

Department of Chemistry
Xavier University
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Adam M. Azman, Ph.D.

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EDUCATION

- 2005-2010 The University of North Carolina at Chapel Hill
Ph.D. Organic Chemistry received August 2010
Dissertation Advisor: Dr. Michael T. Crimmins
Dissertation Title: *Spiroketals as Natural Product Mimics and Progress toward the Total Synthesis of Milbemycin β_{14}*
- 2001-2005 Xavier University, Cincinnati, Ohio
B.S. Cum Laude, Chemistry, University Scholar (Honors) received May 2005
Thesis Advisor: Dr. Richard J. Mullins
Thesis Title: *Efforts toward the Total Synthesis of (+)-Kalkitoxin*

TEACHING EXPERIENCE

- 2018-present Teaching Professor
Xavier University, Cincinnati, OH
Courses Taught:
CHEM 240/241 Organic Chemistry I & Laboratory
CHEM 242/243 Organic Chemistry II & Laboratory
CHEM 150/151 Physiological Chemistry & Laboratory
CHEM 180 Introduction to Chemical Enterprise
- 2010-2018 Lecturer in Organic Chemistry
Butler University, Indianapolis, IN
Courses Taught:
CH 351 Organic Chemistry I (and integrated lab)
CH 352 Organic Chemistry II (and integrated lab)
CH 105 General Chemistry (lab only)
NW 210 Chemistry and Society & Laboratory
- Fall 2009 Future Faculty Fellow
Graduate Assistance in Areas of National Need (GAANN) Fellow
The University of North Carolina at Chapel Hill
Courses Taught:
CHEM 261 Introductory Organic Chemistry I (4 Chapters)
- 2008-2009 GAANN Fellow
The University of North Carolina at Chapel Hill
Courses Taught:
CHEM 261 Honors Organic Chemistry I (2 Chapters)
CHEM 262 Honors Organic Chemistry II (1 Chapter)

HONORS AND MEMBERSHIPS

- 2004-present Member, American Chemical Society
2019-present Co-Advisor, Xavier University Alchemyst Club
2014-2018 Co-Advisor, Butler University Chemistry Club
2015 Butler University SGA Outstanding Faculty Member of the Year Award

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| 2015 | Butler University SGA Annual “Apple for You” Teaching Award |
| 2014 | Butler University SGA Annual “Apple for You” Teaching Award |
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| 2012 | Butler University SGA Annual “Apple for You” Teaching Award |
| 2011 | Butler University SGA Annual “Apple for You” Teaching Award |
| 2009-2010 | Future Faculty Fellow |
| 2008-2010 | Graduate Assistance in Areas of National Need (GAANN) Fellow |
| 2005 | Francis Venable Summer Research Fellowship |
| 2005 | Frederick Miller, S.J. Award for the Highest Distinction in Chemistry |
| 2004 | American Chemical Society Polymer Education Committee Award |

ONLINE OUTREACH

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| <i>Websites</i> | -Contributing Author, <i>chemistry-blog.com/author/azmanam</i> (2008–2013). >150 posts, ~1500 subscribers, ~10,000 page views/week <ul style="list-style-type: none">• Posts have been featured in or syndicated by:<ul style="list-style-type: none">-<i>Chemical and Engineering News</i>: 89(47), 34 (2011); 88(19), 5 (2010); 87(5), 32 (2009)-<i>Nature Chemistry</i>: 5(4), 247 (2013), 4(7), 517 (2012); 3(11), 835 (2011); 2(7), 343 (2010)-<i>New York Times</i>, <i>Diner’s Journal</i>, 4 November 2011. -Senior Member, Chemical Forums, http://bit.ly/gOZnWY -Redesigned M. T. Crimmins Group Homepage, UNC, http://bit.ly/MTCPPage |
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Applications Created

