

Department of Chemistry & Biochemistry

Fall 2024 Newsletter



Dear Alumni and Friends-

We are excited to share with you news and accomplishments from the department over the past year. As always, if you would like to read more about any of the highlights, just click the included links to access more detailed stories.

Missed out on getting your departmental apparel? Never fear - items are still available through the [online marketplace](#). The marketplace can also be accessed by visiting the chemistry homepage, scrolling to the blue bar at the bottom, and selecting "Merch."

We are grateful for those of you who include Notre Dame in your giving. If you would like to contribute your support, undergraduate alumni can follow [this link](#), and graduate alumni can follow [this link](#).

Research News

Patricia Clark's group recently [reported new evidence](#) that synonymous gene mutations, those that still code correct amino acids, can affect protein production in neighboring genes, challenging current views that only non-synonymous gene mutations are significant.

The Mobashery and Chang labs [discovered a way to restore](#) the effectiveness of some antibiotics against MRSA. By employing an inhibitor, they shut down the bacteria's ability to implement its mechanism of antibiotic resistance and could successfully use beta-lactam antibiotics for treatment.

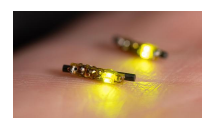
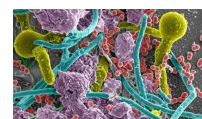
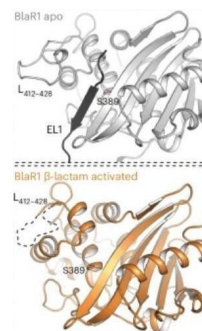
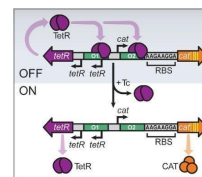
The Castellino group [published findings](#) showing that identifying fibrinolytic deficiencies may help health care providers determine which patients are more susceptible to catheter-associated urinary tract infections.

Adam Jaffe received an [NSF CAREER Award](#) for his proposal entitled "Hybrid Bronzes: Mixed-Valence Hybrid Metal Oxides as a Tunable Material Platform."

The Smith group [collaborated on a wireless LED device](#) that, when combined with light-sensitive dye, can destroy cancer cells and mobilize immune system response in deep-seated cancers.

Jon Camden's group [developed a new plasmonic material](#) capable of concentrating waste heat in the infrared region, opening a pathway for its possible recovery and redirection.

The Baker lab [successfully identified features](#) that distinguish active and inactive neoantigens, which could have significant influence on the design of cancer



Faculty & Staff News

The department is excited to welcome the following new faculty members: [Saurja DasGupta](#) (Assistant Professor), [Kate Biberdorf](#) (Kate the Chemist; Professor for the Public Understanding of Science), [Dana Lashley](#) (Associate Teaching Professor), and [Mariko Morimoto](#) (Huisking Foundation, Inc. Assistant Professor).

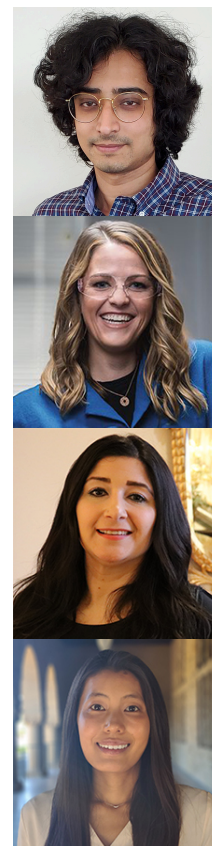
[Peter Burns](#) was elected as a Fellow of the American Association for the Advancement of Science.

[Paul Bohn](#) was named inaugural director of the Bioengineering & Life Sciences (BELS) Initiative.

[Rhona Feltzer](#), laboratory program manager for Profs. Mobashery and Chang, was the winner of the 2023 Best Lab Manager Award from Proteintech.

Three faculty members received [University](#) awards in the spring. Prashant Kamat received the James A. Burns, C.S.C., Award for outstanding graduate mentorship, Kelly Young received the Thomas P. Madden Award for excellence in first-year teaching, and Graham Peaslee received the Hesburgh Legacy Award for contributions to social justice and peace.

[Emily Tsui](#) was promoted to Associate Professor, and [Rachel Branco](#) and [Susan del Valle](#) were promoted to Associate Teaching Professor.



Student & Alumni News

Biochemistry alumnus [Yared Nuguse](#) (BS '21) earned a bronze medal in the men's 1500 m event at the Paris Olympics.

Kyle Watson (PhD '15) was promoted to Associate Professor with tenure at Manchester University, where he serves as chair of the Department of Chemistry and Physics.

John Frater (BS '92), Professor of Pathology & Immunology at Washington University, was elected President of the International Society for Laboratory Hematology.

Ciara Fay (BS '24) received a Naughton Fellowship to pursue a master's degree in global health at Trinity College Dublin.

Isabelle Lukau (BS '23) was chosen as a finalist for the 2024-25 Fulbright U.S. Student Program.

Undergraduate seniors [Reinhard Bartsch](#) and [Emma Powers](#) were selected as 2024 Barry Goldwater Scholars from a pool of over 1,353 nominees.

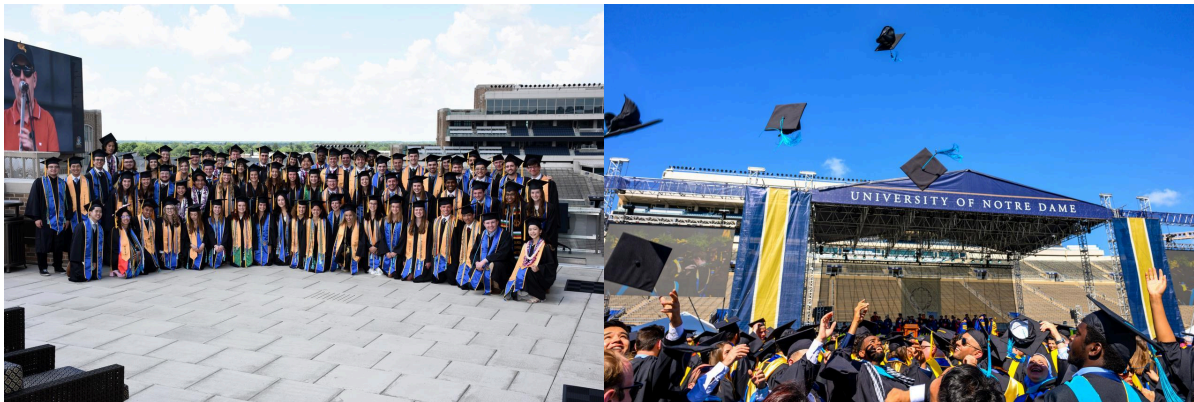
[Gordon Duddy](#), a graduate student in the Camden lab, was selected for the Department of Energy Office of Science Graduate Student Research Program.

[Daniel Hu](#), a graduate student in the Champion lab, participated in the 2023 American Chemical Society Presidential Safety Summit.

Senior [Josiah Miller](#) received a Vincent P. Slatt Fellowship to research hybrid bronzes for energy applications.

In the 2023-2024 academic year, degrees were conferred on 41 PhD graduates, 6 MS graduates, and 73 BS graduates. Congratulations to our newest group of alumni!

(* indicates August 6, 2023 graduation date; ** indicates January 7, 2024 graduation date)



PhD recipients

- Kirk M. Atkinson (Brad Smith)
- **Luis Felipe Avila-Cobain (Shahriar Mobashery)
- Awosiji Olatunde Awotunde (Marya Lieberman)
- Patricia Rose H. Ayson (Seth Brown)
- *Kurtis Breger (Jessica Brown)
- Andrea Casotto (Prashant Kamat, Sylwia Ptasinska, & Luigi Sangaletti)
- Jishnudas Chakkamalayath (Prashant Kamat)
- **Verodia Charlestin (Laurie Littlepage)
- Bo-An Chen (Prashant Kamat & Sylwia Ptasinska)
- *Allison Rose Cutri (Paul Bohn)
- Brandon James Czowski (Katharine White)
- **Anderson Da Silva Duraes (Daniel Gezelter)
- Nathaniel Lawrence Dominique (Jon Camden)
- *Caitlin Elizabeth Thornbury Donahue (Katharine White)
- Chengkai Fan (Brad Smith)
- **Daniel Edward Felton (Peter Burns)
- Rananjaya Subash Gamage (Brad Smith)
- Danielle Kathleen Geremia (Arnaldo Serrano)
- *Kathleen Lucille Hayes (Marya Lieberman)
- Yukun Jin (Graham Peaslee)
- Anthony Kipkorir (Prashant Kamat)
- Kirill Kniazev (Masaru Kuno)
- *Sai Shradha Reddy Kommidi (Brad Smith)
- **Haoting Li (Christian Melander)
- *Jiaqi Ma (Brian Baker)
- Gowthami Mahendran (Jessica Brown)
- Claire Elizabeth Nelmark (Arnaldo Serrano)
- Ryan James Oconnell (Paul Helquist & Olaf Wiest)
- **Kyler Wade Pugh (Brian Blagg)
- Benjamin Howard Rajewski (Juan Del Valle)
- **Bradley Michael Readnour (Francis Castellino)
- Rachel Marie Roller (Marya Lieberman)
- **Aaron M. Rosenberg (Brian Baker)
- Won Taek Seo (Emily Tsui)
- Sydney Shavaliar (Daniel Gezelter)
- Heather Shepherd (Holly Goodson)
- Julia Suzanne Spear (Katharine White)
- Jonathan Thomas Stoffel (Emily Tsui)
- *Stefano Toso (Luca Gavioli, Masaru Kuno, & Liberato Manna)
- Raissa Twiringiyimana (Brandon Ashfeld)
- **Michael James Zeiler (Christian Melander)

