

# Daniel Robert Dries, Ph.D.

Assistant Professor of Chemistry  
Schmid College of Science & Technology  
Chapman University, One University Drive, Orange, CA 92866

## EMPLOYMENT

2025-present Associate Program Director. Chemistry and Biochemistry, Schmid College of Science & Technology, Orange, CA  
2024-present Assistant Professor of Chemistry, Schmid College of Science & Technology, Orange, CA  
2020-2024 Chair, Chemistry & Biochemistry, Juniata College, Huntingdon, PA  
2019-present Associate Professor, Chemistry & Biochemistry, Juniata College, Huntingdon, PA  
2013-2019 Assistant Professor, Chemistry & Biochemistry, Juniata College, Huntingdon, PA

## EDUCATION & TRAINING

1996-2000 University of Delaware, B.S., Biochemistry  
2000-2007 University of California, San Diego, Ph.D., Biomedical Sciences  
2007-2012 University of Texas Southwestern Medical Center, Postdoctoral Fellow, Neuroscience

## RELATED PROFESSIONAL EXPERIENCE

2021 Certification in Mental Health First Aid, National Council for Behavioral Health  
2020 Certified Equity Literacy Trainer and Facilitator  
2015-2018 Director, BioMolViz education assessment team  
2014-present Education Associate, American Society of Biochemistry and Molecular Biology (ASBMB)  
2014-2017 Consultant, MasteringChemistry (Pearson Education)  
2013-2024 Member, BioMolViz education assessment team  
2005-2007 Consultant, Bio-Rad Laboratories, Hercules, CA

## FELLOWSHIPS

2012 Hartwell Biomedical Research Fellowship  
2007-2010 Ruth L. Kirschstein National Research Service Award (NRSA) for Individual Postdoctoral Fellows (F32)  
1999-2000 Howard Hughes Undergraduate Research Fellowship, competitive

## HONORS & AWARDS

2022 Named George Foster Endowed Chair in Chemistry  
2018 Henry H. '57 and Joan R. Gibbel Award for Distinguished Teaching  
2012 Distinguished Service Award, UT Southwestern Postdoctoral Association  
2000 Graduation *Magna Cum Laude* and with Honors  
2000 Induction into Phi Beta Kappa  
2000 Alexander J. Taylor, Sr. Award for Outstanding Senior Male, University of Delaware

## PROFESSIONAL AFFILIATIONS

2021-present Society for the Advancement of Biology Education Research (SABER)  
2021-2024 Affiliate Faculty Member, Scientists Engaged in Educational Research (SEER), University of Georgia  
2013-2018 Ethics, Legal, and Societal Implications (ELSI) Learning Community  
2013-2018 Genome Consortium for Active Teaching (GCAT-SEEK)

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2009-present American Society of Biochemistry and Molecular Biology (ASBMB)  
2007-2020 Alzheimer Research Forum  
2013-2016 Genomics Leadership Initiative Integrative Science Community  
2004-2006 ASBMB  
2002-2004 Biophysical Society

### SERVICE

2025 Associate, Chapman University Center for Excellence in Teaching and Learning  
2023-present Reviewer, PROBio-Africa Fellowships, IUBMB  
2023-2024 Director, Juniata's Center for the Scholarship of Teaching & Learning  
2022-2023 Director-Designate, Juniata's Center for the Scholarship of Teaching & Learning  
2022 Reviewer, Macmillan Learning  
2022 Member, 2022 FAOBMB Education Award Selection Committee  
2021-present Representative for the Pan-American Association of Biochemistry and Molecular Biology to the Education and Training Committee, International Union of Biochemistry and Molecular Biology (IUBMB)  
2021-present Chair, IUBMB Fellowship Committee  
2021 Judge, Mr. Juniata  
2021 Co-organizer, Education and Professional Development Session, 2021 ASBMB Annual Meeting, Indianapolis, IN (Rescheduled from April 2020 in San Diego, CA)\*  
2020-present Reviewer, PROLAB Fellowships, ASBMB  
2020-present Member, IUBMB Fellowship Committee  
2020-2024 Chair, Department of Chemistry & Biochemistry, Juniata College  
2020-2022 Faculty advisor, Chemistry & Biochemistry Club, Juniata College  
2020-present Member, Editorial Board, *Biochemistry and Molecular Biology Education*  
2020 Summer Advisory Group on Racial Justice at Juniata College  
2020 Student Academic Development Committee, Juniata College  
2020 Co-organizer, Education and Professional Development Session, 2020 ASBMB Annual Meeting, San Diego, CA\*  
2019-2024 Judge, Juniata Junior Science and Humanities Symposium, Chemistry Division  
2019-2020 Curriculum Coordinator, First-Year Foundations, Juniata College  
2018-2024 Member, ASBMB Student Chapters Steering Committee  
2018-2020 Campus Read Selection Committee, Juniata College  
2018-present *Ad hoc* reviewer, *Journal of Chemical Education*  
2018-2019 Reviewer, John Wiley & Sons, Inc.  
2018-2019 General Education Committee, Executive Committee Representative, Juniata College  
2018-present Panelist, National Science Foundation grant review  
2017 Reviewer, Pearson Education  
2016-2018 Student Academic Development Committee, Executive Committee Representative, Juniata College  
2016-2019 Executive Committee, Juniata College  
2015-2019 MCAT review, Biochemistry  
2014-2024 Member, Health Professions Committee, Juniata College  
2014-2024 Juniata College Steward of Diversity  
2014-2018 Child Care Task Force, Juniata College  
2014-2017 Member, Advisory Board, Juniata College Center for Entrepreneurial Leadership  
2013-2020 Faculty advisor, ASBMB Student Chapter, Juniata College  
2017-2018 Learning Commons Design Committee, Juniata College

