Michael W. Beck, Ph.D.
Department of Chemistry and Biochemistry
Eastern Illinois University
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Research and Educational Interests

My laboratory is interested in the design, development, and utilization of small molecule chemical tools to interrogate spatially organized (bio)chemical processes in live cells. Combining new chemical tools with more traditional chemical, biochemical, and molecular biology techniques allows us to uncover novel biological processes and mechanisms related to human health. I leverage my research program to create a robust training platform for student scientists, where relating their classroom knowledge of chemical and biological principles to real-world research problems gives students a broad set of skills and experiences to prepare them for the next stage of their scientific training or career.

Professional Experience and Positions

Associate Professor August 2025–Present
Eastern Illinois University (EIU), Charleston, IL, USA
Department of Chemistry and Biochemistry
Member of Graduate Faculty

Assistant Professor August 2019–2025
Eastern Illinois University (EIU), Charleston, IL, USA
Department of Chemistry and Biochemistry
Member of Graduate Faculty

Postdoctoral Scholar July 2015–July 2019
University of Chicago (UC), Chicago, IL, USA
Department of Chemistry
Advisor: Professor Bryan Dickinson, Department of Chemistry

Graduate Student May 2011–June 2015
University of Michigan (UM), Ann Arbor, MI, USA
Department of Chemistry
Advisor: Professor Mi Hee Lim, Life Sciences Institute

Visiting Research Scholar Jan. 2014–Feb. 2015
Ulsan National Institute of Science and Technology (UNIST), Ulsan, South Korea
Department of Chemistry
Advisor: Professor Mi Hee Lim, Department of Chemistry

Undergraduate Research Assistant Dec. 2007–May 2011
Tennessee Technological University (TTU), Cookeville, TN, USA
Department of Chemistry
Advisor: Professor Edward Lisic, Department of Chemistry

2010 Global Research and Development Summer Intern June 2010–Aug. 2010
Colgate-Palmolive Company, Piscataway, NJ, USA

Education

Ph.D., Chemistry, University of Michigan (UM), Ann Arbor, MI, USA May 2011–August 2015
Advisor: Professor Mi Hee Lim

B.S., Chemistry, Tennessee Technological University (TTU), Cookeville, TN, USA Aug. 2007–May 2011
Cum Laude, Biochemistry Concentration with American Chemical Society Certification

Selected Honors and Awards

2026	Edwin L. "Bud" May Award For Outstanding Achievement in Research and Grants
2025	EIU Achievement and Contribution Award for Research Activities
2025	EIU Student Success Award of Excellence (Student Nominated Award)
2025	EIU Summer Creative Activity/Research Award
2025	ASBMB Early Career Faculty Travel Award
2024	EIU College of Liberal Arts and Sciences Travel Award
2024	Lida G. Wall Faculty Research Mentor Award
2023	The Graduate Dean's Award of Excellence in Research and Creative Activity
2023	The Graduate Dean's Award of Excellence in Summer Research and Creative Activity
2023	EIU Achievement and Contribution Award for Research Activities
2023	EIU College of Liberal Arts and Sciences Travel Award
2023	EIU College of Liberal Arts and Sciences Outstanding Faculty Award (Student Nominated Award)
2023	EIU Summer Creative Activity/Research Award
2022	The Graduate Dean's Award of Excellence in Research and Creative Activity
2022	EIU College of Liberal Arts and Sciences Travel Award
2022	EIU Summer Creative Activity/Research Award
2022	ASBMB 2022 Undergraduate Faculty Travel Award
2021	EIU College of Liberal Arts and Sciences Travel Award
2021	EIU Achievement and Contribution Award for Activities Balanced Across Teaching, Research, and Service
2021	TTU ACS Student Affiliate Chapter Golden Eagle Speaker
2021	EIU Summer Creative Activity/Research Award
2020	EIU Summer Creative Activity/Research Award
2018	Poster Award at the Gordon Research Conference on Bioorganic Chemistry
2015	ASBMB 2015 Graduate and Postdoctoral Travel Award
2015	Rackham (UM) Conference Travel Grant Recipient
2014	Best Poster Presentation Award, Second International Symposium for Molecular Neurodegenerative Disease Research
2014	Best Poster Presentation Award, Korean Chemical Society Summer Bioinorganic Chemistry Symposium

Selected Teaching Experience

Primary Instructor

Eastern Illinois University (EIU), Charleston, IL, USA

General Chemistry I (CHM 1310G), Undergraduate	Fall 2019, 2020; Spring 2020
General Chemistry I, Honors (CHM 1390G), Undergraduate	Fall 2022, 2023
Biochemistry I (CHM 3450), Undergraduate	Fall 2019, 2021, 2023, 2025
Biochemistry II (CHM 3460), Undergraduate	Spring 2021, 2023, 2024, 2025
Survey of Biochemistry (CHM 3300), Undergraduate	Spring 2020
Medicinal Chemistry (CHM 4790)	Spring 2022, 2026
Advanced Biochemistry (CHM 4860), Undergraduate/Graduate	Fall 2020, 2022, 2024, 2025
Critical Reading of Chemical Literature (CHM 5003), Graduate	Fall 2021, 2024
Bioanalytical Problem Solving (CHM 5280)	Fall 2025
World of Chemistry Laboratory (CHM 1040G), Undergraduate	Spring 2023
General Chemistry I Laboratory (CHM 1315G), Undergraduate	Fall 2019, 2021
General Chemistry I Laboratory, Honors (CHM 1395G), Undergraduate	Fall 2023, 2024
General Chemistry II Laboratory (CHM 1415G), Undergraduate	Fall 2020, Spring 2021
Biochemistry Laboratory (CHM 3455), Undergraduate	Spring 2021, 2022, 2024, 2025
Bioanalytical Problem Solving Laboratory (CHM 5285)	Fall 2025
Undergraduate Seminar (CHM 3000, 3001, 4000, 4001)	Fall 2020

Graduate Seminar (CHM 5000) Fall 2020

Current Research Group Composition

1 Jointly-Advised Graduate Student, MS Biological Sciences (Thesis Option) Program
3 Undergraduate Students, BS Biochemistry Program
1 Undergraduate Student, BA Chemistry Program
5 Undergraduate Students, BS Biological Sciences Program
1 Undergraduate Student, BS in Engineering Cooperative

Previous Students Mentored Since 2019

4 Graduate Students, MS Chemistry (Thesis Option) Program
1 Jointly-Advised Graduate Student, MS Biological Sciences (Thesis Option) Program
1 Laboratory Manager and Post-Bacc Scholar
3 Graduate Students, MS Biological Sciences (Non-Thesis Option) Program
1 Undergraduate Student, BS Chemistry Program
10 Undergraduate Students, BS Biochemistry Program
1 Undergraduate Student, B.S. Neuroscience Program
9 Undergraduate Students, BS Biological Sciences Program
2 Visiting Undergraduate Student

Accolades of Trainees

2026 EIU Alumni Association Distinguished Senior Award – Rebecca Tori Agans
2026 EIU Alumni Association Distinguished Senior Award – Jemma Booth
2026 EIU Alumni Association Distinguished Senior Award – Qwinsuan Anderson
2026 American Chemical Society Division of Biochemistry and Chemical Biology Graduate Student Travel Award – Jennifer Teibowei
2026 Illinois State Academy of Science Student Research Grant – Rebecca Tori Agans
2025 EIU Williams Travel Grant – Jennifer Teibowei
2025 EIU Alumni Association Distinguished Senior Award – Tyler S. Hanlan
2025 EIU Alumni Association Distinguished Senior Award – Jennifer Teibowei
2025 EIU Alumni Association Distinguished Senior Award – Chinenyenwa N. Okolie
2025 EIU Department of Chemistry and Biochemistry Outstanding Senior Seminar Award – Tyler S. Hanlan
2025 EIU Department of Chemistry and Biochemistry Outstanding Senior Recognition Award Award – Tyler S. Hanlan
2025 ACS Division of Organic Chemistry Undergraduate Award – Tyler S. Hanlan
2025 ACS Division of Biological Chemistry Undergraduate Award in Biochemistry or Chemical Biology – Tyler S. Hanlan
2025 ACS Polymer Chemistry Award – Jayla R. Singleton
2025 Distinguished International Student Award – Jemma Booth
2025 Graduate Alumni Board Outstanding Research or Creative Activity Award – Emmanuel Adusah
2025 Chemistry MS Program Distinguished Graduate Student Award – Emmanuel Adusah
2025 ASBMB Student Chapter Travel Award - Chinenyenwa N. Okolie
2025 EIU Pine Honors College Undergraduate Research, Scholarship, and Creative Activity (URSCA) Spring 2025 Award – Morgan F. Drozs
2025 EIU Pine Honors College Undergraduate Research, Scholarship, and Creative Activity (URSCA) Spring 2025 Award – Caroline G. Lucas
2025 EIU Pine Honors College Undergraduate Research, Scholarship, and Creative Activity (URSCA) Spring 2025 Award – Jayla R. Singleton
2025 EIU Pine Honors College Undergraduate Research, Scholarship, and Creative Activity (URSCA) Spring 2025 Award – Jennifer Teibowei

2025 EIU Pine Honors College Undergraduate Research, Scholarship, and Creative Activity (URSCA) Spring 2025 Award – Tyler S. Hanlan
2025 EIU Pine Honors College Undergraduate Research, Scholarship, and Creative Activity (URSCA) Spring 2025 Award – Chinenyenwa N. Okolie
2024 EIU Williams Travel Grant – Emmanuel Adusah
2024 EIU Alumni Association Distinguished Senior Award – Alana R. Vinson
2024 EIU Alumni Association Distinguished Senior Award – Luke H. Flaig
2024 EIU Alumni Association Distinguished Senior Award – Makenzie R. Walk
2024 EIU Alumni Association Distinguished Senior Award – Shannon M. R. Legge
2024 Illinois State Academy of Science Student Research Grant – Makenzie R. Walk
2024 EIU Pine Honors College Undergraduate Research, Scholarship, and Creative Activity (URSCA) Spring 2024 Award – Shannon M. R. Legge
2024 EIU Pine Honors College Undergraduate Research, Scholarship, and Creative Activity (URSCA) Spring 2024 Award – Morgan F. Drozs
2024 EIU Pine Honors College Undergraduate Research, Scholarship, and Creative Activity (URSCA) Spring 2024 Award – Makenzie R. Walk
2024 EIU Pine Honors College Undergraduate Research, Scholarship, and Creative Activity (URSCA) Spring 2024 Award – Alana R. Vinson
2023 EIU Graduate School Fall Research/Creative Activity Award –Emmanuel Adusah
2023 EIU College Thesis Award of Excellence for the College of Liberal Arts and Sciences – Samuel J. Knebel
2023 Presidential Graduate Assistantship – Carolyn J. Karns
2023 EIU Pine Honors College Undergraduate Research, Scholarship, and Creative Activity (URSCA) Fall 2023 Award – Makenzie R. Walk
2023 EIU Pine Honors College Undergraduate Research, Scholarship, and Creative Activity (URSCA) Fall 2023 Award – Abigail D. Abercrombie
2023 EIU Pine Honors College Undergraduate Research, Scholarship, and Creative Activity (URSCA) Fall 2023 Award – Shannon M. R. Legge
2023 EIU Pine Honors College Undergraduate Research, Scholarship, and Creative Activity (URSCA) Fall 2023 Award – Morgan F. Drozs
2023 EIU Pine Honors College Herbert Lasky Outstanding Graduating Senior Award – Taylor P. Spidle
2023 EIU Alumni Association Distinguished Senior Award – Taylor P. Spidle
2023 EIU Alumni Association Distinguished Senior Award – Pedro Vasquez
2023 College of Liberal Arts & Sciences Scholars in Undergraduate Research at Eastern (SURE) Award – Taylor P. Spidle
2023 EIU Graduate Alumni Fund Outstanding Research/Creative Activity Award – Carolyn J. Karns
2023 Eli Lilly & Company Women Chemists Committee (WCC) American Chemical Society Travel Award – Carolyn J. Karns
2023 Chemistry MS Program Distinguished Graduate Student Award – Samuel J. Knebel
2023 American Chemical Society Division of Biological Chemistry Graduate Student Travel Award – Samuel J. Knebel
2023 EIU Pine Honors College Undergraduate Research, Scholarship, and Creative Activity (URSCA) Spring 2023 Award – Taylor P. Spidle
2023 EIU Pine Honors College Undergraduate Research, Scholarship, and Creative Activity (URSCA) Spring 2023 Award – Makenzie R. Walk
2022 EIU Graduate School Fall Research/Creative Activity Award – Samuel Knebel
2022 EIU Graduate School Fall Research/Creative Activity Award – Carolyn J. Karns
2022 EIU Williams Travel Grant – Samuel Knebel
2022 EIU Williams Travel Grant – Carolyn J. Karns
2022 American Chemical Society Division of Biological Chemistry Graduate Student Travel Award – Carolyn J. Karns

