KEVIN S. HUANG, PH.D.

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ACADEMIC POSITIONS

Professor of Chemistry, Azusa Pacific University 2023-present

Honors College Faculty Fellow, Azusa Pacific University 2020-present

Associate Professor of Chemistry, Azusa Pacific University 2009-2023

Director of Undergraduate Research, Azusa Pacific University 2007-2016

Assistant Professor of Chemistry, Azusa Pacific University 2006-2009

EDUCATION

National Institute of Health Postdoctoral Fellow, Yale University 2002-2006
Advisor: Dr. Scott A. Strobel, Department of Chemistry and
Department of Molecular Biophysics & Biochemistry
Elucidating the mechanism of the ribosome catalyzed protein synthesis machinery

Ph.D. Chemistry, University of California, Davis 1996-2002
Advisor: Dr. Mark J. Kurth, Department of Chemistry
Organic synthesis, reaction mechanism, and spectroscopy of heterocycles

B.S. Chemistry, University of California, Irvine 1991-1996
Undergraduate research projects:

- Synthesis of amino acid ester isocyanates for the construction of artificial β-sheets
  Research Advisor: Dr. James S. Nowick, Department of Chemistry
- Role of neuropeptide Y in the rat tail artery
  Research Advisor: Dr. Susan P. Duckles, Department of Pharmacology

RESEARCH INTERESTS

Organic synthesis and chemical biology of small molecule inhibitors. Team-based learning pedagogy in chemical education.

PROFESSIONAL ORGANIZATION

- American Chemical Society, 1997-present.
- The American Scientific Affiliation, 2020-present.

PEER-REVIEWED PUBLICATIONS ([1]undergraduates)

12. Amelia N. Gray[1], Breeana M. Ramirez[1], Selom K. Mawugbe[1], Jordan F. Mar[1], Yun-Lan C. Wong, and Kevin S. Huang. Functionalized spirocyclic heterocycle synthesis and cytotoxicity assay, *Journal of Visualized Experiments*, **2021**, 168, e61950.

11. Cody R. Drisko[1], Silas A. Griffin[1], and Kevin S. Huang. Solid phase synthesis of [4.4] spirocyclic oximes, *Journal of Visualized Experiments*, **2019**, 144, e58508.

10. Silas A. Griffin[1], Cody R. Drisko[1], and Kevin S. Huang. Tricyclic heterocycles as precursors to functionalized spirocyclic oximes, *Tetrahedron Letters,* **2017**, 58, 4551-4553.

9. Kevin S. Huang,* Nicolas Carrasco,* Emmanuel Pfund, and Scott A. Strobel. Transition state chirality and role of the vicinal hydroxyl in the ribosomal peptidyl transferase reaction, *Biochemistry*, **2008**, *47*, 8822-8827 (*these authors contributed equally).

8. Kevin S. Huang, Joshua S. Weinger, Ethan B. Butler, and Scott A. Strobel. Regiospecificity of the peptidyl tRNA ester within the ribosomal P-site, *Journal of the American Chemical Society*, **2006**, *128*, 3108-3109.

7. T. Martin Schmeing, Kevin S. Huang, Scott A. Strobel, and Thomas A. Steitz. An induced fit mechanism to promote peptide bond formation and exclude hydrolysis of peptidyl-tRNA, *Nature,* **2005**, *438*, 520-524.

6. T. Martin. Schmeing,* Kevin S. Huang,* Scott A. Strobel, and Thomas A. Steitz. The mechanism of peptidyl transferase as defined by the structure of improved ground and transition state complexes with the 50S subunit, *Molecular Cell,* **2005**, *20*, 437-448 (*these authors contributed equally).

5. Kevin S. Huang, Makhluf J. Haddadin, and Mark J. Kurth. Imidazo- and pyridolpyrimidium bromides: synthesis and hydrolysis, *Journal of Organic Chemistry,* **2002**, *67*, 2382-2385.

4. Kevin S. Huang, Makhluf J. Haddadin, Marilyn M. Olmstead, and Mark J. Kurth. Synthesis and reactions of some heterocyclic azacyanines, *Journal of Organic Chemistry,* **2001**, *66*, 1310-1315.

