

Srujana Samhita Yadavalli

Waksman Institute of Microbiology
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EDUCATION

2012 **Ph. D. Microbiology**
The Ohio State University, Columbus OH

2006 **B. Tech. Biotechnology**
Anna University, Chennai, India

PROFESSIONAL APPOINTMENTS

- Sep 2019– **Assistant Professor of Genetics**
Waksman Institute of Microbiology
Rutgers University, New Brunswick NJ
- 2017–19 **Research Associate**
Rutgers University, New Brunswick NJ
- 2012–17 **Postdoctoral Researcher**
University of Pennsylvania, Philadelphia PA
- 2006-12 **Graduate Assistant**
Department of Microbiology
The Ohio State University, Columbus OH

PUBLICATIONS

Google scholar: <https://scholar.google.com/citations?user=cw43C1cAAAAJ&hl=en>

BOLD : Members of Yadavalli Lab

24. **Vellappan S, Sun J, Favate J, Jagadeesan P, Cerda D, Shah P, Yadavalli SS** (2024)
Translation profiling of stress-induced small proteins reveals a novel link among signaling systems.
[bioRxiv](#) doi: 10.1101/2024.09.13.612970;
23. **Sun J, Vellappan S, Akdemir J, Steier L, Feinbloom RE, Yadavalli SS** (2024)
Imaging of porphyrin-specific fluorescence in pathogenic bacteria in vitro using a wearable, hands-free system.
[bioRxiv](#) doi: 10.1101/2024.05.20.595019; Under evaluation at the Journal of Microbiological Methods
22. **Adeleye SA, Yadavalli SS** (2024)
Queuosine biosynthetic enzyme, QueE moonlights as a cell division regulator.
[PLoS Genetics](#) 20(5): e1011287.
21. Favate JS, **Skalenko K**, Chiles E, Su X, **Yadavalli SS**, Shah P. (2023)
Linking genotypic and phenotypic changes in the LTEE using metabolomics.
[eLife](#) 12:RP87039.

20. **Yadavalli SS***, Yuan J*. (2022)
Bacterial small membrane proteins: the Swiss army knife of regulators at the lipid bilayer.
Journal of Bacteriology 204 (1): e0034421. *Corresponding author
Featured in the special section on *Small Proteins*.
19. Favate JS, Liang S, Cope AL, **Yadavalli SS**, Shah P. (2022)
The landscape of transcriptional and translational changes over 22 years of bacterial adaptation.
eLife 11:e81979.
18. Cope AL*, **Vellappan S***, Favate JS, **Skalenko K**, **Yadavalli SS**, Shah P. (2021)
Exploring ribosome-positioning on translating transcripts with ribosome profiling. In: Dassi E. (eds) Post-Transcriptional Gene Regulation.
Methods in Molecular Biology 2404: 83-110. *Equal contribution
17. **Yadavalli SS***, Goh T, Carey JN, Malengo G, **Vellappan S**, Nickels BE, Sourjik V, Goulian M*, Yuan J*. (2020)
Functional determinants of a small protein repressor controlling a broadly conserved bacterial sensor kinase.
Journal of Bacteriology 202 (16) *Corresponding author *Spotlight selection*
16. Masuda I, Matsubara R, Christian T, Rojas E, **Yadavalli SS**, Huang KC, Goulian M, Hou YM. (2019)
tRNA Methylation Is a Global Determinant of Bacterial Multi-drug Resistance.
Cell Systems 8 (4):302-314
15. **Yadavalli SS**, Xiao Q, Sherman SE, Klein ML, Goulian M, Percec V. (2019)
Bioactive cell-like hybrids from dendrimersomes with a human cell membrane and its components.
Proc. Natl. Acad. Sci. USA. 116 (3): 744-752
14. Roggiani M, **Yadavalli SS**, Goulian M. (2017)
Natural variation of a sensor kinase controlling a conserved stress response pathway in Escherichia coli.
PLoS Genetics 13 (11): e1007101
13. Jishkariani D, MacDermaid CM, Timsina YN, Grama S, Gillani SS, Divar M, **Yadavalli SS**, Moussodia R-O, Leowanawat P, Berrios Camacho AM, Walter R, Goulian M, Klein ML, Percec V. (2017)
Self-interrupted synthesis of sterically hindered aliphatic polyamide dendrimers.
Proc. Natl. Acad. Sci. USA. 114 (12): E2275 – 84
12. **Yadavalli SS***, Carey JN, Chen AI, Leibman R, Stern A, Roggiani M, Lippa A, Goulian M*. (2016)
Antimicrobial peptides trigger a division block in Escherichia coli through stimulation of a signaling system.
Nature Communications 7: 12340 *Corresponding author *F1000Prime recommended*
11. Xiao Q, Rubien JD, Wang Z, Reed EH, Hammer DA, Sahoo D, Heiney PA, **Yadavalli SS**, Goulian M, Wilner SE, Baumgart T, Vinogradov SA, Klein ML, and Percec V. (2016)
Self-sorting and co-assembly of fluorinated, hydrogenated, and hybrid Janus dendrimers into dendrimersomes.
Journal of American Chemical Society 138 (38): 12655–63

