Amherst Central, St. Francis, and Orchard Park.



**Science Olympiad:** The 2016 Lake Erie/Niagara Regional New York State Science Olympiad was held in Science Hall, with Phil Sheridan serving as Canisius coordinator. More than 500 students from 25 local high schools participated in 26 science competition events. The 2017 Regional Science Olympiad will take place at Canisius on February 4, 2017.



2016 Science Camp Staff



**Summer Science Camp:** 300 middle school campers attended the 2016 camp directed by Steve Szczepankiewicz and Phil Sheridan. Campers learned about heat, robotics, computer science, fossils and Earth's motions, through hands-on activities. Scholarships were generously provided by a \$5000 grant from Time Warner Cable. The 2017 Summer Science Camp will take place August 7 – 11, 2017. More information can be found at: [www.canisius.edu/sciencecamp](http://www.canisius.edu/sciencecamp).



## News from the Student Chapter of the ACS

For the 2015-2016 academic year, the Canisius SCACS has been awarded an Outstanding Chapter Award, the highest award given by the ACS to a Student Chapter. In addition, the Canisius SCACS was recognized as a Green Chapter for its Green Chemistry activities, which are [featured in the ACS Nexus newsletter and blog](#). Congratulations to the 2015-2016 executive board members for all of their hard work!

President: Lauren Evans (BCH ACS '16)  
Vice President: Ben Swanson (CHM ACS '17)  
Treasurer: Trevor Tumiel (CHM ACS '17)  
Secretary: Connor Tumiel (CHM HT '17)  
Faculty Advisor: Phil Sheridan



Rock climbing



Annual holiday party

Chemical demonstrations



## NASA Goddard Tour



In March, four students and three faculty members visited the astrochemistry and astrobiology research labs at the NASA Goddard Flight Center in Greenbelt, MD. These four students are presenting astrochemical research papers during the fall of 2016 as part of their seminar course. The tour was hosted by Stefanie Milam, Ph.D., Astrochemist and James Webb Space Telescope (JWST) Deputy Project Scientist for Planetary Science. The highlight of the visit was viewing the JWST optics and support structure, visible in the background at left. JWST is scheduled for launch in 2018; more information can be found at: <http://www.jwst.nasa.gov/>.

## Service Trip to Jamaica

In June of 2016, Sarah Evans (far left) and Kayla Murphy (CHM '19, bus window) participated in a two-week service immersion trip to Jamaica. The team of twelve students and faculty spent time in Kingston volunteering with children at grammar schools, community centers, and orphanages. They also volunteered at a farm in Braes River where they helped plant trees and build boxes for bees. The team was able to meet and become friends with the kind and welcoming people of Jamaica. The trip was an enlightening experience, and the team was able to better understand the challenges faced by those living in a developing country.



Chemistry Banquet 2016