3. Kevin S. Huang, Edwin H. Lee[1], Marilyn M. Olmstead, and Mark J. Kurth. Sequential 1,3-dipolar cycloadditions in the synthesis of bis-isoxazolo substituted piperidinones, *Journal of Organic Chemistry* 2000, *65*, 499-503 ([1]undergraduate).

2. James S. Nowick, Darren L. Holmes, Glenn Noronha, Eric M. Smith, Tram M. Nguyen[1], and Sheng-Lin Huang[1]. Synthesis of peptide isocyanates and isothiocyanates, *Journal of Organic Chemistry,* **1996**, *61*, 3929-3934.

1. Thomas C. Glenn, Sheng-Lin Huang[1], and Sue P. Duckles. Cocaine promotes an apparent direct vasoconstrictor effect of neuropeptide Y in the rat-tail artery, *European Journal of Pharmacology,* **1995**, *276*, 191-194 .

ACADMEIC AND PUBLIC SERVICES

- Faculty Evaluation Council, Chair 2022-2025
- Provost Working Group #4: Curricular and Pedagogical Innovation 2022
- Young Life Mt Baldy Capernaum Board Member, Glendora, CA 2021-present
- Faculty Evaluation Council, Azusa Pacific University 2020-present
- Diversity, Equity, and Inclusion (DEI) Working Group on Campus Climate RENEWAL strategic plan, Azusa Pacific University 2020-2021
- Sabbatical Contingency Plan Workgroup, Azusa Pacific University 2020
- University Academic Vision Goals Committee, Azusa Pacific University 2019
- John Stauffer Fellowship and Charitable Trust Grant Committee Member 2014-present
- Diversity Council, Azusa Pacific University 2019-2020
- Faith Integration Council, Azusa Pacific University 2019
- Faculty Senate, Azusa Pacific University
    - CLAS Senator at Large 2016-2020
    - Steering Committee – Senate Representative 2018-2019
    - Steering Committee – Historian 2016-2018
    - CLAS Senator 2014-2016
- Scholarfest (Research, Scholarship, and Creative Arts) Advisory Committee 2019-2020
- Faculty Research Council , Azusa Pacific University
    - CLAS Senate Liaison 2015-2020
    - Member 2007-2020
- Director of Undergraduate Research, Azusa Pacific University 2007-2016

EXTERNAL GRANTS

5. John Stauffer Charitable Trust *2009*
Funding to support chemistry/biochemistry undergraduate research experience
Collaboration with Advancement and Office of Research and Grant

4. American Chemical Society (ACS) Project SEED 2009
Anthropomorphic Molecules Revisited
$1,000

3. American Chemical Society (ACS) Project SEED 2008
Synthesis of Azacyanines.
$1,000

2. American Chemical Society (ACS) Project SEED 2007
Role of Organic Synthesis in Drug Discovery
$1,000

1. NIH Postdoctoral Fellowship 2004-2006
Elucidating the Mechanism of the Ribosome. National Institute of
Health (NIH) and the National Institute of General Medical Sciences (NIGMS).
$91,000, Grant F32GM071209

INTERNAL GRANTS

21. Faculty Research Council Grant 2024
Assessing the effectiveness of MDM2-p53 spirocyclic inhibitors as potential anti-cancer drug candidates
Kevin Huang (PI)
$8,000

20. Scholarly Undergraduate Research Experience (SURE) Grant 2023
Therapeutic potential of spirocyclic small molecules as anticancer drugs
Cheyenne Woon (undergraduate) and Kevin Huang (PI)
$1,500

19. Scholarly Undergraduate Research Experience (SURE) Grant 2022
Exploring the rational drug design process in the synthesis and evaluation of small molecules
Ye Seong Koo (undergraduate) and Kevin Huang (PI)
$1,500

18. President's Enhancement Grant - Research 2021
An interdisciplinary strategy employing spirocyclic compounds as anti-cancer drugs
To inhibit the p53-MDM2 interaction
Kevin Huang (PI) and Jon Milhon (Co-PI)
$36,672

17. President's Enhancement Grant - Teaching 2021
Pilot Study for Effectiveness of Learning Assistants on Student Engagement
Bradly McCoy (PI), Elijah Roth, Tom Albaugh, Sharon McCathern, Marian Saleh, & Kevin Huang
$30,000

16. Richter Scholars Research Grant 2021
Exploring the rational drug design process in the synthesis and evaluation of novel spirocyclic small compounds
Tiffany Nakla (undergraduate) and Kevin Huang (PI)
$5,000

