# *Curriculum Vitae*

**Yana Cen, Ph.D.**

Department of Medicinal Chemistry
Virginia Commonwealth University
800 E Leigh Street, Suite 212
Richmond, VA 23219
Tel: (804)828-7405
Email: ceny2@vcu.edu

## Professional Appointment

| | |
|---|---|
| 07/2024-present | Associate Professor, Department of Medicinal Chemistry<br>Virginia Commonwealth University |
| 07/2019-06/2024 | Assistant Professor, Department of Medicinal Chemistry<br>Virginia Commonwealth University |
| 03/2014-06/2019 | Assistant Professor, Department of Pharmaceutical Sciences-Vermont<br>Albany College of Pharmacy and Health Sciences |
| 07/2012-02/2014 | Research Scientist II, Department of Pharmacology & Toxicology<br>University of Texas Medical Branch |
| 05/2011-06/2012 | Instructor, Department of Pharmacology, Weill Medical College of Cornell University |

## Education

| | |
|---|---|
| 09/2001-05/2006 | Ph.D. in Organic Chemistry, Michigan State University, East Lansing, MI |
| 09/1998-07/2001 | M.S. in Organic Chemistry, Beijing Normal University, Beijing, China |
| 09/1994-07/1998 | B.S. in Chemistry with Honors, Beijing Normal University, Beijing, China |

## Research Experiences

07/2019-present *Department of Medicinal Chemistry, Virginia Commonwealth University*

- Design and Synthesis of Chemical Probes for Epigenetic Modification Enzymes (Sirtuins, KDM)
- Targeting $NAD^+$ metabolism for Drug Discovery
- Development of Chemical Tools to Study DNA Modifications

03/2014-06/2019 *Department of Pharmaceutical Sciences-Vermont, Albany College of Pharmacy and Health Sciences*
Assistant Professor

- Design and Development of Chemical Probes for Epigenetic Modification Enzymes
- Investigation of mammalian $NAD^+$ metabolism
- Synthesis of Novel Probes for Mammalian Nucleobase Transporters

07/2012-02/2014 *Department of Pharmacology & Toxicology, University of Texas Medical Branch*
Research Scientist II

- Oligonucleotides Synthesis and Characterization
- Development of Antiviral and Antitumor Nucleoside Analogs

01/2006-06-2012 *Department of Pharmacology, Weill Medical College of Cornell University*
Postdoctoral Associate and Instructor with Dr. Anthony Sauve
- Design and Synthesis of ADP-ribosyltransferase Inhibitors
- Enzymology of $NAD^+$-dependent Histone Deacetylase (Sirtuins)
- Kinetic Isotope Effects of $NAD^+$-dependent Histone Deacetylase
- $NAD^+$ Metabolism in Regulating Biological Functions
- Development of Novel Antibiotics by Targeting Bacterial Nicotinamidases

09/2001-12/2005 *Department of Chemistry, Michigan State University*
Graduate Research Assistant with Dr. Peter J. Wagner
- Structural Effects on the Behavior of Photo-induced Ketone Biradicals

09/1998-07/2001 *Department of Chemistry, Beijing Normal University*
Graduate Research Assistant with Dr. Cong Zhang
- Studies on Photo-induced Intramolecular Arene Olefin *meta*-Cycloaddition

09/1997-06/1998 *Department of Chemistry, Beijing Normal University*
Undergraduate Thesis Research with Dr. Cong Zhang
- Regio- and Stereoselectivity of Photo-induced Intramolecular Arene Olefin *meta*-Cycloaddition

## Teaching Experience

### VCU Teaching Experience

| | |
|---|---|
| 2025-present | CHEB602 (Chemical Biology II) |
| 2024-present | PHAR523 (Foundation I) |
| 2023-present | MEDC556 (Fundamentals of Drug Discovery II) |
| 2022-present | MEDC551 (Topics in Physical and Analytical Chemistry) |
| 2022-present | MEDC552 (Topics in Organic Chemistry and Biochemistry) |
| 2021-present | PHAR619 (Women's Health and Bone) |
| 2020-present | MEDC310 (Medicinal Chemistry and Drug Design) |
| 2020-present | MEDC691 (Special Topics-Chemical Biology) |
| 2019-2022 | PHAR 534 (Foundations III) |
| 2019-present | MEDC527 (Basic Pharmaceutical Principles for the Practicing Pharmacist) (course coordinator starting in 2021) |
| 2019-present | MEDC555 (Fundamentals of Drug Discovery I) |
| 2019-present | MEDC533 (Pharmacognosy) |

### ACPHS Teaching Experience

| | |
|---|---|
| 2016-2019 | PSC756 (Chemical Biology) |
| 2015-2018 | PSC631 (Foundations of Pharmaceutical Sciences) |
| 2015-2019 | PSC451 (Scientific Literature Evaluation) |
| 2015-2018 | PHM718/719 (Independent Study) |
| 2014-2018 | PSC311 (Biochemistry) |

### Teaching Experience Prior to ACPHS

| | |
|---|---|
| 2001-2005 | Survey of Organic Chemistry, Organic Chemistry I and II, Advanced Organic Chemistry (graduate level) |

| | |
|---|---|
| | Department of Chemistry, Michigan State University<br>Teaching Assistant (recitations) |
| 1999-2000 | Organic Chemistry Laboratory<br>Department of Chemistry, Beijing Normal University<br>Teaching Assistant (laboratory) |

## Honors and Awards

| | |
|---|---|
| 2025 | National and International Recognition Award (NIRA, VCU) |
| 2025 | Excellence in Research Award (VCU School of Pharmacy) |
| 2024 | Bertha Rolfe Teacher of the Year Award (VCU School of Pharmacy) |
| 2023 | Blick Scholar (VCU) |
| 2022 | Emerging Faculty Scholar Award (VCU School of Pharmacy) |
| 2021 | Ralph E. Powe Junior Faculty Enhancement Award (ORAU) |
| 2018 | 2017 Albany College of Pharmacy and Health Sciences Researcher of the Year (ACPHS) |
| 2016 | Blythe Research Award (ACPHS) |
| 2012 | Keystone Symposium Scholarship |
| 2005 | Harold Hart Endowed Fellowship in the Chemical Science (MSU) |
| 2005 | Educational Merit Fellowship (MSU) |
| 1999 | Distinguished Graduate Student Fellowship (BNU) |
| 1998 | Excellent Undergraduate Student of Beijing |
| 1998 | Liyun Scolarship (BNU) |
| 1996-1998 | Sanhao Scholarship (BNU) |
| 1995-1998 | Distinguished Undergraduate Student Fellowship (BNU) |

## Professional Memberships

| | |
|---|---|
| 2015-present | American Heart Association |
| 2015-present | American Association of Pharmaceutical Scientists |
| 2014-present | American Association of Colleges of Pharmacy |
| 2014-2019 | Vermont Cancer Center |
| 2010-present | The New York Academy of Science |
| 2009-present | Sigma Xi, the Scientific Research Society |
| 2007-present | American Association for the Advancement of Science |
| 2001-present | American Chemical Society |

## Services

### Professional Service

| | | |
|---|---|---|
| 2026 | Proposal Reviewer | *NIH ZRG1 MBBC-J (70) Study Section* |
| 2025 | Panelist | *NSF Panel* |
| 2025 | Proposal Reviewer | *NIH CBP Study Section* |
| 2025 | Panelist | *NSF Panel* |
| 2025-present | Editorial Board Member | *Current Topics in Medicinal Chemistry* |
| 2024 | Proposal Reviewer | *NIH ZRG1 MBBC-G (10) Study Section* |
| 2024-present | Editorial Board Member | *Discover Mental Health (Springer Nature)* |
| 2024 | Proposal Reviewer | *NSF Panel* |