2022 EIU Pine Honors College Undergraduate Research, Scholarship, and Creative Activity (URSCA) Fall 2022 Award – Taylor Spidle
2022 EIU Sidney S. Steele Summer Student Award – Samuel Knebel
2022 EIU Alumni Association Distinguished Senior Award – Carolyn J. Karns
2022 ACS Division of Organic Chemistry Undergraduate Award – So Jeong (Allie) Kim
2022 Outstanding International Student Award – So Jeong (Allie) Kim
2022 ASBMB Student Chapter Travel Award – Carolyn J. Karns
2022 Illinois State Academy of Science Student Research Grant – Samuel Knebel
2022 EIU Pine Honors College Undergraduate Research, Scholarship, and Creative Activity (URSCA) Spring 2022 Award – Carolyn J. Karns
2022 EIU Pine Honors College Undergraduate Research, Scholarship, and Creative Activity (URSCA) Spring 2022 Award – So Jeong (Allie) Kim
2022 EIU Pine Honors College Undergraduate Research, Scholarship, and Creative Activity (URSCA) Spring 2022 Award – Luke Flaig
2021 EIU Graduate School Fall Research/Creative Activity Award – Samuel Knebel
2021 6th Annual East Central Illinois ACS Local Section Undergraduate Research Conference Outstanding Presentation – Carolyn J. Karns
2021 112th Annual Meeting of the Illinois State Academy of Science First Place Graduate Oral Presentation in Division Award – Anchal Singh
2021 112th Annual Meeting of the Illinois State Academy of Science First Place Graduate Oral Presentation in Division Award – Katelynn Fuller-Svarz (Jointly-Advised)
2021 Hamand Society of Scholars Induction – Katelynn Fuller-Svarz (Jointly-Advised)
2021 EIU Spring Graduate School Research/Creative Activity Award – Anchal Singh
2020 EIU Spring Graduate School Research/Creative Activity Award – Anchal Singh
2020 Illinois State Academy of Science Student Research Grant – Katelynn Fuller-Svarz
2020 EIU CLAS Undergraduate Research/Creative Activity Award – Anthony Kilber
2020 EIU Spring Graduate School Research/Creative Activity Award – Anchal Singh
2020 EIU Spring Graduate School Research/Creative Activity Award – Jhalak Timilsena
2020 EIU Distinguished International Graduate Student in Chemistry – Jhalak Timilsena
2020 EIU Sidney S. Steele Summer Student Award – Jhalak Timilsena

Professional Affiliations

Member, American Chemical Society (ACS) 2007–Present
Member, American Society of Biochemistry and Molecular Biology (ASBMB) 2019–Present
Member, Illinois State Academy of Science (ISAS) 2021–Present
Member, American Society for Pharmacology and Experimental Therapeutics (ASPET) 2022–Present

Professional Activities and Service

Grant Reviewer

American Society of Biochemistry and Molecular Biology

- Travel Awards for the 2026 ASBMB Annual Meeting 2025

National Science Foundation (NSF)

- Virtual Panel, Reviewer 2024

National Institutes of Health (NIH)

- Research Enhancement Award and SuRE Programs Special Emphasis Panel, Member Spring 2026
- Drug and Biologic Disposition & Toxicity (DBDT) Study Section, Ad-hoc Member Spring 2024

Eastern Illinois University Service

University Service

- Student Research Day Committee 2025-2026
- EIU International Education Council, Member July 2023-June 2026
- Student Standards Board, Member Fall 2025-Spring 2027

- Grants-in-Aid Appeals Committee, Member — Fall 2022–Spring 2025
- EIU Higher Learning Commission Accreditation Team, Member — Fall 2022–Fall 2024
    - Teaching and Learning: Quality, Resources, and Support Subcommittee, Member
- EIU Quality Initiative Committee *Diversifying our Campus Community to Promote Inclusive Excellence & Student Success*, Member — 2020–2024
    - Recruiting/Networking Subcommittee, Member

The Graduate School Service

- Council on Graduate Studies
    - College of Liberal Arts and Sciences Representative (Sciences) — Fall 2026–Spring 2029
- Meyer-Hampton and Wright-Downing Committee — AY2025-26
    - Chair — AY2025-26

College of Liberal Arts and Sciences Service

- Lida G. Wall Faculty Research Mentoring Award Selection Committee — Spring 2025, 2026
    - Member — AY2019-20, AY2020-21, AY2021-22
- Assistant or Associate Professor in Plant Physiology Search 2024 Screening Committee
    - External Department Member — AY2024-25
- Curriculum Committee
    - Chair — AY2021-22
    - Vice-Chair — AY2020-21
    - Department Representative — AY2019-20, AY2020-21, AY2021-22

Department of Chemistry and Biochemistry Service

- Academic Advisor — Fall 2020-Present
- Visiting Assistant Professor in Organic Chemistry Search 2025 Screening Committee
    - Chair — Spring 2025
- Awards Committee, Member — AY2024-25–Present
- Assistant Professor in Analytical Chemistry Search 2023 Screening Committee
    - Chair — AY2023-24
- Curriculum Committee
    - Chair — AY2020-21– AY2022-23, AY2025-26
    - Member — AY2019-20; AY2023-24; AY2024-25
- New Building Committee, Member — 2020–Present
- Safety Committee, Member — AY2019-20–Present
- Graduate Committee
    - Chair — Fall 2024
    - Member — AY2022-23–Present
- Undergraduate Recruitment
    - Chair — AY2023-24
    - Member — AY2021-22
- Stockroom Manager Selection Committee, Member — Summer 2021
- General Chemistry Laboratory Committee, Member — AY2020-21
- Website Committee, Member — AY2020-21
- Assessment Committee, Member — AY2019-20

Other

- EIU ASBMB Student Chapter Co-Advisor — AY2020-21–Present
- EIU Inclusion in STEM! (iSTEM) Faculty Advisory Committee, Member — AY2020-21–Present
- EIU Initiative: Making Excellence Inclusive (MEI), Member — 2019–2024

University Professionals of Illinois (UPI) Local 4100 Service

- UPI Laboratory and Studio Reopening Committee — Summer 2020

- Advised state-level union officials on challenges associated with resuming in person laboratory courses and the impact of potential policies on laboratory courses during the COVID-19 pandemic.

Other Professional Service

- Member of *Biology (MDPI)* Reviewer Board 2020–Present
- Abstract Reviewer, American Society of Biochemistry and Molecular Biology (ASBMB) 2025

Manuscript Referee

*ACS Central Science (*2023*), ACS Chemical Biology (*2023*), ACS Omega* (2025), *ACS Sensors* (2025), *Antioxidants* (2021), *Biology (*2021-2022, 2024*), BMC Molecular and Cell Biology* (2022), *ChemComm* (2020-2025), *Current Opinion in Chemical Biology* (2014), *Dalton Transactions* (2020-2022), *Dyes and Pigments* (2023), *European Journal of Inorganic Chemistry* (2025), *Inorganic Chemistry* (2021-2022), *Inorganics* (2024), *International Journal of Molecular Sciences* (2020, 2025), *Journal of Marine Science and Engineering* (2025), *Journal of the American Chemical Society* (2022), *Metallomics* (2018-2020), *Molbank* (2022), *Molecules* (2022), *Molecular Metabolism* (2021), *Pharmaceuticals* (2020), *Processes* (2022), *PROTEINS* (2023), *Royal Society Open Science* (2019-2020), *RSC Advances* (2015-2016), The *Journal of Organic Chemistry* (2022)

Community Activities

- NSF-Funded Factors affecting Learning, Attitudes, and Mindsets in Education Coordination Network (FLAMEnet) Community Member
  - FLAMEnet Community Hour
    - Participated in a series of web conference discussions focused on best practices in STEM higher education.
- University of Michigan University Career Alumni Network (UCAN)
  - Maintain a profile to allow for Michigan students and alumni seeking career advice and insights to connect with me.
- X and Bluesky *@BeckChemistry* and *@BeckChemistry.bsky.social*
  - Maintain account to promote scientific literacy of the general population, support and advise junior scientists in achieving their career goals, share research occurring at EIU, and recruit students to EIU programs.

Professional Development

Mentoring Neurodivergent Students in Grad School July 9, 2025
American Chemical Society Committee on Chemists with Disabilities and ACS Division of Professional Relations, Online

Mental Health First Aid November 2024
National Council for Mental Wellbeing, Eastern Illinois University, Charleston, IL, USA

Understanding and Supporting ADHD Colleagues in the Workplace August 14, 2024
LinkedIn Learning, Online

Creating A Campus-Wide Culture of Student Success August 8, 2024
Faculty Development and Innovation Center, Eastern Illinois University, Charleston, IL, USA

Managing Generation Z August 8, 2023
LinkedIn Learning, Online

Building Inclusive and Equitable Syllabi and Assignments August 12, 2022
Faculty Development and Innovation Center, Eastern Illinois University, Charleston, IL, USA

STEM Syllabus Design Workshop June 3, 2022
NSF-Funded Factors affecting Learning, Attitudes, and Mindsets in Education Coordination Network, Online

Student Engagement and Motivation: Principles and Pedagogies August 10, 2021

Faculty Development and Innovation Center, Eastern Illinois University, Charleston, IL, USA

FLAMEnet 2021 Workshop: Transforming Cultures & Affirming Resilience in STEM May 12-14, 2021
NSF-Funded Factors affecting Learning, Attitudes, and Mindsets in Education Coordination Network, Online

Online Course Development Institute Summer 2020
Faculty Development and Innovation Center, Eastern Illinois University, Charleston, IL, USA

Safeguarding Quality, Equity, & Inclusion as Learning Moves Online March 27, 2020
Association of American Colleges & Universities (AAC&U), Webinar

Adapting Quickly to Teaching Online March 19, 2020
Harvard Business Publishing Education, Webinar

Course Design and College Teaching Autumn 2018
Chicago Center for Teaching, University of Chicago, Chicago, IL, USA

Seminars and Symposia Organized

8. Department of Chemistry and Biochemistry Seminar Series, iSTEM Invited Speaker, November 11, 2024. Dr. Arianne C. Hunter, Senior Scientist, Centralized Organic Synthesis Group, AbbVie
7. Department of Chemistry and Biochemistry Seminar Series, Invited Speaker, October 28, 2024. Dr. Yuan (Mike) Xue, Postdoc Research Associate, Department of Chemistry and Biochemistry, University of Mississippi
6. Probing Biological Chemistry Symposium, 2023 Joint Midwest - Great Lakes Regional ACS Meeting, October 20, 2023, St. Charles, MO
5. Department of Chemistry and Biochemistry Seminar Series, iSTEM Invited Speaker, September 18, 2023. Dr. Paul Thomson, Colgate-Palmolive Company
4. Department of Chemistry and Biochemistry Seminar Series, iSTEM Invited Speaker, April 17, 2023. Jazmin Aguilar-Romero, Department of Chemistry, University of Illinois Urbana-Champaign
3. Department of Chemistry and Biochemistry Seminar Series, iSTEM Invited Speaker, November 2, 2022 Dr. Treva Brown, Naval Research Laboratory
2. Department of Chemistry and Biochemistry Seminar Series, ASBMB Invited Speaker, October 25, 2021 Dr. Jefferson Chan, University of Illinois Urbana-Champaign
1. Department of Chemistry and Biochemistry Seminar Series, ASBMB Invited Speaker, March 8, 2021 Dr. Charles Yeung, Merck & Co.

Media Appearances/Interviews

3. Taylor, L. Six Awards for Research Funded by the Council on Faculty Research. *The Daily Eastern News* [Online], November 1, 2021. https://www.dailyeasternnews.com/2021/11/01/six-awards-for-research-funded-by-the-council-on-faculty-research/.
2. Solis, M. Undergrads Hit Hard by Pandemic Navigate Disruptions. *Chemistry and Engineering News,* March 22, 2021, p 18-21.
   Also published as Solis, M. Undergrads Hit Hard by Pandemic Navigate Disruptions. *inChemistry* [Online], March 18, 2021. https://inchemistry.acs.org/college-life/pandemic-academic-disruptions.html.
1. Stroud, R. EIU Faculty Make Viral Transport Media for Sarah Bush Lincoln During Coronavirus Pandemic. *Journal Gazette & Times-Courier* [Online], April 20, 2020. https://jg-tc.com/news/local/eiu-faculty-make-viral-transport-media-for-sarah-bush-lincoln-during-coronavirus-pandemic/article_afc2699e-cddc-5168-b93a-c752cf1d4a59.amp.html

Trainee Media Appearances/Interviews

2. Khanna, K. From Failing to Acing Chemistry. *ASBMB Today* [Online], August 24, 2023. https://www.asbmb.org/asbmb-today/people/082423/from-failing-to-acing-chemistry.

1. I'm In This Fishbowl And There Is All These Awards Around Me w/ CJ Karns. *The Semi-Professional Podcast with Jakeb Watts.* April 21, 2023
https://thesemiprofessionalacademicpodcast.buzzsprout.com/2135541/12694242.

