

**Curriculum Vitae**  
**Jane M. Liu**

Pomona College  
Chemistry Department  
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**EDUCATION AND TRAINING**

Tufts University School of Medicine, Boston, MA, USA: 2006-2009  
*IRACDA Postdoctoral Fellow*

Harvard University, Cambridge, MA, USA: 2001-2006  
*Ph.D., Chemistry*

Swarthmore College, Swarthmore, PA, USA: 1996-2000  
*B.A., Biochemistry, High Honors*

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**ACADEMIC POSITIONS HELD**

**Professor of Chemistry, Pomona College: 2023-present**

*Teaching: General Chemistry, Organic Chemistry, Biochemistry, Chemical Biology, and Research in Chemistry and Molecular Biology*

**Associate Professor of Chemistry, Pomona College: 2018-2023**

**Assistant Professor of Chemistry, Pomona College: 2012-2018**

**Assistant Professor of Chemistry, Drew University: 2009-2012**

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**RESEARCH EXPERIENCE**

**Principal Investigator, Pomona College, Department of Chemistry: 2012-present**

*Investigating gene regulation in *Vibrio cholerae*; engineering nucleic acid-based biosensors; chemistry education*

**Sabbatical Leave Research: Visiting Scholar, Division of Biological Sciences at the University of California, San Diego: Spring 2023**

*Department of Ecology, Behavior & Evolution (Laboratory of J. Meyer). Research in bacteriophage and host-phage co-evolution*

**Sabbatical Leave Research: Visiting Associate of Biology and Biological Engineering, California Institute of Technology: 2015-2016**

*Proteome Exploration Laboratory (Laboratory directed by Sonja Hess). Research in mass spectrometry-based proteomics*

**Principal Investigator, Drew University, Department of Chemistry: 2009-2012**

*Research on non-canonical RNAs in *Escherichia coli* and *Vibrio cholerae**

**IRACDA Postdoctoral Fellow, Tufts University School of Medicine: 2006-2009**

*Department of Molecular Biology and Microbiology (Laboratory of A. Camilli). Experimental discovery of new sRNAs in the enteric pathogen *Vibrio cholerae* using direct cloning, 5S/tRNA-depletion, and massively parallel sequencing*

**NSF Predoctoral Fellow/Graduate Research Assistant, Harvard University: 2001-2006**

*Department of Chemistry and Chemical Biology (Laboratory of D.R. Liu). Functional dissection of natural RNAs in *Escherichia coli* and *Saccharomyces cerevisiae* by nonhomologous random recombination and in vivo selections*

**Undergraduate Research Assistant, Swarthmore College: 1999-2000**

Department of Chemistry (Laboratory of R.S. Paley). *Honors thesis exploring intramolecular pinacol coupling and ring-closing metathesis of enantiopure sulfinyl iron(0) dienes*

**Summer Research Assistant, Rutgers University - New Brunswick: 1998**

Department of Chemistry (Laboratory of R.A. Jones). *Synthesized <sup>15</sup>N-labeled guanosine for investigations on metal-binding by RNA*

**FELLOWSHIPS, GRANTS AND AWARDS/RECOGNITION**

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**Grants**

Large Research Grant, Pomona College: 2023

Title: "Elucidating Riboswitch Structure"

Principal Investigator

Howard Hughes Medical Institute Inclusive Excellence 3 (IE3) Initiative Grant: 2022-2028

Co-Program Director

Howard Hughes Medical Institute IE3 Learning Grant: 2021-2023

Program Director

National Institutes of Health Research Grant R15 AI090606: 2010-2023

Title: "The Regulatory Networks that Allow *Vibrio cholerae* to Survive Between Infections and Epidemics"

Principal Investigator

Large Research Grant, Pomona College: 2020

Title: "One to Rule Them All? Determining the Regulatory Role of Cra in *Vibrio cholerae*"

Principal Investigator

National Science Foundation Research Grant IUSE-1841992: 2019-2022

Title: "Development of Novel Augmented Reality Tool for Teaching Molecular Visualization in Biochemistry"

Senior Personnel

Henry Dreyfus Teacher-Scholar Award: 2016-2021

Title: "Molecular Understanding and Applications of Bacterial RNAs"