- Chemistry Spell-Check Dictionary for Word Processors
<http://chemistry-blog.com/dictionary>
- NMR Formatter
<http://bit.ly/nmrformatter>
- Coin Flip Game to Teach NMR Coupling and J-Value Concepts
<http://bit.ly/NMRgame>
- Random Structure Generator
<http://bit.ly/RandomStructures>
- Organic Chemistry Reactions Mind Map
<http://bit.ly/OrgoMindMap>

PUBLICATIONS

PEER-REVIEWED JOURNAL ARTICLES

1. **Azman, A. M.**; Esteb, J. J. A Coin-Flipping Analogy and Web App for Teaching Spin–Spin Splitting in ^1H NMR Spectroscopy. *J. Chem. Educ.* **2016**, *93*(8), 1478-1482. DOI: 10.1021/acs.jchemed.6b00133
2. **Azman, A. M.**; Barrett, J. A.; Darragh M.; Esteb, J. J.; McNulty, L. M.; Morgan, P. M.; O’Reilly, S. A.; Wilson, A. M. “Adding Gas Chromatography-Mass Spectrometry Data to a Melting Point and Thin-Layer Chromatography Laboratory.” *J. Chem. Educ.* **2013**, *90*(1), 140-141. DOI: 10.1021/ed300490x
3. Crimmins, M. T.; **Azman, A. M.** “A Modular, Stereoselective Approach to Spiroketal Synthesis.” *Synlett* **2012**, *23*(10), 1489-1492. DOI: 10.1055/s-0031-1290670
4. **Azman, A. M.** “A Chemistry Spell-Check Dictionary for Word Processors.” *J. Chem. Educ.* **2012**, *89*(3), 412-413. DOI: 10.1021/ed2002994

5. Zhang, D.; Bender, D. M.; Frantz, V.; Peterson, J. A.; Boyer, R. D.; Stephenson, G. A.; **Azman, A.**; McCarthy, J. R. "Facile Rearrangement of N^4 -(α -aminoacyl)cytidines to N -(4-cytidinyl)amino Acid Amides." *Tetrahedron Lett.* **2008**, 49(13), 2052-2055. DOI: 10.1016/j.tetlet.2008.02.015

BOOK CHAPTERS

1. **Azman, A. M.** Electrophilic Addition to Alkenes. In *Carbocation Chemistry: Applications in Organic Synthesis*, Li, J. J., Ed. CRC Press: Boca Raton, Florida, **2017**; pp87-116.
2. **Azman, A. M.** Radical-Mediated C—H Bond Activation. In *C—H Bond Activation in Organic Synthesis*, Li, J. J., Ed. CRC Press: Boca Raton, Florida, **2015**; pp 21-58.
3. **Azman, A. M.**; Mullins, R. J. Oxazoles, Benzoxazoles, and Isoxazoles. In *Heterocyclic Chemistry in Drug Discovery*, Li, J. J., Ed. John Wiley & Sons, Inc.: Hoboken, New Jersey, **2013**; pp 231-282.
4. Mullins, R. J.; **Azman, A. M.** Thiazoles and Benzothiazoles. In *Palladium in Heterocyclic Chemistry*, 2nd ed.; Li, J. J., Gribble, G. W., Eds.; Tetrahedron Organic Chemistry Series 26; Elsevier Science: New York, **2007**; pp 345-377.
5. Mullins, R. J.; **Azman, A. M.** Imidazoles. In *Palladium in Heterocyclic Chemistry*, 2nd ed.; Li, J. J., Gribble, G. W., Eds.; Tetrahedron Organic Chemistry Series 26; Elsevier Science: New York, **2007**; pp 407-433.