Peer-Reviewed Publications

‡Denotes Equal Contribution #Denotes Undergraduate Author

Independent Career

14. Karns, C. J.; Singh, A.; Walk, M. R.;# Adusah, E.; Pearson, A. M.;# Knebel, S. J.; **Beck, M. W.** *Bioorg. Med. Chem. Lett.* **2025**, *128*, 130331. "Fluorescein Diacetate (FDA) Should Not Be Used to Study Human Carboxylesterase 2 (CES2) in Complex Biological Systems Without Validation."
Preprint Version Available on *ChemRxiv* at DOI: 10.26434/chemrxiv-2025-4s8qr-v3

13. Karns, C. J.; Spidle, T. P.#, ‡; Adusah, E.‡; Gao, M.#; Nehls, J. E.; **Beck. M. W.** *Chem. Commun.* **2024**, *60*, 12369. "Fluorogenic Chemical Tools to Shed Light on CES1-Mediated Adverse Drug Interactions"
Featured on Back Cover
Included in 2024 Emerging Investigators Themed Collection

12. Singh, A.; Gao, M.#; Karns, C. J.#; Spidle, T. P.#; **Beck, M. W.** *ChemBioChem* **2022**, *23*, e202200069. "Carbonate-Based Fluorescent Chemical Tool for Uncovering Carboxylesterase 1 (CES1) Activity Variations in Live Cells"
Featured on Front Cover

11. Singh, A.; Gao, M.#; **Beck, M. W.** *RSC Med. Chem.* **2021**, *12*, 1142. "Human Carboxylesterases and Fluorescent Probes to Image Their Activity in Live Cells"
Included in Emerging Investigators Themed Collection

Undergraduate, Ph.D., and Postdoctoral Studies

10. Lisic, E. C.; Grossarth, S. N.#; Bowman, S. B.; Hill, J. L.#; **Beck, M. W.#**; Deweese, J. E.; Jiang, X. H. *Open J. Med. Chem.* **2022**, *12*, 1. "New Copper (II), Palladium (II), and Platinum (II) 2-Acetylpyrazine Tert-Butylthiosemicarbazone Complexes: Inhibition of Human Topoisomerase IIα and Activity against Breast Cancer Cells."

9. Jones, K., A.; Kentala, K.; **Beck, M. W.**; An, W.; Lippert, A. R.; Lewis, J. C.; Dickinson, B. C.; *ACS Cent. Sci.* **2019**, *5*, 1768. "Development of a Split Esterase for Protein–Protein Interaction-Dependent Small-Molecule Activation"
Featured in *ACS Cent. Sci.* **2019**, *5*, 1744.
Preprint Version Available on *ChemRxiv* at DOI: 10.26434/chemrxiv.8258633.v2

8. Qiu, T.‡; Kathayat, R. S.‡; Cao, Y.‡; **Beck, M. W.**; Dickinson, B. C. *Biochemistry* **2018**, *57*, 221. "A Fluorescent Probe with Improved Water Solubility Permits the Analysis of Protein *S*-Depalmitoylation Activity in Live Cells"

7. **Beck, M. W.**; Derrick, J.S.; Suh, J.-M.; Kim, M.; Korshavn, K. J.; Kerr, R. A.; Cho, W. J.; Larsen, S. D.; Ruotolo, B. T.; Ramamoorthy, A.; Lim, M. H. *ChemMedChem* **2017**, *12*, 1828. "Minor Structural Variations of Small Molecules Tune Regulatory Activities Toward Pathological Factors in Alzheimer's Disease"
Featured on Front Cover

6. **Beck, M. W.**; Kathayat, R. S; Cham, C. M.; Chang, E. B.; Dickinson, B. C. *Chem. Sci.* **2017**, *8*, 7588. "Michael Addition-Based Probes for Ratiometric Fluorescence Imaging of Protein *S*-Depalmitoylases in Live Cells and Tissues"

5. **Beck, M. W.** ‡; Derrick, J. S. ‡; Kerr, R. A.; Oh, S. B.; Cho, W. J.; Lee, S. J. C.; Ji, Y.; Han, J.#; Tehrani, Z. A.; Suh, N.; Kim, S.; Larsen, S. D.; Kim, K. S.; Lee, J.-Y.; Ruotolo, B. T.; Lim, M. H. *Nature Commun.* **2016**, *7*, 13115. "Structure-Mechanism-Based Engineering of Chemical Regulators Targeting Distinct Pathological Factors in Alzheimer's Disease"

4. **Beck**, **M. W.**‡; Oh, S. B.‡; Kerr, R. A.; Lee, H. J.; Kim, S. H.; Kim, S.; Jang, M.; Ruotolo, B. T.; Lee, J.-Y.; Lim, M. H. *Chem. Sci.*, **2015**, *6*, 1879. "A Rationally Designed Small Molecule for Identifying an *In Vivo* Link of Metal–Amyloid-β Complexes to the Pathogenesis of Alzheimer's Disease"
   Recommended as "Very Good" on Faculty of 1000 DOI: 10.3410/f.725725194.793509037.

3. **Beck**, **M. W.**; Pithadia, A. S.; DeToma, A. S.; Korshavn, K. J.; Lim, M. H. Chapter 10: Ligand Design to Target and Modulate Metal-Protein Interactions in Neurodegenerative Diseases. In *Ligand Design in Medicinal Inorganic Chemistry* John Wiley & Sons: Chichester, West Sussex, **2014**, pp 256-286.
   Featured in *Angew. Chem. Int. Ed.*, **2015**, *54*, 2324.

2. Liu, Y.‡#; Kochi, A.‡; Pithadia, A. S.; Lee, S.; Nam, Y.; **Beck, M. W**.; He, X.; Lee, D.; Lim, M. H. *Inorg. Chem.*, **2013**, *52*, 8121. "Tuning Reactivity of Diphenylpropynone Derivatives with Metal-Associated Amyloid-β Species via Structural Modifications"

1. Pithadia, A. S.‡; Kochi, A.‡; Soper, M. T.; **Beck, M. W.**; Liu, Y.; Lee, S.; DeToma, A. S.; Ruotolo, B. T.; Lim, M. H. *Inorg. Chem.* **2012**, *51*, 12959. "Reactivity of Diphenylpropynone Derivatives Toward Metal-Associated Amyloid-β Species"

Patents

1. Dickinson, B.C.; Kathayat, R.S.; **Beck, M.W**. "Synthetic Substrates for Enzymes That Catalyze Reactions of Modified Cysteines and Related Methods." U.S. Patent 10,413,583, September 17, 2019.

MS and Undergraduate Honors Thesis Supervised

7. Adusah, E. "Identification of New Fluorescein-Based Chemical Tools for Studying Human Carboxylesterase 1 (CES1)" MS Chemistry (Biochemistry Option) Thesis, Spring 2025.

6. Okolie, C., N. "Studying Chemical Tools to Understand Spatially Organized Biochemistry" Undergraduate Honors Thesis, EIU Department of Biological Sciences, Spring 2025.

5. Karns, C. J. "Shedding Light on Ester Drug Metabolism: Investigating Carboxylesterases in Live Cells with Fluorogenic Chemical Tools" MS Biological Sciences Thesis, Spring 2024.

4. Knebel, S. J. "Development of a Chemical Biology Approach to Uncover the Influence of Sequence Variations on CES1 Activity in Live Cells" MS Chemistry (Biochemistry Option) Thesis, Spring 2023.
   Received EIU College Thesis Award of Excellence for the College of Liberal Arts and Sciences

3. Spidle, T. P. "*In Vitro* Characterization of Fluorogenic Chemical Tools to Study Human Carboxylesterases (CESs)." Undergraduate Honors Thesis, EIU Department of Biological Sciences, Fall 2022.
   Received Second Place Undergraduate Division, EIU Booth Library's 2023 Awards for Excellence in Student Research and Creativity

2. Singh, A. "Development of Fluorescence Microscopy Approaches to Study Subcellular Protein Transport and Enzymatic Activity. " MS Chemistry (Biochemistry Option) Thesis, Spring 2021.

1. Timilsena, J. N. "Design, Synthesis, and Characterization of Chemical Tools to Study Peroxisomal Import." MS Chemistry (Biochemistry Option) Thesis, Summer 2020.

Presentations

Invited Oral Presentations

12. **Saint Louis University, Department of Chemistry Seminar,** St. Louis, MO, September 5, 2025.
"Chemical Tools to Investigate Spatially Organized Chemistry in Human Health"

11. **Tennessee Technological University Department of Chemistry Seminar,** Cookeville, TN, October 4, 2024.
"Chemical Tools to Investigate Spatially Organized Chemistry in Human Health"

10. **University of Texas, Arlington Department of Chemistry and Biochemistry Seminar**, Arlington, TX, September 6, 2024.
"Chemical Tools to Investigate Spatially Organized Chemistry in Human Health"

9. **Probing Biological Chemistry Symposium,** 2023 Joint Midwest - Great Lakes Regional ACS Meeting, St. Charles, MO, October 20, 2023.
"Probing Variations in Drug Metabolism with Chemical Tools"

8. **The University of Chicago Department of Chemistry Seminar**, Chicago, IL, May 24, 2023.
"Chemical Biology Approaches for Uncovering Interindividual Variability in Drug Metabolism"

7. **2nd Annual EIU AED & ASBMB Rapid Research Event**, Charleston, IL, March 1, 2023.
"Chemical Tools to Investigate Spatially Organized Chemistry in Human Health"

6. **Indiana State University Department of Chemistry & Physics Seminar** Terre Haute, IN, January 24, 2023.
"Chemical Biology Approaches for Uncovering Interindividual Variability in Drug Metabolism"

5. **1st Annual EIU AED & ASBMB Rapid Research Event**, Charleston, IL, March 9, 2022.
"Chemical Tools to Interrogate Biology at the Molecular Level"

4. **TTU ACS Student Affiliate Chapter 2021 Golden Eagle Seminar**, Cookeville, TN April 9, 2021.
"Chemical Tools to Interrogate Biology at the Molecular Level"
Presented Electronically Due to COVID-19 Pandemic

3. **EIU ACS Student Affiliate Chapter Meeting,** Charleston, IL October 30, 2019.
"Overview of Beck Research Group"

2. **1st Symposium on Chemistry and Life**, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, South Korea, August 2, 2018.
"Chemical Tools to Interrogate Biology at the Molecular Level"

1. **TTU ACS Student Affiliate Chapter Meeting**, Cookeville, TN, December 3, 2013.
"A Brief Overview of Applying to a PhD Program in Chemistry" and
"Structure-Reactivity Relationship of Diphenylpropynone Derivatives as Bifunctional Chemical Tools to Study Alzheimer's Disease"

Panel Presentations

2. **Pathways to College Teaching Careers Miniconference,** University of Chicago myCHOICE Program, Chicago, IL, May 24, 2023.
"Transitions to Teaching on the Tenure Track" Panelist.

1. **EIU ACS Student Affiliates Meeting**, EIU ACS Student Affiliates, Charleston, IL, October 24, 2019.
"Professional Development Panel" Panelist.

Oral Presentations

7. **The 271st National Meeting of the American Chemical Society,** Division of Biological Chemistry Current Topics in Biochemistry and Chemical Biology Session, Atlanta, GA, March 24, 2026.
"Validated Activity-Based Fluorogenic Chemical Tools to Avoid Pitfalls in Studying Human Carboxylesterases."

6. **2025 Midwest Regional Meeting of the American Chemical Society**, Biochemistry Oral Presentations, Columba, MO, October 14, 2025. "Activity-Based Fluorogenic Chemical Tools to Annotate Variability in Carboxylesterase-Mediated Drug Metabolism."

5. **The 267th National Meeting of the American Chemical Society**, Division of Biological Chemistry The Intersection of Biochemistry and Chemical Biology Session, New Orleans, LA, March 21, 2024. "Illuminating Variations in Drug Metabolism with Fluorogenic Chemical Tools."

4. **The 265th National Meeting of the American Chemical Society**, Division of Biological Chemistry Early Career Investigators Session, Indianapolis, IN, March 29, 2023. "Chemical Biology Approaches for Uncovering Interindividual Variability in Drug Metabolism"

3. **The 265th National Meeting of the American Chemical Society**, Division of Chemical Education General Papers: Undergrad Research, Indianapolis, IN, March 28, 2023. "Developing a Successful Research Program at a Primarily Undergraduate Institution (PUI)"

2. **Oral Dissertation Defense**, University of Michigan, Ann Arbor, MI, May 6, 2015. "Development of Small Molecules as Chemical Tools for Investigating the Role of Metal-Protein Interactions in Neurodegenerative Diseases"

1. **3rd Annual TTU Chemistry Department Distinction in Research Seminar**, Tennessee Tech University, Cookeville, TN, April 21, 2011. "Synthesis and Antimicrobial Studies of Acetylpyrazine-Thiosemicarbazone Compounds"

Workshops Facilitated

1. **NSF-Funded FLAMEnet Research Coordination Network Community Hour,** online, June 9, 2020. Facilitated a workshop on "How do we help students build resilience in (online) laboratory courses and other online teaching interactions?"

Poster Presentations

‡Denotes Presenting Author #Denotes Undergraduate Author

19. **2025 American Society of Biochemistry and Molecular Biology Annual Meeting**, Chicago, IL April 12-15, 2025. **Beck, M. W.**‡ "Shedding Light on Carboxylesterase-Mediated Adverse Drug Interactions: A Chemical Biology Approach."

18. **The 267th National Meeting of the American Chemical Society**, New Orleans, LA, March 17-21, 2024. **Beck, M. W.**‡ "Illuminating Variations in Drug Metabolism with Fluorogenic Chemical Tools." Invited Presentation at Sci-Mix (Poster session for best presentations in each division).

17. **The 267th National Meeting of the American Chemical Society**, New Orleans, LA, March 17-21, 2024. **Beck, M. W.**‡ "Developing a Successful Research Program at a Primarily Undergraduate Institution (PUI)."

16. **American Society for Pharmacology and Experimental Therapeutics (ASPET) 2023**, St. Louis, MO, May 19, 2023. **Beck, M. W.**‡ "Fluorogenic Chemical Tools to Improve Prodrug Treatment Outcomes." DOI: 10.1124/jpet.122.135840

15. **The 265th National Meeting of the American Chemical Society**, Indianapolis, IN, March 26-30, 2023. **Beck, M. W.**‡ "Developing a Successful Research Program at a Primarily Undergraduate Institution (PUI)." Invited Presentation at Sci-Mix (Poster session for best presentations in each division).

