

Department of Chemistry
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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: *Spiroketal 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

2015	Butler University SGA Annual “Apple for You” Teaching Award
2014	Butler University SGA Annual “Apple for You” Teaching Award
2013	Butler University SGA Annual “Apple for You” Teaching Award
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

Websites	-Contributing Author, <i>chemistry-blog.com/author/azmanam</i> (2008–2013). >150 posts, ~1500 subscribers, ~10,000 page views/week • Posts have been featured in or syndicated by: -<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>, Diner’s Journal, 4 November 2011. -Senior Member, Chemical Forums, http://bit.ly/gOZnWY -Redesigned M. T. Crimmins Group Homepage, UNC, http://bit.ly/MTCPage
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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.** Spiroketal 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-cytidinyl)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.