



# SUNY Oswego Dept. of Chemistry

## 2015-2016

### Letter from Chair-Dr. Fehmi Damkaci:

It has been three years since we have moved from Snygg Hall to Shineman Center, the new home for the chemistry department. We are still dealing with the small issues of a new building, however at the same time enjoying all the new equipment that came with the building.

Since the opening of Shineman Center, we have seen a surge in the number of incoming freshman chemistry majors, which has been around 50-60 on an annual basis the last 2-3 years. This can be regarded as good news, it gives us an opportunity to educate more future chemists, however also a challenge in terms of space, faculty, and funding.

During the 2015-2016 academic year, we hired 4 new faculty members, which all will start in the fall semester. Dr. Matthew Baker, organic chemist, and Dr. Sue Haddadi, forensic analytical chemist, were both hired as retirement replacements for Dr. Joe Lefevre and former chair Larry Fuller, respectively. Dr. Thomas Brown, inorganic chemist, was hired for the new visiting assistant professor line. Dr. Julia Koeppe, biochemist, was hired as a replacement of the available biochemistry faculty line. In order to better serve our increasing student body, we have added an 11th tenure track line, to be hired within the next year to replace the new VAP inorganic line. This is very good news for the department.

We have seen an increase in the number of students participating in research during both the academic year and summer sessions. The number of students engaged in research projects before their senior year is on the rise as well as the number of students involved in summer research. With all the new faculty members, we will be able to include even more students in early and summer research, which is the best way of teaching chemistry. In this case, we are in need of your monetary support in order to serve more summer chemistry research students. I will ask for you to utilize your company's matching donation policies to help these young minds. All your donations go directly to our undergraduate and graduate students for their summer stipends or research related expenses.

If you have not been to Shineman Center, we will be happy to give you a tour of the new facilities. Also we are always looking for our alumni to come to campus to serve as guest speakers, if you are interested, please drop us an email to set up your visit.

There are several exciting news related to our faculty; such as a new promotion, research fundings, publications, sabbatical, summer research, new collaborations, and international trips. Enjoy reading our annual newsletter and never stop supporting SUNY Oswego Chemistry.

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# Our 2016 Augustine Silveira Jr. Distinguished Lecturer was Dr. Todd Maloney '96



After graduating with a B.S. in Chemistry from SUNY Oswego in 1996, Dr. Todd Maloney earned his Ph.D. in Analytical Chemistry from the University at Buffalo. He began his career at Pfizer Global Research and Development in Ann Arbor, MI. While at Pfizer he was a member of the Chemical R&D and Analytical Sciences R&D organizations, where he was involved in early phase analytical development, automation technologies, and ultra-high pressure liquid chromatography (UHPLC) for pharmaceutical analysis. In 2007 he joined Eli Lilly and Company as a member of the Analytical Sciences Research and Development division, developing control strategies

for late stage drug substances and continuing to investigate UHPLC and automated method development platforms for pharmaceutical analysis. Todd is currently a Principal Research Scientist in the Process Design and Development group at Lilly in Indianapolis, Indiana where he leads a team responsible for developing process analytical technologies supporting flow chemistry and continuous chemical processes.

Upon his arrival to campus he was first given a tour of Shineman Center by two of our graduate students in the MS Chemistry program, Geoffery Peterson '17 and Joe Starr '16. Todd was very impressed with the new spaces and especially with our state of the art instrumental lab.

Todd was a student athlete at Oswego all four years. He was the soccer goalie under Coach Peterson. Todd had the opportunity to visit with the current soccer coach Bob Friske and see the newly built Laker turf stadium. Ironically enough, our current soccer goalie is also a chemistry major named Todd. Todd Lawson will be graduating this May with his Chemistry BA degree. The two had a chance to meet up and talk shop.

His talk Thursday evening was held in the Marano Campus Center Auditorium. The title was "140 Years of Innovation: Next Generation Development of New Medicines at Eli Lilly and Company". Prior to his talk Todd was able to sit down with different chemistry faculty, students, and administrators and enjoy nice conversations over dinner. During his presentation, Todd spoke about the history of his company from the first commercial use of insulin in the 1920's to Lilly's current drugs such as Cialis, and Trulicity. He explained to us how many factors influence how medicines are made from the chemistry, chemical engineering, and material science. He brought us through the drug development process and the types of work being done at the various stages. Did you know that from discovery to patient, it takes on average 10-15 years and \$2.6 billion dollars per drug? Todd's research group is involved in the Phase 3 Clinical Trial step working on chemistry, manufacturing and control. Technology has brought about many changes in the pharmaceutical industry. Todd introduced us to their automated synthesis lab (this runs 120 reactions per day using only 100mg of target), their continuous manufacturing process, and process analytical technology.



*Dr. Maloney with Todd Lawson '16 talking soccer and chemistry*



*Left to Right: Fehmi Damkaci, Larry Fuller, Todd Maloney, Ken Hyde, Casey Raymond*

On Friday morning Todd was invited to interact with students in two of our classes, sophomores taking the organic 2 lecture and freshmen in the general chem 2 lecture course. He spoke to them about his experience in graduate school, his career path, and his current position at Lilly. Todd shared with them some wonderful words of wisdom about keys to happiness and success.



*Talking to sophomore chemistry majors Walter Paz-Orozco'18 and Ilaya Kelley'18 following his appearance in CHE 332 lecture.*



The Chemistry Club arranged a special meet and greet Oswego Sub Shop luncheon (one of Todd's favorite spots back in the day) where they were able to talk to him in a more informal setting about the different aspects of his job and career opportunities at Lilly.