14. **The 264th National Meeting of the American Chemical Society**, Chicago, IL, August 21-25, 2022. **Beck, M. W.**‡ "Fluorescent Chemical Tool to Identify Risk Factors for Ineffective Treatment with Ester Prodrugs."

13. **Experimental Biology 2022**, Philadelphia, PA, April 1-5, 2022

Singh, A.; Gao, M.;# Karns, C. J.;# Spidle, T. P.;# **Beck, M. W.**‡ "Revealing Human Carboxylesterase 1 (CES1) Sequence-Dependent Activity Variations Using Fluorescent Chemical Tools."

12. **18th Edition of the Department of Chemistry and Biochemistry Student Research Celebration**, Charleston, IL, October 23, 2019.
Beck, M. W.‡ "Overview of Beck Research Group."

11. **2018 Gordon Research Conference on Bioorganic Chemistry**, Andover, NH, June 10-15, 2018.
Beck, M. W.;‡ Trotzuk, E. F.;# Azizi, S.-A.; Choi, W.;# Dickinson, B. C. "Ratiometric Fluorescent Probes to Interrogate the Regulation of Cell Signaling by Protein *S*-Depalmitoylases."
Received Poster Award

10. **Experimental Biology 2015**, Boston, MA, March 31, 2015.
Beck, M. W.;‡ Oh, S. B.; Kerr, R. A.; Lee, H. J.; Kim, S. H.; Kim, S.; Jang, M.; Ruotolo, B. T.; Lee, J.-Y.; Lim, M. H. "Modulation of Metal–Amyloid-β Reactivity by a Rationally Designed Small Molecule for Elucidating the In Vivo Link of Metal–Amyloid-β Complexes to the Pathogenesis of Alzheimer's Disease."

9. **The 2nd International Symposium for Molecular Neurodegenerative Disease Research**, KAIST, Daejeon, South Korea, August 22, 2014.
Beck, M. W.;‡ Oh, S.B.; Kerr, R.; Lee, H. J.; Kim, S. H.; Kim, S.; Jang, M.; Ruotolo, B. T.; Lee, J.-Y.; Lim, M. H. "Metamorphosizing the Reactivity of Metal–Amyloid-β Complexes to Profile Their Relation to the Pathology of Alzheimer's Disease."
Awarded Best Poster Presentation

8. **The 2014 Korean Chemical Society Summer Bioinorganic Chemistry Symposium**, Suanbo, South Korea, July 11, 2014.
Beck, M. W.;‡ Oh, S.B.; Kerr, R.; Lee, H. J.; Kim, S. H.; Kim, S.; Jang, M.; Ruotolo, B. T.; Lee, J.-Y.; Lim, M. H. "Metamorphosizing the Reactivity of Metal–Amyloid-β Complexes to Profile Their Relation to the Pathology of Alzheimer's Disease."
Awarded Best Poster Presentation

7. **The 2013 Vaughn Symposium**, Ann Arbor, MI, August 8, 2013.
Beck, M. W.;‡ Charon, J. P.#; Ghosh, A.#; Lim, M. H. "Design and Development of Pyridinylmethylamine Derivatives as Chemical Tools to Study the Role of Metal Amyloid-β Species in Alzheimer's Disease."

6. **The 241st National Meeting of the American Chemical Society**, Anaheim, CA, March 28, 2011.
Beck, M. W.;‡ Beck, C. N.;‡ Reilly, S. W.; Carr, M.; Holcomb, V. L; Ventrice, J.; Lisic, E. C. "Synthesis and Antimicrobial Studies of Acetylpyrazine-Thiosemicarbazone Compounds."

5. **The 120th Meeting of the Tennessee Academy of Science**, Cookeville, TN, November 19, 2010.
Beck, M. W.;‡ Reilly, S. W.; Swindle, R. L.; Lisic, E. C. "Synthesis and Biological Studies of Palladium (II) Acetylpyrazine Thiosemicarbazone Complexes."
Awarded First Place Poster Presentation in Chemistry Section

4. **The 5th Annual Tennessee Tech University Student Research Day**, Cookeville, TN, April 15, 2010.
Beck, M. W.;‡ Reilly, S. W.; Swindle, R. L.; Lisic, E. C. "Synthesis and Biological Studies of Palladium (II) Acetylpyrazine Thiosemicarbazone Complexes."

3. **The 239th National Meeting of the American Chemical Society**, San Francisco, CA, March 22, 2010.
Beck, M. W.;‡ Reilly, S. W.; Swindle, R. L.; Lisic, E. C. "Synthesis and Biological Studies of Palladium (II) Acetylpyrazine Thiosemicarbazone Complexes."

2. **The 4th Annual Tennessee Tech University Student Research Day**, Cookeville, TN, March 31, 2009.
Beck, M. W.;‡ Steelman, K; and Lisic, E. C. "Synthesis and Characterization of New Acetylpyrazine Thiosemicarbazones."

1. **The 237th National Meeting of the American Chemical Society**, Salt Lake City, UT, March 23, 2009.

Beck, M. W.;‡ Steelman, K; Lisic, E. C. "Synthesis and Characterization of New Acetylpyrazine Thiosemicarbazones."

Student and Mentee Presentations

‡Denotes Presenting Author #Denotes Undergraduate Author

Student and Mentee Oral Presentations

38. **EIU Department of Biological Sciences 2026 Research Conference & Scholarship Recognition**,, Oral Molecular Biology Presentations Session, Charleston, IL, April 22, 2026
Teibowei, J.;‡ Booth, J.;# **Beck, M.W.** "Design and Synthesis of Fluorogenic Chemical Tools Based on Rhodol Scaffolds to Study Human Carboxylesterase 1 (CES1)"
Received First Place Graduate Oral Presentation in Division Award

37. **EIU Department of Biological Sciences 2026 Research Conference & Scholarship Recognition**, Oral Molecular Biology Presentations Session, Charleston, IL, April 22, 2026
Singleton, J. R.; ‡,# Booth, J.;# Plaza, A. A.;# **Beck, M. W.** "Design and Synthesis of Human Carboxylesterase 1 (CES1)-Specific Fluorogenic Chemical Tools Using Self-Immolative Linkers"
Received Second Place Undergraduate Oral Presentation in Division Award

36. **EIU 18th Annual Student Research and Creative Activity Conference,** Biochemistry Oral Presentations Session, Charleston, IL, April 22, 2026
Singleton, J. R.; ‡,# Booth, J.;# Plaza, A. A.;# **Beck, M. W.** "Design and Synthesis of Human Carboxylesterase 1 (CES1)-Specific Fluorogenic Chemical Tools Using Self-Immolative Linkers"

35. **EIU 18th Annual Student Research and Creative Activity Conference,** Biochemistry Oral Presentations Session, Charleston, IL, April 22, 2026
Booth, J.; ‡,# Villalobos, L.;# Adusah, E.; **Beck, M. W.** "Illuminating Human Drug Metabolizing Enzymes Through Structure:Activity Relationship (SAR) Studies of Carbonate-Based Fluorogenic Chemical Tools"

34. **118th Annual Meeting of the Illinois State Academy of Science,** Peoria, IL, April 18, 2026.
Teibowei, J.;‡ Booth, J.;# **Beck, M.W.** "Design and Synthesis of Fluorogenic Chemical Tools Based on Rhodol Scaffolds to Study Human Carboxylesterase 1 (CES1)"
Received First Place Graduate Oral Presentation in Division Award

33. **EIU Department of Chemistry and Biochemistry 2025 Student Summer Research Symposium**, Charleston, IL, July 11, 2025.
Hortenstine, S. P.; ‡,# Adusah, E.; Drozs, M. F.; # Johnson, R. J.; Hoops, G. C.; **Beck, M. W.** "Screening a Library of Fluorogenic Esters to Optimize Specificity for Human Carboxylesterase 1 (CES1)"

32. **EIU Department of Chemistry and Biochemistry 2025 Student Summer Research Symposium,** Charleston, IL, July 11, 2025.
Anderson, Q.;‡,# Teibowei, J.; Adusah, E.;# Knebel, S. J.; **Beck, M. W.** "Determining Influence of Sequence Variations On CES1 Activity"

31. **EIU Department of Chemistry and Biochemistry 2025 Student Summer Research Symposium,** Charleston, IL, July 11, 2025.
Villalobos, L.; ‡,# Booth, J.;# Adusah, E.; **Beck, M. W.** "Optimizing Specificity of Fluorogenic Carbonates For Human Carboxylesterase 1"

30. **EIU Department of Chemistry and Biochemistry 2025 Student Summer Research Symposium**, Charleston, IL, July 11, 2025.
Teibowei,‡ J.; Booth, J.;# Plaza, A. A.;# **Beck, M. W.** "Design and Synthesis of Fluorogenic Chemical Tools Based on Different Scaffolds to Study CES 1"

29. **EIU Department of Chemistry and Biochemistry 2025 Student Summer Research Symposium,** Charleston, IL, July 11, 2025.

Agans, R. T.;[‡,#] Hanlan, T. S.;[#] Duke, R. L.;[#] Legge, S. M. R.;[#] **Beck, M. W.** "Development of Assays to Assess Cancer Drug Activation by CES2"

28. **EIU 17th Annual Student Research and Creative Activity Conference,** Biochemistry Session Charleston, IL April 25, 2025.
Hanlan, T. S.;[‡,#] Okolie, C. N.;[#] Thepsomphone, A. T.;[#] Vinson, A. R.;[#] **Beck, M. W.** "Development of Cell Permeable Peptide-Based PROTACS to Study Peroxisomal Biochemistry"

27. **EIU 17th Annual Student Research and Creative Activity Conference,** Biochemistry Session Charleston, IL April 25, 2025.
Adusah, E.;[‡] Drozs, M. F.;[#] Spidle, T. P.;[#] Hoops, G. Johnson, R. J.; Beck, M. W. "Identification of new fluorogenic chemical tools for studying human carboxylesterase 1 (CES1)."

26. **EIU 17th Annual Student Research and Creative Activity Conference,** Biochemistry Session Charleston, IL April 25, 2025.
Booth, J.;[‡,#] Adusah, E.; Beck, M. W. "Design and Synthesis of a Library of Fluorescein-Based Fluorogenic Carbonates for Human Carboxylesterase Structure-Activity Relationship (SAR) Studies."

25. **EIU Department of Chemistry and Biochemistry 2024 Student Summer Research Symposium,** Charleston, IL, July 18, 2024.
Booth, J.;[‡,#] Adusah, E.; **Beck, M. W. "**Design And Synthesis Of A Library Of Fluorescein-Based Fluorogenic Carbonates For Human Carboxylesterase Structure-Activity Relationship (SAR) Studies"

24. **EIU Department of Chemistry and Biochemistry 2024 Student Summer Research Symposium,** Charleston, IL, July 18, 2024.
Thepsomphone, A. T.;[‡,#] **Beck. M. W. "**Development of Chemical Technology to Understand Spatially Organized Biochemistry"

23. **EIU Department of Chemistry and Biochemistry 2024 Student Summer Research Symposium,** Charleston, IL, July 18, 2024.
Adusah, E.;[‡] Drozs, M. F.;[#] Spidle, T. P.;[#] Hoops, G. C.; Johnson, R. J.; **Beck, M. W. "**Identification Of New Fluorogenic Chemical Tools For Studying Human Carboxylesterase 2 (CES2)."

22. **EIU Department of Chemistry and Biochemistry 2024 Student Summer Research Symposium,** Charleston, IL, July 18, 2024.
Pearson, A. M.;[‡,#] Walk, M. R.;[#] Karns, C. J.; Singh, A.; **Beck, M. W. "**Characterization Of A Fluorogenic Chemical Tool For Human Carboxylesterase 2."

21. **EIU Department of Chemistry and Biochemistry 2024 Student Summer Research Symposium,** Charleston, IL, July 18, 2024.
Lucas, C. G.[‡,#]; Kilber, A. W.;[#] Vasquez, P.[#] Spidle, T. P.; Timilsena, J. N.; **Beck, M. W.** "Peroxisome-Targeting Chemical Technologies and Tools to Study Subcellular Chemistry."

20. **EIU Department of Chemistry and Biochemistry 2024 Student Summer Research Symposium,** Charleston, IL, July 18, 2024.
Duke, R. L.;[‡,#] Legge, S. M. R.;[#] Knebel, S. J.; **Beck, M. W.** "Development Of Biotechnology To Study Interindividual Variability In Human Drug Metabolism."

19. **EIU Department of Chemistry and Biochemistry 2024 Student Summer Research Symposium,** Charleston, IL, July 18, 2024.
Singleton, J. R.;[‡,#] Lucas, C. G.;[#] Abercrombie, A. D.;[#] Spidle, T. P.; Singh, A.; **Beck M. W.** "Optimizing Genetically-Encoded Tools To Study Peroxisomes In Live Cells."

18. **EIU Department of Chemistry and Biochemistry 2024 Student Summer Research Symposium,** Charleston, IL, July 18, 2024.
Teibowei, J.;[‡,#] Okolie; C. N.;[#] Hanlan, T. S.;[#] **Beck, M. W.** "Non-Polar Amino Acids As Cellular Uptake Moieties For Peroxisome Targeting Fluorophores."