15. Center for Research in Science STEM Research Fellowship 2020
Analysis of the structural motif of spirocyclic compounds
Tiffany Nakla (undergraduate) and Kevin Huang (PI)
$500

14. Center for Research in Science Interdisciplinary Project Seed Funding 2020
Using biology-chemistry interdisciplinary strategy in designing potential anti-cancer drug candidates
Kevin Huang (PI) and Jon Milhon (Co-PI)
$1,000

13. Faculty Research Council Grant 2020
Design, & biochemical evaluation of spirocyclic motifs as potential anticancer agents
Kevin Huang (PI)
$6,000

12. Center for Research in Science STEM Research Fellowship 2019
Regenerative Michael Linker in the Spirocyclic Oximes synthesis.
Selom Mawugbe (undergraduate) and Kevin Huang (PI)
$500

11. *Scholarly Undergraduate Research Experience (SURE) Grant* 2019
Progress towards an efficient synthesis of allicin.
Amelia Gray (undergraduate) and Kevin Huang (PI)
$1,500

10. *Faculty Research Council Publication Assistance Grant* 2018
Solid phase synthesis of [4.4]spirocyclic oximes.
Kevin Huang (PI)
$2,400

9. *Scholarly Undergraduate Research Experience (SURE) Grant* 2018
Spirocyclic heterocycles as potential drug candidates for the treatment of cancer cells.
Jordan Mar (undergraduate) and Kevin Huang (PI)
$1,500

8. *Center for Research in Science STEM Research Fellowship* 2018
Measuring the cytotoxicity of spirocyclic molecules
Amelia Gray (undergraduate) and Kevin Huang (PI)
$500

7. *Center for Research in Science STEM Research Fellowship* 2018
Progress towards the synthesis of spirocyclic heterocyles.
Jordan Mar (undergraduate) and Kevin Huang (PI)
$500

6. *Faculty Research Council Grant* 2017
Heterocycles as privileged scaffolds for combinatorial library design and drug discovery
Kevin Huang (PI)
$6,000

5. *Faculty Research Council Grant* 2016
Design and Synthesis of Cyclic Dipeptides for Biomimetic Epoxidation
Kevin Huang (PI)
$6,000

4. *Faculty Research Council Grant* 2015
DNA-Templated Synthesis in the Construction of Non-Peptidyl Macrocycles
Kevin Huang (PI)
$5,000

3. *Faculty Research Council Grant* 2013
DNA hydrogen bonding detection using variable temperature NMR spectroscopy
Kevin Huang (PI)
$4,500

2. *Faculty Research Council Grant* 2007
Be fruitful and polymerize…Investigating the ribosome catalyzed protein synthesis
Kevin Huang (PI)
$2,500

1. *Creative Teaching Grant* 2007
Using molecular modeling to enhance undergraduate organic chemistry curriculum
Kevin Huang (PI)
$900

HONORS AND AWARDS

12. Undergraduate Scholarly Achievement Award, Office of the Provost 2020-2021
University award recipient for promoting undergraduate research and scholarship
Azusa Pacific University, June 2021.

11. Student Athlete Faculty Recognition Award 2015-2016
Recipient for promoting and supporting student-athletes.
Azusa Pacific University, June 2016.

10. American Chemical Society Certificate of Appreciation 2008
Recognition for commitment and outstanding service to the American Chemical Society (ACS) Project SEED program. August 2008

9. San Gabriel Valley Tribune 2008
Article titled "Action hero of the molecular kind" featuring undergraduate research experience in organic chemistry at Azusa Pacific University.
Local News page A3. July 4th, 2008.

8. APU Media Relations 2008
Webpage titled "Azusa High School student joins university science research team."

7. Camille and Henry Dreyfus Invitation 2008
Invitation to submit a full proposal titled "Project Pipeline: Early Undergraduate Research Experience as a Platform for Scholarship and Mentorship for Minority High School Students." June 17th, 2008.

6. APU Life Featured Article 2008
Article titled "Research Revisited: Scholarship Made Personal." Volume 21
Spring 2008.

5. American Chemical Society Western Regional Meeting, San Diego 2007
Azusa High School Hector Correa was awarded one of the five recipients of the undergraduate and graduate student poster presentation awards for his research dissemination in organic chemistry at Azusa Pacific University. October 2007.