He wrapped up his visit on Friday afternoon with one more talk to the chemistry department's faculty and students in Room 122 Shineman entitled "The Role of Process Analytical Technology in Continuous Pharmaceutical Manufacturing". Todd supervises a team of scientists at Lilly responsible for the development and integration of process analytical technologies supporting continuous processes. His team includes organic chemists, chemical engineers and analytical chemists. He explained that continuous manufacturing and process analytical technologies are the new area and future in pharmaceuticals. Where once it took an entire manufacturing site to produce a drug, now the work can be done in research hoods, with the same Kg/day output. He described the current analytical methods they employ to get information from the reactors without disturbing anything (real time data). He showed the group examples such as flow NMR, online LC, and a portable headspace GC which is made locally at Inficon in Syracuse, NY.



*Todd talking to senior Tim Jones'16 and chemistry faculty member Dr. Niri about their research project.*



*Todd talking to student Aaron Brody'17 about careers at Lilly.*

## Faculty and Staff

**Kestutis Bendinskas**, Associate Professor, Biochemistry

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Post-doctoral fellow, John Hopkins University, 1997

Ph.D., Bowling Green State University, 1996

B.S., Mendeleev University of Chemical Technology, 1991

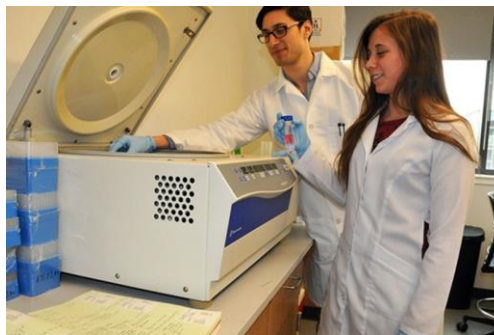


**Research Interests:** Proteins and metabolites involved in cardiovascular problems in children and adults exposed to heavy metals and the expression of such proteins and their metal-binding properties. Other research interests involve the detection methods for biomolecules in novel matrixes and the development of novel biochemistry and 'omic teaching laboratory experiments.

**Update:** Kestas is most proud this year of his students Sasha Padilla, who was accepted to the Biochemistry Ph.D. program at University of Notre Dame, and Ethan Walker, who was accepted to the Biochemistry and Molecular Biology Ph.D. program at the University of Rochester. Kestas Bendinskas and his new collaborators from the University of Michigan have published an article about metabolomics in *Bioinformatics* in early 2016. He ran four active external grants this year. Thus, he and his students were busy every Saturday processing and storing human body samples to assess effects of heavy metals on children health and explore effects of time-off on the health of adults. A significant amount of his time this year was spent on writing five grants as a PI and three as a co-PI. He presented at three venues this year: the national ACS meeting in San Diego, CA, the NIH Common Fund Metabolomics Annual Meeting, Lexington, KY, and presented a talk at "Science Today" to Oswego community and SUNY Oswego faculty and students. Dr. Bendinskas continues to spend a quarter of his productive time serving the scientific community as the Editor-in-Chief of *American Journal of Undergraduate Research (AJUR)*. This journal is now indexed by EBSCO and supported financially by Wiley Publishing.



Sasha Padilla '16, Kestas Bendinskas, and Ethan Walker '16 at the senior graduation party



Iain Thompson '16 and Tatiana Gregory '17 perform the PBMC purification procedure (photo from Jim Russell)

**Martha Bruch**, Professor, Physical Chemistry

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Ph.D., University of Delaware, 1984

B.S., University of Delaware, 1978

**Research Interests:** Nuclear magnetic resonance (NMR) spectroscopy, high performance liquid chromatography (HPLC) and polycyclic aromatic hydrocarbons (PAH).

**Update:**

**Fehmi Damkaci**, Associate Professor, Organic Chemistry

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Post-doctoral fellow, Boston College, 2004-2006

Ph.D., University of Maryland, College Park, 2004

M.S., University of Maryland, College Park, 2000



**Research Interests:** Synthesis of designer polymers to capture heavy metals from water, total synthesis of heterocyclic natural products with medicinal and/or structural importance, and copper and iron catalyzed arylhalides using NPPA derivatives as ligands

**Updates:** Fehmi Damkaci's research groups were successful in securing funding for a post-doctoral researcher from Turkey: Dr. Hasan Sarikahya has been working on synthesis of polymers and analyzing their heavy metal capture capabilities from water. Dr. Damkaci had ten undergraduate and graduate research students working under his guidance. In addition he started a new collaboration with the Cancer Research Center of SUNY Albany in development of nanomaterials for slow release of drug molecules.

In spring 2016, Damkaci and his research group published one paper: "N-Picolinamides as ligands for C-N bond formations" Tetrahedron letters 2016, 57,2197-2200. Dr. Damkaci continues to manage institutional NSF-STEP grant (around \$860,000), and its 3rd year showed great retention rates by using peer-mentorship program within freshman labs. Juniors and Seniors are placed in freshman labs as peer mentors (in addition to TA) to help them with their work as well as questions regarding major, courses etc. Kristin Gublo coordinates the peer-mentorship program for all science departments. Dr. Damkaci and Kristin Gublo are working on publishing the results of Peer-mentorship program. In addition, Dr. Damkaci had \$22,500 external grant for high school summer research program. It served 16 students and three teachers by five faculty in STEM fields. Dr. Damkaci also served as co-PI in drafting the proposal for DoE FIPSE grant, which is a collaborative grant for increasing transfer student success. The project was granted for \$2.8 million to implement collaboration among five organizations for transfer student success.

**Shokouh Haddadi**, Assistant Professor, Forensics & Analytical Chemistry

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**Education:**

PhD in Analytical Chemistry University of Waterloo, 2008

MS Tabriz University, 1999

BS Azad University, 1995



**Research Interests:** Chemical Analysis of Latent Fingerprints, Forensic Drug Analysis, Arson Detection

**Updates:** I worked at the chemistry department as a visiting assistant professor during the 2015-2016 academic year. I taught criminalistic chemistry and forensic science courses in addition to analytical chemistry course and lab during the fall and spring semester. I also conducted research in the area of forensic chemistry, working with four capstone students. I also accepted to be the capstone/assessment coordinator as of Spring 2016, which I will continue in the coming year as well. I applied for two challenge grants this summer, which were both approved. I also got the tenure track position in analytical forensic chemistry and I am happy that I can continue my research and teaching in the area of forensic science here at SUNY Oswego. I applied for the early start program, which was also accepted. What I cherish the most here, besides the new building and the instruments and of course the lake, is working with my wonderful students and colleagues in a joyful and productive environment!