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2016-2017	Brand Identity and Logo Design Committee, Juniata College
2014-2016	Faculty Representative, Board of Trustees Committee on Advancement and Marketing, Juniata College
2013-2018	Institutional Animal Care and Use Committee (IACUC), Juniata College
2013-2014	Provost Search Committee, Juniata College
2007-2013	<i>Ad hoc</i> reviewer, <i>Journal of Biological Chemistry</i>
2006-2011	<i>Ad hoc</i> reviewer, <i>Journal of Medicinal Chemistry</i>

### COURSES TAUGHT

Chapman University

CHEM 140    General Chemistry I

Juniata College

FYF 101	First-Year Foundations 1
FYF 105	First-Year Foundations: Transfer
CH 117	Supplemental Chemistry Laboratory
CH 142	Integrated Chemistry Principles I
CH 143	Integrated Chemistry Principles Laboratory I
CH 144	Integrated Chemistry Principles II
CH 145	Integrated Chemistry Principles Laboratory II
CH 247	Bioanalytical Chemistry Laboratory
CH 250	Analytical Chemistry Laboratory
CH 301	Biochemistry and Molecular Biology I
CH 312	Biochemistry
CH 342	Integrated Chemistry: Biochemistry
CH 416	Biochemistry and Molecular Biology III
CH 418	Advanced Biochemistry
CH 493	Senior Thesis
CH TUT	Chemistry Tutorial: Peer facilitation
IC 203	Genomics, Ethics, & Society
ND 199	From Lab to World
ND 199	Water Wars
NEU120	Fundamentals of Undergraduate Neuroscience

### PUBLICATIONS (understudents underlined)

#### **Peer-reviewed publications**

1. Josh T Beckham, **Daniel R Dries**, Bonnie L Hall, Rachel M Mitton-Fry, Shelly Engelman, Charmita Burch, Roderico Acevedo, Pamela Mertz, Didem Vardar-Ulu, Swati Agrawal, Kristin Fox, Shane Austin, Margaret A Franzen, Henry V Jakubowski, Walter R P Novak, Rebecca Roberts, Alberto I Roca, Kristen Procko. "Seeing Eye-to-Eye? Comparing Faculty and Student Perceptions of Biomolecular Visualization Assessments." *Education Sciences*. Published online January 15, 2024.
2. Ludmila Tyler, Peter J. Kennelly, Shelly Engelman, Kirsten F. Block, Jennifer C. Bobenko, Jaclyn Catalano, Jessica A. Jones, Margaret I. Kanipes-Spinks, Yang Mooi Lim, Jennifer Loertscher, Tejiri

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- Olafimihan, Hailey Reiss, Territa L. Upchurch-Poole, Yufeng Wei, Kimberly J. Linenberger Cortes, Victoria Del Gaizo Moore, and **Daniel R. Dries**. "Evolution of a Self-Renewing, Participant-Centered Workshop Series in BMB Assessment." *Biochemistry and Molecular Biology Education*. 2024 Jan-Feb;52(1):58-69. doi: 10.1002/bmb.21789. Epub 2023 Oct 10. PMID: 37815098.
3. Yang Mooi Lim and **Daniel R. Dries**. "Standards for the Doctoral Degrees in the Molecular Biosciences: Recommendations of the Education and Training Committee of the International Union of Biochemistry and Molecular Biology (IUBMB)." *Biochemistry and Molecular Biology Education*.
  4. Ursula J. Williams and **Daniel R. Dries**. "Supporting fledgling scientists: The importance of autonomy in a guided-inquiry laboratory course." (2022) *Journal of Chemical Education*. **99** (2): 701-707. <https://doi.org/10.1021/acs.jchemed.1c00835>
  5. Quira Ziedan, Jennifer Loerstcher, Adele J. Wolfson, John Tansey, Erika Offerdahl, Peter Kennelly, **Daniel R. Dries**, Victoria Del Gaizo Moore, Diane Dean, L. Michael Carastro, Ludmila Tyler. "Development of a Certification Exam to Assess Undergraduate Students' Proficiency in Biochemistry and Molecular Biology Core Concepts." (2021) *CBE–Life Sci. Educ.* **20** (2): es6, 1-13. doi:10.1187/cbe.19-12-0265
  6. Kristen Procko, Shelly Engelman, Henry Jakubowski, Josh T. Beckham, Diane Dean, Margaret Franzen, Wally Novak, Rebecca Roberts, Alberto Roca, Audrey Shor, Cassidy Terrell, **Daniel Dries**. "Meeting Report: BioMolViz Workshops for Developing Assessments of Biomolecular Visual Literacy." (2021) *Biochemistry and Molecular Biology Education*. **49** (2): 278-286 doi:10.1002/bmb.21440
  7. Kristen Procko, Jessica Bell, Marilee Benore, Rachell Booth, Victoria Del Gaizo Moore, **Daniel R. Dries**, Debra Martin, Pamela Mertz, Erika Offerdahl, Marvin Payne, Quinn Vega, and Joseph Provost. "Moving Biochemistry and Molecular Biology Courses Online in Times of Disruption. Recommended Practices and Resources: A Collaboration with the Faculty Community and ASBMB." (2020) *Biochemistry and Molecular Biology Education*. **48** (5): 421-427. doi:10.1002/bmb.21354. *Cited as one of the journal's top 10 most downloaded papers of the 2019-2020 publication years.*
  8. Kristen Procko, Jessica Bell, Marilee Benore, Rachell Booth, **Daniel Dries**, Debra Martin, Pamela Mertz, Victoria Moore, Erika Offerdahl, Marvin Payne, Quinn Vega, and Joseph Provost. "Online teaching: Practices and resources." *ASBMB*, American Society for Biochemistry and Molecular Biology, March 19, 2020, <https://www.asbmb.org/education/online-teaching>.
  9. Kristen Procko, Diane Dean, **Daniel Dries**, Margaret Franzen, and Henry Jakubowski. "Creating Accessible Tools for Molecular Visualization Instruction." (2019) *PDB Newsletter*. Winter (80).
  10. **Daniel R. Dries**, Diane M. Dean, Laura L. Listenberger, Walter R.P. Novak, Margaret A. Franzen, and Paul A. Craig. "An expanded framework for biomolecular visualization in the classroom: Learning goals and competencies." (2017) *Biochemistry and Molecular Biology Education*. **45** (1), 69-75. doi: 10.1002/bmb.20991. PMID: 27486685. *Cited as one of the journal's top 20 most downloaded papers of the 2016-2017 publication years.*
  11. **Daniel R. Dries**, Yi Zhu, Mieu M. Brooks, Diego A. Forero, Megumi Adachi, Basar Cenik, James M. West, *Jennifer Arbella*, YuHong Han, Cong Yu, Annelie Nordin, Rolf Adolfsson, Jurgen Del-Favero, Q. Richard Lu, Patrick Callaerts, Shari G. Birnbaum, Gang Yu. "Loss of Nicastrin from oligodendrocytes results in hypomyelination and schizophrenia with compulsive behavior." (2016) *Journal of Biological Chemistry* **291** (31), 11647-11656. doi: 10.1074/jbc.M116.715078