10. Xiao Q*, **Yadavalli SS***, Zhang S, Sherman SE, Fiorin E, da Silva L, Wilson DA, Hammer DA, Andre S, Gabius HJ, Klein ML, Goulian M, Percec V. (2016)
Bioactive cell-like hybrids co-assembled from (glyco)dendrimerosomes with bacterial membranes.
Proc. Natl. Acad. Sci. USA. 113 (9): E1134–41 *Equal contribution
9. **Yadavalli SS**, Ibba M. (2013)
Selection of tRNA charging quality control mechanisms that increase mistranslation of the genetic code.
Nucleic Acids Research 41 (2): 1104–12
8. Elo, JM*, **Yadavalli SS***, Euro L, Isohanni P, Gatz A, Carroll C, Valanne L, Alkuraya FS, Uusimaa J, Paetau A, Caruso EM, Pihko H, Ibba M, Tynismaa H, Suomalainen A. (2012)
Mitochondrial phenylalanyl-tRNA synthetase mutations underlie fatal infantile Alpers encephalopathy.
Human Molecular Genetics 21 (20): 4521–9 *Equal contribution
7. **Yadavalli SS**, Ibba M. (2012)
Quality control in aminoacyl-tRNA synthesis: its role in translational fidelity.
Adv. Prot. Chem. Struct. Biol. 86: 1–43
6. Banerjee R, Reynolds NM, **Yadavalli SS**, Rice C, Roy H, Banerjee P, Alexander RW, Ibba M. (2011)
Human mitochondrial aminoacyl-tRNA synthetase single nucleotide polymorphisms that lead to defects in refolding but not aminoacylation.
Journal of Molecular Biology 410 (2): 280–93
5. Banerjee R, Chen S, Dare K, Gilreath M, Praetorius-Ibba M, Raina M, Reynolds NM, Rogers T, Roy H, **Yadavalli SS**, Ibba M. (2010)
tRNAs: cellular barcodes for amino acids.
FEBS Letters 584 (2): 387–95
4. **Yadavalli SS**, Klipcan L, Zozulya A, Banerjee R, Svergun D, Safro M, Ibba M. (2009)
Large-scale movement of functional domains facilitates aminoacylation by human mitochondrial phenylalanyl-tRNA synthetase.
FEBS Letters 583 (19): 3204–8
3. Ling J, So BR, **Yadavalli SS**, Roy H, Shoji S, Fredrick K, Musier-Forsyth K, Ibba M. (2009)
Resampling and editing of mischarged tRNA prior to translation elongation.
Molecular Cell 33 (5): 654–60
2. **Yadavalli SS**, Musier-Forsyth K, Ibba M. (2008)
The return of pretransfer editing in protein synthesis.
Proc. Natl. Acad. Sci. USA. 105 (49): 19031–2
1. Ling J, **Yadavalli SS**, Ibba M. (2007)
Phenylalanyl-tRNA synthetase editing defects result in efficient mistranslation of phenylalanine codons as tyrosine.
RNA 13 (11): 1881–6