17. **EIU 16th Annual Student Research and Creative Activity Conference**, Biochemistry Session, Charleston, IL, April 19, 2024.
Okolie; C. N.;‡,# Timilsena, J. N.; Spidle, T. P.; **Beck, M. W. "**Design and Synthesis of Peroxisome Import Moieties."

16. **EIU 16th Annual Student Research and Creative Activity Conference**, Biochemistry Session, Charleston, IL, April 19, 2024.
Walk, M. R.;‡,# Karns, C. J.; Singh, A. S.; **Beck, M. W. "**Development of Chemical Tools to Study Human Carboxylesterase 2 (CES2)."

15. **EIU 16th Annual Student Research and Creative Activity Conference**, Biochemistry Session, Charleston, IL, April 19, 2024.
Karns, C. J.; ‡ Spidle, T. P.;# Gao, M.;# Nehls, J. E.; Beck, M. W. "Fluorescein-Based Fluorogenic Chemical Tools to Shed Light on Ester Drug Metabolism in Live Cells."

14. **The 267th National Meeting of the American Chemical Society**, Graduate Research in Biochemistry and Chemical Biology Session, New Orleans, LA, March 19, 2024.
Karns, C. J.;‡ Spidle, T. P.;# Gao, M.;# Nehls, J. E.; **Beck, M. W. "**Fluorescein-Based Fluorogenic Chemical Tools to Shed Light on Ester Drug Metabolism in Live Cells."

13. **The 267th National Meeting of the American Chemical Society**, Graduate Research in Biochemistry and Chemical Biology Session, New Orleans, LA, March 19, 2024.
Walk, M. R.;‡,# Karns, C. J.; Singh, A. S.; **Beck, M. W. "**Development of Chemical Tools to Study Human Carboxylesterase 2 (CES2)."

12. **2023 Joint Midwest - Great Lakes Regional ACS Meeting,** Biochemistry Session, St. Charles, MO, October 20, 2023.
Walk, M. R.;‡,# Karns, C. J.; Singh, A. S.; **Beck, M. W.** "Synthesis and Characterization of Chemical Tools to Study Human Carboxylesterases (CESs)."

11. **2023 Joint Midwest - Great Lakes Regional ACS Meeting,** Biochemistry Session, St. Charles, MO, October 20, 2023.
Karns, C. J.;‡ Spidle, T. P.;# Gao, M.;# Nehls, J. E.; **Beck, M. W.** "Development of Fluorogenic Chemical Tools for Studying Drug Metabolic Esterases in Live Cells."

10. **EIU 15th Annual Student Research and Creative Activity Conference,** Biochemistry Session 1, Charleston, IL, April 21, 2023.
Spidle, T. P.;‡,# **Beck, M. W.** "*In Vitro* Characterization of Fluorogenic Chemical Tools to Study Human Carboxylesterases (CESs)"

9. **EIU 15th Annual Student Research and Creative Activity Conference,** Biochemistry Session 1, Charleston, IL, April 21, 2023.
Knebel, S. J.;‡ **Beck, M. W.** "Chemical Biology Approach to Annotate the Influence of Sequence Variations on CES1 Activity in Live Cells."

8. **EIU 15th Annual Student Research and Creative Activity Conference,** Biochemistry Session 1, Charleston, IL, April 21, 2023.
Walk, M. R.;‡,# **Beck, M. W.** "Synthesis and Characterization of Chemical Tools to Study Human Carboxylesterases (CESs)."

7. **EIU 15th Annual Student Research and Creative Activity Conference,** Biochemistry Session 2, Charleston, IL, April 21, 2023.
Vasquez, P.;‡,# **Beck, M. W.** "Peroxisome-Targeting Chemical Technologies and Tools to Study Subcellular Chemistry"

6. **EIU 15th Annual Student Research and Creative Activity Conference,** Biochemistry Session 2, Charleston, IL, April 21, 2023.
Karns, C. J.;‡ **Beck, M. W.** "Fluorescein-based Fluorogenic Chemical Tools to Study Human Carboxylesterases in Live Cells."

5. **115th Annual Meeting of the Illinois State Academy of Science,** Bradley University, April 15, 2023.
   Knebel, S. J.;‡ **Beck, M. W.** "Chemical Biology Approach to Annotate the Influence of Sequence Variations on CES1 Activity in Live Cells."

4. **The 265th National Meeting of the American Chemical Society**, Division of Biological Chemistry: Graduate Student Symposium, Indianapolis, IN, March 30, 2023.
   Knebel, S. J.;‡ **Beck, M. W.** "Chemical Biology Approach to Annotate the Influence of Sequence Variations on CES1 Activity in Live Cells."

3. **The 265th National Meeting of the American Chemical Society**, Division of Biological Chemistry: Graduate Student Symposium, Indianapolis, IN, March 29, 2023.
   Karns, C. J.;‡ Spidle, T. P.;# Flaig, L. H.;# Singh, A.; **Beck, M. W.** "Fluorescein-Based Fluorogenic Chemical Tools to Study Human Carboxylesterases in Live Cells."

2. **112th Annual Meeting of the Illinois State Academy of Science,** Eastern Illinois University, Charleston, IL, April 10, 2021.
   Singh, A.;‡ **Beck, M. W.** "Evaluation of Fluorescein-Based Fluorescent Probe for Monitoring of Carboxylesterase 1 (CES1) Activity in Living Cells."
   Presented Electronically Due to COVID-19 Pandemic
   Received First Place Graduate Oral Presentation in Division Award

1. **112th Annual Meeting of the Illinois State Academy of Science,** Eastern Illinois University, Charleston, IL, April 10, 2021.
   Fuller-Svarz, K.;‡ Olupothage, K.; **Beck, M. W.**; Karunarathne, A.; Periyannan, G. "Development and Evaluation of a Fluorescent Probe to Detect the Expression of Glutamate Carboxypeptidase II."
   Presented Electronically Due to COVID-19 Pandemic
   Received First Place Graduate Oral Presentation in Division Award

Student and Mentee Poster Presentations

128. **EIU Department of Biological Sciences 2026 Research Conference & Scholarship Recognition**, Charleston, IL, April 22, 2026
   Agans, R. T.;‡,# Hanlan, T.S.;# Duke, R. L.;# Legge, S. M. R.;# **Beck, M. W.** "Development of Fluorescence-Based Assays to Assess Cancer Drug Activation by CES2"

127. **EIU 18th Annual Student Research and Creative Activity Conference,** Charleston, IL, April 22, 2026
   Silva, L. A.;‡,# Anderson, Q.;# **Beck, M. W.** "Development of Assays to Study Human Carboxylesterase (CES) Non-Synonymous SNP Activity."

126. **EIU 18th Annual Student Research and Creative Activity Conference,** Charleston, IL, April 22, 2026
   Hortenstine, S. P.;‡,# Adusah, E.; Drozs, M. F.;# Johnson, R. J.; Hoops, G. C.; **Beck, M. W.** "Screening a Library of Fluorogenic Esters to Optimize Specificity for Human Carboxylesterase 1 (CES1)."

125. **EIU 18th Annual Student Research and Creative Activity Conference,** Charleston, IL, April 22, 2026
   Fuentes, I.‡,# Hortenstine, S. P.;# Adusah, E.; **Beck, M. W.** "Utilizing Generative Artificial Intelligence (AI) to Model Human Carboxylesterase (CES) Interactions with Fluorogenic Chemical Tools."

124. **EIU 18th Annual Student Research and Creative Activity Conference,** Charleston, IL, April 22, 2026
   Villalobos, L.;‡,# Booth, J.;# Adusah, E.; **Beck, M. W.** "Optimizing Specificity of Fluorogenic Carbonates for Human Carboxylesterase 1 (CES1)."

123. **EIU 18th Annual Student Research and Creative Activity Conference,** Charleston, IL, April 22, 2026
   Plaza, A. A. ‡,# Booth, J.;# Villalobos, L.;# **Beck, M. W.** "Synthesis of Coumarin-Based Fluorogenic Chemical Tools to Study CES1"

122. **EIU 18th Annual Student Research and Creative Activity Conference,** Charleston, IL, April 22, 2026
   Agans, R. T.;‡,# Hanlan, T.S.;# Duke, R. L.;# Legge, S. M. R.;# **Beck, M. W.** "Development of Fluorescence-Based Assays to Assess Cancer Drug Activation by CES2"

121. **2026 National Conference on Undergraduate Research**, Richmond, VA, April 14, 2026.
Booth, J.; ‡,# Villalobos, L.;# Adusah, E.; **Beck, M. W.** "Illuminating Human Drug Metabolizing Enzymes Through Structure:Activity Relationship (SAR) Studies of Carbonate-Based Fluorogenic Chemical Tools"

120. **2026 National Conference on Undergraduate Research**, Richmond, VA, April 14, 2026.
Singleton, J. R.; ‡,# Booth, J.;# Plaza, A. A.;# **Beck, M. W.** "Design and Synthesis of Human Carboxylesterase 1 (CES1)-Specific Fluorogenic Chemical Tools Using Self-Immolative Linkers"

119. **2026 National Conference on Undergraduate Research**, Richmond, VA, April 14, 2026.
Agans, R. T.;‡,# Hanlan, T.S.;# Duke, R. L.;# Legge, S. M. R.;# **Beck, M. W.** "Development of Fluorescence-Based Assays to Assess Cancer Drug Activation by CES2"

118. **2026 National Conference on Undergraduate Research**, Richmond, VA, April 14, 2026.
Fuentes, I.‡,# Hortenstine, S. P.;# Adusah, E.; **Beck, M. W.** "Utilizing Generative Artificial Intelligence (AI) to Model Human Carboxylesterase (CES) Interactions with Fluorogenic Chemical Tools."

117. **2026 National Conference on Undergraduate Research**, Richmond, VA, April 14, 2026.
Villalobos, L.; ‡,# Booth, J.;# Adusah, E.; **Beck, M. W.** "Optimizing Specificity of Fluorogenic Carbonates for Human Carboxylesterase 1 (CES1)."

116. **The 271st National Meeting of the American Chemical Society,** Undergraduate Research Posters: Biochemistry Session, Atlanta, GA, March 23, 2026.
Anderson, Q.;‡,# Teibowei, J.; Adusah, E.; Knebel, S. J.; **Beck, M. W.** "Determining Influence of Sequence Variations on CES1 Activity"

115. **The 271st National Meeting of the American Chemical Society,** Undergraduate Research Posters: Biochemistry Session, Atlanta, GA, March 23, 2026.
Plaza, A. A. ‡,# Booth, J.;# Villalobos, L.;# **Beck, M. W.** "Synthesis of Coumarin-Based Fluorogenic Chemical Tools to Study CES1"

114. **The 271st National Meeting of the American Chemical Society,** Undergraduate Research Posters: Biochemistry Session, Atlanta, GA, March 23, 2026.
Villalobos, L.; ‡,# Booth, J.;# Adusah, E.; **Beck, M. W.** "Optimizing Specificity of Fluorogenic Carbonates for Human Carboxylesterase 1 (CES1)."

113. **The 271st National Meeting of the American Chemical Society,** Undergraduate Research Posters: Biochemistry Session, Atlanta, GA, March 23, 2026.
Fuentes, I.‡,# Hortenstine, S. P.;# Adusah, E.; **Beck, M. W.** "Utilizing Generative Artificial Intelligence (AI) to Model Human Carboxylesterase (CES) Interactions with Fluorogenic Chemical Tools."

112. **The 271st National Meeting of the American Chemical Society,** Undergraduate Research Posters: Biochemistry Session, Atlanta, GA, March 23, 2026.
Agans, R. T.;‡,# Hanlan, T.S.;# Duke, R. L.;# Legge, S. M. R.;# **Beck, M. W.** "Development of Fluorescence-Based Assays to Assess Cancer Drug Activation by CES2"

111. **The 271st National Meeting of the American Chemical Society,** Undergraduate Research Posters: Biochemistry Session, Atlanta, GA, March 23, 2026.
Singleton, J. R.; ‡,# Booth, J.;# Plaza, A. A.;# **Beck, M. W.** "Design and Synthesis of Human Carboxylesterase 1 (CES1)-Specific Fluorogenic Chemical Tools Using Self-Immolative Linkers"

110. **The 271st National Meeting of the American Chemical Society,** Undergraduate Research Posters: Biochemistry Session, Atlanta, GA, March 23, 2026.
Hortenstine, S. P.;‡,# Adusah, E.; Drozs, M. F.;# Johnson, R. J.; Hoops, G. C.; **Beck, M. W.** "Screening a Library of Fluorogenic Esters to Optimize Specificity for Human Carboxylesterase 1 (CES1)."

109. **The 271st National Meeting of the American Chemical Society,** Undergraduate Research Posters: Biochemistry Session, Atlanta, GA, March 23, 2026.

Silva, L. A.;[‡,#] Anderson, Q.;[#] **Beck, M. W.** "Development of Assays to Study Human Carboxylesterase (CES) Non-Synonymous SNP Activity."