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12. Sheu-Fen Lee, Bhooma Srinivasan, Chantelle F. Sephton, **Daniel R. Dries**, Bing Wang, Cong Yu, Yun Wang, Colleen M. Dewey, Sanjiv Shah, Jin Jiang, and Gang Yu. “ $\gamma$ -secretase-regulated proteolysis of the Notch receptor by mitochondrial intermediate peptidase.” (2011) *Journal of Biological Chemistry* **286** (31), 27447-27453. doi: 10.1074/jbc.M111.243154
13. Basar Cenik, Chantelle F. Sephton, Colleen M. Dewey, Xunde Xian, Shuguang Wei, Kimberley Yu, Wenzhe Niu, Giovanni Coppola, Sarah E. Coughlin, Suzee E. Lee, **Daniel R. Dries**, Sandra Almeida, Daniel H. Geschwind, Fen-Biao Gao, Bruce L. Miller, Robert V. Farese, Bruce A. Posner, Gang Yu, Joachim Herz. “SAHA (VORINOSTAT) upregulates progranulin transcription: a rational therapeutic approach to frontotemporal dementia.” (2011) *Journal of Biological Chemistry* **286** (18), 16101-16108. doi: 10.1074/jbc.M110.193433
14. Colleen M. Dewey, Basar Cenik, Chantelle F. Sephton, **Daniel R. Dries**, Paul R. Mayer, III, Shannon K. Good, Brett A. Johnson, Joachim Herz, and Gang Yu. “TDP-43 is directed to stress granules by sorbitol, a novel physiological osmotic and oxidative stressor.” (2011) *Molecular Cell Biology* **31** (5), 1098-108. doi: 10.1128/MCB.01279-10
15. Paul R. Mayer, III, Nian Huang, Colleen M. Dewey, **Daniel R. Dries**, Hong Zhang, and Gang Yu. “Expression, localization and biochemical characterization of NMN adenylyltransferase 2.” (2010) *Journal of Biological Chemistry* **285** (51), 40387-40396. doi: 10.1074/jbc.M110.178913
16. **Daniel R. Dries**, Sanjiv Shah, Yu-Hong Han, Cong Yu, Sophie Yu, Mark S. Shearman, Gang Yu. “GLU333 of Nicastrin directly participates in gamma-secretase activity.” (2009) *Journal of Biological Chemistry* **284** (43), 29714-29724. doi: 10.1074/jbc.M109.038737
17. **Daniel R. Dries**, Alexandra C. Newton. “Kinetics and mechanism of the interaction of the C1 domain of protein kinase C with lipid membranes by stopped-flow spectroscopy.” (2008) *Journal of Biological Chemistry* **283** (12), 7885-7893. doi: 10.1074/jbc.M709943200
18. **Daniel R. Dries**, Lisa L. Gallegos, Alexandra C. Newton. “A single residue in the C1 domain sensitizes novel protein kinase C isoforms to cellular diacylglycerol production.” (2007) *Journal of Biological Chemistry* **282** (2), 826-830. doi: 10.1074/jbc.C600268200
19. Florence Schmiege, Erin Cataldi, **Daniel Dries**. “PBL approaches in Honors Molecular Biology of the Cell.” *About Teaching*. **54**, Spring ed. University of Delaware: Center for Teaching Effectiveness, 2000.