FUNDING

Current

2022-27 NIGMS R35 (ESI - MIRA) GM147566
Small Proteins and Epitranscriptomic Factors: Emerging Mechanisms in
Bacterial Gene Regulation
Role: PI

2019- Institutional start-up funds
Waksman Institute of Microbiology, Department of Genetics, and the School of Arts and Sciences
Role: PI

Completed

2022-24 NIAID R21 AI170977
The temporal dynamics of translation efficiency during an innate immune response.
PI: Ann Tate (Vanderbilt University)
Role: Co-I

2021-22 Rutgers-New Brunswick COVID Impact on Scholarly Productivity Faculty Grant
Role: PI

2020-22 Busch Biomedical Grant
Role: PI

AWARDS AND RECOGNITION

2024 Young Investigator Award presented by the Theobald Smith Society, NJ Branch of ASM

2022-24 Top 20 Reviewing Editor for 2023 and 2024, highlighted at the Peer Review Week

Trainee Awards

2024-25 Arpita Mukherjee (graduate student) - Charles and Johanna Busch Pre-doctoral Fellowship.

2024 Yaneli Guerra Hernandez (undergrad, Biology major) - RISE/REU Summer Research Fellowship.

2024 Sangeevan Vellappan (graduate student) - Poster prize winner, Spring 2024 Theobald Smith Society (NJ Branch of ASM) meeting.

2023-24 Sangeevan Vellappan (graduate student) - Charles and Johanna Busch Pre-doctoral Fellowship.

2023 Maryam Mohammed - Douglass WiSE project SUPER summer research scholarship.

2023 Sangeevan Vellappan (graduate student) - RNA Society Research Presentation Fellowship.

2023 Hannah Lake (undergrad, Genetics major) - The Department of Genetics Award for Excellence in a Research Presentation.

2022-23 Sangeevan Vellappan (graduate student) - Charles and Johanna Busch Pre-doctoral Fellowship.

2022 Samuel Adeleye (graduate student) - The Sorrow Prize (travel award) for the best oral presentation at the Annual Waksman Institute Scientific Retreat

2022 Hifsa Abbasi (undergrad, Microbiology major) - Waksman Summer Undergraduate Research Fellowship.

2021-22 Samuel Adeleye (graduate student) - Benedict Michael Pre-doctoral Fellowship for the top-ranked applicant at the Waksman Institute of Microbiology.

2021 Hifsa Abbasi (undergrad, Microbiology major) - Rutgers University Pipeline - Initiative for Maximizing Student Development - Summer Undergraduate Research Fellowship.

2021-22 Hannah Lake (undergrad, Genetics major) - Division of Life Sciences Summer Undergraduate Research Fellowships.

2021-23 McKenzie Burge (graduate student) - Rutgers-NIH Biotech Training Fellowship.

2020-21 Samuel Adeleye (graduate student) - Charles and Johanna Busch Pre-doctoral Fellowship.

2020 Debbie Cerda (undergrad) - Division of Life Sciences Summer Undergraduate Research Fellowship.

INVITED TALKS

2024 *Translational profiling of stress-induced small proteins uncovers an unexpected connection among distinct signaling systems.*

22. Keynote lecture at the Theobald Smith Society - NJ Branch of ASM's Fall 2024 Symposium, New Brunswick NJ

2024 *Small Proteins and Epitranscriptomic Factors: Emerging mechanisms in bacterial gene regulation.*

21. Keynote talk at the 2024 New York Bacillus Interest Group (NYBIG) conference, New York City, NY – Declined due to schedule conflict

2023 *Small proteins and their roles in bacterial stress responses.*

20. 2023 Global webinar series, PAR (Prevent Antibiotic Resistance) Foundation

2023 *Low magnesium stress-induced small proteins in E. coli.*

19. Annual microbiology symposium, Rutgers University, New Brunswick NJ

2023 *Epitranscriptomic enzymes and small proteins: Emerging regulators of stress response.*