108. **The 271st National Meeting of the American Chemical Society,** Undergraduate and Graduate Research in Biochemistry and Chemical Biology Session, Atlanta, GA, March 22, 2026.
Booth, J.; [‡,#] Villalobos, L.;[#] Adusah, E.; **Beck, M. W.** "Illuminating Human Drug Metabolizing Enzymes Through Structure:Activity Relationship (SAR) Studies of Carbonate-Based Fluorogenic Chemical Tools"

107. **The 271st National Meeting of the American Chemical Society,** Undergraduate and Graduate Research in Biochemistry and Chemical Biology Session, Atlanta, GA, March 22, 2026.
Drozs, M. F.; [‡,#] Adusah, E.; Spidle, T. P.; [#] Hoops, G. Johnson, R. J.; **Beck, M. W.** "Structure-Activity Relationship Studies of Human Carboxylesterases Using a Fluorogenic Ester Library"

106. **The 271st National Meeting of the American Chemical Society,** Undergraduate and Graduate Research in Biochemistry and Chemical Biology Session, Atlanta, GA, March 22, 2026.
Teibowei, J.;[‡] Booth, J.;[#] **Beck, M.W.** "Design and Synthesis of Fluorogenic Chemical Tools Based on Rhodol Scaffolds to Study Human Carboxylesterase 1 (CES1)"

105. **10th Annual East Central Illinois ACS Local Section Undergraduate Research Conference**, Champaign, IL, November 8, 2025.
Plaza, A. A. [‡,#] Booth, J.;[#] Villalobos, L.;[#] **Beck, M. W.** "Synthesis of Coumarin-Based Fluorogenic Chemical Tools to Study CES1"

104. **10th Annual East Central Illinois ACS Local Section Undergraduate Research Conference**, Champaign, IL, November 8, 2025.
Booth, J.; [‡,#] Villalobos, L.;[#] Adusah, E.; **Beck, M. W.** "Improving Fluorescein-Based Fluorogenic Carbonates as Chemical Tools to Study Human Carboxylesterase 1 (CES1) Through Structure-Activity Relationship (SAR) Studies"
Received Outstanding Presentation Award

103. **10th Annual East Central Illinois ACS Local Section Undergraduate Research Conference**, Champaign, IL, November 8, 2025.
Singleton, J. R.; [‡,#] Booth, J.;[#] Plaza, A. A.;[#] **Beck, M. W.** "Design and Synthesis of Human Carboxylesterase 1 (CES1)-Specific Fluorogenic Chemical Tools Using Self-Immolative Linkers"

102. **10th Annual East Central Illinois ACS Local Section Undergraduate Research Conference**, Champaign, IL, November 8, 2025.
Agans, R. T.;[‡,#] Hanlan, T.S.;[#] Duke, R. L.;[#] Legge, S. M. R.;[#] **Beck, M. W.** "Development of Fluorescence-Based Assays to Assess Cancer Drug Activation by CES2"

101. **10th Annual East Central Illinois ACS Local Section Undergraduate Research Conference**, Champaign, IL, November 8, 2025.
Silva, L. A.;[‡,#] Anderson, Q.;[#] **Beck, M. W.** "Development of Assays to Study Human Carboxylesterase (CES) Non-Synonymous SNP Activity."

100. **10th Annual East Central Illinois ACS Local Section Undergraduate Research Conference**, Champaign, IL, November 8, 2025.
Anderson, Q.;[‡,#] Teibowei, J.; Adusah, E.; Knebel, S. J.; **Beck, M. W.** "Determining Influence of Sequence Variations on CES1 Activity"

99. **10th Annual East Central Illinois ACS Local Section Undergraduate Research Conference**, Champaign, IL, November 8, 2025.
Fuentes, I.[‡,#] Hortenstine, S. P.;[#] Adusah, E.; **Beck, M. W.** "Utilizing Generative Artificial Intelligence (AI) to Model Human Carboxylesterase (CES) Interactions with Fluorogenic Chemical Tools."

98. **10th Annual East Central Illinois ACS Local Section Undergraduate Research Conference**, Champaign, IL, November 8, 2025.

Hortenstine, S. P.;[‡,#] Adusah, E.; Drozs, M. F.;[#] Johnson, R. J.; Hoops, G. C.; **Beck, M. W.** "Screening a Library of Fluorogenic Esters to Optimize Specificity for Human Carboxylesterase 1 (CES1)."
Received Outstanding Presentation Award

97. **10th Annual East Central Illinois ACS Local Section Undergraduate Research Conference**, Champaign, IL, November 8, 2025.
Villalobos, L.;[‡,#] Booth, J.;[#] Adusah, E.; **Beck, M. W.** "Optimizing Specificity of Fluorogenic Carbonates for Human Carboxylesterase 1 (CES1)."

96. **24th Edition of the Department of Chemistry and Biochemistry Student Research Celebration**, Charleston, IL, November 5th, 2025.
Hortenstine, S. P.;[‡,#] Adusah, E.; Drozs, M. F.;[#] Johnson, R. J.; Hoops, G. C.; **Beck, M. W.** "Screening a Library of Fluorogenic Esters to Optimize Specificity for Human Carboxylesterase 1 (CES1)."

95. **24th Edition of the Department of Chemistry and Biochemistry Student Research Celebration**, Charleston, IL, November 5th, 2025.
Booth, J.; [‡,#] Villalobos,[#] L. Adusah, E.; **Beck, M. W.** "Improving Fluorescein-Based Fluorogenic Carbonates as Chemical Tools to Study Human Carboxylesterase 1 (CES1) Through Structure-Activity Relationship (SAR) Studies"

94. **24th Edition of the Department of Chemistry and Biochemistry Student Research Celebration**, Charleston, IL, November 5th, 2025.
Singleton, J. R.; [‡,#] Booth, J.;[#] Plaza, A. A.;[#] **Beck, M. W.** "Design and Synthesis of Human Carboxylesterase 1 (CES1)-Specific Fluorogenic Chemical Tools Using Self-Immolative Linkers"

93. **24th Edition of the Department of Chemistry and Biochemistry Student Research Celebration**, Charleston, IL, November 5th, 2025.
Agans, R. T.;[‡,#] Hanlan, T.S.;[#] Duke, R. L.;[#] Legge, S. M. R.;[#] **Beck, M. W.** "Development of Fluorescence-Based Assays to Assess Cancer Drug Activation by CES2"

92. **24th Edition of the Department of Chemistry and Biochemistry Student Research Celebration**, Charleston, IL, November 5th, 2025.
Silva, L. A.;[‡,#] Anderson, Q.;[#] **Beck, M. W.** "Development of Assays to Study Human Carboxylesterase (CES) Non-Synonymous SNP Activity."

91. **24th Edition of the Department of Chemistry and Biochemistry Student Research Celebration**, Charleston, IL, November 5th, 2025.
Anderson, Q.;[‡,#] Teibowei, J.; Adusah, E.; Knebel, S. J.; **Beck, M. W.** "Determining Influence of Sequence Variations on CES1 Activity"

90. **24th Edition of the Department of Chemistry and Biochemistry Student Research Celebration**, Charleston, IL, November 5th, 2025.
Fuentes, I.[‡,#] Hortenstine, S. P.;[#] Adusah, E.; **Beck, M. W.** "Utilizing Generative Artificial Intelligence (AI) to Model Human Carboxylesterase (CES) Interactions with Fluorogenic Chemical Tools."

89. **2025 Midwest Regional Meeting of the American Chemical Society**, Biochemistry Poster Presentations, Columba, MO, October 13, 2025.
Booth, J.; [‡,#] Villalobos,[#] L. Adusah, E.; **Beck, M. W.** "Improving Fluorescein-Based Fluorogenic Carbonates as Chemical Tools to Study Human Carboxylesterase 1 (CES1) Through Structure-Activity Relationship (SAR) Studies"

88. **2025 Midwest Regional Meeting of the American Chemical Society, Biochemistry** Poster Presentations, Columbia, MO, October 13, 2025.
Drozs, M. F.[‡,#]; Adusah, E.; Spidle, T. P.; Hoops, G. C.; Johnson, R. J.; **Beck, M. W.** "Structure-Activity Relationship Studies of Human Carboxylesterases Using a Fluorogenic Ester Library"

87. **Department of Biological Sciences Undergraduate Research Showcase,** Charleston, IL May 1, 2025.
Booth, J.;[‡,#] Adusah, E.; **Beck, M. W.** "Design and Synthesis of a Library of Fluorescein-Based Fluorogenic Carbonates for Human Carboxylesterase Structure-Activity Relationship (SAR) Studies."

86. **EIU 17th Annual Student Research and Creative Activity Conference,** Charleston, IL April 25, 2025. Plaza., A. A.;‡,# Booth, J.;# **Beck, M. W.** "Synthesis of Coumarin-based Fluorogenic Chemical Tools to Study CES1."

85. **EIU 17th Annual Student Research and Creative Activity Conference,** Charleston, IL April 25, 2025. Teibowei, J.;‡,# Okolie, C. N.;# Hanlan, T. S.;# **Beck, M. W.** "Non-Polar Amino Acids as Cellular Uptake Moieties for Peroxisome Targeting Fluorophores."

84. **EIU 17th Annual Student Research and Creative Activity Conference,** Charleston, IL April 25, 2025. Okolie, C. N.;‡,# Karns, C. J.; Pearson, A. M.;# Walk, M. R.;# Singh, A.; **Beck, M. W.** "Development of a Fluorogenic Chemical Tool to Study Human Carboxylesterase 2 in Live Cells."

83. **EIU 17th Annual Student Research and Creative Activity Conference,** Charleston, IL April 25, 2025. Singleton, J R.;‡,# Lucas, C. G.;# Abercrombie, A. D.;# Singh, A.; Spidle T. P.; **Beck, M. W.** "Optimizing genetically-encoded tools to study peroxisomes in live cells."

82. **EIU 17th Annual Student Research and Creative Activity Conference,** Charleston, IL April 25, 2025. Lucas, C. G.‡,#; Kilber, A. W.;# Vasquez, P.# Spidle, T. P.; Timilsena, J. N.; **Beck, M. W.** "PROTACs to study subcellular chemistry."

81. **2025 American Society of Biochemistry and Molecular Biology Annual Meeting**, Chicago, IL April 12-15, 2025.
Lucas, C. G.‡,#; Kilber, A. W.;# Vasquez, P.# Spidle, T. P.; Timilsena, J. N.; **Beck, M. W.** "PROTACs to study subcellular chemistry."

80. **2025 American Society of Biochemistry and Molecular Biology Annual Meeting**, Chicago, IL April 12-15, 2025.
Duke, R. L.; ‡,# Legge, S. M. R.;# Knebel, S. J.; Beck, M. W. "Development of biotechnology to study interindividual variability in human drug metabolism."

79. **2025 American Society of Biochemistry and Molecular Biology Annual Meeting**, Chicago, IL April 12-15, 2025.
Drozs, M. F.; ‡,# Adusah, E.; Spidle, T. P.; # Hoops, G. Johnson, R. J.; **Beck, M. W.** "Structure-activity relationship studies of human carboxylesterases using a fluorogenic ester library."

78. **2025 American Society of Biochemistry and Molecular Biology Annual Meeting**, Chicago, IL April 12-15, 2025.
Adusah, E.;‡ Drozs, M. F.; # Spidle, T. P.; # Hoops, G. Johnson, R. J.; Beck, M. W. "Identification of new fluorogenic chemical tools for studying human carboxylesterase 1 (CES1)."

77. **2025 American Society of Biochemistry and Molecular Biology Annual Meeting**, Chicago, IL April 12-15, 2025.
Singleton, J R.;‡,# Lucas, C. G.;# Abercrombie, A. D.;# Singh, A.; Spidle T. P.; **Beck, M. W.** "Optimizing genetically-encoded tools to study peroxisomes in live cells."

76. **2025 American Society of Biochemistry and Molecular Biology Annual Meeting**, Chicago, IL April 12-15, 2025.
Okolie, C. N.;‡,# Karns, C. J.; Pearson, A. M.;# Walk, M. R.;# Singh, A.; **Beck, M. W.** "Development of a Fluorogenic Chemical Tool to Study Human Carboxylesterase 2 in Live Cells"

75. **2025 American Society of Biochemistry and Molecular Biology Annual Meeting**, Chicago, IL April 12-15, 2025.
Hanlan, T. S.;‡,# Okolie, C. N.;# Thepsomphone, A. T.;# Vinson, A. R.;# **Beck, M. W.** "Development of Cell Permeable Peptide-Based PROTACS to Study Peroxisomal Biochemistry"

74. **2025 American Society of Biochemistry and Molecular Biology Annual Meeting**, Chicago, IL April 12-15, 2025.
Teibowei, J.;‡,# Okolie, C. N.;# Hanlan, T. S.;# **Beck, M. W.** "Non-Polar Amino Acids as Cellular Uptake Moieties for Peroxisome Targeting Fluorophores"

73. **2025 American Society of Biochemistry and Molecular Biology Annual Meeting**, Chicago, IL April 12-15, 2025.
Booth, J.;‡,# Adusah, E.; **Beck, M. W.** "Design and Synthesis of a Library of Fluorescein-Based Fluorogenic Carbonates for Human Carboxylesterase Structure-Activity Relationship (SAR) Studies."

72. **2025 National Conference on Undergraduate Research**, Pittsburg, PA, April 9, 2025.
Booth, J.;‡,# Adusah, E.; **Beck, M. W.** "Design and Synthesis of a Library of Fluorescein-Based Fluorogenic Carbonates for Human Carboxylesterase Structure-Activity Relationship (SAR) Studies."