| | | |
|---|---|---|
| 2024 | Proposal Reviewer | *NIH ZNS1 SRB Study Section* |
| 2023-present | Review Editor | *Frontiers in Molecular Biosciences* |
| 2023 | Proposal Reviewer | *NIH CBP Study Section* |
| 2023 | Proposal Reviewer | *NIH ZRG1 MBBC-D 55 Study Section* |
| 2022 | Proposal Reviewer | *NIH ZRG1 BCMB-G 10 Study Section (3 times)* |
| 2022 | Proposal Reviewer | *Israel Science Foundation* |
| 2019-2021 | Proposal Reviewer | *Vermont Biomedical Research Network* |
| 2020-present | Proposal Reviewer | *BARD-The US-Israel Agricultural Research & Development Fund* |
| 2019, 2024 | Proposal Reviewer | *Johnson Cancer Research Center-Kansas State University* |
| 2019 | Early Career Reviewer | *NIH SBCA Study Section* |
| 2018, 2022 | Poster Judge | *Gordon Research Conference* |
| 2018 | Proposal Reviewer | *Vermont Genetics Network* |
| 2018-2019 | Faculty Mentor | *Vermont Genetics Network Undergraduate Student Summer Research Program* |
| 2017-2019 | Poster Abstract Screener | *AAPS Annual Meeting and Exposition* |
| 2015-2018 | Faculty Mentor | *"Training Interns and Partnering for Success" program sponsored by the Lake Champlain Regional Chamber of Commerce* |
| 2010-present | Journal Reviewer | *PLoS Computational Biology*<br>*Bioorganic & Medicinal Chemistry*<br>*European Journal of Medicinal Chemistry*<br>*Molecular and Cellular Endocrinology*<br>*BBA-Proteins & Proteomics*<br>*Journal of Pharmacy and Pharmacology*<br>*Molecular Diversity*<br>*Beilstein Journal of Organic Chemistry*<br>*Current Topics in Medicinal Chemistry*<br>*Scientific Report*<br>*ACS Chemical Biology*<br>*PLoS One*<br>*Epigenetics*<br>*Molecules*<br>*Biomolecules*<br>*ChemBioChem*<br>*ChemMedChem*<br>*Chemistry and Biodiversity*<br>*Cancers*<br>*Frontiers in Immunology*<br>*Frontiers in Medicine*<br>*Current Opinion in Chemical Biology*<br>*Clinical and Translational Medicine*<br>*International Journal of Molecular Sciences* |

| | | |
|---|---|---|
| | | *Life*<br>*Nutrients*<br>*Frontiers in Molecular Biosciences*<br>*European Journal of Organic Chemistry*<br>*Journal of International Medical Research*<br>*Journal of Physiology and Biochemistry*<br>*Biochemistry*<br>*Journal of Agricultural and Food Chemistry*<br>*Journal of Medicinal Chemistry*<br>*Molecular Biomedicine*<br>*Genes & Diseases*<br>*Advanced Biology* |
| 2009-2010 | Symposium Organizer | *The New York Academy of Science, Chemical Biology Discussion Group* |

**VCU Service**

| | | |
|---|---|---|
| 2025-present | Chair | Graduate Affairs Committee |
| 2025-present | Member | University Council Academic Affairs Committee |
| 2024-present | Member | VCU COACHE Steering Committee |
| 2024-2025 | Member | VCU Computational Medicinal Chemistry Symposium Organizing Committee |
| 2024-2025 | Member | University Council Faculty Affairs Committee |
| 2024-2025 | Member | Research Day Poster Judging |
| 2023-present | Member | VCU University Council |
| 2023-2024 | Member | Faculty Workload Task Force |
| 2023 | Member | Associate Dean of Student Success Search Committee |
| 2022-2025 | Member | Promotion & Tenure Guideline Committee |
| 2022 | Member | Faculty Search Committee (Internal Medicine) |
| 2020-2021 | Member | Faculty Search Committee (Med Chem and Structural Biology) |
| 2020-2022 | Member | ACPE Self-study Subcommittee |
| 2020-present | Exam Chair | Dean’s Representative on Oral Exams |
| 2022 | Chair | Research and Career Day Poster Judging |
| 2020-2021 | Member | Research and Career Day Poster Judging |
| 2020-2021 | Member | Scientific Administrative Review Committee |
| 2020-2024 | Member | Outcomes and Assessment Committee |
| 2020-present | Member | Academic Performance Committee |
| 2019-present | Interviewer | PharmD Admission Interviews |
| 2021-2025 | Vice Chair | Graduate Affairs Committee |
| 2019-2021 | Member | Graduate Affairs Committee |
| 2019-2021 | Member | Next Generation Pharmacists Coalition |

**ACPHS Service**

| | | |
|---|---|---|
| 2018-2019 | Member | Research Committee |
| 2018-2019 | Member | College Curriculum Committee |
| 2017-2019 | Member | Institution Lab Safety Committee |
| 2015-2019 | Member | Graduate Faculty Review and Appointment Committee |
| 2015-2019 | Mentor | Student Summer Research Program |

| | | |
|---|---|---|
| 2015-2019 | Interviewer | PharmD Admission Committee |
| 2015-2019 | Reviewer | Graduate Admission Committee |
| 2015-2016 | Member | Academic Standing Appeals Committee |
| 2015-2016 | Member | Medicinal Chemistry Faculty Search Committee |
| 2015-2016 | Secondary Writer | ACPE Self-study |
| 2016-2019 | Member | Pharmacy Curriculum Committee |
| 2015-2016 | Consultant | Pharmacy Curriculum Committee |
| 2015 | Member | Vermont College Graduates Recruiting Special Group |
| 2015 | Member | Academic Programming Focus Group |
| 2015 | Member | Pathophysiology/Immunology Faculty Search Committee |
| 2014-2019 | Advisor | Faculty Advisor to PharmD Students |
| 2014-2015 | Member | Medicinal Chemistry Faculty Search Committee |
| 2014 | Reviewer | Scholarship of Discovery Intramural Research Grants Program |

**Graduate Thesis/Dissertation Committee**

| | | | |
|---|---|---|---|
| 1. | Shannon Pollock (PhD) | thesis advisor: Yana Cen | 2024-present |
| 2. | Rasajna Madhusudhana (PhD) | thesis advisor: Yana Cen | 2023-present |
| 3. | Dickson Donu (PhD)<br>*"Small Molecule Approach to Modulate Class III Sirtuins"* | thesis advisor: Yana Cen | 2021-2025 |
| 4. | Rosalie Hoyle (PhD)<br>*"Exploration of Histone Demethylases in Promoting Wnt-induced Colorectal Tumorigenesis"* | thesis advisor: Jiong Li/Yana Cen | 2019-2024 |
| 5. | Daniel Mongeluzi (MS)<br>*"Development of SAM-based Chemical Probes for Methyltransferases"* | thesis advisor: Yana Cen | 2019-2021 |
| 6. | Lama Basalelah (PhD) | thesis advisor: Dayanjan Wijesinghe | 2025-present |
| 7. | Mukesh Kumari (PhD) | thesis advisor: Umesh Desai | 2025-present |
| 8. | Preet Shah (PhD) | thesis advisor: Yan Zhang | 2025-present |
| 9. | Maia Williams (PhD) | thesis advisor: Matthew Hartman | 2024-present |
| 10. | Jake Breeden (PhD) | thesis advisor: Brian Fuglestad | 2024-present |
| 11. | Savannah Biby (PhD) | thesis advisor: Shijun Zhang | 2021-present |
| 12. | Sara Walters (PhD)<br>*"Technology Development for Exploration of Glutathione Peroxidase 4 and Other Protein-Membrane Interactions"* | thesis advisor: Brian Fuglestad | 2022-2026 |
| 13. | Ally Thompson (PhD)<br>*"Development and Applications of Glycosaminoglycan Microarray Technology"* | thesis advisor: Umesh Desai | 2024-2026 |
| 14. | Rawan Fayyad (PhD)<br>*"Drug-like Properties of Synthetic Glycosaminoglycan Mimetics"* | thesis advisor: Umesh Desai | 2023-2025 |
| 15. | Nicholette St. Martin (PhD)<br>"*Development of Next Generation Inhibitors to Disrupt C-terminal Binding Protein's Oncogenic Effects"* | thesis advisor: Keith Ellis | 2023-2025 |
| 16. | Suad Alshammari (PhD) | thesis advisor: Dayanjan Wijesinghe | 2024-2025 |

"*PyZoBot: A Platform for Conversational Information Extraction and Synthesis from Curated Zotero Reference Libraries through Advanced Retrieval-Augmented Generation"*