4. APU Media relations 2007
"Local High School Student Expands Learning Through University Research."
August 29th, 2007.

3. Teaching Award in Chemistry 1998
Outstanding graduate teaching
Sponsored by DOW Chemicals and UC Davis. June, 1998.

2. Chemistry Honors Program 1996
Department of Chemistry, UC Irvine. June, 1996.

1. Excellence in Biological Sciences 1994
Department of Biological Sciences, UC Irvine. 1994

RESEARCH PRESENTATIONS (Out of 43 presentations)

43. "Exploring Spirocyclic Small Molecules as Inhibitors of MDM2-P53 Interactions." Giovanny Vargas and Kevin S. Huang, The 2024 Annual Biomedical Research Conference for Minoritized Scientists (ABRCMS), Pittsburg, PA. November 13-16, 2024 (oral presentation).

42. "Polar side chains show promise in improving the functionality of anti-cancer drugs with a spriocycic motif." Aidan A. Oslob and Kevin S. Huang. Department of Biology and Chemistry. The Fall 2024 STEM Research Symposium, Azusa, CA. September 21, 2024 (oral presentation).

41. "Inhibitors of MDM2-P53 interactions." Giovanny A. Vargas, Aniya L. Rivera, Jacob R. Correa, Aidan Oslob, and Kevin S. Huang. Department of Biology and Chemistry. The Fall 2024 STEM Research Symposium, Azusa, CA. September 21, 2024 (poster presentation).

40. "New insights to the synthesis, structural analysis, and cytotoxicity of spirocyclic compounds." Cheyenne Y. Woon and Kevin S. Huang. Department of Biology and Chemistry. The Fall 2023 STEM Research Symposium, Azusa, CA. September 23, 2023 (Outstanding Oral Presentation Award: 1 out of 6).

39. "Exploring spirocyclic methyl esters as inhibitors of MDM2-P53 protein interactions." Ella Felberg, Colleen Walker, Cheyenne Woon, Gio Vargas, Sydey Noell, Aniya Rivera, and Kevin S. Huang. Department of Biology and Chemistry. The Fall 2022 American Chemical National Meeting & Exposition, San Francisco, Ca. August 13-17, 2023 (poster presentation).

38. "When truth hurts: How climate science is perceived in society." Kevin S. Huang, Erika L. Litson, and Louise K. Huang. Department of Biology and Chemistry and Center for Research and Science (CRIS). The 2023 American Scientific Affiliation Annual Meeting, Mississauga, Canada. July 28-31, 2023 (oral presentation).

37. "Examining the inhibition of MDM2-P53 protein interactions using small molecules containing the spirocyclic motifs." Colleen M. Walker, Tyler Durbin, and Kevin S. Huang. Department of Biology and Chemistry. The 2022 STEM Research Symposium, Azusa Pacific University, 675 E. Foothill Blvd, Azusa, CA 91702. April 17, 2022 (*outstanding poster presenter award).

36. "Designing an efficient methodology and examining the cell viability of potential anticancer small molecules containing spirocyclic motifs." Dave Koo*, Sam, Yu*, Tiffany M. Nakla*, and Kevin S. Huang. Department of Biology and Chemistry. The Fall 2022 American Chemical National Meeting & Exposition, Chicago, IL. August 21-25, 2022 (poster presentation).

35. "Investigating the cell viability of potential anticancer small molecules containing spirocyclic motifs." Tiffany M. Nakla and Kevin S. Huang. Department of Biology and Chemistry. The 2021 STEM Research Symposium, Azusa Pacific University, 675 E. Foothill Blvd, Azusa, CA 91702. April 17, 2021 (*awarded one of the three outstanding oral presenters).

34. "Comparison of the cytotoxicity of novelly synthesized spirocyclic heterocycles." Christine Messner, Cameryn A. Nakamura, and Kevin S. Huang. Department of Biology and Chemistry. The 2021 STEM Research Symposium, Azusa Pacific University, 675 E. Foothill Blvd, Azusa, CA 91702. April 17, 2021 (*awarded one of the two outstanding poster presenters).

