

Department of Chemistry and Biochemistry

ALUMNI NEWSLETTER

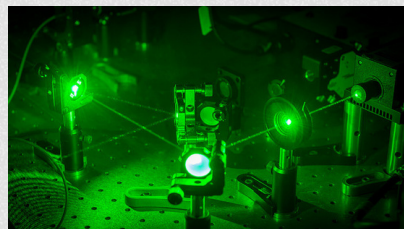
SEPTEMBER 2018

Greetings Alumni!

The 2018-2019 academic year is off to a great start here in South Bend, and we are excited to share with you news from the department over the past year. We hope you will enjoy reading about the accomplishments of our faculty, staff, students, and alumni.

As always, thank you to all who have given to Notre Dame in the past. If you would like to include Notre Dame in your giving, undergraduate alumni can follow [this link](#), and graduate alumni can follow [this link](#). Thank you for supporting the efforts of the department and the University!

Lastly, if you would like additional information on the stories in this newsletter, please visit the departmental [website](#) or [Facebook page](#). If you have news or feedback, just drop us a note; we would love [hear from you](#).

**Faculty & Staff News**

We are pleased to announce the addition of three new tenured and tenure-track faculty members to our department. [Christian Melander](#), George & Winifred Clark Professor, brings his expertise in new strategies for antibiotic development. [Rebecca Whelan](#) joins as an associate professor. Her research focuses on the improved detection and treatment of ovarian cancer. [Katharine White](#) will arrive in January as an assistant professor studying how intracellular pH dynamics effect the molecular mechanisms of cancer.

We are pleased to welcome [Evgenii Kovrigin](#) as the new director of the Magnetic Resonance Research Center. Kovrigin comes to Notre Dame from Marquette University.

[Prashant Kamat](#), Rev. John A. Zahm Professor, was honored with a [tribute](#), or Festschrift, issue in the Journal of Physical Chemistry C. In addition to a tribute article to Kamat, the issue contains 111 papers relating to renewable energy, nanoscience, and nanotechnology.

Norman Dovichi, Grace-Rupley Professor, was the winner of the 2018 American Electrophoresis Society (AES) [Lifetime Achievement Award](#). He was also [named](#) to The Analytical Scientist's 2017 Power List for his contributions to genomics research, being included in the Top 10 Omics Explorers list. Dovichi is also the recipient of the inaugural College of Science Research Award.

[Patricia Clark](#), Rev. John Cardinal O'Hara Professor, and [Paul Huber](#), Professor, were selected to receive 2018 Rev. Edmund P. Joyce Awards for Excellence in Undergraduate Teaching.

Marvin Miller, Professor Emeritus, received the Biometals Award at the 11th International Biometals Symposium. This award is given every 2 years to one individual for recognition of research in the area.

We bid farewell to Professor Emeritus Robert Schuler, who passed away on November 13, 2017. In addition to holding the John A. Zahm Professorship, he served as the director of the Notre Dame Radiation Laboratory. Prof. Schuler published more than 250 research papers and was a fellow of the American Association for the Advancement of Science.



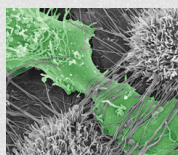
Christian Melander



Rebecca Whelan



Katharine White

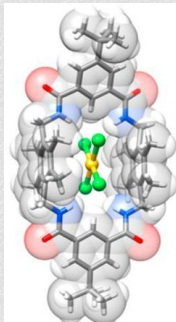


Ovarian cancer cell and peritoneum

Research News

The Stack lab [reported](#) on the role of the molecular composition of ovarian cancer cells in the rate of new tumor growth. Since ovarian cancer cells do not die after shedding from a tumor, but rather survive in the peritoneal cavity, understanding how this environment effects proliferation of these cells can lead to better treatments for the disease.

The Clark lab [showed](#) that intrinsically disordered proteins, or those proteins that do not fold into rigid structures, are even more disordered than previously thought. Clark and her collaborators developed a new, small-angle X-ray scattering analysis method to better



Metal capture with
molecular
recognition

characterize these proteins. Clark also received a [\\$1.1M Keck Foundation grant](#) to develop an innovative approach to replicate in test tubes a universal component of protein folding in cells.

The Dovichi and Huber labs [published](#) their latest work on *Xenopus laevis*, tracking changes in protein levels and phosphorylation from oocyte to egg, followed by fertilization and progression to two-cell embryo. Their improved methods allowed for the identification of nearly three times more phosphorylation sites than previous studies.

The Mobashery lab [demonstrated](#) how the enzyme lytic transglycosylase Slt helps the bacterium *Pseudomonas aeruginosa* recover from damage caused by antibiotics not strong enough to immediately kill the bacterium on contact. *P. aeruginosa* is one of the "nightmare bacteria" recently noted by the CDC, and these studies provide insight for new methods of treatment.