MS recipients

- Nigel Thomas Bennett
- *Samir Zachary El Idrissi
- *Vishal Kumar
- Alexander Michael Pittsford
- Theodore J. Schultz II
- Ariel J. Thelander

BS recipients

- | | | |
|--|---|--|
| • Semeon Afework | • Ella Foster, <i>cum laude</i> | • Aaliyah Percell |
| • Emma Albano, <i>cum laude</i> | • Michael Garza | • Sarah Petersen, <i>magna cum laude</i> |
| • Matthew Amoako, <i>magna cum laude</i> | • Daniel Gatewood, <i>cum laude</i> | • Ella Pfaff |
| • Christopher Barile, <i>cum laude</i> | • Gillian Gaynor, <i>cum laude</i> | • Saisantosh Ponna, <i>magna cum laude</i> |
| • Hannah Bergin, <i>magna cum laude</i> | • Karson Girvin | • Angela Rea, <i>cum laude</i> |
| • Bryn Boznanski | • Gabriel Goertz | • Isabella Schmich, <i>cum laude</i> |
| • Jin Rui Cai, <i>magna cum laude</i> | • Joseph Hagerty | • Olivia Schneider |
| • Andrew Canzano | • Mary Hall | • Ian Schowe, <i>magna cum laude</i> |
| • Meghan Chouanard | • Calvin Hawe, <i>cum laude</i> | • Kunhai Shah |
| | • Caroline Hoy | • Colin Shea |
| | • Stephen Kasko, <i>magna cum laude</i> | |
| | • Andrew Kim | |

- Isalina Colzman, *cum laude*
- Ryan Conant
- **Theo Coughlin
- Declan Creaney, *cum laude*
- Andrew Crow
- Madeline Czerwicz
- Rebecca Daly
- Lily Darman, *cum laude*
- Christine DeRosa, *cum laude*
- Kaitlyn Donton, *cum laude*
- Vivienne Dragan
- Gavin Ealey
- Ciara Fay
- Julia Florek Carlson, *magna cum laude*
- Sara Foote, *cum laude*
- Kang-Young Kim
- Giovanni Komyatte
- Darbie Kwon
- Cecilia Leber
- Xiaotong Alex Lin
- Regan Maronick
- Claire Marshall
- Lauren Martin
- Diane Medina Batista
- Aidan Meuninck
- **Joshua Mijares, *cum laude*
- Rosa Nguyen
- Michael Oblich
- Sullivan O'Hara
- Hayden Ousley, *cum laude*
- Conor Sheehan
- Gabrielle Souza
- Adison Steinke, *cum laude*
- Lauren Stevens
- Dominic Stoner, *magna cum laude*
- Andrew Striegel
- Elijah Tan, *cum laude*
- Joseph Termini III
- Victor Tsang
- Brian Wagner, *magna cum laude*
- Evan Wells, *cum laude*
- Dashiell Wuller, *summa cum laude*

In Memoriam

The department sadly mourned the loss of [Dawn Verleye](#) on May 7, 2024. Dawn not only served as our Stock and Space Coordinator, but she was also a kind and caring friend to many in Stepan and Nieuwland.

[Sister Dorothy Cecilia LeBlanc](#) (MS '67) passed away December 3, 2023 at the age of 97. Sister Dorothy was an educator and caregiver with positions in Louisiana, Texas, and Kansas.

[James Flanagan](#) (PhD '64) passed away March 12, 2024. Jim spent the majority of his career teaching chemistry at F.D. Roosevelt High School in Hyde Park, New York.

[Thomas McGuire](#) (BS '47) passed away May 2, 2024. Tom worked for various companies around the world, including Bristol Myers International, Union Carbide, and Richardson-Vicks.

[Rocco Colagiovanni](#) (MS '67) passed away May 23, 2024. Roger was a professor of mathematics at Roger Williams University for over 30 years.

[Charles McEachern](#) (PhD '69) passed away August 16, 2024. Charlie worked as a research chemist and a substitute teacher with the ConVal school district.

Sister of Mercy [Mary Judith Schmelz](#) (MS '56, PhD '57) passed away September 4, 2024. Sister Mary worked as a long-time teacher and administrator at Mount Saint Agnes College before becoming a missionary to Guyana.

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251 Nieuwland Science Hall, Notre Dame, IN 46556

Phone (574) 631-7058 Email: chemistry@nd.edu web: chemistry.nd.edu

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