EDITOR-REVIEWED ARTICLES

1. **Azman, A. M.** "Teaching Chemistry through History." *Nature Chemistry* **2013**, 5(5), 353. DOI: 10.1038/nchem.1635. - **INVITED**
2. **Azman, A. M.** "Blogroll: Real-time Chemistry." *Nature Chemistry* **2013**, 5(1), 5. DOI: 10.1038/nchem.1534. - **INVITED**
3. **Azman, A.M.** "A Few of Our Favorite Chemical Reactions: Diels-Alder Reaction." *Chemical & Engineering News* **2011**, 89(47), 34-36. URL: bit.ly/DAFavRxn
4. **Azman, A. M.** On Creating a Chemistry Dictionary File. *ChemSpider J. Chem.* **2009**, 1. URL: bit.ly/ChemSpiderArticle – **INVITED**

PRESENTATIONS

1. **Azman, A. M.** Flipping the Classroom Using Lightboard Technology. Faculty Food for Thought, Butler University, February 6, **2018**. – **INVITED**
2. Esteb, J. J.; McNulty, L. M.; Wilson, A. M.; Morgan, P.; **Azman, A. M.** Effect of Discussion Sessions on Student Learning in the Organic Laboratory: What Do Our Students Know? *Abstracts of Papers*, 248th National Meeting of the American Chemical Society, San Francisco, CA, United States, August 10-14, 2014; American Chemical Society: Washington, DC, **2014**.
3. **Azman, A. M.**; Esteb, J. J. Coin-Flipping Game for Teaching NMR Spin-spin Splitting. *Abstracts of Papers*, 246th National Meeting of the American Chemical Society, Indianapolis, IN, United States, September 8-12, 2013; American Chemical Society: Washington, DC, **2013**.
4. **Azman, A. M.** "Wednesday Fun Facts" Make Chemistry Exciting, Accessible. Presented at SENCER Summer Institute, Santa Clara, CA, August 1-5, **2013**.
5. McNulty, L.; Esteb, J.; Wilson, A.; Morgan, P.; **Azman, A.** Effect of Discussion Sessions on Student Learning in the Organic Laboratory. *Abstracts of Papers*, 245th National Meeting of the American Chemical Society, New Orleans, LA, United States, April 7-11, 2013; American Chemical Society: Washington, DC, **2013**.

6. McNulty, L.; Esteb, J.; Wilson, A.; Morgan, P.; **Azman, A.** Incorporation of NMR spectroscopy into organic chemistry laboratory at Butler University. *Abstracts of Papers*, 245th National Meeting of the American Chemical Society, New Orleans, LA, United States, April 7-11, 2013; American Chemical Society: Washington, DC, **2013**.
7. **Azman, A. M.** Spiroketals as Natural Product Mimics & Synthesis of the Northern Hemisphere of Milbemycin β_{14} . Xavier University, March 14, **2011**. – **INVITED**
8. Frantz, V.; Deyi, Z.; Bender, D. M.; Peterson, J. A.; Boyer, R. D.; Stephenson, G. A.; **Azman, A. M.**; McCarthy, J. R. Conversion of N^4 -(α -aminoacyl)cytidines to N -(4-cytidiny)amino Acid Amides by a Novel Rearrangement Reaction. *Abstracts of Papers*, 232 National Meeting of the American Chemical Society, San Francisco, CA, Sept 10-14, 2006; American Chemical Society: Washington, DC, **2006**.
9. **Azman, A. M.**; Rohlf, R. L.; Mullins, R. J. Synthesis and Medicinal Chemistry of Kalkitoxin. National Conference for Undergraduate Research, Lexington, VA, April, 2005; Council on Undergraduate Research, **2005**.

STUDENT PRESENTATIONS

1. “Preparation of Novel β -Lactams for Antibiotic Synthesis.” Snyder, A.; Esteb, J. J.; **Azman, A. M.** Eli Lilly & Company Undergraduate Research Grant Symposium, Indianapolis, IN. August 16, **2011**.

GRANTS

1. *Modernizing and innovating the organic chemistry laboratory curriculum.* Xavier University Wheeler Academic Development Fund. **\$4000 FUNDED** – Spring 2019.
2. *The Gamification of Organic Chemistry: Can Organic Chemistry Actually Be Fun?* Butler University Center for Academic Technology. **\$1000 FUNDED** – Spring 2017.
3. *Chemistry Outreach Program and Demo Kit.* Co-PI with student Jericha Mill. Butler University Innovation Fund. **\$7500 FUNDED** – Spring 2015.