18. Genetics, Cell Biology and Anatomy seminar series, University of Nebraska, Omaha NE (Virtual)

17. Biological sciences seminar series, Vanderbilt University, Nashville TN

16. Microbiology seminar series, The Ohio State University, Columbus OH

2022 *Dual Functions of a Biosynthetic Enzyme (QueE) in tRNA Modification and Bacterial Stress Response.*

15. Biology seminar series, La Salle University, Philadelphia PA

Small Proteins and Epitranscriptomic Factors: Emerging mechanisms in bacterial gene regulation.

14. Biology seminar series, Rutgers-Camden NJ

13. Institute for infectious and inflammatory Diseases (i3D) 2022 Faculty Retreat, Rutgers University, Piscataway NJ (Virtual)

Development of an in vivo photo-cross-linking method to identify small protein targets.

12. International Small Small Protein Meeting, National Institutes of Health (NIH), Bethesda MD (Virtual)

2021 *Small but mighty regulators of bacterial gene expression and stress response.*

11. Biology seminar series, University of Delaware, Newark DE (Virtual)

Small Proteins and Epitranscriptomic Factors: Emerging mechanisms in bacterial gene regulation.

10. Lambda lunch seminar series, National Institutes of Health (NIH), Bethesda MD (Virtual)

An epitranscriptomic enzyme moonlights in bacterial stress response.

9. Evelyn M. Witkin 100th birthday symposium, Waksman Institute of Microbiology, Rutgers University, Piscataway NJ (Virtual)

Small proteins and epitranscriptomic factors: Emerging regulators of bacterial gene expression.

8. Division of Life Sciences – New faculty symposium, Rutgers University, Piscataway NJ (Virtual)

2020 *Bacterial stress response to antimicrobial peptides.*

7. Annual microbiology symposium, Rutgers University, New Brunswick NJ

2018 *Bacterial stress response to antimicrobial peptides.*

6. Genetics seminar series, Rutgers University, Piscataway NJ
Antimicrobial peptide stress response in *E. coli*.
5. Institute of Marine and Environmental Technology, Baltimore MD
- 2017 Navigating an academic career: PhD to postdoc (Interdisciplinary Graduate Programs Career Day).
4. The Ohio State University, Columbus OH
Antimicrobial peptide stress response in *E. coli*.
3. University of Oklahoma, Oklahoma City OK
2. University of Toronto, Toronto Canada
Antimicrobial stress response in bacteria.
1. University of California at Riverside, Riverside CA

CONFERENCE AND OTHER PRESENTATIONS

- 2024 **Yadavalli SS**
Importance of scientific method and research in biomedicine.
22. First-Year Interest Group Seminar (FIGS), Rutgers University, Piscataway NJ
- 2024 **Yadavalli SS**
Analyses of small proteins induced under magnesium stress reveal a novel connection among three signaling systems in *E. coli*.
21. Microbial Stress Response Gordon Research Conference (GRC), Mount Holyoke College, South Hadley MA
- 2023 **Yadavalli SS**
Small but powerful regulators of bacterial stress response.
20. Waksman Institute Board of Trustees Meeting, Rutgers University, Piscataway NJ (Talk)
- 2022 Adeleye SA and **Yadavalli SS**
Moonlighting function of a biosynthetic enzyme links RNA metabolism and cell division during stress response in *E. coli*.
19. Molecular Genetics of Bacteria and Phages Meeting, University of Wisconsin, Madison WI
- Adeleye SA and **Yadavalli SS**
Dual Functions of a Biosynthetic Enzyme (*QueE*) in tRNA Modification and Bacterial Stress Response.
18. Microbial Stress Response Gordon Research Conference (GRC), Mount Holyoke College, South Hadley MA (Talk)
- 2017 **Yadavalli SS**, Carey J, Leibman R, Stern A, Roggiani M, Lippa A and Goulian M
Antimicrobial peptides trigger a division block in *E. coli* through *PhoQ* signaling.
17. Waksman Annual Retreat, Rutgers University, Piscataway NJ
 16. Chemical and Biomolecular Engineering Conference, Dow Chemicals & University of Pennsylvania, Philadelphia PA
- 2016 **Yadavalli SS**, Carey J, Leibman R, Stern A, Roggiani M, Lippa A and Goulian M
Antimicrobial peptides trigger a division block in *E. coli* through *PhoQ* signaling.
15. Microbial Stress Response Gordon Research Conference (GRC) at Mount Holyoke College, MA (Talk)
- 2015 **Yadavalli SS**, Carey J, Leibman R, Stern A, Roggiani M, Lippa A and Goulian M
Modulation of cell division by a signal transduction system in *E. coli*.