The Smith lab has [invented](#) a new class of molecules that can simplify the process used to mine gold, platinum, and palladium. Current gold mining, for instance, relies on a 125-year-old process employing large amounts of sodium cyanide. The newly designed molecules use molecular recognition based on shape and size and can work under milder, more environmentally friendly conditions.



Harisa Spahic

Student & Alumni News

[Harisa Spahic](#) (B.S. '18), a biochemistry major with minors in anthropology and science, technology, and values, was selected as the 2018 Salutatorian. She was also the 2018 Daniel and Anne Crossen Pre-Medical Student Award winner. She is currently attending Johns Hopkins School of Medicine.

[Sarah Lum](#), a Ph.D. student in the Dovichi lab, was one of ten recipients of a Graduate Research Fellowship in STEM from the National Institute of Justice for her work in developing a novel bioanalytical instrument for the forensic analysis of sexual assault evidence.

[Prof. Timothy Wencewicz](#) (Ph.D. '11) received a 2018 Sloan Research Fellowship for his work in antibiotic drug discovery and drug delivery systems. Prof. Wencewicz is an Assistant Professor of Chemistry at Washington University in St. Louis. He was also featured in Biochemistry as an early career scientist representing the 'Future of Biochemistry.'

[Karl Scheidt](#) (B.S. '94) has been selected to lead Northwestern University's NewCures program, an accelerator program aimed at funding promising research in pharmaceutical and biologics development.

[Kaiyu Fu](#), a Ph.D. student in the Bohn lab, was awarded an American Chemical Society Division of Analytical Chemistry Summer Graduate Fellowship. Fu's research focuses on the pairing of state-of-the-art nanotechnology with electrochemistry.

[Tesia Janicki](#) (B.S. '16) and [Stephanie Prince](#) (B.S. '16) received 2018 National Science Foundation Graduate Research Fellowships. Janicki is currently a graduate student at the University of Wisconsin, and Prince is currently a graduate student at the Georgia Institute of Technology.

[Roger Hanshaw](#) (Ph.D. '06) was elected speaker of the West Virginia House of Delegates. He was elected to the West Virginia House in 2014 and re-elected in 2016.

[Brandon Haines](#) (Ph.D. '14) accepted a position as an assistant professor at Westmont College in Santa Barbara, CA.

[Frank Stermitz](#) (B.S. '50) became Centennial Professor Emeritus at Colorado State University after an [illustrious academic career](#).

[Nancy Gray](#) (B.S. '81), President and CEO of the Gordon Research Conferences, was named to the Board of Directors of Ligand Pharmaceuticals.

Over the past year, we have added 41 Ph.D. graduates, 6 M.S. graduates, and 35 B.S. graduates to the ranks of our alumni. Congratulations to the following students:

Ph.D. Recipients

Chemistry

Jennifer Arceo, Los Angeles, CA (Norman Dovichi)*

Victoria Lane Bridewell, Camden, TN (Prashant Kamat)

ChiaFu Chang, Pingtung County, Taiwan (Richard Taylor)*

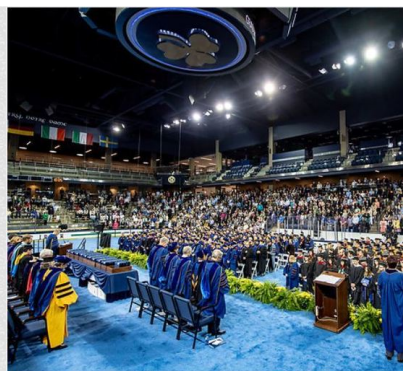
Clyde Abraham Theodore Daly, Jr., Randolph, MA (Steven Corcelli)

Mateusz Dembowski, Bialystok, Poland (Peter Burns)*

Jeremy Allen Eberle, New Albany, IN (Ken Henderson and Vlad Iluc)