**Webe Kadima**, Associate Professor, Analytical & Biochemistry

[webe.kadima@oswego.edu](mailto:webe.kadima@oswego.edu)

Post-doctoral fellow, University of California, Riverside, 1987–1989

Ph.D., University of Alberta, 1986

M.Sc., University of Montreal, 1982

B.S., University of Montreal, 1980



**Research Interests:** The investigation of plants used to treat diabetes in the Democratic Republic of Congo (DRC) involving clinical studies in the DRC and biochemical studies at SUNY Oswego.

**Updates:** We have continued to investigate the mechanisms of plants used to treat type 2 diabetes in the Democratic Republic of Congo (DRC). This year, we are pleased to share that the work of three capstone students – Deborah Ajayi , Tia Bullard , and Bianca Camillaci- has confirmed that an aqueous extract of the stem bark of the *Musanga cecropioides* inhibits three enzymes involved in three different pathways that lead to hyperglycemia in people with type 2 diabetes –digestion, gluconeogenesis and glycogenolysis. Our next step is to isolate the specific compound(s) that inhibit the enzymes and to determine their structures. So, I am looking forward to the next crop of capstone students to move forward this work! This summer, I am going back to the DRC. I will collect fresh extract of *Musanga cecropioides* and *Paropsia brazeanna*. I will also administer hemoglobin A1C test to the small group of diabetic patients at the Medical Center Mwindi --I have been involved with the center and the patients since 2009.

## **Biolchemistry Major Earns 2016 Chancellor's Award**

Congratulations to Iain Thompson'16, one of three SUNY Oswego students that received the 2016 SUNY Chancellor's Award for Student Excellence. The Chancellor's Award for Student Excellence honors State University of New York students who have best demonstrated and been recognized for their integration of academic excellence with other aspects of their lives, which may include leadership, campus involvement, athletics, career achievement, community service or creative and performing arts.

Iain did research under Dr. Bendsinkas and Dr. Contento, he also studied at the National Brain Research Center in New Delhi. He was President and co-founder of the Pre-Health Care Club, he also is a member of C-STEP Club. He worked as a personal trainer as well as interned and volunteered at Oswego Hospital. In the fall he earned the college's Dr. Walter Freund Memorial Scholarship in pre-health. He plans to attend medical school in the fall of 2017

This award is the highest honor for a SUNY student. Way to go Iain! We are so proud of your accomplishments!



*At the award ceremony on April 5<sup>th</sup> in Alban, Iain with Chancellor Nancy Zimpher and Jerri Drummond, the Associate Vice President of Student Affairs and Dean of Students (photo from SUNY facebook page)*

**Vadoud Niri**, Assistant Professor, Analytical Chemistry

[vadoud.niri@oswego.edu](mailto:vadoud.niri@oswego.edu)

Post-doctoral fellow, University of North Dakota, 2009-2010

Post-doctoral fellow, University of Waterloo, 2004-2008

Ph.D. in Analytical Chemistry, University of Tabriz



**Research Interests:** Dr. Niri's research group has been focusing on developing new sampling/sample preparation and analytical methods for monitoring chemical pollutants, which negatively affect public health and the environment (air, water, soil and sediment media) and investigating the efficiency of possible removal/remediation techniques for these compounds.

#### Update:

During the last year, Dr. Niri has been active in research by supervising 5 graduate students and 13 undergraduate students in their research projects in the area of analytical chemistry. He received 5 internal grants to support his research activities and has applied for an external grant. His research group worked on different projects including chemical analysis of electronic cigarettes, analysis of microbial volatile compounds from mold samples, and analysis of local, store, and organic fruits and vegetables for their metal and pesticide contents. He has been collaborating with Dr. Damkaci, and Dr. Haddadi. He has submitted two papers for publication. In addition to presentations in on-campus conferences such as *QUEST* and *Summer Scholars Symposium*, Dr. Niri and his students have presented the results of their works in regional and national meetings.

Presentations (presenters are underlined):

1. V. Niri, G. Peterson, A. Donahoe, Chemical Analysis of Electronic Cigarettes Using Solid Phase Microextraction and Needle Trap Device Coupled to Gas Chromatography Mass Spectrometry, *250th American Chemical Society National Meeting*, Boston, MA, August 16-20, 2015. (*Oral presentation*)
2. H. Posada, J. Calvert, V. Niri, Analyzing Toxic Heavy Metals in Local Fruits and Vegetables, *61<sup>st</sup> Annual ACS Undergraduate Research Symposium*, St. John Fisher College, Rochester, NY, April 16, 2016. (*Oral presentation*)
3. T. Jones, G. Peterson, V. Niri, So You Think Electronic Cigarettes are Safe?, *61<sup>st</sup> Annual ACS Undergraduate Research Symposium*, St. John Fisher College, Rochester, NY, April 16, 2016. (*Oral presentation*)

**Casey Raymond**, Assistant Professor, Inorganic Chemistry

[casey.raymond@oswego.edu](mailto:casey.raymond@oswego.edu)

Post-doctoral fellow, Northwestern University, 1996–1998

Ph.D., Colorado State University, 1996

B.S., Michigan State University, 1991



**Research Interests:** Solid-state inorganic chemistry, metal oxide, boron chemistry, crystallography, brewing science, fermentation science, and food science.