17. Lamya Alghanim (PhD) thesis advisor: Martin Safo/Yan Zhang 2023-2024
"*Design and Synthesis of Benzamide-substituted Aromatic Aldehydes as Potential Therapeutics for Sickle Cell Disease"*
18. Rachael Flammia (PhD) thesis advisor: Yan Zhang 2023-2024
*"Exploring the Structure-Activity Relationship of NAY to Identify a Next-Generation Lead Compound to Treat Opioid Use Disorder"*
19. Rachel Joshi (PhD) thesis advisor: Adam Hawkridge 2022-2024
*"Chemoproteomics Reagents for Mass Spectrometry-based Target Identification and Standardization"*
20. Ahmed Alghamdi (MS) thesis advisor: Martin Safo 2021-2024
*"Utilizing Hemoglobin Binding Kinetics and X-ray Crystallography in Sickle Cell Disease Drug Development"*
21. Mona Alkhairi (PhD) thesis advisor: Martin Safo 2021-2024
*"Developing Novel Antiviral Agents: Targeting the N-Terminal Domain of SARS-CoV-2 Nucleocapsid Protein with Small Molecule Inhibitors"*
22. Samuel Holmes (PhD) thesis advisor: Umesh Desai 2020-2023
*"Characterizing 3-O-Sulfation-Induced Novel Compact Topologies in Heparan Sulfate and Their Interactions with Proteins"*
23. Celsey Stahlman (PhD) thesis advisor: Yan Zhang 2020-2023
*"Systematic Structure-Activity Relationship Study of Nalfurafine Towards Treatments for Substance Use Disorders and Pain Management"*
24. Noah Herrington (PhD) thesis advisor: Glen Kellogg 2020-2022
"*Structure-Based Drug Discovery and Development of Protein Structure Prediction Tools Using an Empirical Force Field"*
25. Pornprom Klongkumnuankarn thesis advisor: Yan Zhang 2019-2020
*"Design, Synthesis, and Biological Evaluation of Mu Opioid Receptor Selective Antagonists Bearing Pyrazole and Imidazole Side Chains"*
26. Machayla Donovan (MS) thesis advisor: Christopher Cioffi 2018-2019
*"Synthesis of Nonretinoid Inhibitors of RPE65 for the Potential Treatment of Dry Age-related Macular Degeneration and Stargardt Disease"*
27. Juliet Obi (MS) thesis advisor: Karen Glass 2018-2019
*"Molecular Mechanism(s) of Di-acetyllysine Recognition by the BRPF1 Bromodomain"*
28. Chiara Evans (MS) thesis advisor: Karen Glass 2016-2018
*"Coordination of Di-acetylated Histone Ligands by the ATAD2 Bromodomain"*
29. Jonathan Lloyd (MS) thesis advisor: Karen Glass 2016-2017
*"Molecular Mechanism of Di-acetyllysine Recognition by the ATAD2B Bromodomain"*
30. Shriya Mathur (MS) thesis advisor: Martha Hass 2014-2015
*"Synthesis and Evaluation of Co-drugs Derived from Methotrexate and Ibuprofen for the Treatment of Psoriasis"*

## Publications

**Prior to VCU**

*Peer-reviewed Journal Articles*

1. Zhang, C.; **Cen, Y.**; Sun, Z.; Shen, X.; Deng, Z., "Synthesis of Sterically Hindered Enantiopure (*1S, 2S, 3R, 5R*)-Neoisopinocampheyl Aryl Ethers by the Mitsunobu Reactions", *Synthetic Communications*, **2002**, *32*, 3127-3135.
2. Fulco, M.; **Cen, Y.**; Zhao, P.; Hoffman, E. P.; McBurney, M. W.; Sauve, A. A.; Sartorelli, V., "Glucose Restriction Inhibits Skeletal Myoblast Differentiation by Activating SirT1 through AMPK-Mediated Regulation of Nampt", *Developmental Cell*, **2008**, *14*, 661-673.
3. French, J.; **Cen, Y. (co-first author)**; Sauve, A. A., "*Plasmodium falciparum* Sir2 is an $NAD^+$-dependent Deacetylase and an Acetyllysine-dependent and Acetyllysine independent $NAD^+$ Glycohydrolase", *Biochemistry*, **2008**, *47*, 10227-10239.
4. **Cen, Y.**; Sauve, A. A., "Diastereocontrolled Electrophilic Fluorination of 2'-Deoxyribonolactone: Syntheses of All Corresponding 2-Deoxy-2-fluoro-lactones and 2'-Deoxy-2'-fluoro-NAD+s", *Journal of Organic Chemistry*, Featured Article, **2009**, *74*, 5779-5789.
5. Frizzell, K. M.; Gamble, M. J.; Berrocal, J. G.; Zhang, T.; Krishnakumar, R.; **Cen, Y.**; Sauve, A. A.; Kraus, W. L., "Global Analysis of Transcription Regulation by Poly(ADP-ribose) Polymerase-1 and Poly(ADP-ribose) Glycohydrolase in MCF-7 Human Breast Cancer Cells", *Journal of Biological Chemistry*, **2009**, *284*, 33926-33938.
6. **Cen, Y.**, "Sirtuins Inhibitors: The Approach to Affinity and Selectivity", *Biochimica et Biophysica Acta (BBA)-Proteins & Proteomics*, **2010**, *1804*, 1635-1644*.*
7. **Cen, Y.**; Sauve, A. A., "Efficient Syntheses of Clofarabine and Gemcitabine from 2-Deoxyribonolactone", *Nucleosides, Nucleotides and Nucleic Acids*, **2010**, *29*, 113-122.
8. **Cen, Y.**; Sauve, A. A., "Transition State of ADP-ribosylation of Acetyllysine Catalyzed by *Archeaoglobus fulgidus* Sir2 Determined by Kinetic Isotope Effects and Computational Approaches", *Journal of the American Chemical Society*, **2010**, *132*, 12286-12298.
9. French, J. B.; **Cen, Y.**; Sauve, A. A.; Ealick, S. E., "High-Resolution Crystal Structures of *Streptococcus pneumoniae* Nicotinamidase with Trapped Intermediates Provide Insights into the Catalytic Mechanism and Inhibition by Aldehyde", *Biochemistry*, **2010**, *49*, 8803-8812.
10. French, J. B.; **Cen, Y.**; Vrablik, T. L.; Xu, P.; Allen, E.; Hanna-Rose, W.; Sauve, A. A., "Characterization of Nicotinamidases: Steady State Kinetic Parameters, Classwide Inhibition by Nicotinaldehydes, and Catalytic mechanism", *Biochemistry*, **2010**, *49*, 10421-10439.
11. **Cen, Y.**; Falco, J. N.; Xu, P.; Youn, D. Y.; Sauve, A. A., "Mechanism-based Affinity Capture of Sirtuins", *Organic & Biomolecular Chemistry*, **2011**, *9*, 987-993.
12. Bai, P.; Canto, C.; Oudart, H.; Brunyánszki, A.; **Cen, Y.**; Thomas, C.; Yamamoto, H.; Huber, A.; Kiss, B.; Houtkooper, R. H.; Schoonjans, K.; Schreiber, V.; Sauve, A. A.; Meinissier-de Murcia. J.; Auwerx, J., "PARP-1 Inhibition Increases Mitochondrial Metabolism through SIRT1 Activation", *Cell metabolism,* **2011**, *13*, 461-468.
13. Bai, P.; Canto, C.; Brunyánszki, A.; Huber, A.; Szántó, M.; **Cen, Y.**; Yamamoto, H.; Houten, S. M.; Kiss, B.; Oudart, H.; Gergely, P.; Meinissier-de Murcia. J.; Schreiber, V.; Sauve, A. A.; Auwerx, J., "PARP-2 Regulates SIRT1 Expression and Whole-Body Energy Expenditure", *Cell metabolism,* **2011**, *13*, 450-460.
14. **Cen, Y.**; Youn, D. Y.; Sauve, A. A., "Advances in Characterization of Human Sirtuin

Isoforms: Chemistries, Targets and Therapeutic Applications", *Current Medicinal Chemistry*, **2011**, *18*, 1919-1935.

15. Cantó, C.; Houtkooper, R. H.; Pirinen, E.; Youn, D. Y.; Oosterveer, M. H.; **Cen, Y.**; Fernandez-Marcos, P. J.; Yamamoto, H.; Andreux, P. A.; Cettour-Rose, P.; Gademann, K.; Rinsch, C.; Schoonjans, K.; Sauve, A. A.; Auwerx, J., "The $NAD^+$ Precursor Nicotinamide Riboside Enhances Oxidative Metabolism and Protects against High-Fat Diet-Induced Obesity", *Cell Metabolism*, **2012**, *15*, 838-847.