71. **2025 National Conference on Undergraduate Research**, Pittsburg, PA, April 8, 2025.
Okolie, C. N.;‡,# Karns, C. J.; Pearson, A. M.;# Walk, M. R.;# Singh, A.; **Beck, M. W.** "Development of a Fluorogenic Chemical Tool to Study Human Carboxylesterase 2 in Live Cells"

70. **2025 National Conference on Undergraduate Research**, Pittsburg, PA, April 8, 2025.
Hanlan, T. S.;‡,# Okolie, C. N.;# Thepsomphone, A. T.;# Vinson, A. R.;# **Beck, M. W.** "Development of Cell Permeable Peptide-Based PROTACS to Study Peroxisomal Biochemistry"

69. **2025 National Conference on Undergraduate Research**, Pittsburg, PA, April 8, 2025.
Teibowei, J.;‡,# Okolie, C. N.;# Hanlan, T. S.;# **Beck, M. W.** "Non-Polar Amino Acids as Cellular Uptake Moieties for Peroxisome Targeting Fluorophores"

68. **23rd Edition of the Department of Chemistry and Biochemistry Student Research Celebration**, Charleston, IL, November 13th, 2024.
Adusah, A.‡; Drozs, M. F.#; Spidle, T. P.# Hoops, G. C.; Johnson, R. J.; **Beck, M. W.** "Identification of New Fluorogenic Chemical Tools for Studying Human Carboxylesterase 1"

67. **23rd Edition of the Department of Chemistry and Biochemistry Student Research Celebration**, Charleston, IL, November 13th, 2024.
Teibowei, J.;‡,# Okolie, C. N.;# Hanlan, T. S.;# **Beck, M. W.** "Non-Polar Amino Acids as Cellular Uptake Moieties for Peroxisome Targeting Fluorophores"

66. **23rd Edition of the Department of Chemistry and Biochemistry Student Research Celebration**, Charleston, IL, November 13th, 2024.
Singleton, J. R.;‡,# Lucas, C. G;# Abercrombie, A. D.;# Spidle, T. P.; Singh, A.; **Beck, M. W.** "Optimizing Genetically-Encoded Tools to Study Peroxisomes in Live Cells"

65. **23rd Edition of the Department of Chemistry and Biochemistry Student Research Celebration**, Charleston, IL, November 13th, 2024.
Pearson, A. M.;‡,# Walk, M. R.;# Karns, C. J.; Singh, A.; **Beck, M. W. "**Characterization of a Fluorogenic Chemical Tool for Human Carboxylesterase 2."

64. **23rd Edition of the Department of Chemistry and Biochemistry Student Research Celebration**, Charleston, IL, November 13th, 2024.
Okolie, C. N.;‡,# Teibowei, J.;# Hanlan, T. S.;# Timilsena, J. N.; Spidle T. P.; **Beck, M. W. "**Design and Synthesis of Peroxisome Import Moieties."

63. **23rd Edition of the Department of Chemistry and Biochemistry Student Research Celebration**, Charleston, IL, November 13th, 2024.
Lucas**,** C. G.;‡,# Vasquez, P.;# Spidle, T. P.; Timilsena, J. N.; **Beck, M. W. "**Peroxisome-Targeting Chemical Technologies and Tools to Study Subcellular Chemistry"

62. **23rd Edition of the Department of Chemistry and Biochemistry Student Research Celebration**, Charleston, IL, November 13th, 2024.
Hanlan, T. S.;‡,# Okolie, C. N.;# Thepsomphone, A. T.;# Vinson, A. R.;# **Beck, M. W.** "Development of Cell Permeable Peptide-Based PROTACS to Study Peroxisomal Biochemistry"

61. **23rd Edition of the Department of Chemistry and Biochemistry Student Research Celebration**, Charleston, IL, November 13th, 2024.

Duke, R. L;‡,# Legge, S. M. R.;# Knebel, S. J.; **Beck, M. W.** "Development of Biotechnology to Study Interindividual Variability in Human Drug Metabolism"

60. **23rd Edition of the Department of Chemistry and Biochemistry Student Research Celebration**, Charleston, IL, November 13th, 2024.
Droz, M. F.;‡,# Adusah, E.; Spidle, T. P.;# Hoops, G. C.; Johnson, R. J.; **Beck, M. W. "**Structure-Activity Relationship Studies of Human Carboxylesterases Using a Fluorogenic Ester Library."

59. **23rd Edition of the Department of Chemistry and Biochemistry Student Research Celebration**, Charleston, IL, November 13th, 2024.
Booth, J.;‡,# Adusah, E.; **Beck, M. W.** Design and Synthesis of a Library of Fluorescein-Based Fluorogenic Carbonates for Human Carboxylesterase Structure-Activity Relationship (SAR) Studies."

58. **9th Annual East Central Illinois ACS Local Section Undergraduate Research Conference**, Champaign, IL, October 19, 2024.
Teibowei, J.;‡,# Okolie, C. N.;# Hanlan, T. S.;# **Beck, M. W.** "Non-Polar Amino Acids as Cellular Uptake Moieties for Peroxisome Targeting Fluorophores"

57. **9th Annual East Central Illinois ACS Local Section Undergraduate Research Conference**, Champaign, IL, October 19, 2024**.**
Singleton, J. R.;‡,# Lucas, C. G;# Abercrombie, A. D.;# Spidle, T. P.; Singh, A.; **Beck, M. W.** "Optimizing Genetically-Encoded Tools to Study Peroxisomes in Live Cells"

56. **9th Annual East Central Illinois ACS Local Section Undergraduate Research Conference**, Champaign, IL, October 19, 2024**.**
Pearson, A. M.;‡,# Walk, M. R.;# Karns, C. J.; Singh, A.; **Beck, M. W. "**Characterization of a Fluorogenic Chemical Tool for Human Carboxylesterase 2."

55. **9th Annual East Central Illinois ACS Local Section Undergraduate Research Conference**, Champaign, IL, October 19, 2024.
Okolie, C. N.;‡,# Teibowei, J.;# Hanlan, T. S.;# Timilsena, J. N.; Spidle T. P.; **Beck, M. W. "**Design and Synthesis of Peroxisome Import Moieties."

54. **9th Annual East Central Illinois ACS Local Section Undergraduate Research Conference**, Champaign, IL, October 19, 2024**.**
Lucas**,** C. G.;‡,# Vasquez, P.;# Spidle, T. P.; Timilsena, J. N.; **Beck, M. W. "**Peroxisome-Targeting Chemical Technologies and Tools to Study Subcellular Chemistry"

53. **9th Annual East Central Illinois ACS Local Section Undergraduate Research Conference**, Champaign, IL, October 19, 2024.
Hanlan, T. S.;‡,# Okolie, C. N.;# Thepsomphone, A. T.;# Vinson, A. R.;# **Beck, M. W.** "Development of Cell Permeable Peptide-Based PROTACS to Study Peroxisomal Biochemistry"

52. **9th Annual East Central Illinois ACS Local Section Undergraduate Research Conference**, Champaign, IL, October 19, 2024**.**
Duke, R. L;‡,# Legge, S. M. R.;# Knebel, S. J.; **Beck, M. W.** "Development of Biotechnology to Study Interindividual Variability in Human Drug Metabolism"

51. **9th Annual East Central Illinois ACS Local Section Undergraduate Research Conference**, Champaign, IL, October 19, 2024**.**
Droz, M. F.;‡,# Adusah, E.; Spidle, T. P.;# Hoops, G. C.; Johnson, R. J.; **Beck, M. W. "**Structure-Activity Relationship Studies of Human Carboxylesterases Using a Fluorogenic Ester Library."

50. **9th Annual East Central Illinois ACS Local Section Undergraduate Research Conference**, Champaign, IL, October 19, 2024**.**
Booth, J.;‡,# Adusah, E.; **Beck, M. W.** Design and Synthesis of a Library of Fluorescein-Based Fluorogenic Carbonates for Human Carboxylesterase Structure-Activity Relationship (SAR) Studies."

49. **EIU 16th Annual Student Research and Creative Activity Conference,** Charleston, IL, April 19, 2024.

Adusah, E.;‡ Drozs, M.F.;# Spidle, T. P.;# Hoops, G. C.; Johnson, R. J.; **Beck, M. W. "**Identification of New Fluorogenic Chemical Tools for Studying Human Carboxylesterase 2 (CES-2)."

48. **EIU 16th Annual Student Research and Creative Activity Conference,** Charleston, IL, April 19, 2024. Vinson, A. R.;‡,# Spidle, T. P.; Timilsena, J. N.; Vasquez, P.;# **Beck, M. W.** "Development of PROTACs to Study Peroxisomal Biochemistry."

47. **EIU 16th Annual Student Research and Creative Activity Conference,** Charleston, IL, April 19, 2024. Drozs, M. F.;‡, C. J.; Spidle, T. P.;# Hoops, G. C.; Johnson, R. J.; **Beck, M. W.** "Structure-Activity Relationship Studies of Human Carboxylesterases Using a Fluorogenic Ester Library"

46. **EIU 16th Annual Student Research and Creative Activity Conference,** Charleston, IL, April 19, 2024. Flaig, L. H.;‡,# Kilber, A. W. N.;# Timilsena, J. N.; **Beck, M. W.** "Design and Synthesis of Peroxisome Targeted Fluorophores"

45. **EIU 16th Annual Student Research and Creative Activity Conference,** Charleston, IL, April 19, 2024. Legge, S. M. R.;‡,# Knebel, S. J.; Singh, A. S.; **Beck, M. W. "**Optimization of Human Carboxylesterase Activity Assays to Enable Personalized Medicine."

44**. Department of Biological Sciences Undergraduate Research Showcase,** Charleston, IL, April 16, 2024.
Okolie; C. N.; ‡,# Timilsena, J. N.; Spidle, T. P.; **Beck, M. W. "**Design and Synthesis of Peroxisome Import Moieties."

43**. Department of Biological Sciences Undergraduate Research Showcase,** Charleston, IL, April 16, 2024.
Walk, M. R.;‡,# Karns, C. J.; Singh, A. S.; **Beck, M. W. "**Development of Chemical Tools to Study Human Carboxylesterase 2 (CES2)."

42**. Department of Biological Sciences Undergraduate Research Showcase,** Charleston, IL, April 16, 2024.
Vinson, A. R.;‡,# Spidle, T. P.; Timilsena, J. N.; Vasquez, P.;# **Beck, M. W.** "Development of PROTACs to Study Peroxisomal Biochemistry."

41. **Department of Biological Sciences Undergraduate Research Showcase,** Charleston, IL, April 16, 2024.
Legge, S. M. R.;‡,# Knebel, S. J.; Singh, A. S.; **Beck, M. W. "**Optimization of Human Carboxylesterase Activity Assays to Enable Personalized Medicine."

40. **116th Annual Meeting of the Illinois State Academy of Science,** Millikin University, April 13, 2024.
Legge, S. M. R.;‡,# Knebel, S. J.; Singh, A. S.; **Beck, M. W. "**Optimization of Human Carboxylesterase Activity Assays to Enable Personalized Medicine."

39. **2024 National Conference on Undergraduate Research**, Long Beach, CA, April 8-10, 2024.
Walk, M. R.;‡,# Karns, C. J.; Singh, A. S.; **Beck, M. W. "**Development of Chemical Tools to Study Human Carboxylesterase 2 (CES2)."

38**. 2024 National Conference on Undergraduate Research**, Long Beach, CA, April 8-10, 2024.
Flaig, L. H.;‡,# Kilber, A. W. N.;# Timilsena, J. N.; **Beck, M. W.** "Design and Synthesis of Peroxisome Targeted Fluorophores"

37. **2024 National Conference on Undergraduate Research**, Long Beach, CA, April 8-10, 2024.
Drozs, M. F.;‡,# Karns, C. J.; Spidle, T. P.;# Hoops, G. C.; Johnson, R. J.; **Beck, M. W.** "Structure-Activity Relationship Studies of Human Carboxylesterases Using a Fluorogenic Ester Library"

36. **2024 National Conference on Undergraduate Research**, Long Beach, CA, April 8-10, 2024.
Okolie; C. N.; ‡,# Timilsena, J. N.; Spidle, T. P.; **Beck, M. W. "**Design and Synthesis of Peroxisome Import Moieties"

35. **2024 National Conference on Undergraduate Research**, Long Beach, CA, April 8-10, 2024.

Vinson, A. R.;‡,# Spidle, T. P.; Timilsena, J. N.; Vasquez, P.;# **Beck, M. W.** "Development of PROTACs to Study Peroxisomal Biochemistry."

34. **2024 National Conference on Undergraduate Research**, Long Beach, CA, April 8-10, 2024.
Legge, S. M. R.;‡,# Knebel, S. J.; Singh, A. S.; **Beck, M. W. "**Optimization of Human Carboxylesterase Activity Assays to Enable Personalized Medicine."

33. **The 267th National Meeting of the American Chemical Society,** New Orleans, LA, March 17-21, 2024.
Karns, C. J.; ‡ Spidle, T. P.;# Gao, M.; # Nehls, J. E.; **Beck, M. W. "**Fluorescein-Based Fluorogenic Chemical Tools to Shed Light on Ester Drug Metabolism in Live Cells."
Invited Presentation at Sci-Mix (Poster session for best presentations in each division).