14. Prokaryotic Seminar Series, Microbiology and Molecular Biology, University of Pennsylvania, Philadelphia PA (Talk)
13. Molecular Genetics of Bacteria and Phages meeting, University of Wisconsin, Madison WI (Talk)
- Yadavalli SS**, Carey J, Leibman R, Stern A, Roggiani M, Lippa A and Goulian M
PhoQ/PhoP-dependent filamentation of E. coli.
12. Biochemistry and Molecular Biophysics Research Discussion seminar series, University of Pennsylvania, Philadelphia PA (Talk)
- 2014 **Yadavalli SS**, and Goulian M
Regulation of the PhoQ histidine kinase by small membrane protein MgrB.
11. Molecular Genetics of Bacteria and Phages meeting, University of Wisconsin, Madison WI
- Yadavalli SS**, Carey J, Leibman R, Stern A, Roggiani M, Lippa A and Goulian M
Filamentation of E. coli by hyperactivation of PhoQ-PhoP two component system.
10. Prokaryotic Seminar Series, Microbiology and Molecular Biology, University of Pennsylvania, Philadelphia PA (Talk)
- 2013 **Yadavalli SS**, Carey J, Leibman R, Stern A, Roggiani M, Lippa A and Goulian M
Filamentation of E. coli by hyperactivation of PhoQ-PhoP two component system.
9. Bacteria, Archaea and Phages meeting at University of Wisconsin, Madison WI (Talk)
- Yadavalli SS**, and Ibba M
Role of phenylalanyl-tRNA synthetase in aminoacylation, translation quality control and disease.
8. Prokaryotic Seminar Series, Microbiology and Molecular Biology, University of Pennsylvania, Philadelphia PA (Talk)
- 2012 **Yadavalli SS**, and Ibba M
Divergent requirements for quality control mechanisms in bacterial translation.
7. Bacteria, Archaea and Phages meeting at the Cold Spring Harbor Lab, Cold Spring Harbor NY (Talk)
- 2011 **Yadavalli SS**, and Ibba M
To edit or not to edit: the Mycoplasma question.
6. Microbiology department annual seminar series, The Ohio State University, Columbus OH (Talk)
- 2010 **Yadavalli SS**, Klipcan L, Zozulya A, Svergun D, Safo M, and Ibba M
Conformational change essential for productive tRNA recognition by an aminoacyl-tRNA synthetase.
5. Microbiology department annual seminar series, The Ohio State University, Columbus OH (Talk)
- Yadavalli SS**, Ignatov M, Musier-Forsyth K, and Ibba M.
Protein-RNA dynamics during post-transfer editing by phenylalanyl-tRNA synthetase.
4. 23rd tRNA Workshop at Aveiro, Portugal
- 2009 **Yadavalli SS**, Ling J, So BR, Shoji S, Roy H, Fredrick K, Musier-Forsyth K, and Ibba M
Resampling and editing of mischarged tRNA prior to translation elongation.
3. Ohio Branch American Society of Microbiology (OBASM) Meeting, Athens OH
- Yadavalli SS** and Ibba M.
How does PheRS ensure aminoacylation fidelity?
2. Microbiology department annual seminar series, The Ohio State University, Columbus OH (Talk)

2008 **Yadavalli SS**, Ling J, So BR, Shoji S, Roy H, Fredrick K, Musier-Forsyth K, and Ibba M.
Resampling and editing of mischarged tRNA prior to translation elongation.