Principal Investigator

National Science Foundation Research Grant CBET-1258307: 2012-2018

Title: "CAREER: Riboswitch-Based Whole-Cell Biosensors to Detect Small Organic Molecules: A Combined Educational and Research Plan"

Principal Investigator

Training in Education and Critical Research Skills (TEACRS) Postdoctoral Fellowship, National Institute of General Medical Science (NIGMS): 2006-2009

National Science Foundation Graduate Research Fellowship: 2002-2005

**Professional awards and recognition**

Robert Holland Jr. Award for Research Excellence and Contributions to Diversity, Equity and Inclusion, Research Corporation for Scientific Advancement: 2023

Wig Distinguished Professor Award for Excellence in Teaching, Pomona College: 2015, 2020

National Institutes of Health Academic Research Enhancement Award: 2010, 2014, 2019

Jean Dreyfus Lectureship for Undergraduate Institutions (co-lead Principal Investigator): 2017

Henry Dreyfus Teacher-Scholar Award: 2016

National Science Foundation CAREER Award: 2012

Distinction in Teaching at Harvard University: 2001, 2002 (x2), 2004

Elected to Phi Beta Kappa: 2000

Elected to Sigma Xi: 2000

**PUBLICATIONS** (asterisk: work from J. Liu's independent career; underlined: students mentored by J. Liu)

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1. \*Perla AA, Hollar S, Muzikar K, **Liu JM**. Using CREATE and scientific literature to teach chemistry. *Journal of Chemical Education* **2023** 100 (2), 612-618.
2. \*Hollond C, Sung R-J, **Liu JM**. Integrating anti-racism, social justice, and equity themes in a biochemistry class. *Journal of Chemical Education*. **2022**. 99, 202-210.
3. \*Beck C, Perry S, Stoebel DM, **Liu JM**. Cra and cAMP receptor protein have opposing roles in the regulation of *fruB* in *Vibrio cholerae*. *Journal of Bacteriology*. **2021**. 203, e00044-21.
4. \*Sung R-J, Wilson A, Lo S, Crowl L, Nardi J, St. Clair K, **Liu JM**. Biochem AR—an augmented reality educational tool for teaching macromolecular structure and function. *Journal of Chemical Education*. **2020**. 97, 147-153.
5. \*Zhang M, **Liu JM**. Transcription of *cis* antisense small RNA *MtlS* in *Vibrio cholerae* is regulated by transcription of its target gene, *mtlA*. *Journal of Bacteriology*. **2019**. 201, e00178-19.
6. \*Page K, Shaffer J, Lin S, Zhang M, **Liu JM**. Engineering riboswitches *in vivo* using dual genetic selection and fluorescence-activated cell sorting. *ACS Synthetic Biology*. **2018**. 7, 2000-6.
7. \*Byer T, Wang J, Zhang M, Blachman A, Vather N, Visser B, **Liu JM**. *MtlR* negatively regulates mannitol utilization by *Vibrio cholerae*. *Microbiology*. **2017**, 163, 1902-1911.
8. \***Liu JM**, Sweredoski MJ, Hess S. Improved 6-plex tandem mass tags quantification throughput using a linear ion trap-high-energy collision induced dissociation MS3 scan. *Analytical Chemistry*. **2016**, 88, 7471-7475.
9. \*Vasquez TE, Saldaña C, Muzikar KA, Mashek D, **Liu JM**. Searching for synthetic antimicrobial peptides: An experiment for organic chemistry students. *Journal of Chemical Education*. **2016**, 93, 1103–1107.
10. \*Chang H, Replogle JM, Vather N, Tsao-Wu M, Mistry R, **Liu JM**. A *cis*-regulatory antisense RNA represses translation in *Vibrio cholerae* through extensive complementarity and proximity to the target locus. *RNA Biology*. **2015**, 12, 136-148.
11. \*Mustachio LM, Aksit S, Mistry RH, Scheffler R, Yamada A, **Liu JM**. The *Vibrio cholerae* mannitol transporter is regulated post-transcriptionally by the *MtlS* small RNA. *Journal of Bacteriology*. **2012**, 194, 598-606.
12. \***Liu JM**, Camilli A. Discovery of sRNAs by high-throughput sequencing. In: Kwon YM, Ricke SC eds. *Methods in Molecular Biology*. Vol 733. New York, NY: Humana Press; **2011**.
13. \***Liu JM**, Camilli A. A broadening world of bacterial small RNAs. *Current Opinions in Microbiology* **2010**, 13, 18-23.
14. Wang W, Zha J, Han Q, Wang G, Yang G, Shallop AJ, **Liu JM**, Gaffney BL, Jones, RA. Modulation of RNA metal binding by flanking bases: <sup>15</sup>N NMR evaluation of GC, tandem GU, and tandem GA sites. *Nucleosides, Nucleotides & Nucleic Acids* **2009**, 28, 424-434.
15. Paley RS, Berry KE, **Liu JM**, Sanan TT. Diastereoselective intramolecular pinacol couplings of sulfinyl iron(0) diene complexes. *Journal of Organic Chemistry* **2009**, 74, 1611-1620.
16. **Liu JM**, Livny J, Lawrence MS, Kimball MD, Waldor MK, Camilli A. Experimental discovery of sRNAs in *Vibrio cholerae* by direct cloning, 5S/tRNA-depletion and parallel sequencing. *Nucleic Acids Research* **2009**, 37, e46.
17. **Liu JM**, Liu, DR. Discovery of a mRNA mitochondrial localization element in *Saccharomyces cerevisiae* by nonhomologous random recombination and *in vivo* selection. *Nucleic Acids Research* **2007**, 35, 6750-6761.

