

# Department of Chemistry and Biochemistry

## SUMMER 2022 NEWSLETTER

AUGUST 2022



### Alumni & Friends-

It has been a busy year here in South Bend, and we are excited to share with you some of the accomplishments of our faculty, staff, students, and alumni. First and foremost, we welcome our new Department Chair, [Steve Corcelli](#), and thank Brian Baker for his six years of leadership. We look forward to continuing to advance the department under Steve's leadership in our pursuit of high caliber research and our unwavering commitment to education and training.

As you read through, if you would like more information on any of the stories in this newsletter, please click the links that will take you to full articles on the [departmental website](#), and if you have news or feedback, we would love to [hear from you](#). You can also find this newsletter and past editions on our website under [Alumni](#).

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!

### Research News

The [department improved](#) an impressive 17 spots in the U.S. News & World Reports "Best Chemistry Programs" graduate program rankings. ND now claims the 42nd place out of 211 ranked schools. This was the second largest improvement of any program since the last report in 2018.



Notre Dame received a [record-breaking \\$244 million](#) in research awards in fiscal year 2022. The department accounted for \$19.4 million of that total.

The Chang and Mobashery labs, along with their collaborators, have [reported](#) that an experimental

drug (R-ND-336) they developed for diabetic foot ulcers is also effective at treating pressure ulcers, more commonly known as bed sores. There are currently no medicinal therapies that treat bed sores, which affect millions of people each year.

The Baker lab, with researchers at Memorial Sloan Kettering, [reported the discovery](#) of a new neoantigen - a peptide resulting from a common gene mutation in cancer patients. They demonstrated how this neoantigen stimulates the immune system and how and why T cell receptors can target it with high specificity, opening the door for an immunotherapy that could be used by very large numbers of cancer patients.

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## Faculty & Staff News

We are very glad to welcome Kaiyu Fu and Shawn Miller to the faculty.

[Kaiyu Fu](#) is an assistant professor, returning to Notre Dame (Ph.D. '18) after completing a postdoc at Stanford University. His research focuses on electrochemistry, nanotechnology, and biomedical devices.

[Shawn Miller](#) is joining as an associate teaching professor. He comes to ND from Utah State University. He completed a postdoc at the University of Illinois Urbana-Champaign and holds a Ph.D. from the University of California Irvine.

[Prashant Kamat](#) has been conferred with a number of awards and honors this year. He received the [Richard E. Smalley Award](#) for nanocarbons research and the [Porter Medal](#) for photochemistry research. Kamat was also named a [Fellow of the Materials Research Society](#) and was ranked number 31 in the US/45 in the world on Research.com's list of Top Chemistry Scientists.

[Patricia Clark](#) was named a [Fellow of the American Association for the Advancement of Science](#). She was honored for her seminal contributions in characterizing the biology and biochemistry of unfolded proteins. Clark also received a prestigious [Director's Pioneer Award from the National Institutes of Health](#). She is the first researcher in Indiana to receive this award.

[Marya Lieberman](#) won the [2022 James A. Burns, C.S.C., Award](#) from ND, recognizing outstanding faculty mentorship of graduate students. Lieberman also received the [2022 J. Calvin Giddings Award](#) for Excellence in Education from the American Chemical Society Division of Analytical Chemistry.

We congratulate Brandon Ashfeld on his promotion to Professor, Jessica Brown on her promotion to Associate Professor with tenure, and Kelley Young on her promotion to Associate Teaching Professor.

Masaru Kuno, Laurie Littlepage, and Kelley Young were all recipients of a [2022 Rev. Edmund P. Joyce, C.S.C., Award](#) for Excellence in Undergraduate Teaching.

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Dr. Kaiyu Fu



Dr. Shawn Miller



Prashat Kamat



## Student & Alumni News

Jessamine Kuehn received a [2022 National Science Foundation Graduate Research Fellowship](#). Four other students received Honorable Mention, including Samantha Barlock, Luke Piszkin, Nico Robalin, and Simon Weaver.

Nicolas Mjaess ('23), a biochemistry major and undergraduate researcher in the Clark lab, received a 2022 Barry Goldwater Scholarship.

[Madan Bhasin](#) (Ph.D. '63) was named a 2021 Fellow of the National Academy of Inventors. He was previously elected to the National Academy of Engineering in 2006.

This past year, we added 31 Ph.D. graduates, 13 M.S. graduates, and 46 B.S. graduates to our alumni. Congratulations graduates!



### Ph.D. Recipients

** Seol Baek (Paul Bohn)	Agust Olafsson (Jon Camden)
*Joshua Berwanger (Merlin Bruening)	*Ilia Pavlovec (Masaru Kuno)
Brendan Brown (Greg Hartland)	Arambage Ranasinghe (Schwarz/Whelan)
Federica Costantino (Prashant Kamat)	*Matthew Rhodes (Richard Taylor)
**Olivia Cracchiolo (Corcelli/Serrano)	**Anabel Rodriguez (Patricia Clark)
*Hyein Do (Paul Bohn)	*Brady Russo (Francis Castellino)
*Thomas Do (Seth Brown)	Cassandra Shaffer (Brad Smith)
Jeffrey DuBose (Prashant Kamat)	Lindy Sherman (Jon Camden)
**Yassin Elbatrawi (Juan Del Valle)	Shannon Stoffel (Jeff Peng)
*Sara Gilson (Peter Burns)	**Hui Tan (Merlin Bruening)
Matthew Hanson (Steve Corcelli)	**Meghanne Tighe (Lieberman/Peaslee)
*Jin Jia (Paul Bohn)	**Hrafn Traustason (Peter Burns)
Grant Keller (Brian Baker)	**Zachary Tucker (Brandon Ashfeld)

Donghao Li (Brad Smith)	Cody Work (Vlad Iluc)
**Reagan Meredith (Anthony Serriani)	Emily Work (Helquist/Wiest)
**Kristopher Murray (Holly Goodson)	

### M.S. Recipients

Morgan Carpenter	*Allison Miller
Justin Cifuentes	Lisa Minkoff
Lauren Eckermann	Xuan Ngo
Molly Eilbes	Aaron Scott
*Tyler Hendricks	Monica Spritzky
**Stephanie Mackley	Dhanushika Thavakumaran
*Sergio Madera	

### B.S. Recipients

#### Biochemistry

Luke Aloï	Pia Martindale
Alyssa Arbuïso, magna cum laude	Eleanor McGhee, cum laude
Patrick Brown	Stephanie Mueller, magna cum laude
Kevin Carthy, cum laude	Nora Nelson, cum laude
Lucia Chang, summa cum laude	Kayla Nenninger, cum laude
Nara Chung	**Claire Noyes
Lauren Connelly, magna cum laude	Emily Annamarie Nye, cum laude
Caroline Corcoran	John Pape, cum laude
Katelyn Dungan	Reed Popp
Erin Fennessy, magna cum laude	Margaret Roccato
Daniel Fulkerson, cum laude	Grace Schiefelbein
Patrick Gaffney, cum laude	Michael Siroky
Jessamine Kuehn	Henry Skocy
Milly Ladner	Rachel Walsdorf
Michael Lee	Laura Weiss, cum laude
Ethan Low, cum laude	Vita Zhang

#### Chemistry

Adriana Baez	Maijidda Haruna
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Evans Brown	Thomas Kasl
Andrew Christy	**Olivia Lanchoney, cum laude
Hannah Collins	Kyle Rubin
Gina Connors	Jacob Smith
Skyler Hamilton	Jordan Theriault

#### Chemistry with Business

Laura Pesanello	Alexandra Vervoordt
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\*August 2021 Graduate

\*\* January 2022 Graduate

### In Memoriam

[Professor Emeritus Subhash Basu](#) passed away November 14, 2021. He joined the faculty at Notre Dame in 1970 and mentored over 170 trainees until his retirement in 2009. His research led to seminal contributions in understanding glycolipid biosynthesis in eukaryotic cells.

[John D. "Jack" Ryan](#) (Ph.D. '60) passed away September 28, 2021. Dr. Ryan enjoyed a long and successful career as a chemist at DuPont.

[Peter Earle Butler](#) (Ph.D. '62) passed away October 16, 2021. Dr. Butler made his career as a highly respected Wall Street chemical analyst.

[James Edward Sturm](#) (Ph.D. '57) passed away November 25, 2021. Dr. Sturm was a Professor at Lehigh University.

[Sister Catherine Markey](#) (M.S. '61) passed away December 11, 2021. She made her monastic profession with the Sisters of St. Scholastica Monastery.

[John Holt Brazinsky](#), M.D. (B.S. '60) passed away May 12, 2022. He worked as a doctor of pathology, first for the US Army and later in private practice.

[Edward J. "Hammer" Buraczewski](#) (M.S. '63) passed away July 24, 2022. He worked as a high school chemistry teacher.