1. Rustbelt RNA Meeting at Mount Sterling OH

MENTORING

Rutgers University

Graduate and Undergraduate students

1. Yaneli Guerra Hernandez (Undergraduate Biology Major, Duke University; Rutgers RISE/REU fellow, Summer 2024)
2. Isabella Ang (Undergraduate freshman, Fall 2024)
3. Sangeevan Vellappan (Microbiology & Molecular Genetics graduate student, Spring 2020-)
4. Samuel Adeleye (Microbiology & Molecular Genetics graduate student, Spring 2020-)
5. Arpita Mukherjee (Master of Science in Microbial Biology, 2024-)
6. Simran Samal (Undergraduate Genetics Major, Fall 2023)
7. Sarah Khan (Undergraduate Genetics Major, 2023-2024)
8. Kaneshia Freeman (Undergraduate Biotechnology Major - honors thesis student, 2023 Ronald E. McNair Summer research scholar; George H. Cook scholar 2023-24)
9. Johnathan Akdemir (Undergraduate Genetics Major, 2023-24)
10. Maryam Mohammed (Undergraduate Microbiology Major-Project SUPER, 2023)
11. Janki Patel (Undergraduate Biological Sciences Major, 2022-23)
12. Varun Chovatia (Undergraduate, University of Illinois at Urbana Champaign, Summer 2022)
13. Pranavi Jagadeesan (Master of Science in Biomedical Sciences, 2021-22)
14. Hifsa Abbasi (Undergraduate Microbiology Major 2021-23; 2021 RISE/REU-IMSD student, Summer 2022 Waksman Undergraduate Research Fellow/WURF)
15. Hannah Lake (Undergraduate Genetics Major - honors thesis student 2022-23, 2021 & 2022 Summer DLS-SURF)
16. Shokufeh Nourallahi (Volunteer researcher, Fall 2021)
17. Daryl Von Herbert (Volunteer researcher, Master of Science in Clinical Research Management, Fall 2020)
18. McKenzie Burge (Master of Science in Molecular Biosciences, 2020-21)
19. Debbie Cerda (Undergraduate Genetics Major, 2019-20, Summer 2020 DLS-SURF)

Students - other

1. Katelyn Edelbach (Genetics major, Honors thesis committee, 2024-25)
2. Riya Mamtora (Biological Sciences, Honors Capstone thesis committee, 2024)
3. Katherine Duseau (Molecular Biosciences, rotation Spring 2024)
4. Sho Ogino (Genetics, Honors thesis committee, 2023-24)
5. Lena Schumacher (Molecular Biosciences, rotation Fall 2023)
6. Lily Lumkong (Molecular Biosciences, rotation Fall 2023)
7. Travis Santana (Microbial Biology, rotation Fall 2023)
8. Kyle Skalenko (Microbial Biology, Ph.D. thesis defense committee, 2023)
9. Ronald Haines (Microbial Biology, Master's thesis committee, 2023)

10. Yuxuan Wang (Microbial Biology, Ph.D. qualifying exam committee, 2023)
11. Ahmad Salman Sirajee (Molecular Biosciences, rotation 2022-23)
12. Stephannie Rosario-Garrido (Microbiology, Biochemistry and Molecular Genetics-Rutgers NJMS Newark, Ph.D. thesis committee, 2023-)
13. Hoa Vu (Microbial Biology, Ph.D. thesis committee, 2023-)
14. Gustavo Rios-Delgado (Microbiology Molecular Genetics, Ph.D. qualifying exam and thesis committees, 2023-)
15. Saai Anugraha Tiruchendurai Suryanarayanan (Cell & Developmental Biology, Ph.D. qualifying exam and thesis committees, 2021-)
16. Ayla Boyd (Genetics, Honors thesis committee, 2021)
17. Sukanya Das (Shah lab, Fall 2018)
18. Alex Gorbunov (Severinov-Nickels labs, Fall 2018)
19. Jiayu Shen (Molecular Biosciences, Nickels lab rotation 2017-18)