#### Updates:

I was happy to get back to teaching this year and getting a new research project off the ground with an undergraduate geochemistry student. The new project involves the exploratory hydrothermal synthesis of metal polychalcogenides ( $Q_n^{2-}$ ,  $Q=S$ ,  $Se$  &  $n=2-6$ ). The first goal was to get the laboratory set up for this new project and duplicate previous results with different reaction vessels. As we completed this task and moved to new reactions, we observed some interesting features on our crystals by SEM. We are currently attempting to understand the source/cause of these features. On a different note, Mike Knopp and I published a structural paper that clarified the bonding present in the pyrazolones that he and Prof. Silveira worked on. In March, I presented a talk on apps that help teach inorganic chemistry at the National ACS meeting in San Diego.

My first year as the Associate Director of the College Honors Program was quite interesting. The biggest challenges were creating schedules for the incoming class of honors students, because they are from every major on campus, and working with a dozen different departments to create the schedule of honors classes for each semester. I attended the national and Northeast region of the National Collegiate Honors Council. We had two student presenters at the regional meeting. Fall semester will bring four new faculty to the department, including a VAP inorganic chemist. It'll be nice to have another inorganic person around to talk with and share the teaching duties. It's been nearly eight years since Ken Hyde retired—unless my math is wrong.

**Jeffery Schneider**, Associate Professor, Analytical and Environmental Chemistry

[jeffery.schneider@oswego.edu](mailto:jeffery.schneider@oswego.edu)

Ph.D., Dartmouth College, 1992

M.S., University of Wisconsin-Milwaukee, 1985

B.S., University of Wisconsin-Milwaukee, 1981



**Research Interests:** The determination of arsenic and lead in soils of Rice Creek Field Station, kinetic and equilibrium studies of novel water-soluble porphyrins and the student of carbohydrate composition of beer.

**Updates:**

**Kristin Gublo**, Instructional Support Specialist

[kristin.gublo@oswego.edu](mailto:kristin.gublo@oswego.edu)

M.S., SUNY Oswego, 1999

B.S., SUNY Oswego, 1996



**Updates:**

Kristin is responsible for providing all reagents and equipment for our laboratory courses and the training of the teaching assistants. She provides lab safety training workshops each semester to the chemistry faculty, graduate students and undergraduate research students. Kristin serves as the department's Advisement Coordinator, Coordinator of the General Chemistry Peer Mentor Program, and last year became a First Year Advisor. She is teaching a new course for the department CHE 110 which is a "Freshmen Chemistry Seminar" course. This course provides incoming First Year Students a Gateway to Chemistry course to help smooth their transition and provide opportunities to build a strong cohort of support. She works closely with our Career Services office to provide our majors with career exploration field trips and alumni visits. This year she planned a trip to Cooper Vision in Scottville, Anheuser Busch in Baldwinsville, and helped arrange Dr. Todd Maloney's '96 visit. She helps advise both the Chemistry Club and the Pre-optometry club. Kristin is active in various committees on campus including fundraising, advisement practices, and the Chemical Hygiene Plan committee. She continues to supervise ~ 5 work study students per year. Her family is her "spare time", Ryan is going into 6<sup>th</sup> grade and Emily will be starting 3<sup>rd</sup> grade this fall. Her husband Ed (Oswego alumn '95/97) has been with Thermopatch Inc. in Syracuse for 12 years as their Operations Manager.

**Fred Scoles**, Instructional Support Technician

[fred.scoles@oswego.edu](mailto:fred.scoles@oswego.edu)

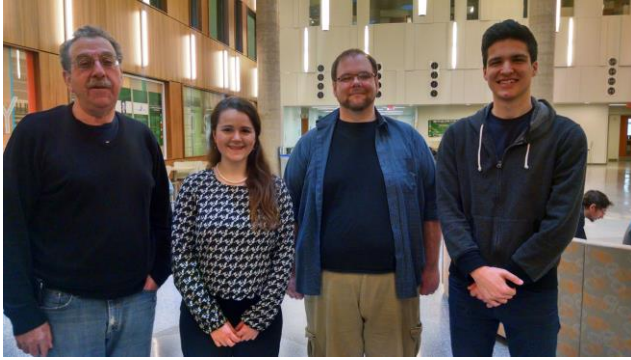
*B.S., Ohio State University*

*M.S., Ohio State University*

**Updates:**



## Quest Photos



*Dr. Pagano with Hannah Valentino '16, Andrew Garner '09 & '11, and Jesse Mazur '17*



*Dr. Bendinskas with Ethan Walker '16 and his parents*



*Tim Jones '16, Douglas Carey '16, Todd Lawson '16, Dr. Niri, and Hilda Posada '16*



*Danielle Chasworth '16, Dr. Haddadi, and Naa Ashleley '16*



*Deborah Ajayi '16, Tia Bullard '16, Dr. Kadima, and Bianca Camillaci '16*



*Nathaniel Stemmler '16, Kate Bailie '16, and Dr. Haddadi*



*Alex Corrao '16, Dr. Kadima, and Amanda Gunarathna '16*



*Congratulations to Hilda Posada '16- the 2016 Sigma Xi Best Quest Presentation award (shown here with her research advisor Dr. Niri)*

## Career Exploration Field Trips

On September 23, 2015 several STEM majors went on a career exploration field trip to **CooperVision's** made to order manufacturing site in Scottsville, NY. CooperVision is a leading global manufacturer of soft contact lenses. They have 8,000 employees worldwide and 1,200 in the Rochester area. The students were able to interact with their chemists and engineers. The students enjoyed seeing how the same instrumentation they are learning about in their chemistry courses are being used at the facility. Their Lab Manager Connie Musante showed them instruments such as UV-Vis, IR, HPLC, GC, TOC, autoclave, conductivity and pH meters. The students toured both the manual and automated lines of the entire contact lens manufacturing process lead by Process Engineer Mike DiRoma. The students saw first hand all of the intricate steps involved from casting the mold, to lathing, to the packaging and distribution. They were privileged to meet up with an Oswego chemistry alumni **Jerry Koehler (MS class of 1983)** who is their Senior Quality Manager. He talked about his position at the company and gave them valuable career advice as well as sharing fond memories of his days back in Snugg Hall.