### **Invited reviews:**

1. Diego A. Forero, Sandra López-León, Yeimy González-Giraldo, **Daniel R. Dries**, Angela J. Pereira-Morales, Karen M. Jiménez, Juan E. Franco-Restrepo. “APOE Gene and Neuropsychiatric Disorders and Endophenotypes: A Comprehensive Review” (2018) *Neuropsychiatric Genetics*. **177** (2): 126-142. doi: 10.1002/ajmg.b.32516
2. **Daniel R. Dries**, Gang Yu. “Assembly, maturation, and trafficking of the gamma-secretase complex in Alzheimer’s disease.” (2008) *Curr. Alz. Res.* **5** (2) 124-138. doi: 10.2174/156720508783954695

### **Peer-reviewed book chapters:**

1. **Daniel R. Dries**, Jessica Bell, and J. Ellis Bell. “Types of CUREs: From First Year to Capstone” in Martinez-Vaz, B. and Bell, J.E. (Eds.) *Molecular Life Science CUREs: Design, Implementation, and Assessment*. Vol 1493. (2025) Washington, D.C.: American Chemical Society.
2. **Daniel R. Dries**, Josh T. Beckham, Ashley Vater, and Shane Austin. “CUREs: Networks and

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Communities” in Martinez-Vaz, B. and Bell, J.E. (Eds.) *Molecular Life Science CUREs: Design, Implementation, and Assessment*. (2025) Washington, D.C.: American Chemical Society.

3. Shuchismita Dutta and **Daniel R. Dries**. “Virtual Exploration of Biomolecular Structure and Function” in Bussey, T. and Cortes, K. (Eds.) *Biochemistry Education: Discussions of the Classroom and Laboratory Learning Environments*. (2020) Washington, D.C.: American Chemical Society.
4. **Daniel R. Dries** and Gang Yu. “The What, Where, and How of gamma-Secretase Complex Assembly” in Lahiri, D.K. (Ed.) *Advances in Alzheimer Research*. (2013) Oak Park, IL: Bentham Science. eBook

### **Invited oral presentations:**

1. **Daniel R. Dries**. “Models of Mentored Learning within a Social Constructivist Pedagogy.” ASBMB Annual Meeting (Chicago, IL): April 2025.
2. **Daniel R. Dries**. “Mentorship in the Classroom: How a Social Constructivist Approach to Teaching Introductory Biochemistry from the Primary Literature Can Serve as an Intensive Mentorship.” ASBMB Annual Meeting (Chicago, IL): April 2025.
3. **Daniel R. Dries** as a member of the Undergraduate Education Panel. “CUREs Communities and Consortia.” The Protein Society 38<sup>th</sup> Annual Symposium (The Protein Society, Vancouver, Canada): July 2024.
4. **Daniel R. Dries**, Ursula J. Williams. “Building Science Identity Through an Authentic Inquiry Laboratory.” Evolving Molecular Bioscience Education (Biochemical Society, Manchester, United Kingdom): May 2023.
5. **Daniel R. Dries**. “Encouraging curiosity.” OUR CUREs Community Workshop (Virtual): July 2022.
6. **Daniel R. Dries**. “Closing the Loop: Training the *Whole* Scientist.” Special interest session on research education at the Annual Meeting of the American Society for Biochemistry and Molecular Biology (ASBMB): April 2022.
7. **Daniel R. Dries**. “It Only Took a Global Pandemic: Exposing Cracks in the Façade of Biochemistry Education.” 48<sup>th</sup> Philippine Society for Biochemistry and Molecular Biology (PSBMB) Annual Convention: December 2021.
8. **Daniel R. Dries**. “Rethinking the Role of the Instructor: Empowering Students to Become Autonomous Learners.” Ursinus College, Department of Biology (Host: Rebecca Roberts): September 2021.
9. **Daniel R. Dries**. “The Push We Needed: How the Global Pandemic Forced us to Reconsider How We Deliver a BMB Curriculum.” IUBMB-FAOBMB-CBSL Virtual Education Symposium 2021: July 2021.
10. **Daniel R. Dries**. “Narrative Curriculum: Teaching a Story through the Primary Literature.” Oral presentation, ASBMB Annual Meeting (virtual): April 2021. (Rescheduled from April 2020)

### **Other publications:**

1. **Daniel Dries**, Jenny Loertscher, and Vickie del Gaizo Moore. “How do we know what students know?” (2023) *ASBMBToday*. **22** (2), 34-36.