Technicians and other trainees

1. Nitish Sharma (Postdoctoral researcher, 2024-)
2. Salma Al Saai (Postdoctoral researcher, 2024-)
3. Junhong Sun (Lab technician, 2023-)
4. Kyle Skalenko (Research technician, 2020-22)
5. Shun Liang (Lab researcher, 2019-20)
6. Katherine Maniates (Postdoc in Singson lab, career advisory committee, 2023-24)
7. Rachana Rao Battaje (Postdoc in Manhart lab, mentoring and advisory committee, 2024-)

University of Pennsylvania

1. Ted Goh (Undergraduate Honors Thesis, Swarthmore University, 2013-14)
2. Dr. Shiyin Ren, Huaiyin institute of Technology, China (Visiting Professor, Goulian lab, 2012-13)
3. Annie I. Chen (Goulian lab, Ph.D., 2014-17)
4. Yitian Zhou (Zhu lab, Ph.D. rotation, 2014)

The Ohio State University

1. Eric Caruso (Undergraduate researcher and co-author on a manuscript, 2011-2012)
2. Eileen Gulertekin (Undergraduate researcher, 2011-12)
3. Chaojie Wang (Ibba lab, Ph.D. rotation, 2011)
4. Diana Norden (Ibba lab, Ph.D. rotation, 2011)
5. Rajat Banarjee, University of Calcutta, India (Visiting Professor and co-author on 3 manuscripts, Ibba lab, 2008-09)

TEACHING

Faculty

- Fall 2024 Genetic Analysis I 01:447:384 for Genetics majors
- Spring 2024 Genetic Analysis II 01:447:385 for Genetics majors (2 lectures)
- Fall 2023 Genetic Analysis I 01:447:384 for Genetics majors
- Fall 2022 Genetic Analysis I 01:447:384 for Genetics majors (hybrid, in person and online)
- Spring 2022 Ethical Scientific Conduct Refresher 16:115:558 for graduate students and postdocs
- Fall 2021 Genetic Analysis I 01:447:384 for Genetics majors (hybrid, in person and online)
- Spring 2021 Ethical Scientific Conduct 16:115:556 for graduate students and postdocs
- Fall 2020 Genetic Analysis I 01:447:384 for Genetics majors (fully online due to the COVID-19 pandemic)

Graduate Teaching Assistant

- Spring 2010 General Microbiology II
- Winter 2009 General Microbiology II
 - Fall 2009 General Microbiology I
- Spring 2008 General Microbiology II
 - Fall 2007 General Microbiology I
- Spring 2007 Basic and Practical Microbiology
 - Fall 2006 Basic and Practical Microbiology

PROFESSIONAL SERVICE

- 2024 President (elect) of the Theobald Smith Society, the NJ Branch of ASM
- 2024- FEBS Letters Advisory Board
- 2024- Executive Planning and Policy Committee, Waksman Institute of Microbiology, Rutgers University
- 2024 Guest Reviewing Editor, eLife
- 2024 Faculty mentor, First-Year Interest Group Seminars (FIGS) program (peer instructor: Fawaaz Masood), Rutgers-New Brunswick
- 2024 Faculty recruitment, Microbial Biology, School of Environmental and Biological Sciences (SEBS), Rutgers-New Brunswick
- 2023 Reviewer for the 2023 Busch Biomedical Grant Program, Rutgers University
- 2022- Reviewing Editor at Microbiology Spectrum (ASM)
- 2020- Ad-hoc reviewer at eLife, PLoS Genetics, PLoS Pathogens, mBio, Journal of Bacteriology, Molecular Microbiology, mSystems and Frontiers in Molecular Biosciences
- 2017- Reviewer at Bio-protocol
- 2021- Co-leader and administrator for Slack group for Small Protein research community of over 120 trainees and faculty members, "Small proteins, Big questions"
- 2022- Undergraduate academic advisor for Genetics majors, Department of Genetics, Rutgers University
- 2023-24 Peer Evaluation Committee (PEC) as part of the Faculty Compensation Program (FCP), Waksman Institute of Microbiology, Rutgers University
 - 2023 Organizer for the annual Waksman scientific retreat
 - 2023- Co-organizer for the annual Evelyn M. Witkin seminars
 - 2022- Waksman Busch Funds Committee for annual student/postdoc fellowships and seed grants, Waksman Institute of Microbiology, Rutgers University