Front Row: Dana Mitchell, Bianca Fernandez, Jenna Kasza, Marianna Butera Back Row: Silvia Roman, Kyler Anderson, Kyle Pollicove and Jerry Koehler ('83)



Kyle Pollicove '18 and Kyler Anderson '19 (Chemistry Co-op students all suited up to tour the facility)

Twelve SUNY Oswego chemistry majors spent the afternoon of March 30, 2016 learning about career opportunities at the **Anheuser Busch** facility in Baldwinsville, NY. Their tour guide was Brew master Matt Morgenthaler who earned his chemistry degree from ESF and has been with the company for 25+ years. He started the afternoon with a presentation to the students on the history of beer, different ingredients they use, various brewery terminology, and the science behind the entire process. The students enjoyed hearing about the different techniques that they are learning in their lab courses and how they apply in a large scale manufacturing setting. The trip was funded by the Experiential Learning Office. Chaperones included Sheila Cooley (Co-op office) and Kristin Gublo from Chemistry.



Kim Lagatta '17 and Diana Rispoli '17 taking in the hop's aroma



Students learning about the various control systems for operating the plant



The trip was organized by Mallory Bower (Career Services) and Kristin Gublo (Chemistry) and the Pre-Optometry Club. Funding was provided by Career Services and the Department of Chemistry.

## News from Alumni

**Danielle Gilbert –Perper '06,'03** is celebrating her 10th anniversary at Johnson & Johnson. She is the IT Lead in the Janssen Supply Chain group, working on Lab Systems, responsible for the standard archiving software laboratory data for supply chain labs throughout the network (worldwide). She will be celebrating her seven year wedding anniversary! Her and Adam just bought their “dream house” in Lebanon Township, New Jersey and continue to be blessed everyday with their son, Max, who is turning 4 in August.

**Craig Johnson '07** was married to Catherine Knight on July 18th, 2015. They live in Massachusetts where Craig just finished his 5th year of teaching chemistry and biology at Bristol County Agricultural High School. He presented for the first time with a colleague at the National Science Teachers Association (NSTA) conference in Nashville in April of 2016 on Standards-based Grading.

**Kevin Watkins'10** is planning on defending his PhD this fall at the University of Wyoming. His work is in semiconductor photoelectrochemistry as it applies to solar energy.

**Rachel Koenigstein '10, '08** received her MSED in 2010 from Oswego. She lives in Long Island and teaches Chemistry and Science Research at Yorktown High School. Some of her students participated in Genius Olympiad 2016. She enjoyed bringing them the campus.

**Fengrong Wang '11** is a fifth-year PhD student at Johns Hopkins University Bloomberg School of Public Health in the Department of Biochemistry & Molecular Biology. She is in the laboratory of Dr. Pierre A. Coulombe and studying how keratin influences keratinocyte migration.

**Kristin Leach '12** is now working in the purification department at the Vaccine Research Center at the NIH in Gaithersburg. She is very thankful for the summer internship experience at WR Grace while a student here. From her connections there, she was recommended for the job at the NIH.

**Andrew Preischel '12** is working at Niagara Lubricant Co. Inc. NLC is a contract packager and manufacturer of industrial, commercial, and automotive lubricants/greases. He started out as a quality control chemist, was promoted to R&D Chemist, and then last year he was promoted to their Lab Manager. He is also the company's Management Representative for their quality management system, authoring, administering, and overseeing the procedures and quality objectives of the company.

**Adam Szymaniak '13** is a third year PhD Candidate in Organic Chemistry at Boston College, Morken group. Developing methodologies for asymmetric transition-metal catalyzed synthesis of organoboronates, and their application towards the synthesis of biologically relevant natural products.

**Shirley Peng '13** graduated from the University of Cincinnati last year with her M.S. degree in materials science. She is working in Pittsburgh, where she currently works on formulating coatings for military/other governmental applications.

**Ben Weber '13** is working at Albany Molecular Research

**Carolyn Joyce '13** is starting a new job this summer in the chemistry department at R.E. Ginna nuclear plant with Exelon just outside Rochester.

**Vyncent Nguyen '14** received his M.S. in Chemical and Biological Engineering. He is working as a Biology Research Associate (Drug Metabolism and Pharmacokinetics) at AMRI in Buffalo.

**Justin Sbarra '15** was accepted to Dental School. He will be attending UB Dental School in the fall of 2016.

**Chad Smith '15, '13** is a Waste Water Treatment Operator at GDI Integrated Facility Services. GDI is the temp agency for Novelis.

**Katie Tylock '15** is employed at Albany Molecular Research as a Research Scientist I.

# Chemistry Club News

The club started out the school year in September with their Annual Liquid Nitrogen ice cream social to introduce the new students to the faculty and upperclassmen. In October they sponsored an ACS Webinar Pizza Party. They also participated in the college's Green and Au Day, sponsored a ice cream making challenge, and volunteered by giving tours of Shineman to prospective students during open houses. They ended the fall semester with their annual holiday party saying farewell to our December graduates. In the spring semester they continued the annual chemistry valentine fundraiser to raise money for a local food pantry. They sponsored breakfast and lunch for our Quest day presenters, sponsored our Faculty mini presentations for our juniors, and a meet and greet luncheon with Dr. Todd Maloney. The officers were honored at a Leadership reception by the administration on April 11<sup>th</sup>. They all celebrated the end of the semester with a party for our May graduates. The same group of officers were reelected for 2016-2017, they are looking forward to another great year ahead!