16. Laurent, G.; de Boer, V. V.; Finley, L. W.; Sweeney, M.; Lu, H.; Schug, T. T.; **Cen, Y.**; Jeong, S. M.; Sauve, A. A.; Haigis, M. C., "SIRT4 Represses Peroxisome Proliferator-activated Receptor α Activity to Suppress Hepatic Fat Oxidation", *Molecular and Cellular Biology*, **2013**, *33*, 4552-4561.

17. Kraus, D.; Yang, Q.; Kong, D.; Banks, A. S.; Zhang, L.; Rodgers, J. T.; Pirinen, E.; Pulinilkunnil, T. C.; Gong, F.; Wang, Y. C.; **Cen, Y.**; Sauve, A. A.; Asara, J. M.; Peroni, O. D.; Monia, B. P.; Bhanot, S.; Alhonen, L.; Puigserver, P.; Kahn, B. B., "Nicotinamide N-methyltransferase Knockdown Protects against Diet-induced Obesity", *Nature*, **2014**, *508*, 258-262.

18. North, B. J.; Rosenberg, M. A.; Jeganathan, K. B.; Hafner, A. V.; Michan, S.; Dai, J.; Baker, D. J.; **Cen, Y.**; Wu, L. E.; Sauve, A. A.; van Deursen, J. M.; Rosenzweig, A.; Sinclair, D. A., "SIRT2 Induces the Checkpoint Kinase BubR1 to Increase Lifespan", *The EMBO Journal*, **2014**, *33*, 1438-1453.

19. Wood, M.; **Cen, Y.***, "Facile Synthesis of NaMN, NaAD and Derivatives", *Annals of Pharmacology & Pharmaceutics*, **2016**, *1*, 1007.

20. Subramaniam, R.; Mathew, I.; Jagadeesan, R.; **Cen, Y.**; Balaz, S., "Scalable Synthesis and Purification of Acetylated Phosphatidyl Choline Headgroup", *Organic Process Research & Development,* **2017***, 21,* 177-181.

21. Wood, M.; Rymarchyk, S.; Zheng, S.; **Cen, Y.***, "Trichostatin A inhibits deacetylation of histone H3 and p53 by SIRT6", *Archives of Biochemistry and Biophysics*, **2018**, *638*, 8-17.

22. Graham, E.; Rymarchyk, S.; Wood, M.; **Cen, Y.***, "Development of Activity-Based Chemical Probes for Human Sirtuins", *ACS Chemical Biology,* **2018**, *13*, 782-792.

23. Tran, A.; Yokose, R.; **Cen, Y.***, "Chemo-enzymatic Synthesis of Isotopically Labeled Nicotinamide Riboside", *Organic and Biomolecular Chemistry*, **2018**, *16*, 3662-3671.

24. Subranabuam, R.; Lynch, S.; **Cen, Y.**; Balaz, S., "Polarity of Hydrated Phosphatidylcholine Headgroups", *Langmuir*, **2019**, *35*, 8460-8471.

**After Coming to VCU**

*Peer-reviewed Journal Articles*

25. Zheng, S.; Wohlfahrt, J.; Cohen, I.; **Cen, Y.***, "Methods for Studying Human Sirtuins with Activity-based Chemical Probes", *Methods in Enzymology*, **2020**, *633*, 251-269.

26. Carraway, H.; Malkaram, S.; **Cen, Y.**; Fan, J.; Ali, H.; Abd Elmageed, Z.; Buttolph, T.; Shatnawi, A.; Denvir, J.; Primerano, D.; Fandy, T., "Activation of SIRT6 by DNA hypomethylating agents and clinical consequences on combination therapy", *Scientific Reports*, **2020**, *10*, 10325.

27. Hoyle, R.; Wang, H.; **Cen, Y.**; Zhang, Y.; Li, J., "IOX1 Suppresses Wnt Target Gene Transcription and Colorectal Cancer Tumorigenesis Through Inhibition of KDM3",

*Molecular Cancer Therapeutics*, **2021**, *20*, 191-202.

28. Curry, A.; Barton, E.; Kang, W.; Mongeluzi, D.; **Cen, Y.***, “Development of Second Generation Activity-Based Chemical Probes for Sirtuins”, *Molecules*, **2021**, *26*, 11.
29. Rymarchyk, S.; Kang, W.; **Cen, Y.***, “Substrate-dependent Sensitivity of SIRT1 to Nicotinamide Inhibition”, *Biomolecules*, **2021**, *11*, 312.
30. Curry, A.; White, D.; Donu, D.; **Cen, Y.***, “Human Sirtuin Regulators: the Success Stories ”, *Frontiers in Physiology*, **2021***,* Oct. 21, https://doi.org/10.3389/fphys.2021.752117.
31. Curry, A.; Cohen, I.; Zheng, S.; Wohlfahrt, J.; White, D.; Donu, D.; **Cen, Y.***, “Profiling Sirtuin Activity Using Copper-free Click Chemistry”, *Bioorganic Chemistry*, **2021**, *117*, 105413.
32. Curry, A.; White, D.; **Cen, Y.***, “Small Molecule Regulators Targeting $NAD^+$ Biosynthetic Enzymes”, *Current Medicinal Chemistry*, **2022**, *10*, 1718.
33. White, D. S.; Mongeluzi, D.; Curry, A. M.; Donu, D.; **Cen, Y.***, “Facile Synthesis of Photoactivatable Adenosine Analogs”, *RSC Advances*, **2022**, *12*, 2219.
34. Donu, D.; Sharma, C.; **Cen, Y.***, “*Plasmodium falciparum* Nicotinamidase as A Novel Antimalarial Target”, *Biomolecules*, **2022**, *12*, 1109.
35. Sharma, C.; Donu, D.; **Cen, Y.***, “Emerging Role of Nicotinamide Riboside in Health and Diseases”, *Nutrients*, **2022**, *14*, 3889.
36. Szymanski, M.; Karlowicz, A.; Herrmann, G.; **Cen, Y.***; Yin, W., “Human EXOG possesses strong AP hydrolysis activity – implication on mitochondrial DNA base excision repair”, *Journal of the American Chemical Society*, **2022**, *144*, 23543-23550.
37. Kellogg, G. E.; **Cen, Y.**; Dukat, M.; Ellis, K. C.; Guo, Y.; Li, J.; May, A. E.; Safo, M. K.; Zhang, S.; Zhang, Y.; Desai, U.; “Merging Cultures and Disciplines to Create a Drug Discovery Ecosystem at Virginia Commonwealth University: Medicinal Chemistry, Structural Biology, Molecular and Behavioral Pharmacology and Computational Chemistry”, *SLAS Discovery*, **2023**, *28*, 255-269.
38. Sharma, C.; Donu, D.; Curry, A.; Barton, E.; **Cen, Y.***, “Multifunctional Activity-based Chemical Probes for Sirtuins”, *RSC Advances*, **2023**, *13*, 11771-11781.
39. Tran, A.; Gao, S.; Shek, R.; Zheng, S.; **Cen, Y.***; French, J. B.*, “Dual-function Probes to Tag, Isolate and Identify Nucleobase-binding Proteins” (January 19, 2023), available at SSRN: *https://ssrn.com/abstract=4329400* or *http://dx.doi.org/10.2139/ssrn.4329400*.
40. Curry, A.; Rymarchyk, S.; Herrington, N.; Donu, D.; Kellogg, G.; **Cen, Y.***, “Nicotinamide Riboside Activates SIRT5 Deacetylation”, *The FEBS Journal*, **2023**, *290*, 4762-4776.
41. Kang, W.; Hamza, A.; Curry, A. M.; Korade, E.; Donu, D.; **Cen, Y.***, “Activation of SIRT6 Deacetylation by DNA Strand Breaks”, *ACS Omega*, **2023**, *8*, 41310-41320.
42. Sharma, C.; Hamza, A.; Boyle, E.; Donu, D.; **Cen, Y.***, “Post-translational Modifications and Diabetes”, *Biomolecules*, **2024**, *14*, 310.
43. Donu, D.; Boyle, E.; Curry, A.; **Cen, Y.***, “Biochemical Characterization and Discovery of Inhibitors for *Pf*Sir2A – New Tricks for An Old Enzyme”, *RSC Chemical Biology*, **2025**, *6*, 438-448.
44. Madhusudhana, R.; Boyle, E.; **Cen, Y.***, “An Overview of Glutaminyl Cyclase as a Promising Drug Target for Alzheimer's Disease”, *Biomedicines*, **2025**, *13*, 1467.