18. **Liu JM**, Bittker JA, Lonshteyn M, Liu DR. Functional dissection of sRNA translational regulators using nonhomologous random recombination and *in vivo* selection. *Chemistry & Biology* **2005**, *12*, 757-767.
19. Bittker JA, Le BV, **Liu JM**, Liu DR. Directed evolution of protein enzymes using nonhomologous random recombination. *Proceedings of the National Academy of Sciences USA* **2004**, *101*, 7011-7016.
20. Paley RS, **Liu JM**, Lichtenstein BR, Knoedler VL, Sanan TT, Adams DJ, Fernandez J, Rablen PR. Simultaneous and stereoselective formation of planar and axial chiralities in enantiopure sulfinyl iron diene complexes. *Organic Letters* **2003**, *5*, 309-312.

**SELECTED PRESENTATIONS** (asterisk: work from J. Liu's independent career; underlined: students mentored by J. Liu)

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1. \*George M, Hollond C, **Liu JM**. **2022**. Regulation of – and by – the mannitol operon repressor (MtlR) in *Vibrio cholerae*. Gordon Research Conference, Sensory Transduction in Microorganisms: Ventura, CA. (Poster Presentation)
2. \***Liu JM**, Hollond C, Sung R-J, Hollar S. **2022**. Integrating antiracism, social justice, and equity themes throughout an undergraduate biochemistry course. Biennial Conference on Chemical Education: West Lafayette, IN. (Oral Presentation)
3. \***Liu JM**, Perla A, Hollar S. **2022**. Using scientific literature to increase students' understanding of what it means to be a scientist. Biennial Conference on Chemical Education: West Lafayette, IN. (Oral Presentation)
4. \*Weiss A, Mackey E, **Liu JM**. **2022** *Vibrio cholerae*'s response to mannitol. Gordon Research Conference, Microbial Stress Response: South Hadley, MA. (Poster Presentation)
5. \***Liu JM**. **2021**. Liu Lab Biosensors: They Started in a Swarthmore Seminar. Professor Robert Paley Retirement Symposium: Swarthmore College. (Invited Talk on Research)
6. \***Liu JM**. **2021**. What's in that Cell?! The Making of a Biosensor. Denison University. (Invited Seminar on Research)
7. \***Liu JM**, Hollond C, Sung R-J. **2021**. Incorporating anti-racism and equity themes in a biochemistry class. ASBMB 2021 Annual Meeting: Virtual Conference. (Poster Presentation)
8. \*Beck C, Perry S, **Liu JM**. **2020**. Regulation of the genes encoding the fructose-specific transport system of *Vibrio cholerae*. Gordon Research Conference, Sensory Transduction in Microorganisms: Ventura, CA. (Poster Presentation)
9. \*Beck C, Perry S, **Liu JM**. **2019**. CRP and Cra have opposing activities in the regulation of the fructose operon in *Vibrio cholerae*. Molecular Genetics of Bacteria and Phage: Madison, WI. (Poster Presentation)
10. \***Liu JM**. **2019**. Applying the C.R.E.A.T.E. approach to bridge the jump from introductory to upper-level chemistry courses. Gordon Research Conference, Chemistry Education Research and Practice: Lewiston, ME. (Poster Presentation)
11. \***Liu JM**. **2019**. On Again and Off Again: A Riboswitch Story. Loyola Marymount University. (Invited Seminar on Research)
12. \***Liu JM**, Page K, Shaffer J, Lin S. **2018**. Evolving novel riboswitches through *in vivo* genetic selection and cell sorting. 5<sup>th</sup> International Conference on Regulating with RNA in Bacteria and Archaea: Seville, Spain. (Poster Presentation)
13. \***Liu JM**. **2018**. RNA + Bacteria + Evolution = Sensors! Department of Chemistry. Hope College. (Invited Seminar on Research)
14. \*Hanson P<sup>‡</sup>, Kowalski JR<sup>‡</sup>, **Liu JM**<sup>‡</sup>, Stultz L<sup>‡</sup>. **2017**. Creating synergy by integrating interdisciplinary research and teaching (I<sup>2</sup>RT). 2017 IRACDA Conference: Birmingham, AL. (1.5-hour Symposium/Mini-Workshop) [<sup>‡</sup>Co-presenters]