## 2015-2106 Chemistry Club Officers

President: Gabriel Odugbesi  
Vice President: Alyssa Aldrich  
Secretary: Thomas Sobiech  
Treasurer: Laura Smith

Advisor: Casey Raymond



## Pre-Optometry Club Officers 2015-2016

President: Dana Mitchell  
Vice President: Jenna Kasza  
Secretary: Marianna Butera  
Treasurer: Matthew Waszkiewicz

Advisor: Kristin Gublo

## Pre-Optometry Club News

The club was so excited for their career exploration field trip in September to Copper Vision which is located just outside of Rochester. See more on this experience on page 10.



*Officers: Marianna Butera '17, Jenna Kasza '17, and Dana Mitchell '17 outside the building*

They sponsored an OAT/ MCAT information session on campus on October for all pre-health majors. They brought a speaker in from Kaplan.



*Marianna Butera '17, Jenna Kasza '17, and Dana Mitchell '17. And Bianca Fernandez '19*

Throughout the spring semester they organized a used prescription eyewear drive on campus for OneSight, a charitable program dedicated to helping the world to see. They were able to collect over 75 pairs of glasses from faculty and students on campus. Congratulations to their gift card winners: Patricia Meleski (Dean's office), Mary Crow (Res Life), Andrew Salvagni (Facilities), and Sofia Windstam (Biological Sciences).

In February, they worked alongside the chemistry club to make and sell chemistry valentines to raise money for Human Concerns, a local food pantry.



The pre-optometry officers were honored at a Leadership reception by the administration in Sheldon Hall on April 11<sup>th</sup>.

Good news! Our club President Dana Mitchell was accepted into the Optometry Learning Experience at Salus University over the winter break. She enjoyed learning more about the profession and their program. Both Dana and Marianna will be on applying to Optometry schools for fall 2017.



Willy G. Schuh Outstanding Senior Award & ACS Undergraduate Student Award in Environmental Chemistry: Hannah Valentino



Pearle Monroe Scholarship: Rachel Scalzo

## Department's Spring Awards:

Class of 2016 that graduated with department honors:

Amanda D M Gunarathna  
Sasha Padilla  
Rachel Scalzo  
Alison Taylor  
Iain Thompson  
Hannah Valentino  
Ethan Walker



ACS Senior Organic Award: Cory Ludwig



POLYED Organic Award: Kyle Pollicove



Anthony VanGeet Scholarship: Gabe Odugbesi



ACS Analytical Award: Marianna Butera



Outstanding TA Award: Katie Piazza



Outstanding Peer Mentor Award-Alison Taylor

# 2015- 2016 Chemistry Degree Candidates

## August 2015

John Gleason	Chemistry BA	
Matthew Gogis	Chemistry BA	Chemical Field Technician at Chemcept, Inc

## Dec 2015

Christina Buckingham	Biochemistry BS	Associate Plant Operator at Exelon Nuclear at Nine Mile Point
Devin Busch	Biochemistry BS	QC Analyst at Regeneron
Christopher McMullen	Biochemistry BS	Sample Inventory Operations Associate at Bristol Myers Squibb
Christopher Winn	Chemistry BS	HPLC Analyst at Galson Labs

## May 2016

Deborah Ajayi	Biochemistry BS	
Naa Asheley	Chemistry BA	
Kate Bailie	Chemistry BS	SUNY Oswego, Chemistry MS
Tia Bullard	Biochemistry BS	Wegmans School of Pharmacy/ Pharm.D
Bianca Camillaci	Biochemistry BS	
Douglas Carey	Biochemistry BS	
Danielle Chasworth	Biochemistry BS	John Jay College of Criminal Justice, Forensic Science MS
Alexandria Connelly	Chemistry BS	SUNY Oswego-Adol Ed Chemistry MST 7-12
Alexandra Corrao	Biochemistry BS	
Amanda D M Gunarathna	Biochemistry BS	
Shaun Henderson	Biochemistry BS	SUNY Oswego, Chemistry MS
Lyndsey Ladd	Chemistry BS	
Todd Lawson	Chemistry BA	QC Analyst at Regeneron
Cory Ludwig	Chemistry BS	SUNY Oswego, Chemistry MS
Sean Lyons	Chemistry BA	SUNY Oswego, MSED
Martha Miller	Geochemistry BS	Post college appointee, Nuclear and Chemical Sciences Division at Lawrence Livermore National Laboratory in California
Sasha Padilla	Biochemistry BS	University of Notre Dame, Biochemistry PhD, TA
Rachel Scalzo	Chemistry BA	
Alison Taylor	Biochemistry BS	SUNY Oswego, Chemistry MS
Iain Thompson	Biochemistry BS	
Hannah Valentino	Biochemistry BS	Virginia Tech, PhD, ICTAS doctoral fellowship
Ethan Walker	Biochemistry BS	University of Rochester, Biochemistry and Mol Biology PhD, TA
Emily Yerdon	Geochemistry BS	Syracuse University, Chemistry PhD, TA

## **Master Candidates:**

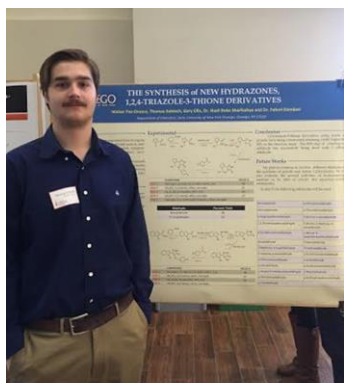
Abdul Alawaed	Chemical Lab Technician at Yincae Advanced Materials LLC in Albany
Jason Biasini	Biotech Production Specialist in the clinical manufacturing department at Regeneron
Lyndon Flynn-Roach	
Zack Kuvent	
Katie Piazza	
Will Schwab	
Joe Starr	Quality Control Laboratory Technician at VanDeMark Chemical Inc. in Lockport, NY.
Dan Walter	GC-MS lab analyst at Galson Labs, Syracuse NY

## Conferences:

Some of our students presented at the Rochester Academy of Science's 42nd annual fall scientific paper session, held Nov. 7 at Finger Lakes Community College.

"Method Development for Analyzing Pharmaceuticals in Drinking Water Using High Performance Liquid Chromatography" by Christopher McMullen '15 and Dr. Niri, and "Analyzing Heavy Metal Content of Local Fruits and Vegetables" by Hilda Posada '16, James Calvert MS '17 and Dr. Niri.

Also some presented at the 61<sup>st</sup> Annual Undergraduate Research Symposium sponsored by the Rochester Section of the American Chemical Society at St. John Fisher College.



*Shown here with his poster: Thomas Sobiech '17.*

*Others that presented at St. John Fisher include Gary Ellis '17 and Walter Paz-orozco '18*

## Real World Experiences:

Biochemistry major Alison Taylor '16 worked at the Oswego Port this spring semester in a paid co-op position. She works with SUNY Oswego's Agricultural Testing and Analysis Laboratory. They test grains, corn, soybeans and wheat at the port prior to the exchange between farmer and buyer. Her faculty advisor is Dr. Contento of the biological sciences department. They lab is located on the ground level in Shineman. Alison will begin her graduate work at Oswego in fall 2016.



*William Ernest (Geology major) and Alison Taylor speak with Port of Oswego Executive Director Zelko Kirincich and President Deborah F. Stanley. (Photo from Jim Russell)*

## Thank you!

We would like to thank our generous alumni that made donations to our department last year. We used this money to support extra programs and to purchase equipment for our laboratories. Thank you very much.



If you are interested in making a gift to the college to support the department, you can go to alumni's secure on-line website ([www.oswego.edu/givenow](http://www.oswego.edu/givenow)). To allocate the donation to our department, simply specify "Other Designation". You have three options available: Chemistry Department, a Chemistry Scholarship, or the Chemistry Summer Research Fund. If you would like to make a donation via check, checks can be made out to "Oswego College Foundation, Inc." and can be mailed to: University Development, 219 Sheldon Hall, Oswego, NY 13126. Please write your designation in the memo line.

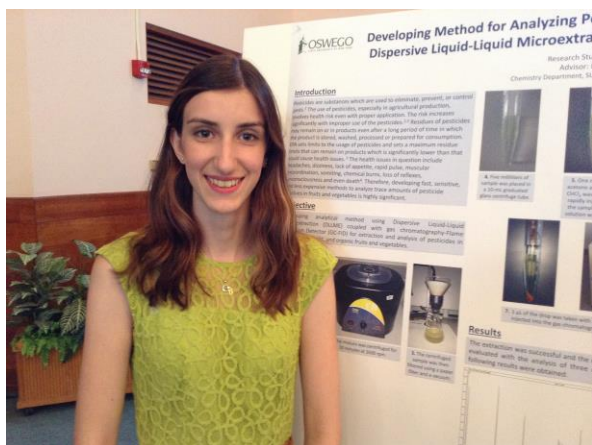


*Back row: Nathan Stemmler ('16), Naa Asheley ('16), Cydney Ward ('16)  
Front Row: Rachel Scalzo ('16), Gabriel Odughesi ('17), Marianna Butera ('17)*

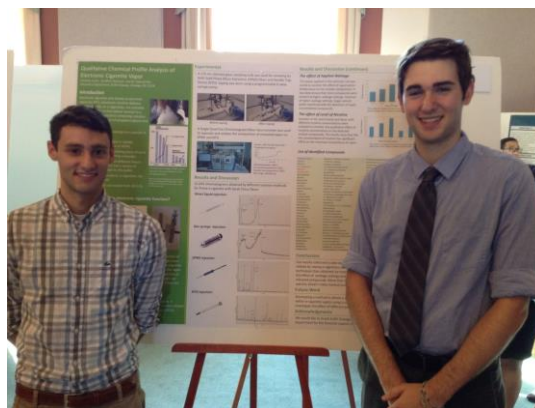


# The 2015 Summer Scholarly and Creative Activities Symposium:

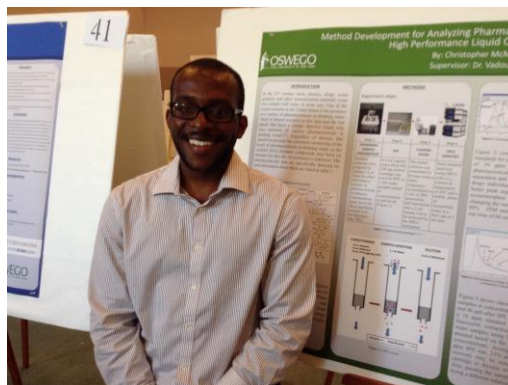
This took place September 4th in the Sheldon Hall Ballroom. It was a great opportunity for the community to check out student research and creative projects completed over the summer by Challenge Grant Recipients, Global Lab Students and other summer scholars at SUNY Oswego. Over 50 student projects were featured.



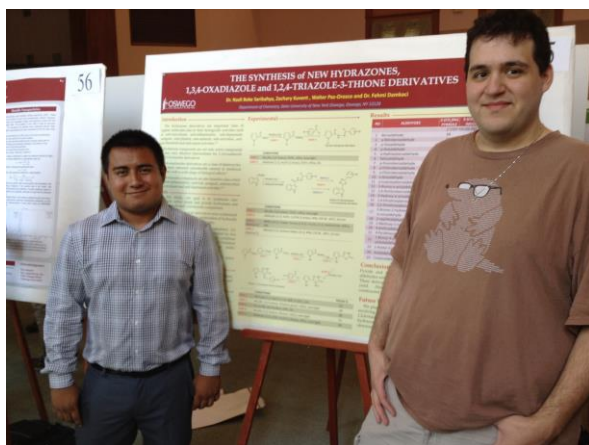
Ilaya Kelly '18 from Niri's group.