45. White, D. S.; Sharma, C.; **Cen, Y.***, "Synthesis and Characterization of 2'-Halogen Substituted NR Analogs", *Bioorganic and Medicinal Chemistry Letters*, *under review*.
46. Hamza, A.; Donu, D.; Boyle, E.; Madhusudhana, R.; Curry, A.; **Cen, Y.***, "Differential Regulation of SIRT5 Activity by Reduced Nicotinic Acid Riboside (NARH)", *RSC Chemical Biology*, **2026**, *7*, 286-297.
47. Madhusudhana, R.; Hamza, A.; Boyle, E.; Pollock, S.; **Cen, Y.***, "Sirtuins in Women's Health", *Pharmaceuticals*, **2025**, *18*, 1859.
48. Hamza, A.; Sharma, C.; **Cen, Y.***, "Facile Synthesis of H-L-Photo-lysine and Its Genetic Incorporation into Proteins", *ChemBioChem*, *accepted*.
49. Li, J.; Pandit, S.; Manupati, K.; Wang, A.; Zaman, S.*; **Cen, Y.***, "Curcumin Suppresses HNSCC Tumorigenesis through Directly Targeting FOSL1/JUN", *BBA - Molecular Basis of Disease*, *accepted*.
50. Boyle, E.; Zhang, O.; **Cen, Y.***, "One-pot Enzymatic Synthesis of $NAD^+$ and $NAD^+$ Analogs", *Current Protocols*, *under review*.

.

*Book Chapter*

1. **Cen, Y.** (2020). "Natural Products as CNS Stimulants" in Zhang, Y. (Eds.), *Pharmacognosy: Current Herbal Medications and Natural Product Chemistry for a PharmD Curriculum* (pp 291-300). Cognella Academic Publishing.

## Presentations

(presenter is underlined)

1. **Cen, Y.**; Wagner, P. J., "Photocyclization of 2-Alkoxy-3-alkyl Phenyl Ketones", *230th American Chemical Society National Meeting*, Washington D. C., August 2005 (poster presentation).
2. **Cen, Y.**; Sauve, A. A., "A Switch of Mechanism for $NAD^+$ Hydrolysis at Alkaline pH Featuring Pronounced Primary $^{14}C$ and α-Secondary $^{3}H$ Kinetic Isotope Effects", *Gordon Research Conference Isotope in Biological and Chemical Science*, Ventura, CA, February 2008 (poster presentation).
3. **Cen, Y.**; Sauve, A. A., "Mechanism for $NAD^+$ Hydrolysis at pH 9 as Determined by Kinetic Isotope Effects and Computational Analysis", *The 40th American Chemical Society Middle Atlantic Regional Meeting*, New York, NY, May 2008 (oral presentation).
4. Sauve, A. A.; French, J.; **Cen, Y.**, "*Plasmodium falciparum* Sir2 is a Nicotinamide Adenine Dinucleotide Dependent Deacetylase with Acetyllysine-dependent and Acetyllysine-independent Nicotinamide Adenine Dinucleotide Glycohydrolase Activities", *The 17th International Symposium on Poly(ADP-ribosyl)ation*, Tucson, Arizona, May 2008 (poster presentation).
5. Sinclair, D.; Hafner, A. V.; Gomes, A.; Liang, J.; **Cen, Y.**; Lanza, I.; Nair, S.; Sauve, A. A.; Rozenzweig, A., "Does Declining Mitochondrial $NAD^+$ and Unscheduled Opening of Mitochondrial Transition Pore Promote Mammalian Aging?", *52nd ASH Annual Meeting and Exposition*, Orlando, FL, December 2010 (oral presentation).
6. Falco, J.; **Cen, Y.**; Youn, D.; Xu, P.; Sauve, A. A., "Mechanism-based Affinity Capture of Sirtuins", *22nd Enzyme Mechanisms Conference*, St. Pete Beach, FL, January 2011 (poster presentation).

7. **Cen, Y.**, "Transition State of ADP-ribosylation of Acetyllysine Catalyzed by *Archeaoglobus fulgidus* Sir2 Determined by Kinetic Isotope Effects and Computational Approaches", *NYAS Chemical Biology Discussion Group Year-End Meeting*, New York, NY, June 2011 (oral presentation).
8. **Cen, Y.**, "Transition State of ADP-ribosylation of Acetyllysine Catalyzed by *Plasmodium falciparum* and *Archeaoglobus fulgidus* Sirtuins", *Keystone Symposium Sirtuins in Metabolism, Aging and Disease*, Tahoe City, CA, February 2012 (oral presentation).
9. **Cen, Y.**, "Dissecting Sirtuin Transition State Using Kinetic Isotope Effects, SIRTainly!", *Albany College of Pharmacy and Health Sciences*, Colchester, VT, August 2013 (invited talk).
10. **Cen, Y.**; Zhang, K; Lin, H., "Activity-based Photoaffinity Labeling of Sirtuins", *Fifth Annual ACPHS Research Forum*, Albany, NY, January 2015 (poster presentation).
11. **Cen, Y.**, Zhang, K., Lin, H., "Development of Activity-based Chemical Probes for Sirtuin Profiling", *Epigenomics and Novel Therapeutic Targets Conference*, Boston, MA, May 2015 (oral presentation).
12. Graham, E.; Wood, M.; Rymarchyk, S.; Zhang, K.; Lin, H.; **Cen, Y.**, "Chemical Biology Approach for Sirtuin Profiling", *Sixth Annual ACPHS Research Forum*, Albany, NY, January 2016 (oral presentation).
13. Graham, E.; Rymarchyk, S.; **Cen, Y.**, "Design and Synthesis of Activity-based Chemical Probes for Specific Sirtuin Isoforms", *Sixth Annual ACPHS Research Forum*, Albany, NY, January 2016 (poster presentation).
14. **Cen, Y.**, "Novel Probes for Sirtuins: a Chemical Biology Approach", *University of Vermont*, Burlington, VT, April 2016 (invited talk).
15. Graham, E.; Rymarchyk, S.; Wood, M.; Zhang, K.; Lin, H.; **Cen, Y.**, "Activity-based Sirtuin Profiling", *Clinical and Translational Research Symposium*, University of Vermont, Burlington, VT, April 2016 (poster presentation).
16. **Cen, Y.**; Wood, M.; Fandy, T., "DNA Hypomethylating Agents Modulate the Activity of the Histone Deacetylase Sirtuin 6 (SIRT6)", *2016 AAPS Annual Meeting and Exposition*, Denver, CO, November 2016 (poster presentation).
17. Tran, A.; French, J.; **Cen, Y.**, "Design and Synthesis of Dual-functional Nucleobase Analogs for Labeling Nucleobase Transporters", *2016 ACPHS Student Summer Research Presentation and Award Ceremony*, Albany, NY, November 2016 (poster presentation).
18. Tran, A.; Wood, M.; Yokose, R.; French, J. B.; **Cen, Y.**, "Novel Probes for Nucleobase Transporters", *25th Enzyme Mechanism Conference*, St. Pete Beach, FL, January 2017 (poster presentation).
19. Graham, E.; Rymarchyk, S.; Wood, M.; Zhang, K.; Lin, H.; **Cen, Y.**, "Novel Probes for Sirtuins: A Chemical Biology Approach", *Seventh Annual ACPHS Research Forum*, Albany, NY, January 2017 (poster presentation).
20. Tran, A.; Wood, M.; Yokose, R.; French, J. B.; **Cen, Y.**, "Novel Probes for Nucleobase Transporters", *Seventh Annual ACPHS Research Forum*, Albany, NY, January 2017 (poster presentation).
21. Tran, A.; French, J.; **Cen, Y.**, "Design and Synthesis of Dual-functional Nucleobase Analogs for Labeling Nucleobase Transporters", *Seventh Annual ACPHS Research*

*Forum*, Albany, NY, January 2017 (poster presentation).

22. Tran, A.; Wood, M.; Yokose, R.; French, J. B.; **Cen, Y.**, "Novel Probes for Nucleobase Transporters", *Gordon Research Conference on High Throughput Chemistry & Chemical Biology*, Andover, NH, June 2017 (poster presentation).
23. **Cen, Y.**, "Activity-based Chemical Probes for Sirtuins", *FASEB Science Research Conference Reversible Acetylation in Health and Disease*, Big Sky, MO, August 2017 (short talk).
24. **Cen. Y.**; Wood, M.; Smith, P.; Fandy, T., "Comparing the Impact of Indirect DNA Methyltransferase Inhibitors on DNA Methylation and Histone Acetylation", *2017 AAPS Annual Meeting and Exposition*, San Diego, CA, November 2017 (poster presentation).
25. Zheng, S.; **Cen, Y.**, "Synthesis of Cyclooctyne Containing Probes for Labeling Sirtuins", *2017 ACPHS Student Summer Research Presentation and Award Ceremony*, Albany, NY, November 2017 (poster presentation).
26. Rymarchyk, S.; Kisaka, S.; Urman, L.; Ayres, R.; **Cen, Y.**, "Allosteric Activation of Human SIRT6", *Eighth Annual ACPHS Research Forum*, Albany, NY, January 2018 (poster presentation).
27. Tran, A.; Shek, R.; Yokose, R.; Wood, M.; French, J.; **Cen, Y.**, "Identification and Characterization of Nucleobase Transporters", *Eighth Annual ACPHS Research Forum*, Albany, NY, January 2018 (poster presentation).
28. Zheng, S.; **Cen, Y.**, "Synthesis of Cyclooctyne Containing Probes for Labeling Sirtuins", *Eighth Annual ACPHS Research Forum*, Albany, NY, January 2018 (poster presentation).
29. **Cen, Y.**, "Novel Activity-Based Chemical Probes for Human Sirtuins", *Spring 2018 ACS National Meeting*, *Early Career Investigators in Biological Chemistry session*, New Orleans, LA, March 2018 (oral presentation).
30. **Cen, Y.**, "Sirtuin and $NAD^+$: It Takes Two to Tango!", *Saint Michael's College,* Colchester, VT, April 2018 (invited talk).
31. Tran, A.; Yokose, R.; **Cen, Y.**, "Chemo-enzymatic Synthesis of Isotopically Labeled Nicotinamide Riboside", *Gordon Research Conference on Enzymes, Coenzymes and Metabolic Pathways*, Waterville Valley, NH, July 2018 (poster presentation).
32. **Cen, Y.**; ElMageed, Z.; Fandy, T., "The impact of DNA hypomethylating agents on the activity of nuclear sirtuins", *2018 ACCP Annual Meeting*, Bethesda, MD, September 2018 (poster presentation).
33. Zheng, S.; Ogbonna, C.; Ebhohon, W.; **Cen, Y.**, "Synthesis of Nicotinamide Riboside Derivatives", *2018 ACPHS Student Summer Research Presentation and Award Ceremony*, Albany, NY, November 2018 (poster presentation).
34. Tran, A.; Zheng, S.; Yokose, R.; Rymarchyk, S.; **Cen, Y.**, "Nicotinamide Riboside (NR), A Multifaceted Molecule", *26$^{th}$ Enzyme Mechanism Conference*, New Orleans, LA, January 2019 (poster presentation).
35. Zheng, S.; Ogbonna, C.; Ebhohon, W.; **Cen, Y.**, "Synthesis of Nicotinamide Riboside Derivatives", *Ninth Annual ACPHS Research Forum*, Albany, NY, January 2019 (poster presentation).
36. Tran, A.; Yokose, R.; **Cen, Y.**, "Chemo-enzymatic Synthesis of Isotopically Labeled Nicotinamide Riboside", *Ninth Annual ACPHS Research Forum*, Albany, NY, January 2019 (poster presentation).

37. **Cen, Y.**, "Sirtuin and $NAD^+$: It Takes Two to Tango!", *University of Missouri,* Columbia, MO, January 2019 (invited talk).
38. **Cen, Y.**, "Sirtuin and $NAD^+$: It Takes Two to Tango!", *Virginia Commonwealth University,* Richmond, VA, February 2019 (invited talk).
39. **Cen, Y.**, "Sirtuin and $NAD^+$: It Takes Two to Tango!", *Wayne State University,* Detroit, MI, February 2019 (invited talk).
40. Tran, A.; Zheng, S.; Yokose, R.; Rymarchyk, S.; **Cen, Y.**, "Nicotinamide Riboside (NR), A Multifaceted Molecule", *Gordon Research Conference on High Throughput Chemistry & Chemical Biology*, New London, NH, June 2019 (poster presentation).
41. Barton, E.; Curry, A. M.; **Cen, Y.**, "Development of Second Generation Activity-based Probes for Human Sirtuins", *VCU School of Pharmacy PharmD-PhD Summer Research Fellow Presentation*, virtual, August 2020 (oral presentation).
42. **Cen, Y.**, "Chemical Biology Approach to Study Human Sirtuins", *University of Massachusetts-Dartmouth*, October 2020 (invited talk).
43. Barton, E.; Curry, A. M.; Kang, W.; Mongeluzi, D.; **Cen, Y.**, "Development of Second Generation Activity-based Chemical Probes for Sirtuins", *VCU School of Pharmacy, Virtual Research and Career Day*, February 2021 (poster presentation).
44. Mongeluzi, D.; White, D. S.; **Cen, Y.**, "Progress Towards the Development of SAM-based Chemical Probes for the Profiling of Methyltransferase Activity", *VCU School of Pharmacy, Virtual Research and Career Day*, February 2021 (poster presentation).
45. Hoyle, R.; Wang, H.; **Cen, Y.**; Zhang, Y.; Li, J., "IOX1 Suppresses Wnt Target Gene Transcription and Colorectal Cancer Tumorigenesis Through Inhibition of KDM3 Histone Demethylases", *VCU School of Pharmacy, Virtual Research and Career Day*, March 2021 (poster presentation).
46. Curry, A.; Barton, E.; Kang, W.; Mongeluzi, D.; **Cen, Y.**, "Development of Diazirine-containing Activity-based Chemical Probes for Sirtuins", *Spring 2021 ACS National Meeting*, virtual, April 2021 (poster presentation).
47. Hoyle, R.; Wang, H.; **Cen, Y.**; Zhang, Y.; Li, J., "IOX1 Suppresses Wnt Target Gene Transcription and Colorectal Cancer Tumorigenesis Through Inhibition of KDM3 Histone Demethylases", *VirginiaDrugDiscoveryRx Virtual Poster Session*, May 2021 (poster presentation).
48. **Cen, Y.**, "Unlock the Secrets of Longevity Genes, SIRTainly!", *Pharmaceutical Research and Drug Development (PharmD-2021)*, virtual, September 2021 (invited talk).
49. **Cen, Y.**, "Small Molecule Approach to Study Longevity Proteins, SIRTainly!", *University of Georgia, School of Pharmacy*, virtual, October 2021 (invited talk).
50. Curry, A.; Rymarchyk, S.; Zheng, S.; **Cen, Y.**, "Differential Regulation of SIRT5 Activity by Small Molecules", *27th Enzyme Mechanism Conference*, Tucson, AZ, January 2022 (poster presentation).
51. Curry, A.; Cohen, I.; Zheng, S.; Wohlfahrt, J.; White, D. S.; Donu, D.; **Cen, Y.**, "Profiling Sirtuin Activity Using Copper-free Click Chemistry", *Spring 2022 ACS National Meeting*, virtual, March 2022 (poster presentation).
52. Kang, W.; Curry, A.; Korade, E.; **Cen, Y.**, "Allosteric Activation of Human SIRT6 by DNA Strand Breaks", *Spring 2022 ACS National Meeting*, virtual, March 2022 (poster presentation).

53. **Cen, Y.**, "Small Molecule Approach to Study Human Sirtuins", *Virginia Commonwealth University, Department of Chemistry*, virtual, March 2022 (invited talk).
54. Curry, A.; Cohen, I.; Zheng, S.; Wohlfahrt, J.; White, D. S.; Donu, D.; **Cen, Y.**, "Profiling Sirtuin Activity Using Copper-free Click Chemistry", *VirginiaDrugDiscoveryRx Poster Session,* Richmond, VA, May 2022 (poster presentation).
55. White, D. S.; Mongeluzi, D.; Curry, A. M.; Donu, D.; Cen, Y., "Facile Synthesis of Photoactivatable Adenosine Analogs", *VirginiaDrugDiscoveryRx Poster Session*, Richmond, VA, May 2022 (poster presentation).
56. **Cen, Y.**, "Small Molecule Approach to Study Human Sirtuins", *Gordon Research Conference on Bioorganic Chemistry*, Andover, NH, June 2022 (invited talk).
57. Curry, A.; Rymarchyk, S.; Herrington, N.; Donu, D.; Kellogg, G.; **Cen, Y.**, "Nicotinamide Riboside Activates SIRT5 Deacetylation", *Gordon Research Conference on Enzymes, Coenzymes and Metabolic Pathways*, Waterville Valley, NH, July 2022 (poster presentation).
58. Donu, D.; Sharma, C.; **Cen, Y.**, "*Plasmodium falciparum* Nicotinamidase as A Novel Antimalarial Target", *Spring 2023 ACS National Meeting*, virtual, March 2023 (poster presentation).
59. **Cen, Y.**, "Differential Regulation of SIRT5 Activity by Nicotinamide Riboside", *Gordon Research Conference on Nucleosides, Nucleotides and Oligonucleotides*, Newport, RI, June 2023 (invited talk).
60. **Cen, Y.**, "Differential regulation of SIRT5 activity by small molecules", *2023 Southeastern Regional ACS Meeting*, Durham, NC, October 2023 (invited talk).
61. Sharma, C.; Donu, D.; Curry, A. M.; Barton, E.; **Cen, Y.**, "Multifunctional Activity-based Chemical Probes for Sirtuins", *VCU School of Pharmacy Research Day*, Richmond, VA, October 2023 (poster presentation).
62. Hamza, A.; Kang, W.; Donu, D.; Curry, A. M.; Korade, E.; **Cen, Y.**, "Activation of SIRT6 Deacetylation by DNA Strand Breaks", *VCU School of Pharmacy Research Day*, Richmond, VA, October 2023 (poster presentation).
63. Curry, A. M.; Rymarchyk, S.; Herrington, N.; Donu, D.; Kellogg, G.; **Cen, Y.**, "Nicotinamide Riboside Activates SIRT5 Deacetylation", *28$^{th}$ Enzyme Mechanism Conference*, Naples, FL, January 2024 (poster presentation).
64. Hamza, A.; Kang, W.; Donu, D.; Curry, A. M.; Korade, E.; **Cen, Y.**, "Activation of SIRT6 Deacetylation by DNA Strand Breaks", *28$^{th}$ Enzyme Mechanism Conference*, Naples, FL, January 2024 (poster presentation).
65. Donu, D.; Boyle, E.; **Cen, Y.**, "Targeting *Plasmodium falciparum* Sir2 for the Development of Novel Antimalarials", *VCU Graduate Research Symposium*, Richmond, VA, April 2024 (poster presentation).
66. Donu, D.; Boyle, E.; **Cen, Y.**, "Targeting *Plasmodium falciparum* Sir2 for the Development of Novel Antimalarials", *VirginiaDrugDiscoveryRx2024*, Virginia Beach, VA, May 2024 (short talk).
67. Sharma, C.; Hamza, A.; **Cen, Y.**, "Facile Synthesis of H-L-Photo-lysine and Its Genetic Incorporation into Proteins", *VirginiaDrugDiscoveryRx2024*, Virginia Beach, VA, May 2024 (poster presentation).
68. **Cen, Y.**, "SIRT6 Activation by DNA Strand Breaks", *Gordon Research Conference on*

*Bioorganic Chemistry*, Andover, NH, June 2024 (short talk).

69. Donu, D., "Targeting *Plasmodium falciparum* Sir2 for the Development of Novel Antimalarials", *VCU Symposium on Epigenetics and Chromatin Biology*, Richmond, VA, August 2024 (oral presentation).
70. Hamza, A.; Donu, D.; Boyle, E.; Curry, A.; Sharma, C., **Cen, Y.**, "Differential Regulation of SIRT5 Activity by Small Molecules", *VCU Symposium on Epigenetics and Chromatin Biology*, Richmond, VA, August 2024 (poster presentation).
71. Hamza, A.; Sharma, C.; **Cen, Y.**, "Genetic Incorporation of Non-canonical Amino Acids for the Identification of SIRT6 Substrates", *VCU School of Pharmacy Research Day*, Richmond, VA, October 2024 (poster presentation).
72. Boyle, E.; Gatuku, S.; **Cen, Y.**, "NMA1: A Key Player for the Enzymatic Synthesis of $NAD^+$ and its Analogs", *VCU School of Pharmacy Research Day*, Richmond, VA, October 2024 (poster presentation).
73. Donu, D.; Boyle, E.; **Cen, Y.**, "Targeting *Plasmodium falciparum* Sir2 for the Development of Novel Antimalarials", *VCU School of Pharmacy Research Day*, Richmond, VA, October 2024 (poster presentation).
74. Boyle, E.; Gatuku, S.; **Cen, Y.**, "Progress Towards the Enzymatic Synthesis of $NAD^+$", *Computational Medicinal Chemistry Symposium at VCU*, Richmond, VA, April 2025 (poster presentation).
75. Donu, D.; Boyle, E.; **Cen, Y.**, "Targeting *Plasmodium falciparum* Sir2 for the Development of Novel Antimalarials", *Computational Medicinal Chemistry Symposium at VCU*, Richmond, VA, April 2025 (poster presentation).
76. Donu, D.; Boyle, E.; **Cen, Y.**, "Biochemical Characterization and Discovery of Inhibitors for *Pf*Sir2A: New Tricks for An Old Enzyme", *2025 Virginia Academy of Science Annual Meeting*, Charlottesville, VA, May 2025 (poster presentation).
77. **Cen, Y.**, "Beyond the Syllabus: What Makes Teaching Work", *VCU School of Pharmacy Lunch and Learn Series*, Richmond, VA, June 2025 (invited talk).
78. Boyle, E.; Zhang, O.; Gatuku, S.; **Cen, Y.**, "One-pot Enzymatic Synthesis of $NAD^+$ and $NAD^+$ Analogs", *VCU School of Pharmacy Research Day*, Richmond, VA, October 2025 (poster presentation).
79. Hamza, A.; Donu, D.; Boyle, E.; Madhusudhana, R.; Curry, A.; **Cen, Y.**, "Differential Regulation of SIRT5 Activity by Reduced Nicotinic Acid Riboside (NARH)", *VCU School of Pharmacy Research Day*, Richmond, VA, October 2025 (poster presentation).
80. Madhusudhana, R.; Nagarajan, B.; Hamza, A.; **Cen, Y.**, "Finding New *Pf*Nic Inhibitors for Treatment of Malaria Through Virtual Screening", *VCU School of Pharmacy Research Day*, Richmond, VA, October 2025 (poster presentation).
81. **Cen, Y.**, "Nicotinamide Riboside: Beyond an $NAD^+$ Precursor", *Florida State University*, Tallahassee, FL, April 2026 (invited talk).

## Patents

1. Sauve, A. A.; **Cen, Y.**, "Synthesis of Halogenated 2-Deoxy-lactones, 2'-Deoxy-nucleosides, and Derivatives Thereof", Provisional U.S. Patent No. 61/222,424, July 1, 2009.
2. Sauve, A. A.; **Cen, Y.**, "Reagents and Methods for Sirtuin Capture", Provisional U.S.

Patent No. 61/345,970, May 18, 2010.

3. Sauve, A. A.; **Cen, Y.**, "Halogenated 2-Deoxy-lactones, 2'-Deoxy-nucleosides, and Derivatives Thereof", International Patent Application No. PCT/US2010/040816, July 1, 2010.
4. Sauve, A. A.; **Cen, Y.**, "2-Fluorinated Riboses and Arabinoses and Methods of Use and Synthesis", U.S. Patent Application No. 13/381,587, December 29, 2011.
5. Sauve, A. A.; **Cen, Y.**, "Reagents and Methods for Sirtuin Capture", U.S. Patent Application No. 13/698,561, November 16, 2012.
6. Sauve, A. A.; **Cen, Y.**, "Reagents and Methods for Sirtuin Capture", U.S. Patent No. 9,290,791, March 22, 2016.
7. Sauve, A. A.; **Cen, Y.**, "2-Fluorinated Riboses and Arabinoses and Methods of Use and Synthesis", U.S. Patent No. 9,790,252, October 17, 2017.

## Grants

### Ongoing

1. **Cen, Yana** (PI)
   05/01/2022-01/31/2027
   1R01GM143176-01A1
   NIH/NIGMS
   "Small Molecule Approach to Activate Human SIRT5"
   Amounts: $1,454,952

2. **Cen, Yana** (PI)
   07/01/2023-06/30/2027
   *Blick Scholar Award*, MCV Foundation at VCU
   Amount: $100,000

3. **Cen, Yana** (PI)
   11/01/2024-05/31/2026
   *CCTR Endowment Fund*, Virginia Commonwealth University
   "Interrogating Nucleobase Transporters with Chemical Tools"
   Amount: $50,000

### Completed

1. **Cen, Yana** (PI)
   09/01/2019-08/31/2025
   CHE-1846785
   NSF
   "CAREER: Allosteric Activation of SIRT6 by DNA"
   Amount: $463,995

2. **Cen, Yana** (PI)
   02/01/2023-01/31/2024
   3R01GM143176-02S1
   NIH/NIGMS
   "Administrative Supplements for Equipment Purchases for NIGMS Awardees"
   Amounts: $199,933

3. Hass, Martha (PI); **Cen, Yana** (Co-I)
   04/01/2020-08/31/2022
   1R15GM123393
   NIH/NIGMS
   "Novel Probes for Sirtuins: A Chemical Biology Approach"
   Amount: $50,000

4. **Cen, Yana** (PI)
   01/15/2020-07/31/2022
   *CCTR Endowment Fund*, Virginia Commonwealth University
   "Small Molecule Activator of Human SIRT5"
   Amount: $50,000

5. **Cen, Yana** (PI)
   07/01/2020-06/30/2022
   VCU Presidential Research Quest Fund
   "Transition State Analysis of *Plasmodium falciparum* Sir2"
   Amount: $50,000

6. **Cen, Yana** (PI)
   06/01/2021-05/31/2022
   Ralph E. Powe Junior Faculty Enhancement Award, Oak Ridge Associated Universities
   "Targeted Protein Degradation Using Bifunctional Small Molecules"
   Amount: $10,000

7. **Cen, Yana** (PI)
   06/30/2020-03/29/2022
   Jeffress Trust Awards Program in Interdisciplinary Research
   "Determining Enzyme Transition State Using Kinetic Isotope Effects and Computational Analysis"
   Amount: $104,500

8. **Cen, Yana** (PI)
   (Dr. Yana Cen was replaced by Dr. Martha Hass as the PI of this grant upon her departure from ACPHS)
   04/01/2017-06/28/2019
   1R15GM123393
   NIH/NIGMS
   "Novel Probes for Sirtuins: A Chemical Biology Approach"
   Amount: $480,000

9. Stevens, Stanley (PI); **Cen, Yana** (Co-I)
   05/01/2017-10/31/2020
   7R21AA025183
   NIH/NIAAA
   "Role of Methylation in Ethanol-induced Microglial Activation"
   Amount: $467,368

10. **Cen, Yana** (PI)

02/01/2016-01/31/2018
*Rudolph and Dorothy Blythe Research Award*, Albany College of Pharmacy and Health Sciences
"Identification and Characterization of Nucleobase Transport Proteins"
Amount: $26,000

11. **Cen, Yana** (PI)
05/23/2016-06/09/2017
*Scholarship of Discovery Intramural Research Grant Program*, Albany College of Pharmacy and Health Sciences
"Allosteric Activation of Human SIRT6"
Amount: $5,000

12. **Cen, Yana** (PI)
06/01/2015-05/31/2016
*Scholarship of Discovery Intramural Research Grant Program*, Albany College of Pharmacy and Health Sciences
"Development of Activity-based Chemical Probes for Sirtuin Profiling"
Amount: $5,000

## Lab Personnel

### Current Lab Members

| | | |
|---|---|---|
| Isabella Kimble | 2026-present | PharmD research intern |
| Shannon Pollock | 2024-present | 2nd year PhD student |
| Rasajna Madhusudhana | 2023-present | 3rd year PhD student |
| Abu Hamza | 2022-present | postdoctoral fellow |
| Emily Boyle | 2023-present | research technician |

### Lab Alumni at VCU

| | | |
|---|---|---|
| Zi Wang | 2024-2025 | postdoctoral fellow |
| Chiranjeev Sharma | 2021-2024 | postdoctoral fellow<br>(current: postdoctoral fellow at VCU) |
| Dawanna White | 2019-2021 | postdoctoral fellow<br>(current: Patent Examiner at the United States Patent and Trade Office) |
| Wenjia Kang | 2020-2021 | postdoctoral fellow<br>(current: deceased) |
| Dickson Donu | 2021-2025 | PhD student |
| Rosalie Hoyle | 2019-2024 | PhD student<br>(current: research scientist at Avalere Health) |
| Daniel Mongeluzi | 2019-2021 | MS student<br>(current: scientist I at Pharmaron) |
| Alyson Curry | 2019-2021 | research technician<br>(current: PhD student at Wake Forest University) |
| Elizabeth Barton | 2019-2020 | PharmD research intern and summer research fellow<br>(current: manager in clinical science at Daiichi Sankyo) |
| Jeankyong So | 2019-2020 | PharmD research intern |
| Pauline Tran | 2019-2020 | PharmD research intern |

| | | |
|---|---|---|
| Orod Motevalli | 2023 | PharmD research intern (independent study) |
| Dalliah Godwin | 2025 | PharmD research intern |
| Tamia Bryant | 2019-2020 | federal work study |
| Destiny Cryer | 2021 | undergraduate research intern |
| Harlean Bajwa | 2021 | undergraduate research intern |
| Evan Korade | 2021 | undergraduate research intern and independent study |
| | (current: technician at Glen Research) | |
| Layne Talbott | 2022 | undergraduate research intern |
| | (current: advance technician at Celanese) | |
| Deepa Rao | 2022 | honors summer undergraduate research fellow |
| Kennedy Miranda | 2023 | undergraduate research intern (CHEM392) |
| | (current: technician at HHMI Janelia Research Campus) | |
| Jenay Hutt | 2023 | honors summer undergraduate research fellow |
| Sneha Gatuku | 2024 | honors summer undergraduate research fellow |
| Sriya Lingamaneni | 2025 | honors summer undergraduate research fellow |
| Olivia Zhang | 2025 | high school summer research intern |

**Lab Alumni at ACPHS**

| | | |
|---|---|---|
| Ian Cohen | 2018-2019 | research technician |
| | (current: EQUITAS Life Sciences, LLC) | |
| Stacia Rymarchyk | 2015-2018 | research technician |
| | (current: researcher at Medigen, Inc) | |
| Sarah Abdalla | 2019 | APPE research rotation |
| | (current: pharmacist at Edge Pharma, LLC) | |
| Cameron Montgomery | 2018-2019 | PharmD research intern |
| Jaclyn Morasutti | 2018 | independent study |
| David Channell | 2018 | APPE research rotation |
| | (current: perfusionist at Keystone perfusion services) | |
| Wilson Ebhohon | 2018 | APPE research Rotation |
| Chinomso Ogbonna | 2018 | APPE research Rotation |
| Rebecca Betts | 2017-2018 | PharmD research intern and research assistant |
| Michael Mandrino | 2017-2018 | PharmD research intern |
| Ashley Ten Eyck | 2017-2018 | PharmD research intern |
| Bao Ly | 2017 | independent study |
| Ryan Ayres | 2017 | APPE research rotation |
| Steven Kisaka | 2017 | APPE research rotation |
| Opoku Krapah | 2017 | PharmD research intern |
| Lawrence Urman | 2017 | federal work study and APPE research rotation |
| Song Zheng | 2016-2019 | ACPHS student summer research award and research assistant |
| | (current: clinical scientist at Luye Pharma USA Ltd) | |
| Ai Tran | 2016 | ACPHS student summer research award and independent study |
| Ryota Yokose | 2016 | independent study |
| Elysian Graham | 2015 | summer volunteer and independent study |
| | (current: pharmacist at Asante Rogue Regional Medical Center) | |
| Marci Wood | 2014-2016 | federal work study |
| | (current: ambulatory pharmacist clinician at The University of Vermont Medical Center) | |

| | | |
|---|---|---|
| Jessica Wohlfahrt | 2018-2019 | graduate research assistant<br>(current: PhD student at University of South Florida) |
| Michael McLane | 2016 | graduate student research rotation |
| Sabrina Hardy | 2018 | VGN summer undergraduate research intern |
| Kenan Paliv | 2017 | high school research intern |
| Margaret Chase | 2016-2017 | high school research intern<br>(current: MSAT scientist at Lonza) |
| Brendan Li | 2016 | high school research intern |