Ashley Renee Gans-Forrest, Park Forest, IL (Alex Kandel)**

Sarah Anne Griffin, Lebanon, TN (Jon Camden)*
 Xin Gu, Guiyang, China (Jon Camden)**
 Jacob Bartchy Hoffman, Shelby, OH (Prashant Kamat)*
 Weixin Huang, Jiangmen, China (Ian Carmichael and Sylwia Ptasinska)**
 Bonnie Jaskowski Huges, Royal Oak, MI (Norman Dovichi)
 Gabriel Joseph LaBonia, Memphis, TN (Amanda Hummon)
 Wenqi Liu, Shandong, China (Brad Smith)
 Patrick Benjamin Loudon, Saint Clair Shores, MI (Daniel Gezelter)
 Jennifer Lynn Meloche, Muskegon, MI (Brandon Ashfeld)**
 Triet Sy Thanh Nguyen-Beck, Ho Chi Minh city, Viet Nam (John Parkhill)
 Elizabeth Hannah Peuchen, Assaria, KS (Norman Dovichi)
 Michelle Anne Pillers, Portland, OR (Marya Lieberman)**
 Patrick Eugene Rothstein, South Bend, IN (Vlad Iluc)*
 Scott Kenneth Shaw, Milton, FL (Brad Smith)
 Michael James Trujillo, Tooele, UT (Jon Camden)
 Brandon Matthew Tutkowski, Menomonee Falls, WI (Paul Helquist and Olaf Wiest)
 Huan Wang, Chang Chun, China (Mayland Chang)*
 William Raymond Anthony Wichert, Flint, MI (Paul Bohn)*
 Kun Yao, PingXiang, China (John Parkhill)



2018 Graduate School Commencement

Biochemistry

Garima Agrahari, Allahabad, India (Francis Castellino)*
 Cory Matthew Ayres, Jackson, GA (Brian Baker and Steven Corcelli)**
 Julia Eve Beck, Crawfordsville, IN (Francis Castellino)*
 Micayla Anne Bowman, Sykesville, MD (Patricia Clark)
 Olivia F. Cox, Cumming, GA (Paul Huber)**
 Kathryn Ann Del Vecchio, Bismarck, ND (Robert Stahelin)
 Eve Adriana Granatosky, Groton, CT (Richard Taylor)
 Giselle Nicole Jacobson, Traverse City, MI (Patricia Clark)**
 Kristen Anna Johnson, San Francisco, CA (Robert Stahelin)**
 Brendan Joseph Mahoney, Charlestown, PA (Jeff Peng)
 Timothy Patrick Riley, South Bend, IN (Brian Baker)**
 Felicia Marie Roland, Manteno, IL (Brad Smith)
 Carolyn Mullane Shirey, Downingtown, PA (Robert Stahelin)
 Yuan Wang, Tianjin, China (Brian Baker)**
 Kaveesha Jayani Wijesinghe, Colombo, Sri Lanka (Robert Stahelin)

M.S. Recipients

Chemistry

Marcus David Arieno, Spokane, WA*
 Ryan Philip Forrest, Ottawa, IL*
 Amanda Marie Holland, Xenia, OH (Vlad Iluc)*
 Amanda Lee Houser, New Orleans, LA*
 Emily Ann Peters, Marshall, MI

Biochemistry

Skya Marie Gentle, Downers Grove, IL**

B.S. Recipients

Chemistry

Jonathan Mark Baker, *cum laude*, Southlake, TX
 Helen Sandra Barzyk, *magna cum laude*, Milwaukee, WI
 Robert Thomas Felix Black, *magna cum laude*, Hauppauge, NY

Thomas Bradley Clarke, Vernon Hills, IL
Emma Ryan Guiberson, Colorado Springs, CO
Soren Holm, Rodovre, Denmark
Zoe Nathania Loh, Mississauga, Ontario, Canada
Hannah Aymen Naguib, Columbus, OH
Michael Patrick O'Connor, Indianapolis, IN
Daniel Patrick O'Neill, Southbury, CT
Emma C. Tackman, Jefferson, WI
Sara Kathleen Tobin, Oak Lawn, IL
Richard Martyn Williams, Guilford, CT
Eric Young, Flushing, NY
Susan Shan Zhu, Granger, IN



2018 Commencement

Biochemistry

Michael Joseph Anderson, Tinley Park, IL
Anissa Cervantes, Leesburg, IN
Jonah L. Cremin-Endes, Guilford, CT
Christopher J. Euell, Newtown, PA
Richard Felli, Teaneck, NJ
Valentine Henry de Frahan, Brussels, Belgium
Sarah Kimberly Herzog, Greenville, OH
Kristina Grace Hollkamp, *magna cum laude*, Dayton, OH
Simian Huang, *cum laude*, Shanghai, China
Katherine Anne Inskeep, Lima, OH
Aline Nkiranuye Irihamye, Lexington, KY
Annemarie Kerrigan Leonard, *magna cum laude*, Orland Park, IL
Emily Marie Medina, Norman, OK
Natalia Mesa Rodriguez, Bogota, Colombia
Maria Jose Penuela Tamayo, Coconut Creek, FL
Harisa Spahic, *summa cum laude*, Granger, IN
Tiffany Auria Toni, *summa cum laude*, Long Grove, IL
Kelly Lynn Volk, Tinley Park, IL
Rachael Nicole Walsh, Rochester, NY
Christian Murray Wood, Phoenixville, PA

*August 6, 2017 graduate

** January 7, 2018 graduate



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