15. \*Cunningham A<sup>‡</sup> and **Liu JM<sup>‡</sup>**. **2017**. Starting with the end in mind: Selecting assessment tools that improve learning and satisfy accountability. 2017 WASC Senior College and University Commission Academic Resource Conference: San Diego, CA. (1-hour Symposium/Mini-Workshop) [<sup>‡</sup>Co-presenters]
16. \***Liu JM**. **2016**. Creating riboswitch-based whole cell biosensors for small organic molecules. 252nd ACS National Meeting: Philadelphia, PA. (Oral Presentation, Young Academic Investigator Symposium)
17. \*Coyle MC, Hansen E, Sweredoski MJ, Solvik T, Moradian A, Hess S, **Liu JM**. **2016** The sRNA MtlS and post-translational regulation of the mannitol transporter in *Vibrio cholerae*. Gordon Research Conference, Microbial Stress Response: South Hadley, MA. (Poster Presentation)
18. \***Liu JM**, Sweredoski MJ, Hess S. **2016** Increasing protein quantification in 6-plex TMT experiments. 64th ASMS Conference on Mass Spectrometry and Allied Topics: San Antonio, TX. (Poster Presentation)
19. \*Vather N, Blachman A, **Liu JM**. **2016** MtlR regulates transport of the sugar alcohol mannitol in *Vibrio cholerae*. Gordon Research Conference, Sensory Transduction in Microorganisms: Ventura, CA. (Poster Presentation)
20. \*Coyle MC, Hansen E, Sweredoski MJ, Solvik T, Moradian A, Hess S, **Liu JM**. **2015**. Mass spectrometry-based identification of proteins affected by the mannitol operon small RNA, MtlS, in *Vibrio cholerae*. 4<sup>th</sup> International Conference on Regulating with RNA in Bacteria and Archaea: Cancun, Mexico. (Poster Presentation)
21. \***Liu JM**. **2014**. Small RNAs, Big Roles in Gene Regulation. University of California, Riverside. (Invited Seminar on Research)
22. \*Scheffler R, Vather N, Replogle J, Mistry R, **Liu JM**. **2013** A noncoding RNA inhibits synthesis of the mannitol permease in *Vibrio cholerae*. 3<sup>rd</sup> International Conference on Regulating with RNA in Bacteria: Würzburg, Germany. (Poster Presentation)
23. \***Liu JM**. **2013**. Small RNAs and sugars in *Vibrio cholerae*: Sweet regulation. Harvey Mudd College. (Invited Seminar on Research)
24. \***Liu JM**. **2012**. Great big world of bacterial small RNAs. University of Southern California. (Invited Seminar on Research)
25. \***Liu JM**, Mustachio LM, Aksit A, Mistry R. **2011**. The *Vibrio cholerae* MtlS small RNA regulates gene expression in response to changes in carbon source. ASM Conference on Regulating RNA in Bacteria: San Juan, Puerto Rico. (Poster Presentation)
26. **Liu JM**, Kimball MD, Camilli A. **2009**. An sRNA regulator of mannitol uptake in *Vibrio cholerae*. Symposium on Bacterial Cell Biology and Pathogenesis: Umea, Sweden. (Oral Presentation)