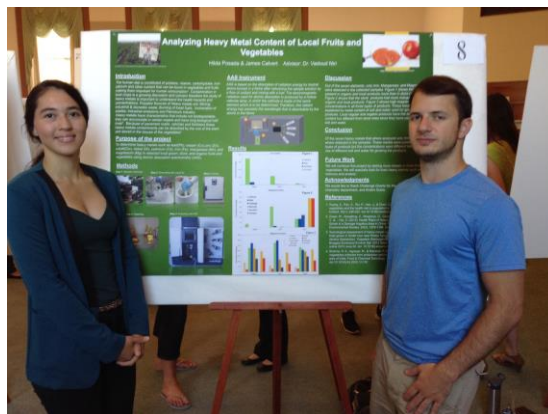
Geoffrey Peterson '17 and Tim Jones '16 from Niri's group



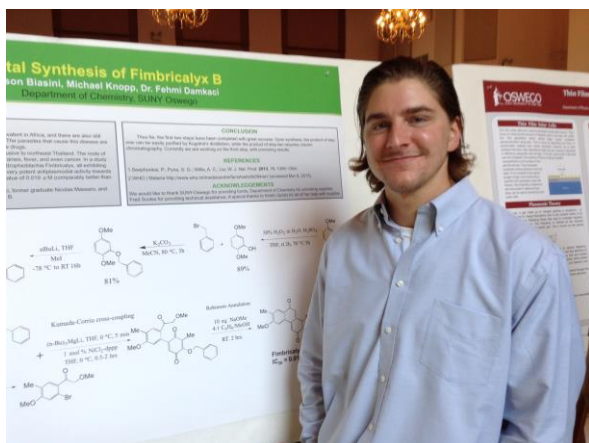
Christopher McMullen '15 from Niri's group



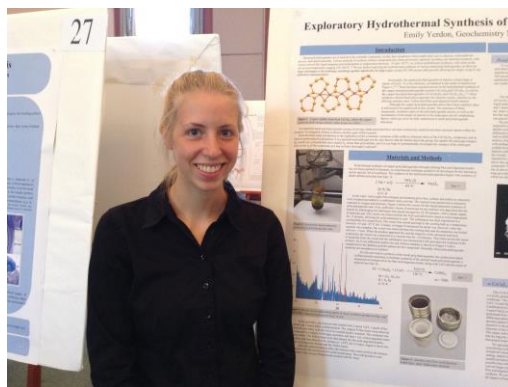
Walter PazOrozco '18 and Zack Kuvent '16 from Damkaci's group



Hilda Posada '16 and James Calvert '17 from Niri's group



Jason Biasini '16 from Damkaci's group



Emily Yerdon '16 from Raymond's group

## Alumni Visit:



On December 9<sup>th</sup>, Tanya Rutter '97 MS '00 brought 15 Innovation Tech High School BOCES students up from Liverpool to utilize equipment in the organic teaching lab. Kristin Gublo along with four chemistry students volunteered to help the high students successfully synthesize aspirin from salicylic acid.

Shown here are teachers Benjamin Feinberg '06 MS'12 and Tanya Rutter '97 M'00 working with Innovation Tech HS students Layloni Vinson and Mikael Michlovitch during their recrystallization step. (Photo from Jim Russell)

Dr. Damkaci spent some time talking to the high school students during their visit about Medicinal Chemistry. After the lab work they had lunch and learned about the different careers they can pursue as a chemistry major. They had a fun filled day.

## Publications:

**Jim Parise '00** Teaching Professor, Department of Chemistry and Biochemistry at University of Notre Dame

recently published a textbook, "Organic Chemistry, Sixth Edition" with Marc Loudon at Purdue University.

**Fengrong Wang '11**

Chapter Twelve-Skin Keratins F Wang, A Zieman, PA Coulombe Methods in enzymology 568, 303-350

**Adam Szymaniak '13:**

B. Potter, A. **A. Szymaniak**, E. K. Edelstein, and J. P. Morken. J. Am. Chem. Soc. 2014, 136, 17918.

L. Zhang, G. J. Lovinger, E. K. Edelstein, A. **A. Szymaniak**, M. P. Chierchia and J. P. Morken, Science, 2016, 351, 70

## Genius Olympiad:

During the summers, Dr. Fehmi Damkaci keeps busy with the GENIUS Olympiad, an international high school project competition about environmental issues ([www.geniusolympiad.com](http://www.geniusolympiad.com)). This year it hosted 950 students and teachers from 64 countries in five disciplines with environmental focus. The disciplines include science, art, creative writing, design and music. Summer 2016 was the fifth annual GENIUS Olympiad and received more than 1400 projects from 69 countries. The program accepted only 38% of the submitted projects. It became the 2nd biggest international high school project competition in the world. Below are pictures from the 2016 science competition, with chemistry faculty judges Dr. Vadoud Niri and Dr. Sue Haddadi.



## **in memoriam:**



Frank J. Pierce '11 passed away suddenly on Saturday, April 16, 2016, as a result of a motorcycle accident. Surviving are his son, Wolfgang Pierce; parents, Bruce and Rebecca Pierce; siblings, Bruce Pierce Jr., Joshua (Shelley) Pierce and Rhonda Pierce; nieces, Vharie and Kitty; nephews, Maximus and Roman; and many aunts, uncles and cousins.

## **Alumni-**

If your company has any internship or co-op opportunities for our current students, please reach out to us. Same with any job postings for BS or MS chemists. We would be more than happy to advertise the positions to our students.

Please keep in touch and send us updates for next year's newsletter.

Our address is:  
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Department of Chemistry  
296 Shineman Center  
30 Centennial Drive  
Oswego, NY 13126

Department Secretary: Christine Finnegan  
(christine.finnegan@oswego.edu)  
Phone: 315-312-3048  
Email: chem@oswego.edu

Would you like to join our Oswego Chemistry Alumni Group on Linked In? Simply send a message to Kristin Gublo through her Linked in account. What a fabulous way to reconnect with old classmates and help our recent grads network in the field. Currently we have ~75 members.