32. **The 267th National Meeting of the American Chemical Society**, New Orleans, LA, March 18, 2024.
Flaig, L. H.;‡,# Kilber, A. W. N.;# Timilsena, J. N.; **Beck, M. W.** "Design and Synthesis of Peroxisome Targeted Fluorophores"

31. **The 267th National Meeting of the American Chemical Society**, New Orleans, LA, March 18, 2024.
Drozs, M. F.;‡,# Karns, C. J.; Spidle, T. P.;# Hoops, G. C.; Johnson, R. J.; **Beck, M. W.** "Structure-Activity Relationship Studies of Human Carboxylesterases Using a Fluorogenic Ester Library"

30. **The 267th National Meeting of the American Chemical Society**, New Orleans, LA, March 18, 2024.
Okolie; C. N.; ‡,# Timilsena, J. N.; Spidle, T. P.; **Beck, M. W. "**Design and Synthesis of Peroxisome Import Moieties"

29. **The 267th National Meeting of the American Chemical Society**, New Orleans, LA, March 18, 2024.
Vinson, A. R.;‡,# Spidle, T. P.; Timilsena, J. N.; Vasquez, P.;# **Beck, M. W.** "Development of PROTACs to Study Peroxisomal Biochemistry."

28. **The 267th National Meeting of the American Chemical Society**, New Orleans, LA, March 18, 2024.
Legge, S. M. R.;‡,# Knebel, S. J.; Singh, A. S.; **Beck, M. W. "**Optimization of Human Carboxylesterase Activity Assays to Enable Personalized Medicine."

27. **The 267th National Meeting of the American Chemical Society**, New Orleans, LA, March 17, 2024.
Spidle, T. P.;‡ **Beck, M. W. "**Lighting Up General Chemistry with a Chemiluminescent Chemical Biology Experiment."

26. **22nd Edition of the Department of Chemistry and Biochemistry Student Research Celebration**, Charleston, IL, November 6, 2023.
Abercrombie, A. D.;‡,# Singh, A. S.; **Beck, M. W.** "Molecular Biology Approaches for Studying Peroxisomal Biochemistry"

25. **22nd Edition of the Department of Chemistry and Biochemistry Student Research Celebration**, Charleston, IL, November 6, 2023. Okolie; C. N.; ‡,# **Beck, M. W. "**Development of Cell Permeable Peroxisome Import Moieties"

24. **22nd Edition of the Department of Chemistry and Biochemistry Student Research Celebration**, Charleston, IL, November 6, 2023.
Walk, M. R.; ‡# Karns, C. J.; Singh, A. S.; **Beck, M. W.** "Synthesis and Characterization of Chemical Tools to Study Human Carboxylesterases (CESs)"

23. **8th Annual East Central Illinois ACS Local Section Undergraduate Research Conference**, October 28, 2023**.**
Walk, M. R.; ‡# Karns, C. J.; Singh, A. S.; **Beck, M. W.** "Synthesis and Characterization of Chemical Tools to Study Human Carboxylesterases (CESs)"
Received Outstanding Poster Award

22. **8th Annual East Central Illinois ACS Local Section Undergraduate Research Conference**, October 28, 2023.
Okolie; C. N.; ‡,# **Beck, M. W. "**Development of Cell Permeable Peroxisome Import Moieties"

21. **8th Annual East Central Illinois ACS Local Section Undergraduate Research Conference**, October 28, 2023.
Abercrombie, A. D.; ‡,# Singh, A. S.; **Beck, M. W.** "Molecular Biology Approaches for Studying Peroxisomal Biochemistry"

20. **2023 Joint Midwest - Great Lakes Regional ACS Meeting,** St. Charles, MO, October 19, 2023.
Okolie; C. N.; ‡,# **Beck, M. W. "**Development of Cell Permeable Peroxisome Import Moieties"

19. **American Society for Pharmacology and Experimental Therapeutics (ASPET) 2023**, St. Louis, MO, May 20, 2023.
Karns, C. J.;‡ Walk, M. R.;# Singh, A.; Gao, M.;# Spidle, T. P.;# **Beck, M. W.** "Development and Characterization of Chemical Tools to Study Ester Drug Metabolic Enzymes in Live Cells " DOI: 10.1124/jpet.122.182480

18. **EIU 15th Annual Student Research and Creative Activity Conference,** Charleston, IL, April 21, 2023.
Okolie; C. N.; ‡,# **Beck, M. W.** "Development of Less Polar Peroxisome Import Moieties"

17. **Distinguished Graduate Student Awards Ceremony,** Charleston, IL, April 11, 2023.
Knebel, S. J.;‡ **Beck, M. W.** "Chemical Biology Approach to Uncover Influence of Sequence Variations on CES1 Activity in Live Cells."

16. **Distinguished Graduate Student Awards Ceremony,** Charleston, IL, April 11, 2023.
Karns, C. J.;‡ Spidle, T. P.;# Flaig, L. H.;# Singh, A.; **Beck, M. W.** "Fluorescein-Based Fluorogenic Chemical Tools to Study Human Carboxylesterases in Live Cells."

15. **The 265th National Meeting of the American Chemical Society**, Indianapolis, IN, March 26-30, 2023.
Walk, M. R.;‡,# **Beck, M. W.** "Synthesis and Characterization of Chemical Tools to Study Human Carboxylesterases (CESs)."

14. **The 265th National Meeting of the American Chemical Society**, Indianapolis, IN, March 26-30, 2023.
Spidle, T. P.; ‡,# Nehls, J. E.; Karns, C. J.; Gao, M.;# **Beck, M. W.** "*In Vitro* Characterization of Fluorogenic Chemical Tools to Study Human Carboxylesterases (CESs)."

13. **7th Annual East Central Illinois ACS Local Section Undergraduate Research Conference**, Champaign, IL. November 12, 2022.
Spidle, T. P.; ‡,# Singh, A.; Gao, M.;# Karns, C. J.; **Beck, M. W. "**Evaluation of an Ethyl Carbonate Masked Fluorophore as a Fluorogenic Chemical Tool for Human Carboxylesterase 1."

12. **21st Edition of the Department of Chemistry and Biochemistry Student Research Celebration**, Charleston, IL, November 9, 2022.
Knebel, S. J.;‡ Singh, A.; **Beck, M. W.** "Chemical Biology Approach to Unravel Sequence Variations on CES1 Activity in Live Cells."

11. **21st Edition of the Department of Chemistry and Biochemistry Student Research Celebration**, Charleston, IL, November 9, 2022.
Walk, M. R.;‡,# Karns, C. J.;‡ Singh, A.; Gao, M.; **Beck, M. W.** "Development and Characterization of Chemical Tools to Study Human Carboxylesterase 2 (CES2)."

10. **21st Edition of the Department of Chemistry and Biochemistry Student Research Celebration**, Charleston, IL, November 9, 2022.
Spidle, T. P.;‡,# Singh, A.; Gao, M.;# Karns, C. J.; **Beck, M. W. "**Evaluation of an Ethyl Carbonate Masked Fluorophore as a Fluorogenic Chemical tool for Human Carboxylesterase 1."

9. **21st Edition of the Department of Chemistry and Biochemistry Student Research Celebration**, Charleston, IL, November 9, 2022.
Kilber, A. W. N.;‡,# Vasquez, P.;‡,# Karns, C. J.; Timilsena, J. N.; **Beck, M. W.** "Peroxisome Targeting Chemical Technologies and Tools to Study Subcellular Chemistry."

8. **The 264th National Meeting of the American Chemical Society**, Chicago, IL, August 21-25, 2022.

Karns, C. J.;‡ Flaig, L. H.;# Spidle, T. P.;# Singh, A.; **Beck, M. W.**, "Development and Characterization of Fluorescent Chemical Tools to Study Human Carboxylesterase 2 (CES2)."

7. **The 264th National Meeting of the American Chemical Society**, Chicago, IL, August 21-25, 2022.
Knebel, S. J.;‡ **Beck, M. W.** "Chemical Biology Approach to Uncover Influence of Sequence Variations on CES1 Activity in Live Cells."

6. **EIU Student Research and Creative Activity Conference**, Charleston, IL, April 1, 2022.
Knebel, S. J.;‡ Singh, A.; **Beck, M. W.** "Chemical Biology Approach to Uncover Influence of Sequence Variations on CES1 Activity in Live Cells."

5. **Experimental Biology 2022**, Philadelphia, PA April 1-5, 2022.
Karns, C. J.;‡# Flaig, L. H.;# Singh, A.; Gao, M.;# **Beck, M. W.** "Development and Characterization of Fluorescent Chemical Tools to Study Human Carboxylesterase 2 (CES2)."

4. **6th Annual East Central Illinois ACS Local Section Undergraduate Research Conference**, November 13, 2021.
Karns, C. J.; ‡# Singh, A.; Gao, M.;# **Beck, M. W.** "Development and Characterization of Fluorescent Chemical Tools to Study Human Carboxylesterase 1 (CES1)."
Received Outstanding Presentation Award
Presented Electronically Due to COVID-19 Pandemic

3. **20th Edition of the Department of Chemistry and Biochemistry Student Research Celebration**, Charleston, IL, November 10, 2021.
Karns, C. J.; ‡# Singh, A.; Gao, M.;# **Beck, M. W.** "Using Chemistry to Study Drug Metabolism: Chemical Tools to Monitor Carboxylesterase 1 (CES1) Activity in Live Cells."

2. **19th Edition of the Department of Chemistry and Biochemistry Student Research Celebration**, Charleston, IL, November 18, 2020.
Singh, A.;‡ **Beck, M. W.** "Evaluation of Fluorescein-Based Fluorescent Probe for Specific Monitoring of Carboxylesterase 1 (CES1) Activity in Living Cells."
Presented Electronically Due to COVID-19 Pandemic

1. **EIU Student Research and Creative Activity Conference 2020,** Charleston, IL, April 13-17, 2020.
Timilsena, J. N.;‡ **Beck, M. W.** "Small Molecule Chemical Tools for the Modulation of Subcellular Trafficking."
Presented Electronically Due to COVID-19 Pandemic

Research Support

Current

NIH R15 AREA NIH R15GM152890 (2/1/2024-1/31/2027) $300,000 direct
National Institute of General Medical Studies (NIGMS)
"Chemical Biology Approaches to Understand Interindividual Variability in Carboxylesterase Activity"
Role: PI

EIU Council on Faculty Research FY 2025 Grant (11/01/2025-6/30/2026) $5000 total
EIU Council on Faculty Research
"Artificial Intelligence (AI) Driven Discovery of Carboxylesterase Substrates"
Role: PI

Previous

NSF LEAPS-MPS NSF 2213273 (7/1/2022-6/30/2025) $250,000 total
NSF Launching Early-Career Academic Pathways in the Mathematical and Physical Sciences
"LEAPS-MPS: Peroxisome Targeting Chemical Technologies and Tools to Study Subcellular Chemistry"
Role: PI

EIU Council on Faculty Research FY 2025 Grant (11/01/2024-6/30/2025) $5000 total

EIU Council on Faculty Research
"Illuminating Ester Metabolism by CES3 with High Throughput Fluorescence Microscopy Assays"

EIU Student Impact Grant For Faculty Mentors (11/1/2024-5/1/2025) $1500 total
EIU Office of Research and Sponsored Programs
"Travel Support for Students to Attend a National Scientific Conference"

Redden Fund Grant (7/1/2024-6/30/2025) $1740 total
EIU Foundation
"Enhancing Impacts of Student Research Courses Through National Scientific Conference Attendance"

Redden Fund Grant (7/1/2024-6/30/2025) $1750 total
EIU Foundation
"Technology to Support Recorded Course Content to Enhance Student Learning.

Early Career Grant (10/1/2023-6/30/2024) $5000 total
EIU Council on Faculty Research
"Optimizing Human Carboxylesterases as Sensors for Environmental Contamination"
Role: PI

Redden Fund Grant (7/1/2023-6/30/2024) $1385 total
EIU Foundation
"Lighting Up General Chemistry: Enhancing Student Learning with a Chemiluminescence Experiment"
Role: PI

EIU Council on Faculty Research FY 2023 Grant (10/10/2022-6/30/2023) $4000 total
EIU Council on Faculty Research
"Ester Specificity of Human Drug Metabolizing Carboxylesterase Enzymes
Role: PI

Redden Fund Grant (7/1/2022-6/30/2023) $1750 total
EIU Foundation
"Activity Determination of Human Drug Metabolism Enzymes Carboxylesterase 1 and 2 (CES1 and CES2) in An Undergraduate Biochemistry Laboratory Course"
Role: PI

EIU Student Impact Grant For Faculty Mentors (11/1/2022-5/1/2023) $1500 total
EIU Office of Research and Sponsored Programs
"Development of Fluorogenic Chemical Tools to Study Enzymatic Activity in Living Cells"
Role: PI

Redden Fund Grant (8/1/2021-8/31/2022) $1750 total
EIU Foundation
"Purification and Activity Determination of Human Drug Metabolism Enzyme Carboxylesterase 2 (CES2) in An Undergraduate Biochemistry Laboratory Course"
Role: PI

EIU Council on Faculty Research FY 2022 Grant (10/1/2021-6/30/2022) $4000 total
EIU Council on Faculty Research
"Development and Optimization of Chemical Tools for Measuring the Effect of Genetic Differences in Drug Metabolism"
Role: PI

Redden Fund Grant (8/1/2020-8/31/2021) $700 total
EIU Foundation
"Utilizing Recorded Course Content to Enhance Student Learning"
Role: PI

EIU Student Impact Grant For Faculty Mentors (11/1/2020-5/1/2021) $1500 total

EIU Office of Research and Sponsored Programs
"Development of Fluorescent Chemical Tools to Study Enzymatic Activity in Living Cells"
Role: PI