## RESEARCH EXPERIENCE WITH STUDENTS

**Supervised Research Students at Pomona College** (underlined: STEM student from minoritized group)

‡Beckman Scholar; §Fulbright Scholar / Watson Fellow; \*Goldwater Scholar; \*\*ASM-Undergraduate Research Fellow

| <b>Student (class year)</b> | <b>Term(s)</b>      | <b>Current/last known position</b> |
|-----------------------------|---------------------|------------------------------------|
| Alan Wang ('25)             | Sept 2023 – present | current Pomona undergraduate       |
| Eleanor Nicholson ('24)     | June 2023 – present | current Pomona undergraduate       |
| Gabby Calvi ('25)           | June 2023 – present | current Pomona undergraduate       |
| Zheous Abalos ('25)         | June 2023 – present | current Pomona undergraduate       |
| Heidi Xu ('24)              | Summer 2023         | current Pomona undergraduate       |
| Elizabeth Sohn ('25)        | Summer 2023         | current Pomona undergraduate       |
| Eric Liu ('25)              | Summer 2023         | current Pomona undergraduate       |
| Seohyeon Lee ('25)          | Summer 2023         | current Pomona undergraduate       |
| Christabel Akowuah ('25)    | Summer 2023         | current Pomona undergraduate       |

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|---------------------------------------|------------------------|---|
| Giuliano Richetta ('25)               | Spring 2023 – present  | current Pomona undergraduate            |
| Eleanor Mackey ('22)                  | Sept 2021 – May 2023   | M.D. student, Albert Einstein           |
| Eugene Kwon ('23)                     | Summer 2021            | Ph.D. student, UCSB                     |
| <u>Andrea Perla ('22)</u>             | Jan 2021 – May 2022    | Teachers College, Columbia Univ.        |
| Amy Kaneshiro ('22)                   | Jan 2021 – May 2022    | Research Assistant, NIH                 |
| David Kim ('23)                       | Oct 2020 – Aug 2021    | B.A. Neuroscience                       |
| Dylan Santa ('23)                     | Sept 2020 – Dec 2020   | B.A. Chemistry                          |
| Jo Rodriguez ('21)                    | Sept 2020 – May 2021   | B.A. Chemistry & Theatre                |
| <u>Christabel Egemba ('21)</u>        | Sept 2020 – May 2021   | B.A. Chemistry                          |
| Megan Chang ('23)                     | May 2020 – May 2023    | Master's student, Stanford University   |
| Alana Weiss ('22)                     | May 2020 – May 2022    | B.A. Molecular Biology                  |
| Christine Cannon ('23)                | Summer 2020 - May 2023 | Terray Therapeutics                     |
| Nathalie Hong ('21)                   | May 2020 – May 2021    | Ph.D. student, Stanford University      |
| Sayde Perry*§ ('22)                   | May 2019 – May 2022    | Fulbright Scholar                       |
| Eric Tang ('21)                       | May 2019 – May 2021    | Research Assistant, Harvey Mudd College |
| Noelle Mitchell ('20)                 | Jan 2019 – May 2020    | Ph.D. student, UCLA                     |
| Chanha Kim ('22)                      | Jan 2019 – Jul 2019    | B.A. Computer Science                   |
| Calder Hollond ('21)                  | Jan 2019 – May 2021    | M.D. student, NYU                       |
| <u>Caitlin Halligan ('21)</u>         | Jan 2019 – May 2019    | Ph.D. student, UCLA                     |
| <u>Micayla George ('20)</u>           | Jan 2019 – May 2020    | Research Assistant, Broad Institute     |
| Hussein Faara ('21)                   | Jan 2019 – May 2019    | B.A. Molecular Biology                  |
| <u>Sabrina Mendez-Contreras ('18)</u> | May 2017 – May 2018    | M.D. student, UCSF                      |
| Maryann Zhao‡ ('18)                   | Jan 2017 – Aug 2018    | M.D. student, Harvard University        |
| Jessica Wang ('18)                    | Jan 2017– May 2018     | M.D. student, UC Irvine                 |
| Samuel Lin ('20)                      | Jan 2017 – Jul 2017    | B.A. Economics                          |
| <u>Theodore Lang ('19)</u>            | Jan 2017 – May 2019    | M.D. student, U. Chicago                |
| Christina Beck*‡ ('20)                | Jan 2017 – Aug 2020    | Ph.D. student, MIT                      |
| Katharine Page ('17)                  | May 2016 – Aug 2017    | Ph.D. student, Caltech                  |
| Mark Zhang‡ ('17)                     | Mar 2016 – Jul 2018    | Ph.D. student, Caltech                  |
| <u>Tanner Byer*§ ('17)</u>            | Mar 2016 – May 2017    | Watson Fellow                           |
| Elisabeth Hansen§ ('16)               | Jan 2015 – May 2016    | M.D. student, Harvard University        |
| Marek Zorawski§ ('16)                 | Jan 2015 – May 2016    | M.D./Ph.D. student, Duke University     |
| Jeremy Shaffer ('15)                  | Sept 2014 – Aug 2016   | Master's student, Cornell University    |
| Maya Tsao-Wu ('17)                    | May 2014 – May 2017    | M.D. student, Penn State                |
| <u>Erick Velasquez ('16)</u>          | Mar 2014 – May 2016    | Ph.D., UCLA                             |
| Anna Blachman ('16)                   | Mar 2014 – May 2016    | EcoTruck (Ho Chi Minh City, Vietnam)    |
| Catherine Song ('17)                  | Jan 2014 – May 2015    | M.D. student, USC                       |
| Daniel Phan ('16)                     | Jan 2014 – May 2016    | M.D., USC                               |
| Laurel Estes ('15)                    | Jan 2014 – May 2015    | Ginkgo Bioworks, Inc.                   |
| <u>Cristina Saldaña ('15)</u>         | Summer 2013            | Master's Engineering, UC Irvine         |
| Howard Chang ('14)                    | May 2013 – May 2014    | M.D. student, Johns Hopkins             |
| Abe Cass ('14)                        | Jan 2013 – Aug 2013    | Schwarzman Scholar                      |
| Maxwell Coyle ('14)                   | Jan 2013 – May 2014    | Ph.D. student, UC Berkeley              |
| John Repogle ('14)                    | Jan 2013 – May 2014    | Ph.D., MIT                              |
| Kristina Solvik** ('15)               | Jan 2013 – May 2015    | Ph.D. student, UCSF                     |
| <u>Naomi Vather ('15)</u>             | Jan 2013 – May 2015    | M.D., U. Iowa                           |

**Supervised Research Students at Drew University** (underlined: STEM student from minoritized group)

\*Goldwater Scholar; \*\*ASM-Undergraduate Research Fellow; #Successfully wrote and defended honors research thesis

**Student (class year)                      Term(s)                      Current/last known position**

|                              |                      |                                       |
|------------------------------|----------------------|---------------------------------------|
| <u>Stacey Ceron</u> ('12)    | Sept 2011 – May 2012 | Ph.D., Dartmouth College              |
| Aleksander Kubiak ('13)      | Summer 2011          | M.D., Drexel University               |
| Taras Varshavsky ('13)       | Summer 2011          | M.D., Rutgers University              |
| Jarod Grossman ('12)         | Jan 2011 – Aug 2011  | Ph.D., Syracuse University            |
| Ross Shamby ('11)            | Fall 2010            | B.A. Biochem. Mol. Biol               |
| Lalita Nekkanti ('11)        | Fall 2010            | Dental student, Tufts University      |
| Robert Scheffler*# ('14)     | Jul 2010 – May 2014  | Ph.D., Princeton University           |
| Ronak Mistry#('13)           | May 2010 – May 2013  | D.O., Rowan University                |
| Akikuni Yamada ('11)         | Jun 2010 – Dec 2010  | B.A. Biochem. Mol. Biol               |
| <u>Selime Aksit**#</u> ('12) | Jan 2010 – Aug 2012  | Med student, Hacettepe Medical School |
| Lisa Maria Mustachio#('11)   | Jan 2010 – May 2011  | Ph.D., Dartmouth College              |

## SELECTED STUDENT RESEARCH PRESENTATIONS – PEER-REVIEWED ABSTRACTS

(underlined: students mentored by J. Liu; \*: presenting author)

1. Mackey E\* and Liu JM. **2023**. Proteomic changes of *Vibrio cholerae* in response to mannitol. DiscoverBMB 2023: Seattle, WA. (Poster Presentation)
2. Beck C\*, Perry S, Liu JM. **2020**. CRP and Cra have antagonistic roles in the regulation of the fructose operon in *Vibrio cholerae*. ASBMB 2020 Annual Meeting: San Diego, CA. (Poster Presentation) Conference canceled.
3. George M\* and Liu JM. **2020**. Regulation of the mannitol locus by MtlR in *Vibrio cholerae*. ASBMB 2020 Annual Meeting: San Diego, CA. (Poster Presentation) Conference canceled.
4. Zhang M\* and Liu JM. **2018**. Exploring the regulation of a *cis*-antisense RNA in *Vibrio cholerae*. ASM Microbe 2018: Atlanta, GA. (Poster Presentation)
5. Mendez-Contreras S\*, Tsao-Wu M, Liu JM. **2018**. Identifying regulatory targets of the small RNA MtlS in *Vibrio cholerae*. ASBMB 2018 Annual Meeting: San Diego, CA. (Poster Presentation)
6. Wang J\*, Zhang M, Liu JM. **2018**. Transcriptional and post-transcriptional regulation of *mtlA* in *Vibrio cholerae*. ASBMB 2018 Annual Meeting: San Diego, CA. (Poster Presentation)
7. Zhang M\*, Byer T, Wang J, Liu JM. **2017**. MtlR negatively regulates mannitol transport by *Vibrio cholerae*. SCASM 2017 Meeting: San Diego, CA. (Poster Presentation)
8. Hansen EE\*, Coyle MC, Liu JM. **2016**. Investigating the mechanism by which the small RNA MtlS regulates the mannitol protein transporter at the post-translational level in *Vibrio cholerae*. ASBMB 2016 Annual Meeting: San Diego, CA. (Oral Presentation)
9. Zorawski M\*, Shaffer J, Velasquez E, Liu JM. **2016**. Creating a riboswitch-based whole-cell biosensor for bisphenol A. ASBMB 2016 Annual Meeting: San Diego, CA. (Poster Presentation)
10. Shaffer J\*, Velasquez E, Liu JM. **2015**. Creating a riboswitch-based whole-cell biosensor for BPA. 2015 Synthetic Biology: Engineering, Evolution and Design (SEED) Conference: Boston, MA. (Poster Presentation)
11. Shaffer J\*, Phan D\*, Velasquez E, Liu JM. **2015**. Creating riboswitch-based whole cell biosensors for small organic molecules. 115<sup>th</sup> General Meeting of the American Society for Microbiology: New Orleans, LA. (Poster Presentation)
12. Vather N\*, Tsao-Wu M\*, Liu JM. **2015**. MtlR is one of several regulators of mannitol transporter synthesis in *Vibrio cholerae*. 115<sup>th</sup> General Meeting of the American Society for Microbiology: New Orleans, LA. (Poster Presentation)
13. Solvik TA\*, Liu JM. **2015**. Investigating the role of CRP in mannitol operon small RNA (MtlS) expression in *Vibrio cholerae*. 115<sup>th</sup> General Meeting of the American Society for Microbiology: New Orleans, LA. (Poster Presentation)
14. Coyle M\*, Replogle J\*, Sweredoski M, Hess S, Liu JM. **2014**. The MtlS small RNA affects protein levels in *Vibrio cholerae*. Keystone Symposium on Long Noncoding RNAs, Marching Toward Mechanism: Santa Fe, NM. (Poster Presentation)

15. Chang H\*, Vather N, **Liu JM. 2014**. Post-transcriptional regulation of MtlA in *Vibrio cholerae* by a small non-coding RNA. Keystone Symposium on Long Noncoding RNAs, Marching Toward Mechanism: Santa Fe, NM. (Poster Presentation)
16. Aksit S\*, Mustachio LM, Scheffler R, **Liu JM. 2012**. Expression of MtlS sRNA negatively affects MtlA protein synthesis in *Vibrio cholerae*. 112<sup>th</sup> General Meeting of the American Society for Microbiology: San Francisco, CA. (Poster Presentation)
17. Scheffler R\*, Mistry R\*, **Liu JM. 2012**. Dual regulation of mannitol transporter synthesis in *Vibrio cholerae*. 112<sup>th</sup> General Meeting of the American Society for Microbiology: San Francisco, CA. (Poster Presentation)
18. Aksit S\*, Mustachio LM, **Liu JM. 2011**. The MtlS small RNA regulates mannitol transport in *Vibrio cholerae*. 111<sup>th</sup> General Meeting of the American Society for Microbiology: New Orleans, LA. (Poster Presentation)
19. Mustachio LM\*, Mistry R\*, Aksit S, **Liu JM. 2011**. The *Vibrio cholerae* mannitol transporter is regulated post-transcriptionally. 111<sup>th</sup> General Meeting of the American Society for Microbiology: New Orleans, LA. (Poster Presentation)

## **OTHER SERVICE AND ACTIVITIES**

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Panelist, Inclusive Teaching Faculty Panel – *How do I know it's working?*, Claremont Colleges: 2023  
Panelist, Career Panel at Summer Symposium @ Pipeline Programs, Tufts University: 2023  
External Reviewer, Review of BMB Program, Gustavus Adolphus College: 2023  
Workshop Leader, Foundational Dialogues at Bates College, Department of Chemistry: 2022  
Participant, Heal.LA Bioscience & Healthcare Accelerator Program: 2022-2023  
Participant, HERS Leadership Institute: 2022  
Leadership Member, Learning Community Cluster 4, Inclusive Excellence 3 Initiative of HHMI: 2022-2023  
Faculty Speaker for *Take Two* Commencement Ceremony for Class of 2020: 2022  
Participant, Innovation Life Sciences Cohort, Springboard Enterprises: 2022  
Co-Founder and CEO, BRT Biotechnologies, Inc.: 2021-present  
Fellow, Claremont Faculty Leadership Program: 2020-2021  
Faculty Advisor, Pomona Scholars of Science 7: 2019-2021  
Speaker, "A Short Guide to CRISPR," Mt. San Antonio Gardens Retirement Community Seminar Series: 2019  
Speaker, "Life at a PUI Through Calendar," Science Leadership and Management Seminar Series, UC Berkeley: 2018  
Panelist for "Funding at PUIs", hosted by TEACRS, Tufts University: 2015; 2018  
Panel reviewer for NSF CBET grant proposals: 2014  
Panelist for "Bay Area Postdocs: Workshop on Scientific Teaching", hosted by SEPAL: 2014  
Workshop Leader, Grant Writing Workshop, hosted by TEACRS, Tufts University: 2013  
Panelist for "Negotiating the Job Offer", National IRACDA Conference 2010: 2010  
Ad hoc reviewer for *ACS Synthetic Biology*, *Biomedical and Environmental Sciences*, *Journal of Chemical Education*, *JoVE*, *microLife*, *npj Biofilms and Microbiomes*, *Oxford University Press*, *PLoS One*, *PNAS*, *WIREs RNA*

## **SELECTED POMONA COLLEGE SERVICE**

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2023 – 2025 Faculty Personnel Committee  
2022 – 2023 Inclusive Excellence Committee



2020 – 2021 Faculty Committee on Strategic Vision Implementation  
2020 – 2021 Research Committee, chair  
2019 – 2022 HHMI Working Group / Inclusive Excellence Committee, chair  
2019 – 2020 Ad hoc committee of assessment of P/NC grading for CHEM 1A  
2019 – 2020 Research Committee  
Spring 2019 Health Sciences Committee  
2018 – 2020 Strategic Planning Steering Committee (elected position)  
2016 – 2018 Executive Committee / Division II chair (elected position)  
2013 – 2015 Academic Procedures Committee / Academic Discipline Board / Academic Standards Committee

### **PROFESSIONAL MEMBERSHIPS**

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American Chemical Society since 2005

American Society for Biochemistry and Molecular Biology since 2015

American Society for Microbiology since 2006