- 2022-23 Waksman Vision and Hiring Plans Committee for new faculty recruitment, Waksman Institute of Microbiology, Rutgers University
- 2022-23 Seminar Planning Committee, Waksman Institute of Microbiology, Rutgers University
- 2021-23 Diversity and Strategic Planning Committee, Waksman Institute of Microbiology, Rutgers University
- 2020- Graduate student recruitment for Molecular Biosciences and Microbial biology programs, Rutgers University
- 2020- Diversity and Strategic Planning Committee, Department of Genetics, Rutgers University
- 2019- Departmental Seminar Planning Committee, Department of Genetics, Rutgers University

Invited panelist:

- 2024 Judge for posters and talks at the Waksman Annual Scientific Retreat, Rutgers University, New Brunswick NJ.
- 2024 ASM Molecular Biology and Physiology (MBP) Council on Microbial Sciences (COMS) Retreat Discussion (Virtual)
- 2023 Judge for posters at the 2023 Annual Graduate Student Research Symposium for biomedical graduate students and postdocs, Rutgers University, Piscataway NJ.
- 2022 Judge for posters presented by graduate students and postdocs at the 2022 Waksman Annual Scientific Retreat, Rutgers University, Piscataway NJ.
- 2022 Mentor at the career development roundtable on "Prepare your Teaching and DEI statements for a Faculty Search" at the Molecular Genetics of Bacteria and Phages meeting, University of Wisconsin, Madison WI.
- 2022 Academic career paths: career panel for biomedical graduate students and postdocs, Rutgers University, Piscataway NJ (virtual).
- 2022 Judge for talks and posters at the 2022 Annual Graduate Student Research Symposium for biomedical graduate students and postdocs, Rutgers University, Piscataway NJ.
- 2021 Mentor/facilitator for the "Women in science" session at the Molecular Genetics of Bacteria and Phages symposium (virtual).
- 2021 Academic career paths: career panel for biomedical graduate students and postdocs, Rutgers University, Piscataway NJ (virtual).
- 2020 Women in academia: biology career panel for the graduate students and postdocs as part of the iJOBS program, Rutgers University, Piscataway NJ (Virtual).
- 2016 Presentation judge - Graduate presentations at the Annual retreat for Department of Biology, University of Pennsylvania, Philadelphia PA.
- 2015 Penn Women's Biomedical Society General Body Meeting, University of Pennsylvania, Philadelphia PA.
- 2010 Presentation judge - Biological, Mathematical, and Physical Sciences Undergraduate Research Forum, The Ohio State University, Columbus OH.
- 2009-10 Elected student representative on the Graduate Admissions Committee, Dept. of Microbiology, The Ohio State University, Columbus OH.

OTHER SERVICE

- 2021- Member of the Board of Trustees at the Rutgers-Livingston Day Care Center (R-LDCC) – New Jersey's first nationally accredited early childhood program.
Budget and finance, Health, safety and food service committees
- 2020- Unofficial mentor/advisor for women, Asian and/or minority students and postdocs at the Waksman Institute and the Department of Genetics, Rutgers University.

PROFESSIONAL AFFILIATIONS

International Small Small Protein Group
Graduate Program in Microbiology and Molecular Genetics (MMG), Rutgers
Graduate Program in Microbial Biology, Rutgers
American Society of Microbiology (ASM)
New Jersey Branch ASM Theobald Smith Society (TSS)
Human Genetics Institute of New Jersey (HGINJ), Rutgers
Institute for Infectious and Inflammatory Diseases (i3D), