

Curriculum Vitae

Ling Hao, Ph.D.

Assistant Professor of Chemistry
The George Washington University

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EDUCATION AND TRAINING

2017-2019	Postdoctoral Research Fellow National Institute of Neurological Disorders and Stroke, NIH, Bethesda, MD
2012-2017	Ph.D. in Pharmaceutical Sciences University of Wisconsin (UW)-Madison, Madison, WI
2011-2012	Undergraduate research assistant Tsinghua University, Beijing, China
2008-2012	B.S. in Chemistry China Agricultural University, Beijing, China

POSITIONS

2019-present	Assistant Professor Department of Chemistry, the George Washington University, Washington, DC.
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EXPERTISE AND RESEARCH INTERESTS

Bioanalytical Chemistry, Mass Spectrometry, Proteomics, Metabolomics, Neuroscience

Research in the Hao Lab is focused on developing novel mass spectrometry-based analytical chemistry methods and applying the combination of chemistry, bioinformatics, and cell biology approaches to study human brain diseases. Specifically, 1) we develop novel proteomic and metabolomic strategies to capture the dynamic intracellular microenvironment and molecular interactions; 2) we study the molecular mechanisms of lysosomal & mitochondrial dysfunctions underlying brain diseases using human stem cell-derived neurons.

SELECTED HONORS

2023	NSF CAREER Award
2023	Cottrell Scholar Award
2022	Rising Star Award, Human Proteome Organization (HUPO)
2022	Finalist, ECR Manuscript Competition, HUPO 2022 World Congress
2022	Young Investigator Award, Chinese American Society for Mass Spectrometry
2021	Emerging Investigator, Journal of the American Society for Mass Spectrometry
2021	Named Five of the Future, Alumni Rising Stars, UW-Madison School of Pharmacy
2020	R.E. Powe Junior Faculty Enhancement Award, Oak Ridge Associated Universities
2017	Wisconsin Initiative for Science Literacy Thesis Award, UW-Madison
2013	Mern Keir Wisconsin Distinguished Graduate Fellowship, UW-Madison
2009	Undergraduate National Scholarship, China

RESEARCH GRANTS

2023-2028	PI: Hao, NSF CAREER Award
2023-2026	PI: Hao, Cottrell Scholar Award
2021-2026	PI: Hao, NIH R01 Grant
2022-2023	Co-PI, GW, Cross-disciplinary Research Fund
2021-2022	PI: Hao, GW, University Facilitating Fund
2020-2021	PI: Hao, R.E. Powe Junior Faculty Award, Oak Ridge Associated Universities
2019-2023	PI: Hao, Faculty Startup Fund, GW.

TEACHING

2023 spring	Instructor, CHEM2122: Introductory Quantitative Analysis
2019-2021 fall	Instructor, CHEM 4122: Instrumental Analytical Chemistry
2021 fall	Instructor, CHEM 6284: Environmental Analytical Chemistry
2021 spring	Instructor, CHEM 2123W: Introductory Quantitative Analysis Laboratory
2020 spring	Instructor, CHEM 6222: Biomedical Mass Spectrometry
2021-2022 fall	Guest lecturer: CHEM 2199 Frontiers of Chemical Research
2022-23 spring	Guest lecturer: BIOC 6221 New Technologies in Scientific Research

PROFESSIONAL SERVICE

Service at GW:

2022-present	Research Advisory Council, Columbian College of Arts & Sciences, GW
2022	Judge, GW Annual Research Showcase
2021-2022	Planning Committee Member, Chemistry Department Annual Retreat
2021	Chair, GW Chemistry Department Seminar Series, Spring Semester
2020-2022	Committee Chair, Chemistry Department Award Selection Committee for ACS Division of Analytical Chemistry Undergraduate Award

Service at national/international organizations:

2023	Co-Organizer, 19th US Human Proteome Organization (US-HUPO) Conference
2023	NSF Reviewer
2021	NIH Reviewer (Ad hoc, EBIT study section)
2021	Oral Session Chair, 69th American Society for Mass Spectrometry (ASMS) Conference
2021	Oral Session Co-Chair, 20th World HUPO Congress.
2021	Oral Session Co-Chair, 17th US-HUPO Conference
2021-2022	Guest Editor, Journal of Visualized Experiments, Special Method Collection on: "Understanding the Central Nervous System by Mass Spectrometry"
2021-2022	Mentor, Females in Mass Spectrometry Mentorship Program, Pod #15
2019	Co-Chair, SCBA DC-Baltimore Chapter Annual Scientific Symposium

2018 Judge, 14th NIH Graduate Student Research Symposium, NIH
2015 Co-Chair, American Association of Pharmaceutical Scientists UW-Madison Chapter
Member: American Society for Mass Spectrometry (2012-); Human Proteome Organization (2018-); American Association of Pharmaceutical Scientists (2012-2016); American Chemical Society; American Association for the Advancement of Science (2022-);

Journal Reviewer:

Nature Communications; Analytical Chemistry; Trends in Analytical Chemistry; Journal of American Society for Mass Spectrometry; Chemical Science; Journal of Proteome Research; Analyst; Scientific Reports; Analytical Chimica Acta; Rapid Communications in Mass Spectrometry; Journal of Pharmaceutical Analysis; Metabolic Brain Disease; Molecular Omics; Journal of Chemical education, etc.

PUBLICATIONS (total citation: **2157**, Google Scholar)

At George Washington University (*Corresponding authors):

30. A. Frankenfield, J. Ni, M. Ahmed, **L. Hao***, "Protein Contaminants Matter: Building Universal Protein Contaminant Libraries for DDA & DIA Proteomics". *Journal of Proteome Research*, 2022, 21, 9, 2104-2113. (**Journal Front Cover**)
29. H. Li, M. Uittenbogaard, R. Navarro, M. Ahmed, A. Gropman, A. Chiamello, **L. Hao***, "Integrated Proteomic and Metabolomic Analyses of the Neurodegenerative Disease MELAS". *Molecular Omics*, 2022, 18, 196-205.
28. A. Frankenfield, J. Ni, **L. Hao***, "Characterization of Neuronal Lysosome Interactome with Proximity Labeling Proteomics". *Journal of Visualized Experiments*, 2022, (184), e64132.
27. H. Li, A. Frankenfield, R. Houston, S. Sekine, **L. Hao***, "Thiol-Cleavable Biotin for Chemical and Enzymatic Biotinylation and Its Application to Mitochondrial TurboID Proteomics". *Journal of the American Society for Mass Spectrometry*. 2021, 32, 9, 2358–2365. (Emerging Investigators Focus Issue, **Journal Front Cover**)
26. H. Li, M. Uittenbogaard, **L. Hao***, A. Chiamello*, "Clinical Insights into Mitochondrial Neurodevelopmental and Neurodegenerative Disorders: Their Biosignatures from Mass Spectrometry-Based Metabolomics." *Metabolites*, 2021, 11(4), 233.
25. A. Frankenfield, MS. Fernandopulle, S. Hasan, ME. Ward, **L. Hao***, "Development and Comparative Evaluation of Endolysosomal Proximity Labeling-based Proteomic Methods in Human iPSC-derived Neurons." *Analytical Chemistry*, 2020, 92, 15437-15444.
24. M. Shlafstein, E. Hannah, **L. Hao***, "Determining the Ethanol Concentrations in Ethyl Alcohol-Based Hand Sanitizers with Different Expiration Dates Using Fourier-Transform Infrared Spectroscopy (FT-IR)". *ChemRxiv*. Cambridge: Cambridge Open Engage; 2021 (Preprint)
23. P. Parel, L. Burnett, M. Geoffroy, J. Parel, **L. Hao***. "Determining the Acetic Acid Concentration in White Vinegar: An At-Home Undergraduate Chemistry Experiment During the COVID-19 Pandemic." *ChemRxiv*. Cambridge: Cambridge Open Engage; 2021 (Preprint)

Publications as postdoc, graduate, and undergraduate researcher:

22. S. Thomas, **L. Hao**, K. Delaney, D. McLean, L. Steinke, P. Marker, C. Vezina, L. Li., W. Ricke, "Spatiotemporal Proteomics Reveals the Molecular Consequences of Hormone Treatment in a Mouse Model of LUTD." *Journal of Proteome Research*, 2020,19, 1375. (Co-First authors)
21. P. Wei, **L. Hao**, S. Thomas, A. Buchberger, L. Steinke, P. Marker, W. Ricke, L. Li, "Urinary Amine Metabolomics Characterization with Custom 12-Plex Isobaric DiLeu Labeling", *Journal of the American Society for Mass Spectrometry*, 2020, 31 (9), 1854-1860.
20. **L. Hao**, Y. Zhu, P. Wei, J. Johnson, A. Buchberger, D. Frost, W. J. Kao, L. Li. "Metandem: An Online Software Tool for Mass Spectrometry-Based Isobaric Labeling Metabolomics." *Analytica Chimica Acta*, 2019, 1088, 99-106.
19. Y. Liao, M. Fernandopulle, G. Wang, H. Choi, **L. Hao**, C. Drerup, R. Patel, S. Qamar, J. Nixon-Abell, Y. Shen, W. Meadows, M. Vendruscolo, T. Knowles, M. Nelson, M. Czekalska, G. Musteikyte, M. Gachechiladze, C. Stephens, A. Pasolli, L. Forrest, P. George-Hyslop, J. Lippincott-Schwartz, M. Ward. "RNA Granules Hitchhike on Lysosomes for Long-Distance Transport Using Annexin A11 as a Molecular Tether." *Cell*, 2019,179.
18. J. Vargas, C. Wang, E. Bunker, **L. Hao**, D. Maric, G. Schiavo, F. Randow, R. Youle. "Spatiotemporal Control of ULK1 Activation by NDP52 and TBK1 during Selective Autophagy." *Molecular Cell*, 2019. 74 (2), 347-362. e6.
17. **L. Hao**, S. Thomas, T. Greer, C. Vezina, S. Bajpai, A. Ashok, C. Bieberich, L. Li, W. Ricke. "Quantitative Proteomic Analysis of a Genetically induced Prostate Inflammation Mouse Model via Custom 4-plex DiLeu Isobaric Labeling." *American Journal of Physiology-Renal Physiology*, 2019. 316(6), F1236-F1243.
16. P. Wei, **L. Hao**, F. Ma, Q. Yu, A. Buchberger, S. Lee, W. Bushman, L. Li, "Urinary metabolomic and proteomic analyses in a mouse model of prostatic inflammation", *Urine*, 2019, 1, 17-23
15. Q. Cao, Y. Wang, B. Chen, F. Ma, **L. Hao**, G. Li, C. Ouyang, L. Li. "Visualization and Identification of Neurotransmitters in Crustacean Brain via Multifaceted Mass Spectrometric Approach". *ACS Chemical Neuroscience*, 2019, 10 (3), 1222-1229
14. D. Sliter, J. Martinez, **L. Hao**, X. Chen, N. Sun, T. Fischer, J. Burman, Y. Li, Z. Zhang, D. Narendra, H. Cai, C. Klein, R. Youle. "Parkin and PINK1 Mitigate STING-induced Inflammation." *Nature*, 2018, 561,258-262.
13. **L. Hao**, J. Wang, D. Page, S. Asthana, H. Zetterberg, C. Carlsson, O. Okonkwo, L. Li. "Comparative Evaluation of MS-based Metabolomics Software and the Application to Preclinical Alzheimer's Disease." *Scientific Reports*, 2018, 8, 1-10.
12. **L. Hao**, Y. Shi, S. Thomas, C. Vezina, S. Bajpai, A. Ashok, C. Bieberich, W. Ricke, L. Li. "Comprehensive Urinary Metabolomic Characterization of a Genetically Induced Mouse Model of Prostatic Inflammation" *International Journal of Mass Spectrometry*, 2018, 434, 185.
11. Z. Chen, Q. Yu, **L. Hao**, F. Liu, J. Johnson, Z. Tian, J. Kao, W. Xu, L. Li. "Site-specific characterization and quantitation of N-glycopeptides in PKM2 knockout breast cancer cells using DiLeu isobaric tags enabled by ET-HCD" *Analyst*, 2018, 143, 2508.
10. **L. Hao**, J. Johnson, C. Lietz, A. Buchberger, D. Frost, W. J. Kao, L. Li. "Mass Defect-based N,N-Dimethyl Leucine (DiLeu) Labels for Quantitative Proteomics and Amine Metabolomics of

- Pancreatic Cancer Cells.” *Analytical Chemistry*, 2017, 89, 1138-1146 (**Journal Front Cover**).
9. F. Liu, F. Ma, Y. Wang, **L. Hao**, H. Zeng, C. Jia, P. Liu, I. M. Ong, B. Li, G. Chen, J. Jiang, Y. Wang, S. Gong, L. Li, W. Xu. “PKM2 methylation by CARM1 activates aerobic glycolysis to promote tumorigenesis” *Nature Cell Biology*, 2017, 19, 1358.
 8. **L. Hao**, T. Greer, D. Page, Y. Shi, W. Bushman, C. Vezina, W. Ricke, P. Marker, D. Bjorling, L. Li. “In-Depth Characterization and Validation of Human Urine Metabolomes Reveal Novel Metabolic Signatures of Lower Urinary Tract Symptoms.” *Scientific Reports*, 2016, 6, 30869.
 7. J. Lu, X. Zhong, H. Liu, **L. Hao**, C. Huang, M. Sherafat, J. Jones, L. Li, S. Zhang. “Generation of Serotonin Neurons from Human Pluripotent Stem Cells.” *Nature Biotechnology* 2016, 34, 89.
 6. X. Zhong, **L. Hao**, J. Lu, H. Ye, S. Zhang, L. Li; “Quantitative Analysis of Serotonin Secreted by Human Embryonic Stem Cells-derived Serotonergic Neurons via PH-mediated Online Stacking-CE-ESI-MRM.” *Electrophoresis* 2016, 37, 1027.
 5. **L. Hao**, H. Li, J. Lin. “Fractional Factorial Design-based Microwave-assisted Extraction for the Determination of Organophosphorus and Organochlorine Residues in Tobacco by GC-MS.” *Journal of Separation Science*, 2016, 40, 542.
 4. **L. Hao**, X. Zhong, T. Greer, H. Ye, L. Li. “Relative Quantification of Amine- Containing Metabolites using Isobaric *N,N*-Dimethyl Leucine (DiLeu) Reagents via LC-ESI- MS/MS and CE-ESI-MS/MS.” *Analyst*, 2015, 140, 467 (Editor selected Hot article).
 3. S. Thomas, **L. Hao**, W. Ricke, L. Li. “Biomarker Discovery in Mass Spectrometry-based Urinary Proteomics.” *PROTEOMICS-Clinical Applications* 2015, 10, 358. (Co-First authors, **Cover article**)
 2. T. Greer, **L. Hao**, A. Nechyporenko, S. Lee, C. M. Vezina, W. Ricke, P. Marker, D. Bjorling, W. Bushman, L. Li. “Custom 4-plex DiLeu Isobaric Labels Enable Relative Quantification of Urinary Proteins in Men with Lower Urinary Tract Symptoms (LUTS).” *PLOS one*, 2015, 10, e0135415.
 1. S. Jiang, Z. Liang, **L. Hao**, L. Li. “Investigation of Signaling Molecules and Metabolites Found in Crustacean Hemolymph via in vivo Microdialysis using a Multi-faceted Mass Spectrometric Platform.” *Electrophoresis* 2015, 37, 1031.

INVITED TALKS AS A FACULTY

Invited as Seminar Speakers:

13. University of Arizona, Chemistry and Biochemistry Colloquium Series, Tucson, AZ, 10/13/2022
12. Hood College, Chemistry Department Seminar Series, Frederick, MD, 10/20/2022.
11. University of Maryland, Pharmaceutical Science Seminar Series, Baltimore, MD, 09/07/2022.
10. Washington Chromatography Discussion Group, Rockville, MD, 09/21/2022.
9. Washington-Baltimore Mass Spectrometry Discussion Group Seminar, Columbia, MD, 09/19/2022.
8. American University, Chemistry and Neuroscience Seminar Series, D.C., 03/16/2022.
7. West Coast Metabolomics Center Guest Lecture Series, UC-Davis, 11/21/2021.
6. College of William & Mary, Chemistry Department Seminar Series, Virginia, 10/29/2021.
5. GW School of Medicine Faculty Research Talk Series, 03/30/2021.
4. Vassar College, Chemistry Department Seminar, New York, 12/02/2020.

3. Howard University, Chemistry Department Seminar Series, D.C., 02/21/2021.
2. GW Neuroscience Symposium, 02/06/2020.
1. GW FACULTY WOW Seminar Series, 11/06/2019.

As Conference Speakers:

7. Human Proteome Organization World Congress, "Cleavable Biotin for Proximity Labeling Proteomics to Characterize Mitochondrial Dynamics", Cancun, Mexico, 12/07/2022.
6. 2nd Chinese American Society for Mass Spectrometry Virtual Conference, "Capturing Organelle Dynamics with Multifaceted MS-Omics Strategies", 10/18/2022
5. International Chemical Congress of Pacific Basin Societies (Pacifichem), "Multifaceted Mass Spectrometric Characterization of Mammalian Lysosomes", 12/17/2021.
4. 13th Annual Frontiers in Chemistry and Biology Interface Symposium, "Developing MS Strategies for Chemical and Enzymatic Biotinylation", 05/07/2021.
3. 1st Chinese American Mass Spectrometry Conference, "Developing Proximity Labeling Proteomic Strategies for Neurodegenerative Diseases", 08/11/2021.
2. 17th US Human Proteome Organization (HUPO) Annual Conference, "Cleavable Biotin-Enabled Proximity Labeling Proteomics", 03/12/2021.
1. SCBA DC-Baltimore Chapter Annual Scientific Symposium, "Advancing MS-based Omics Strategies to Study Neurodegeneration", 12/12/2020.

CONFERENCE PRESENTATIONS BY HAO LAB STUDENTS

14. H. Li, A. Chiaramello, S. Sekine, L. Hao, "Integrated MS-Omics Strategies to Study Mitochondrial Disease", 2nd CASMS Conference, Virtual, 10/20/2022. (Oral)
13. A. Frankenfield, J. Ni, M. Ahmed, L. Hao, "How do Protein Contaminants Influence DDA & DIA Proteomics", 70th ASMS Conference, Minneapolis, MN, 06/06/2022. (Poster)
12. H. Li, M. Uittenbogaard, R. Navarro, M. Ahmed, A. Gropman, A. Chiaramello, L. Hao, "Integrated Proteomics and Metabolomics of Mitochondrial Neurodegenerative Disease using Patient-derived Fibroblasts", 70th ASMS Conference, Minneapolis, MN, 06/06/2022. (Poster)
11. J. Ni, L. Hao, "Proteomic Evaluation of ROCK inhibitors for iPSC and iPSC-Neuron Differentiation." 70th ASMS Conference, Minneapolis, MN, 06/06/2022. (Poster)
10. M. Ahmed, A. Frankenfield, H. Lu, L. Hao, "DDA and DIA Proteomic Evaluation of Motor Learning Benefits in Rett Syndrome Mouse Model." 70th ASMS Conference, Minneapolis, MN, 06/06/2022. (Undergrad poster)
9. A. Frankenfield, L. Hao, "Dynamic Protein Turnover in Human iPSC-Neurons with DDA and DIA", 69th ASMS Conference, Philadelphia, PA, 11/01/2021. (Poster)
8. H. Li, M. Uittenbogaard, R. Navarro, M. Ahmed, A. Gropman, A. Chiaramello, L. Hao, "Thiol-Cleavable Biotin for Chemical Biotinylation and Mitochondrial TurboID Proteomics", 69th ASMS Conference, Philadelphia, PA, 11/04/2021. (Poster)
7. S. Hasan, M. Fernandopulle, A. Frankenfield, M. Ward, L. Hao, "Quantitative Proteomics of

- Lysosomal Dysfunction Caused by Progranulin Deficiency”, 69th ASMS Conference, Philadelphia, PA, 11/04/2021. (Poster)
6. A. Frankenfield, S. Hasan, M. Ward, L. Hao, “Proteomic Evaluation of Protein Turnover in Human iPSC-Neurons”, 17th US HUPO Conference, 03/09/2021. (Poster)
 5. H. Li, M. Uittenbogaard, A. Chiaramello, L. Hao, “MS-based Proteomics and Metabolomics of MELAS”, 17th US HUPO Conference, 03/09/2021. (Poster)
 4. A. Frankenfield, S. Hasan, M. Ward, Ling Hao, “Proximity-labeling Proteomics of Mammalian Lysosome” 19th World HUPO Congress, 10/19/2020. (Poster)
 3. A. Frankenfield, L. Hao, “A Specific and Sensitive Proximity-labeling Proteomics Approach for Studying Protein-Protein Interactions of the Lysosome Membrane” Keystone eSymposia on Proteomics in Cell Biology and Disease, 09/20/2020. (Short talk)
 2. A. Frankenfield, L. Hao, “Improving Proximity-labeling Proteomics Approach to Study Protein-protein Interactions” 68th ASMS Conference, Virtual, 06/03/2020. (Poster)
 1. A. Frankenfield, S. Hasan, M. Ward, L. Hao, "Development of lysosome membrane and membrane-binding proteomic strategies both in vitro and in vivo", 68th ASMS Conference, Virtual, 06/04/2020.

CONFERENCE PRESENTATIONS PRIOR TO GW

12. L. Hao, “Human iPSC-derived neuronal model of neurodegeneration.” SLAS International Conference & Exhibition, Washington, DC. 02/06/2019. (Invited Oral)
11. L. Hao, T Fischer, D Sliter, R. Youle, et al. “Quantitative Proteomic Evaluation of Mitophagy in Parkinson's Disease.” Ubiquitins, Autophagy & Disease Meeting, Cold Spring Harbor Laboratory, NY. 04/25/2019. (Short talk and Poster)
10. L. Hao, M. Fernandopulle, R. Prestil, A. Saric, Y. Liao, J. Lippincott-Schwartz, R. Youle, M. Ward. “Multifaceted proteomic evaluation of lysosomal dysfunction in iPSC-derived neuron models of neurodegeneration.” *66th ASMS Annual Conference*, San Diego, CA, 06/05/2018. (Poster)
9. L. Hao, “Mass Spectrometry-based Proteomic Evaluation of Lysosome Dysfunction in Human iPSC-neuron Models of Neurodegeneration.” SCBA DC-Baltimore Chapter Annual Scientific Symposium, Rockville, MD, 03/24/2018. (Invited Oral)
8. L. Hao, Y. Zhu, P. Wei, F. Liu, J. Johnson, A. Buchberger, W. J. Kao, W. Xu, L. Li. “Metandem: A novel online software platform for mass spectrometry-based isobaric labeling metabolomics.” *65th ASMS Annual Conference*, Indianapolis, IN, 06/06/2017. (Poster)
7. L. Hao, J. Johnson, C. Lietz, J. Kao, L. Li. “Mass defect-based N, N-Dimethyl Leucing labels for quantitative proteomics and amine metabolomics of pancreatic cancer cells.” *64th ASMS Annual Conference*, San Antonio, TX, 06/07/2016. (Poster)
6. L. Hao, “Combining MS-based Metabolomics Analysis and Advanced Bioinformatics for Disease Biomarker Discovery and Diagnosis.” *47th PGSRM*, Lexington, KY, 06/12/2021. (Oral)
5. L. Hao, “Mass Spectrometry in the Study of Human Cells-from Method Development to Disease Applications.” UW-Madison Campus Stem Cell Meeting, Madison, WI. 01/31/2016. (Oral)
4. L. Hao, T. Greer, D. Page, C. Vezina, W. Ricke, L. Li. “Combining DiLeu Labeling and Label-free

Methods for Metabolite Quantification and Biomarker Discovery of Lower Urinary Tract Symptoms.” *63rd ASMS Conference*, St. Louis, MO, 06/01/2015. (Poster)

3. L. Hao, T. Greer, C. Vezina, W. Ricke, P. Marker, D. Bjorling, W. Bushman, L. Li. “Biomarkers Discovery of Lower Urinary Tract Symptoms in Mouse Models and Human Patients.” *NIH Urology Centers Directors' Meeting*, Asilomar Conference Grounds, CA, 12/08/2014. (Poster)
2. L. Hao, T. Greer, C. Vezina, W. Ricke, W. Bushman, L. Li. “Identification of Potential Metabolite Biomarkers of Lower Urinary Tract Symptoms in Mouse and Human Urine.” *62nd ASMS Conference*, Baltimore, MD, 06/16/2014. (Poster)
1. L. Hao, H. Ye, X. Zhong, T. Greer, D. Frost, Z. Liang, L. Li. “A Novel Strategy for Quantification of Primary Amine-containing Metabolites Using N,N-Dimethyl Leucine Reagents via CE-ESI-MS.” *61st ASMS Conference*, Minneapolis, MN, 06/12/2013. (Poster)

HAO LAB MEMBERS

Current group members:

- Postdoc fellow: Dr. Gwangbin Lee (2022-)
- PhD students: Ashley Frankenfield (2019-), Haorong Li (2020-), Naomi Ni (2021-), Atiqah Mazli (2022-), Noah Smeriglio (2022-)
- Undergrad students: Jamison Shih, Abigail Klink, Mustafa Ahmed

Former group members:

- Ryan Navarro (B.S. of Neuroscience, Current position: Medical student at the Queens University)
- Erik Prakken (B.S. of Chemistry, Current position: Research Associate at the Broad Institute)
- Nicholas Randolph (B.S. of Chemistry, Current position: NIH IRTA Postbac Fellow)
- Anna Grim (B.S. of Chemistry, Current position: consultant at Coresight Research Inc.)
- Cameron Baker (summer student, NSF REU program)
- Miranda Xiong (summer student, TJHSST high school)
- Caleb Zhao (summer student, Blair high school)
- Temporary rotation: Erin McCaughey, Benjamin England, Lalindri Samaranayake, Jared Foeppel

HAO LAB STUDENT AWARDS

- Jamison Shih, The Luther Rice Undergraduate Research Fellowship, 2023
- Mustafa Ahmed: American Society for Mass Spectrometry Undergraduate Travel Award, 2022
- Haorong Li: 1st place, Washington-Baltimore Mass Spectrometry Discussion Group (WBMSDG) Young Investigator Travel Award, 2022
- Ashley Frankenfield: Poster Award, CASMS Virtual Conference, 2022
- Ashley Frankenfield, Bill & Marilynn Sweetser Named Scholar of the ARCS Foundation, 2022
- Ashley Frankenfield: ARCS Foundation Scholarship, 2021
- Haorong Li: SCBA Scientific Symposium Best Poster Award, 2021
- Haorong Li: Bourdon F. Scribner Summer Fellowship, 2021, 2022
- Ashley Frankenfield: Bourdon F. Scribner Summer Fellowship, 2020


- Ashley Frankenfield: Keystone Symposia Student Scholarship, 2020
- Nicholas Randolph: NIH Postbaccalaureate Intramural Research Training Award, 2020

CITATION METRICS

Google scholar: 30 total publications; 2157 total citations; 16 H-index.

Google Scholar ID: [lgEvNuQAAAAJ&hl=en](https://scholar.google.com/citations?hl=en&user=lgEvNuQAAAAJ)

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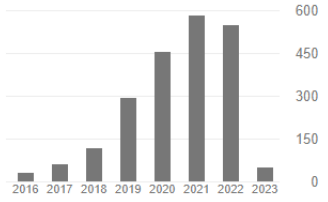


Ling Hao ✎

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<input type="checkbox"/> TITLE	CITED BY	YEAR
<input type="checkbox"/> Parkin and PINK1 mitigate STING-induced inflammation DA Sliter, J Martinez, L Hao, Xi Chen, N Sun, TD Fischer, JL Burman, Y Li, ... <i>Nature</i> 561 (7722), 258-262	750	2018
<input type="checkbox"/> Spatiotemporal control of ULK1 activation by NDP52 and TBK1 during selective autophagy JNS Vargas, C Wang, E Bunker, L Hao, D Maric, G Schiavo, F Randow, ... <i>Molecular cell</i> 74 (2), 347-362. e6	276	2019
<input type="checkbox"/> RNA granules hitchhike on lysosomes for long-distance transport, using annexin A11 as a molecular tether YC Liao, MS Fernandopulle, G Wang, H Choi, L Hao, CM Drerup, R Patel, ... <i>Cell</i> 179 (1), 147-164. e20	262	2019
<input type="checkbox"/> PKM2 methylation by CARM1 activates aerobic glycolysis to promote tumorigenesis F Liu, F Ma, Y Wang, L Hao, H Zeng, C Jia, Y Wang, P Liu, IM Ong, B Li, ... <i>Nature cell biology</i> 19 (11), 1358-1370	168	2017
<input type="checkbox"/> Generation of serotonin neurons from human pluripotent stem cells J Lu, X Zhong, H Liu, L Hao, CTL Huang, MA Sherafat, J Jones, M Ayala, ... <i>Nature biotechnology</i> 34 (1), 89-94	153	2016

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Based on funding mandates