UNDERGRADUATE RESEARCH MENTORING

66. Anna Garcia (allied health, 2024-present)
65. Mia Pierce (biology, 2024-present)
64. Makayla Vanderwaaz (allied health, 2024-present)
63. Sunny Shin (chemistry, 2024-present)
62. Aidan Oslob (biochemistry, 2024)
61. Jacob Coreea (chemistry, 2024)
60. Aniya Rivera (biochemistry, 2023-present)
59. Gio Vargas (biology, 2023-present)
58. Sydney Noell (chemistry, 2022-2024)
57. Tyler Durbin (biochemistry, 2022-2024)
56. Coleen Walker (chemistry, 2022-2024)
55. Ella Felberg (biochemistry, 2022-2023)
54. Cheyenne Woon (biochemistry, 2022-2023)
53. Samuel Yu (biology, 2021-2022)
52. Erika Litson (chemistry, 2021-2022, Stauffer Fellow)
51. Dave Ye Seong Koo (biology, 2021-2022, SURE Undergraduate Grant)
50. Tiffany Nakla (biology, 2020-2022, Richter Scholars Undergraduate Grant, Stauffer Fellow)
49. Hannah Lim (biochemistry, 2020-2021)
48. Nathaniel Kim (biochemistry, 2020-2021)
47. Christine Messner (biology, 2020-2022)
46. Cameryn Nakamura (allied health, 2020-2021, UCSF Pharmacy)
45. Breeana Ramierez (biology, 2019-2020)
44. Selom Mawugbe (biochemistry, 2019-2021)
43. Amelian Gray (biochemistry, 2018-2021, SURE Undergraduate Grant)
42. Jordan Mar (biology, 2018-2022, SURE Undergraduate Grant)
41. Aaron Ramsay (chemistry, 2017-2019, ACS Scholar recipient, Stauffer Fellow)
40. Alissa Mattus (chemistry, 2017-2018, NSF Graduate Research Fellow, UC Irvine)
39. Jenelle Dhing (history, 2017-2018)
38. Erica Steuer (allied health, 2017-2018)
37. Jeff Tereski8 (biochemistry, 2017-2018)
36. Caitlin Maslyar (allied health, 2016-2017)
35. Cody Drisko (chemistry, 2016-2018, Stauffer Fellow), currently PhD chemistry Notre Dame
34. Silas Griffin (biochemistry, 2015-2018), MD Loma Linda, US Air Force Health Professions Program
33. Jeremy Hitchcock (biochemistry, 2014-2015)
32. Emily Burchinal (allied health, 2014-2015)
31. Kaiah Luecke (biochemistry, 2014-2015)
30. Cyndi Reck (allied health, 2014-2015)
29. Chandler Paul (allied health, 2014-2015)
28. Isaac Fields (chemistry, 2013-2014, Stauffer Fellow).
27. Joel Sowders (biology, 2013-2014)
26. Tyler Glendrange (chemistry, 2013-2014)
25. Joshua Delgado (allied health, 2013-2014)
24. Stephanie Thomas (chemistry, 2012-2013)
23. Kelsey Rodin (allied health, 2012-2013)
22. Scott Lap (biology, 2011-2012)
21. Amanda Bueno (biology, 2011-2012)
20. Cody McDermott (biology, 2011-2012)
19. Ian Giacopuzzi (biochemistry, 2011-2012)
18. Abbi Mleziva (biochemistry, 2011-2012)
17. James McDowell (biology, 2011-2012)
16. Emily White (chemistry, 2011-2012)

15. Jordan West (biology, 2011-2012)
14. Kari Honda (allied health, 2010-2012)
13. Grant Zomermaand (biology, 2010-2011)
12. Clifford Gee (chemistry, 2010-2012, Stauffer Fellow)
11. Rebecca Skilbred (biochemistry, 2009-2010)
10. Andrew Shore (allied health, 2009-2010)
09. James Barger (biochemistry, 2008-2009)
08. Erica Ascencio (Azusa High School; ACS Project SEED 2008)
07. Hector Correa (Azusa High School; ACS Project SEED 2007), Bill Gates Foundation Scholar, Yale University
06. Mary Hernandez (biology, 2007-2009)
05. Chris Saucedo (chemistry, 2007-2009, ACS Scholar)
04. Nick Okerson (chemistry, 2006-2008)
03. Joel Roberts (biochemistry, 2006-2008)
02. Joy Yilpet (biology, 2006-2008)
01. Russel Anwar (biology, 2006-2008)