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2. **Daniel Dries.** “Rewarding Curiosity.” (2021) *ASBMBToday*. **20** (6): 43-45.
3. **Daniel R. Dries** and Gang Yu. “Breathing new life into the rational design of Alzheimer’s therapeutics.” (2021) *Cell*. **184**, 296-298. doi: 10.1016/j.cell.2020.12.036
4. **Daniel R. Dries**, Nathan Vanderford. “Well-being in the workplace.” (2020) *ASBMBToday*. **19** (1), 25-27.
5. **Daniel R. Dries.** “Reclaim your curiosity.” (2019) *Juniata Voices*. **19**: 1-5.
6. Henry Jakubowski, Margaret Franzen, and **Daniel Dries.** “Do you see what I see? Regional workshops to assess biomolecular visual literacy.” (2017) *ASBMBToday*. **16** (11), 38-39.
7. Hannah Bellwoar, **Daniel Dries**, Donna Weimer. “*Station Eleven*: A Panel Discussion.” (2017) *Juniata Voices*. **17**: 16-24.
8. **Daniel R. Dries**, Gang Yu, Joachim Herz. “Extracting  $\beta$ -amyloid from Alzheimer’s Disease.” (2012) *Proc. Natl. Acad. Sci. U.S.A.* **109** (9): 3199-200. doi: 10.1073/pnas.1121560109
9. **Daniel R. Dries**, Gang Yu. “Rip exposed: How ectodomain shedding regulates the proteolytic processing of transmembrane substrates.” (2009) *Proc. Natl. Acad. Sci. U.S.A.* **106**: 14737-14738. doi: 10.1073/pnas.0908124106

### CONFERENCE ABSTRACTS

#### Undergraduate students underlined

1. **Daniel R. Dries**, Charlotte Caddick, Cassie J. Firestone, Kara M. Mette, Tai Pham, and Natalie E. Slusser. “The tension of autonomy in a social constructivist STEM course: Self-directed learning vs. reduced feelings of self-efficacy.” Society for the Advancement of Biology Education Research (SABER) (Minneapolis, MN): July 2025.
2. **Daniel R. Dries.** “Do I or Don’t I? A phenomenological autoethnography of an untenured mid-career educator deciding how, when, and where to implement standards-based grading.” The Grading Conference (Online): June 2025.
3. **Daniel R. Dries**, Charlotte Caddick, Cassie J. Firestone, Kara M. Mette, Tai Pham, and Natalie E. Slusser. “The Paradox of Autonomy: A Social Constructivist Pedagogy Reveals Conflicts Between Student Motivation and Self-Efficacy.” Society for the Advancement of Biology Education Research (SABER) West (Irvine, CA): January 2025.
4. **Daniel R. Dries.** “Collaborative Interrogation and Meaning-Making from the Primary Literature (CIMMPL).” National Association of Biology Teachers Annual Meeting (Anaheim, CA): November 2024.
5. Daniel R. Dries, Jennifer C. Bobenko, Kimberly Lane, Yufeng Wei, Jennifer Loertscher, Ludmila Tyler, Shelly Engelman, Kimberly J. Linenberger Cortes, Victoria Del Gaizo Moore. “Building and Inclusive Community for the Assessment of BMB Learning (ICABL).” BioMolecular Horizons (International Union of Biochemistry and Molecular Biology and Federation of Asian and Oceanian Biochemists and Molecular Biologists, Melbourne, Australia): September 2024.

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6. *Karis Huff-Love* and **Daniel R. Dries**. “A Literature Review of Learned Helplessness in STEM.” Liberal Arts Symposium: Juniata College, April 2024.
7. Jaclyn Catalano, Shelly Engelman, Jennifer L. Hearne, Jessica Jones, Peter J. Kennelly, Jennifer A. Loertscher, Territa L. Upchurch-Poole, Yufeng Wei, and **Daniel R. Dries**. “ICABL Workshops as a Model for Diversifying Leadership and Representation in a Community of BMB Educators.” Oral presentation, ASBMB Annual Meeting (Seattle, WA): March 2023.
8. Jennifer A. Loertscher, Kirsten Block, Victoria Del Gaizo Moore, **Daniel R. Dries**, Peter J. Kennelly, John Tansey, Ludmila Tyler, Adele J. Wolfson. “A Survey of Accredited Programs: Feedback on ASBMB Accreditation and Certification Exam.” Oral presentation, ASBMB Annual Meeting (Seattle, WA): March 2023.
9. Josh T. Beckham, Kristen Procko, Shelly Engelman, **Daniel R. Dries**, Margaret A. Franzen, Henry Jakubowski, Alberto I. Roca, Pamela S. Mertz, Roderico Acevedo. “Evaluating Biomolecular Visual Literacy: A Library of Classroom-Tested Assessments for Instructor Use.” Oral presentation, ASBMB Annual Meeting (Seattle, WA): March 2023.
10. Natalie E. Slusser, Cassie J. Firestone, Kara M. Mette, Tai P. Pham, and **Daniel R. Dries**. “Building Biochemistry Content Knowledge from the Primary Literature.” Poster presentation, ASBMB Annual Meeting (Seattle, WA): March 2023.
11. Alexa R. Neiderer, Susan R. Gembic, Alexis C. Hammaker, and **Daniel R. Dries**. “STEM identity at a rural primarily undergraduate institution.” Poster presentation, ASBMB Annual Meeting (Seattle, WA): March 2023.
12. Shelly Engelman, **Daniel R. Dries**, Josh T. Beckham, Kristen Procko. “Building collaborative networks of STEM Educators: Can an online workshop replace the in-person experience?” Poster presentation, American Educational Research Association Annual Meeting (Chicago, IL): April 2023.
13. **Daniel R. Dries**, Henry Jakubowski, Josh T. Beckham, Kristen Procko. “BioMolViz: A Community to Improve Biomolecular Visual Literacy.” Poster presentation, FEBS-IUBMB-PABMB 2022 Congress (Lisbon, Portugal): July 2022.
14. Victoria Moore, Kimberly Cortes, Kirsten Block, Shelly Engelman, Margaret Kanipes, Peter Kennelly, Yang Lim, Jennifer Loertscher, Tejiri Olafimihan, Ludmila Tyler, Territa Upchurch-Poole, **Daniel R. Dries**. “Building ICABL: An Inclusive Community for the Assessment of Biochemistry and Molecular Biology Learning.” Poster presentation, ASBMB Annual Meeting (Philadelphia, PA): April 2022.
15. **Daniel R. Dries** and Ursula J. Williams. “Using autonomy to drive the development of students into budding scientists.” Oral and poster presentations, ASBMB Annual Meeting (Philadelphia, PA): April 2022.
16. Kristen Procko, Shelly Engelman, Josh Beckham, **Daniel R. Dries**, Margaret Franzen, Henry Jakubowski, Walter Novak, Rebecca Roberts, Alberto Roca, Audrey Shor. “Developing Assessments to Gauge Biomolecular Visual Literacy: A 5 step approach to ensuring accuracy and reliability.” Poster presentation, ASBMB Annual Meeting (Philadelphia, PA): April 2022.

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17. Kristen Procko, Josh T. Beckham, **Daniel R. Dries**, Shelly Engelman, Margaret A. Franzen, Henry Jakubowski, Walter Novak, Rebecca Roberts, Alberto I. Roca, Audrey C. Shor. “BioMolViz: A Community for Visual Literacy Instruction and Assessment.” Poster presentation, PDB50 (a special symposium honoring the 50<sup>th</sup> anniversary of the Protein Data Bank): May 2021.
18. Victoria Del Gaizo Moore, Kimberly J. Cortes, **Daniel R. Dries**, Margaret I. Kanipes, Peter J. Kennelly, Jennifer Loertscher, Ludmila Tyler, and Quira Zeidan. “An Inclusive Workshop Centered on Assessment of Biochemistry and Molecular Biology Student Learning Outcomes.” Poster presentation, ASBMB Annual Meeting (virtual): April 2021.
19. Ludmila Tyler, Cheryl Bailey, Kirsten Block, L. Michael Carastro, Kimberly J. Cortes, Diane Dean, Victoria Del Gaizo Moore, **Daniel R. Dries**, Margaret Kanipes, Peter Kennelly, Jennifer Loerstcher, Debra Martin, Erika Offerdahl, John Tansey, Sachel M. Villafañe, Adele Wolfson, and Quira Zeidan. “‘Community-supported Development of an Annual Exam Assessing Undergraduate Competencies in Biochemistry and Molecular Biology’.” Poster presentation, ASBMB Annual Meeting (virtual): April 2021. (Rescheduled from April 2020)
20. Josh T. Beckham, Diane M. Dean, **Daniel R. Dries**, Shelly Engelman, Margaret A. Franzen, Henry V. Jakubowski, Walter R.P. Novak, Kristen Procko, Rebecca A. Roberts, Alberto I. Roca, and Audrey Shor. “BioMolViz: A Community Devoted to the Assessment of Biomolecular Visual Literacy.” Poster presentation, ASBMB Annual Meeting (virtual): April 2021. (Rescheduled from April 2020)
21. Kristen Procko, **Daniel R. Dries**, Rebecca Roberts, and Josh Beckham. “Improving Biomolecular Visualization Instruction.” Video presentation. 2020 STEM For All Video Showcase, May 5-12, 2020.
22. **Daniel R. Dries**, Lisa Gentile, and Ursula J. Williams. “Building Authentic Inquiry into a Sophomore-Level Bioanalytical Chemistry Laboratory.” Oral presentation, Transforming Undergraduate Education in the Molecular Life Sciences: University of the Incarnate Word, San Antonio, TX, July 2019.
23. Kristen Procko, **Daniel R. Dries**, and Audrey Shor. “A Workshop to Develop Crowdsourced, Quality Molecular Visualization Assessments” (workshop leader): Transforming Undergraduate Education in the Molecular Life Sciences: University of the Incarnate Word, San Antonio, TX, July 2019.
24. Peter Kennelly, Cheryl Bailey, Michael Carastro, Diane Dean, Victoria Del Gaizo Moore, **Dan Dries**, Jennifer Loerstcher, Debra Martin, Erika Offerdahl, John Tansey, Ludmila Tyler, Adele Wolfson, and Quira Zeidan. “ASBMB Accreditation program & Certification Exam 2019: Progress Report on a Community Owned and Operated Assessment Initiative.” Poster presentation, Transforming Undergraduate Education in the Molecular Life Sciences: University of the Incarnate Word, San Antonio, TX, July 2019.
25. **Daniel R. Dries**. “Gains in Affect and in Scientific Literacy from Peer-Led Team Learning in a Literature-Based First-Semester Biochemistry Course.” Poster, ASBMB Annual Meeting : Orlando, FL, April 2019.
26. Kristen Procko, April Bednarski, Josh T. Beckham, Diane M. Dean, **Daniel R. Dries**, Margaret A. Franzen, Henry V. Jakubowski, Walter R.P. Novak, Rebecca A. Roberts, Alberto I. Roca, and Cassidy R. Terrell. “Crowdsourcing the Development of Assessments for Biomolecular Visual Literacy.” Oral presentation and poster, ASBMB Annual Meeting : Tampa, FL, April 2019.

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27. Ursula J. Williams, **Daniel R. Dries**, Philip T. Dunwoody, Jill B. Keeney. "Leveraging campus narratives and assessment data to facilitate inclusionary institutional change." AAC&U Transforming STEM Higher Education: Atlanta, GA, November 2018.
28. **Daniel R. Dries**, Diane M. Dean, Margaret A. Franzen, Henry V. Jakubowski, Walter R.P. Novak, Kristen Procko, Alberto I. Roca, and Cassidy R. Terrell. "A Competency-Based Approach to Developing Biomolecular Visual Literacy." Oral presentation and poster, ASBMB Annual Meeting : San Diego, CA, April 2018.
29. *Jessica Zavadak* and **Daniel R. Dries**. "Differential Gene Expression in the Striatum of an Alzheimer's Disease Mouse Model." Liberal Arts Symposium: Juniata College, April 2018.
30. **Daniel R. Dries**. "Presenting Biochemistry as a Narrative: Using the Primary Literature to Teach Sophomore-Level Biochemistry." Catalyst Conversations: Montclair State University, NJ, March 2018.
31. **Daniel R. Dries** and Diane Dean. "Teaching molecular visualization - A workshop to develop competencies for facilitating bio-molecular visual literacy." Oral presentation, ASBMB Special Symposium on Transforming Undergraduate Education: University of Tampa, July 2017.
32. **Daniel R. Dries**. "From Molecules to Mice:  $\gamma$ -Secretase and Neurological Disease." Oral presentation, Juniata Senior Institute: Westminster Woods, June 2017.
33. **Daniel R. Dries** and Ursula J. Williams. "Encouraging student engagement in a sophomore-level bioanalytical chemistry laboratory course." Oral presentation, Mid-Atlantic Regional Meeting of the American Chemical Society: Hershey, PA, June 2017.
34. **Daniel R. Dries**, Paul A. Craig, Diane Dean, Henry V. Jakubowski, Walter R.P. Novak, Alberto I. Roca, Cassidy R. Terrell, Margaret A. Franzen. "A Framework for Assessing Molecular Visualization Skills and Competencies." Oral presentation and poster, ASBMB Annual Meeting : Chicago, IL, April 2017.
35. *Amanda Harvey* and **Daniel R. Dries**. "Transcriptome Analysis of Conditional Knockout Mice." Poster, ASBMB Annual Meeting : Chicago, IL, April 2017.
36. *Chelsea M. Keller*, *Brittany E. Bridges*, James N. Roney, and **Daniel R. Dries**. "Stressing Interdisciplinarity to Mold the Undergraduate Experience." Oral presentation and poster, ASBMB Annual Meeting : Chicago, IL, April 2017.
37. *Chelsea Biefeld*, *Amanda Harvey*, and **Daniel R. Dries**. "Transcriptome Analysis of Conditional Knockout Mice." Liberal Arts Symposium: Juniata College, April 2017.
38. *Chelsea M. Keller*, *Brittany E. Bridges*, James N. Roney, and **Daniel R. Dries**. "Stressing Interdisciplinarity to Mold the Undergraduate Experience." Poster, Central Pennsylvania Local Section of the American Chemical Society Undergraduate Poster Symposium: Penn State University, September 2016.
39. *Chelsea M. Keller*, *Brittany E. Bridges*, James N. Roney, and **Daniel R. Dries**. "Stressing Interdisciplinarity to Mold the Undergraduate Experience." Poster, Landmark Summer Research Conference: Moravian University, July 2016.
40. **Daniel R. Dries**, Paul A. Craig, Diane Dean, Laura Listenberger, Walter R.P. Novak, Margaret A. Franzen. "Molecular Visualization in the Classroom: Learning Goals and Competencies." Oral presentation and poster, ASBMB Annual Meeting : San Diego, CA, April 2016.
41. **Daniel R. Dries**, Julia Zhu, Shari Birnbaum, Gang Yu. "Compulsive Grooming and Hyperactivity

## Daniel Robert Dries, Ph.D.

- in Nicastrin Conditional Knockout Mice.” Poster, ASBMB Annual Meeting : San Diego, CA, April 2016.
42. Mizuho Yamato, Yi Zhu, **Daniel Dries**, Gang Yu. “Deletion of *nicastrin* Leads to Hypomyelination and Transcriptional Changes in Juvenile Mice.” Poster, ASBMB Annual Meeting : San Diego, CA, April 2016.
  43. Jessica Hatter, **Daniel Dries**. “Testing Specificity of Commercially Available Nicastrin Antibodies.” Poster, ASBMB Annual Meeting : San Diego, CA, April 2016.
  44. Chelsea Biefeld, Kelcie Sztroin, Yi Zhu, Gang Yu, **Daniel Dries**. “Transcriptome Analysis of Conditional Knockout Mice.” Poster, ASBMB Annual Meeting : San Diego, CA, April 2016.
  45. **Daniel R. Dries**. “From Sir Walter Raleigh to the mongoose: A Problem-Based Learning (PBL) course in biochemistry centered around curare.” Poster, ASBMB Annual Meeting : Boston, April 2015.
  46. Margaret A. Franzen, Paul A. Craig, Diane M. Dean, **Daniel R. Dries**, Laura L. Listenberger, Walter R.P. Novak. “An expanded rubric for assessing molecular visualization literacy.” Poster, ASBMB Annual Meeting : Boston, April 2015.
  47. Richard L. Burgan, Yi Zhu, Gang Yu, **Daniel R. Dries**. “Identifying transcriptional changes in a conditional knockout mouse.” Poster, ASBMB Annual Meeting : Boston, April 2015.
  48. Adam R. Lescallete, Vincent R. Knecht, **Daniel R. Dries**. “Student reflections from an upper level Problem-Based Learning biochemistry course.” Poster, ASBMB Annual Meeting : Boston, April 2015.
  49. Siham Zniber, **Daniel R. Dries**. “How the translation of a 19<sup>th</sup> century medical text enhances the professional development of a senior undergraduate.” Poster, ASBMB Annual Meeting : Boston, April 2015.
  50. **Daniel R. Dries**, YuHong Han, Megumi Adachi, Mieu Brooks, Basar Cenik, Cong Yu, Shari Birnbaum, Q. Richard Lu, Gang Yu. “Compulsive grooming and hyperactivity in mutant mice defective in oligodendrocyte  $\gamma$ -secretase activity.” Poster, Gordon Research Conference: Neurobiology of Brain Disorders, Stonehill College, August 2012. (*Awarded “Best Poster”*)
  51. **Daniel R. Dries**, YuHong Han, Megumi Adachi, Mieu Brooks, Basar Cenik, Cong Yu, Shari Birnbaum, Q. Richard Lu, Gang Yu. “Compulsive grooming and hyperactivity in mutant mice defective in oligodendrocyte  $\gamma$ -secretase activity.” Poster, Gordon Research Conference: Myelin, Il Ciocco, May 2012.
  52. **Daniel R. Dries**, Sanjiv Shah, YuHong Han, Cong Yu, Sophie Yu, Mark S. Shearman, Gang Yu. “Glu-333 of nicastrin directly participates in  $\gamma$ -secretase activity.” Poster, UT Southwestern Postdoctoral Research Symposium, Dallas, February 2010. (*Honorable Mention for best poster.*)
  53. **Daniel R. Dries**, Sanjiv Shah, Gang Yu. “Biochemistry of the  $\gamma$ -secretase complex.” Poster, Molecular Mechanisms of Neurodegeneration, Antigua, December 2007.
  54. **Daniel R. Dries**, Alexandra C. Newton. “The contribution of electrostatic and hydrophobic interactions in the binding of the C1 domain of protein kinase C to lipid membranes.” Poster, American Society of Biochemistry and Molecular Biology, San Diego, June 2005.
  55. **Daniel R. Dries**, Alexandra C. Newton. “The contribution of electrostatic and hydrophobic interactions in the binding of the C1 domain of protein kinase C to lipid membranes.” Poster,



## Daniel Robert Dries, Ph.D.

NSF FAIN 2018204	\$24,603	06/20-05/21
“Building Community Capacity for Assessment of Student Learning in Undergraduate Biochemistry and Molecular Biology”		
Grantor: National Science Foundation		
Role: Co-PI		
Juniata College	\$2,240	06/20-08/20
“Hybrid-Flex Prep and Revision of Three Lab Courses”		
Grantor: Innovative Educational Initiatives (Juniata College)		
Role: Co-PI		
NSF IUSE 1712268	\$98,416	06/17-08/18
“Building an Inclusive Community of Biochemistry and Molecular Biology Educators to Develop Competencies for Facilitating Biomolecular Visual Literacy”		
Grantor: National Science Foundation		
Role: PI		
ELSI and interdisciplinarity	\$20,000	05/16-05/17
Grantor: Howard Hughes Medical Institute (internal, institutional, competitive)		
Role: Co-PI		
Academic Initiative Award	\$2,000	05/16-08/16
Developing a Program of Emphasis in Neuroscience		
Grantor: Juniata College Provost’s Office		
Role: Co-PI		
iPad Grant in the Classroom	20 iPads	08/13-05/14
Grantor: Juniata College Campus Technological Services		
Role: Co-PI		

### RESEARCH SUPPORT

“Identification of new genes and pathways that contribute to the non-cognitive aspects of Alzheimer’s disease”		06/15-08/16
Grantor: Howard Hughes Medical Institute (internal, institutional, competitive)		
Role: PI		
“Misregulated genes in the white matter of adult brains with neurological disease”		08/15-08/15
Grantor: International Healthspan Institute		
Role: PI		
“Misregulated genes in the white matter of adult brains with neurological disease”		06/15-05/16
Grantor: International Healthspan Institute		
Role: PI		
“Misregulated genes in the white matter of adult brains with neurological disease”		06/14-05/15
Grantor: International Healthspan Institute		
Role: PI		
“Misregulated genes in the white matter of adult brains with neurological disease”		01/14-05/14
Grantor: International Healthspan Institute		

## Daniel Robert Dries, Ph.D.

Role: PI

R01 NS079796 (PI: Gang Yu, UT Southwestern Medical Center)

04/13-03/14

“Gamma-Secretase and Myelin: A Paradigm Shift in Brain Disorders”

Role: PI on subaward

Consortium for Frontotemporal Dementia Research

01/11-12/11

“A mouse model for TDP-43 neuropathologies: using dual-labeled fluorescent TDP-43”

Role: Co-PI