



Periodic Times

Wittenberg University Department of Chemistry
Catalyzing Student Success

2017-18 Highlights:

New Forensic Science program created in partnership with Bowling Green.

Justin Houseknecht promoted to Professor.

Dave Finster wins Lou Laux Environmental Sustainability Award.

Kristin Cline elected to SEAC Board of Directors.

New scholarships awarded to incoming freshmen.

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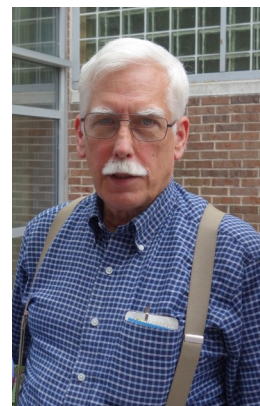
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Volume XII

Summer 2018

End of an Era as Mr. York Retires

Richard York retired at the end of July from his position as Coordinator of Chemistry Labs, having served Wittenberg for 37 years. The Department held a lunch for the campus in his honor in June (see photos on back page). Many students, colleagues and alumni wrote letters that were presented to Mr. York in an album. He will continue to teach clarinet and serve as principal clarinetist of the Springfield Symphony Orchestra.



Dave Finster Receives the Lou Laux Sustainability Award



Dave Finster was named the recipient of the Lou Laux Environmental Sustainability Award at the 2018 Honors Convocation in Weaver Chapel. This award is given to a faculty or staff member in recognition of "effort and creativity devoted to cultivating a spirit of environmentalism on campus". It is named for Professor Emeritus of Biology Lou Laux. Dave's nomination was based upon his leadership in chemical safety and green chemistry as well as courses he has taught on climate change.

New Program in Forensic Science Announced

Wittenberg has partnered with Bowling Green State University to offer a five-year plan that results in a B.A. in chemistry from Wittenberg and a Master of Science in Forensic Science with a specialization in forensic chemistry from BGSU. Under the agreement, Wittenberg students who meet specific requirements may apply to BGSU and, if accepted, the students will spend two years at BGSU. In March, Jon E. Sprague, director of forensic science at BGSU and BCI Eminent Scholar, visited the department to present a seminar "Forensic Chemistry and Application of the Pharmacophore Rule" and to talk to students about the new program.



Department Welcomes Jennifer Gile as New Lab Coordinator



Jennifer Gile is our new chemistry lab coordinator and chemical hygiene officer. Formerly an instructional laboratory technician at Mission College in Santa Clara, California, Jennifer also worked for Alza Pharmaceuticals and has served as an emergency medical technician. She received her B.S. from University of California, Davis where she majored in Genetics and minored in Dramatic Art.

Summer Research 2018



Top: Marshall Eippert, Charles Samuel, Christina Thompson, Garrin Bachinski, Caitlyn Hum, Justin Unternaher, Jack Snider.
Bottom: Erin Armitage, Brad Malott, Nick Weissman.

Name (class year)	Hometown	Major(s)	Summer Project
Erin Armitage ('20)	Spokane, WA	BMB	Lead and Chromium in Avian Eggshells and Egg Yolks
Garrin J. Bachinski ('20)	Columbus OH	Biology	Measuring the Effectiveness of the Active Learning in Organic Chemistry Workshops
Marshall Eippert ('19)	Milford, OH	BMB	Investigation into Developing Ampicillin resistant <i>E. Coli</i>
Caitlyn Hum ('20)	Hamilton, OH	Chemistry	Investigating the Attachment of Ferrocene Derivatives and Arylamines to Aryldiazonium Groups Grafted on a Glassy Carbon Electrode
Bradley Malott ('19)	Middletown, OH	Chemistry	Development and investigation of antibiotic resistance in <i>E. coli</i> using aminoglycosides
Charles Samuel ('19)	Kauai, Hawaii	Biology	Accessing the Gas Phase Reactivities of Cyanide in Nucleophilic Acyl Substitution
Jack Snider ('19)	Beavercreek, OH	Chemistry	Glyphosate Concentrations and a Measure of their Decay
Christina Thompson ('21)	Maineville, OH	BMB & Music	Free Energy Changes of Glucose Binding to Glucose/Galactose Binding Protein
Justin Unternaher ('19)	Newark, OH	BMB	Investigating Amide Bond Formation of Grafted Aryl Carboxylates and Aryl Amines on Glassy Carbon Electrodes
Nick Weissman ('21)	Kettering, OH	Chemistry & Music	Oleuropein Levels in Olive and Fringe Trees

Alumni Notes

Lydia Kisley ('10) accepted a position as a Physics Professor at Case Western University.

Rachel Saylor ('10) is a Visiting Assistant Professor at Oberlin College.

Dan Marous ('09) and Mandy Crosser Marous ('10) are the proud parents of Evelyn Grace. (see photo at right). Dan is a Visiting Assistant Professor at Wittenberg, teaching organic chemistry this year.

Khoa Dao ('14) was accepted into the Pharmacy program at Ohio Northern University.

Zachary Miller ('10) finished his postdoctoral studies at UW-Madison, developed enantioselective triplet sensitized photocycloadditions, and accepted a position at PPG as a photochromic dye research chemist.

Michelle Peace ('91) is serving as the President of The Society of Forensic Toxicologists.

Rebecca Holmes ('16) has been accepted into the University of Cincinnati Molecular, Cellular, and Biochemical Pharmacology program.

Kyra Peczkowski ('16) was accepted into the Biomedical Science Graduate Program at The Ohio State University and plans to research the effects of heart failure on skeletal muscle.

Sophia Melnyk ('16) has been accepted to a Master of Science in Nursing program at Xavier University to become a Nurse Practitioner.

Sean Murphy ('15) has been accepted into the University of Notre Dame Graduate Ph.D. Program in the Department of Biological Sciences.

Waverly Hebert ('16) has been accepted into the Kentucky College of Osteopathic Medicine.

Neil Anderson ('10) works for Olon-Ricerca Biosciences as a Quality Assurance Auditor in Shaker Heights, Ohio.

Rachael Nuzzo ('13) works at the Cleveland Clinic in Surgical Pathology as a Pathologists' Assistant.

Chi Nguyen ('16) is at Boston University studying Computer Information Systems.

Chelsea Horvath ('16) accepted a job with Advanced Environmental Laboratories in Jacksonville FL as an Organic Chemistry Analyst

Madelyn Miller ('16) is studying at University of Central Florida and teaching quantitative methods in a biology lab.

To include your updates in the next department newsletter and/or to send changes in e-mail addresses, write to neelye@wittenberg.edu



Evelyn Grace Marous



Above: Dr. Finster provides music for New Student Days move-in.
Below: Dr. Dudek and Jessica Skoglund.



Chemistry & BMB Majors Receive Department and University Awards 2017-18

Presidential Scholars: Katie Robinson and Karen Wildemann

Sartoris Award for Outstanding Senior Chemistry Major: Jessica Skoglund

Outstanding Senior BMB Major: Sabrina Davis

Patterson Award for Outstanding Junior: Brad Malott

James T. Gregory Award: MacKenzie Freeman

Organic Award: Amor Niksic

General Chemistry Award: Jillian Poska and Lucas Klever



To contribute to the chemistry department and/or Wittenberg's Annual Fund, send donations to:

The Wittenberg Fund
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PO Box 720
Springfield, OH 45504

or go to:
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Scroll to the bottom to
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Wittenberg, and click on:
Make a Gift Now,
Academic Support

Thanks to these recent chemistry department contributors

The department received generous gifts and bequests the past year from the following:

Franta Fund: Virginia Franta Estate

Glasoe Fund: Dr. Timothy and Mrs. Teri Knilans
Dr. Warren L. & Mrs. Barbara E. Bosch

Sartoris Fund: Dr. William H. Bunnelle & Ms. Leslie V. Evans
AbbVie Foundation

Chemistry Department Gift Account:

Vincent and Antoinette Davisson

Mr. Gary and Mrs. Mira Foote

Jessica and Anthony Hoane

Ms. Rachel C. Ianni

Ms. Lydia M. Kisley

Mr. Stephen D. Klingner

Robert J. Hrebek Revocable Trust

Zachary D. Miller

Schwab Charitable Fund

Mr. David L. Wackerow

Department Pursues Initiatives to Recruit New Students

Several initiatives are underway in the Chemistry Department as we continue to pursue our Strategic Plan goal of attracting more students to Wittenberg and to the Chemistry and Biochemistry/Molecular Biology (BMB) programs. In addition to the new Forensic Science Program (p. 1), we piloted a new scholarship program (Special Interest Award in Chemistry) for entering students—two incoming freshmen have accepted this award. The number of scholarships will increase in the coming years, thanks to our generous donors. Dr. Cline is participating in the campus First Year Research Assistant (FYRA) Scholars program this year, mentoring a new student on a chemistry project. Dr. Dudek and Dr. Cline are teaching First Year Seminar classes that are coupled to a general chemistry section—these seminars have proven a good opportunity for recruiting majors. Erin Neely and Justin Houseknecht have been communicating with prospective students via text messages and Erin has been tracking those students with an interest in Chemistry to analyze the results of our efforts. Alumni continue to play an important role in recruiting, for example by nominating a student for a scholarship (see box with link to the right) and letting potential chemistry students know about our Special Interest Award.

Alumni Referral Program
\$1,000 per year - Alumni
have the opportunity to refer
students to receive a
Wittenberg Referral Award.
Referrals must be submitted
before the student applies to
Wittenberg. The award is
renewable each year for four
years.
[https://www.wittenberg.edu/
admission/alumni-
scholarships](https://www.wittenberg.edu/admission/alumni-scholarships)

Faculty Service in National Organizations

Dave Finster: Editorial Board, Journal of Chemical Health and Safety
ACS Committee on Chemical Safety
ACS Education subcommittee chair
Safety Committee in ACS Division of Chemical Education
ACS Chemical health and Safety Examination Committee, Chair

Kristin Cline: Elected to Board of Directors, Society for Electroanalytical

Journal of
CHEMICAL
Health & Safety



Chemistry Department Papers and Conference Presentations, 2017-18

Publications

"Mnemonic Devices for Thermodynamic Relationships", Ray Dudek, in *Engaging Students in Physical Chemistry*, ACS Books, 2018.

"Models for integrating toxicology concepts into chemistry courses and programs," Amy S. Cannon, David Finster, Douglas Raynie, John Warner, *Green Chemistry Letters & Reviews*, November 2017.

"Revising the Division of Chemical Education Safety Guidelines for Chemical Demonstrations", Irene G. Cesa, David C. Finster, Samuella B. Sigmann, and Monique R. Wilhelm, *Journal of Chemical Education*, 2018, 95 (4), pp 502–503.

Presentations

Kristin K. Cline, "Teaching Analog-to-Digital Conversion with a Human Counting Circuit" Midwestern Universities Analytical Chemistry Conference, Athens, OH, October, 2017.

Jack Snider and Ray Dudek, "Testing the Adiabatic Flame Model", Biennial Conference on Chemical Education, August 2018, Notre Dame, South Bend, IN, oral.

Mackenzie Freeman, Erin Armitage, and Ray Dudek, "Lead Contamination of Eggshells and Contents", Biennial Conference on Chemical Education, August 2018, Notre Dame, South Bend, IN, oral.

Jack Snider and Ray Dudek, "Glyphosate Concentrations in River and Stream Water", American Chemical Society National Meeting, March 2018, New Orleans, LA, poster.

Mackenzie Freeman and Ray Dudek, "Lead Concentrations in Avian Eggshells and Egg Contents", American Chemical Society National Meeting, March 2018, New Orleans, LA, poster.

Ray Dudek, "Temperature Sensitive Paper as a Medium to Study Reaction Energies and Equilibrium Constants", American Chemical Society National Meeting, March 2018, New Orleans, LA, oral.

Chemical Health and Safety in the 21st Century, Dave Finster, seminar at Capital University, Feb 9, 2018.

Analyzing Hazards and Risks in High School Chemistry Labs, Irene Cesa, David C. Finster, 254th ACS National Meeting, 20 August 2017, Washington, DC.

Muzyka, J.; Winfield, L.; Houseknecht, J.; Leontyev, A.; Maloney, V.; Rossi, R.; Welder, C. "Organic chemistry education resources: community of organic chemistry researchers." Poster presentation, 2017, 254th National Meeting of the American Chemical Society, Washington, D.C.

Clarke, T.; Houseknecht, J. B. "The Reaction of Acetyl Cyanide with Fluoroacetylide: Associative, Dissociative, and Concerted Pathways." Poster presentation, 2017, 16th MERCURY Conference on Computational Chemistry, Greenville, South Carolina.

Unternaher, J.; Houseknecht, J. B. "Nucleophilic Acyl Substitution of Acetyl Cyanide with Cyanide." Poster presentation, 2017, 16th MERCURY Conference on Computational Chemistry, Greenville, South Carolina.

Wood, K.; Houseknecht, J. B. "Analyzing the Effects of a Better Leaving Group for Nucleophilic Acyl Substitution using M06-2X and MP2." Poster presentation, 2017, 16th MERCURY Conference on Computational Chemistry, Greenville, South Carolina.



(Left) Justin Houseknecht was promoted to Professor in 2018. (Right) Ray Dudek is serving as interim chair of the chemistry department this year while Justin Houseknecht is on sabbatical leave.



Professor Emeritus Nelson Sartoris published a second book of poetry, *On Wings of Words*, available from Amazon.





Department of Chemistry
PO Box 720
Springfield, OH 45501

Phone: 937.327.6435
E-mail: neelye@wittenberg.edu

www.wittenberg.edu/chemistry

E-mail
neelye@wittenberg.edu
to request inclusion in
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LinkedIn Group



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BMB Class of 2018



Back row left to right:

Andrew Nelson, Sarah White, Keaton Wood, Brett Siemon, Tyler Begg, Tanner Clark

Front row, left to right:

Evan Welch, Mareyuna Lukasak, MacKenzie Freeman, Emily Rudolph Victoria Zysik, Sabrina Davis

Chemistry Graduates 2018



Riley Alexander, Barbara Lafranzo, Nick Rigel, Stephanie Schmitz, Jessica Skogland, Kelly Spray, Kayla Burkhardt.

Biochemistry/Molecular Biology Graduates

Tyler Begg is attending Veterinary School at the University of Florida.

Tanner Clarke plans to work for a year and apply to dental school and PA school.

Sabrina Davis plans to attend medical school at either OU-HCOM or LECOM.

MacKenzie Freeman is attending graduate school at University of Cincinnati's Molecular Genetics, Biochemistry and Microbiology Ph.D.

Mareyuna Lukasak did not share her plans.

Andrew Nelson is studying Chinese language abroad.

Marietta Ojo is attending Columbia University, MPH in Epidemiology at the Mailman School of Public Health.

Emily Rudolph is applying to graduate school in the United Kingdom.

Brett Siemon is attending Case Western Reserve for a master of science in anesthesia.

Evan Welch did not share his plans.

Sarah White is attending graduate school in Public health policy, Johns Hopkins Bloomberg School of Public Health.

Keaton Wood is attending Heritage College of Osteopathic Medicine.

Victoria Zysik is attending Marian University College of Medicine.

Chemistry Graduates

Riley Alexander is a Data Scientist/Analyst for August Mack Environmental.

Kayla Burkhardt is a Quality Assurance Specialist for Bodycote.

Barbara Lafranzo is searching for employment.

Nick Rigel is attending graduate school at The Ohio State University.

Stephanie Schmitz plans on a year of service.

Jessica Skoglund is attending Heritage College of Osteopathic Medicine.

Kelly Spray is a quality control lab technician with Frutarom.

Richard York's Retirement Party



Attendees included Emeriti Professors Dave Westneat (Chemistry) and Al Stickney (Math/Computer Science), former Chemistry Department Assistants Kay Reed and Ginny Harkins, alumni Tim Knilans, Emily Duderstadt with dog Lena, and current faculty, staff and students.

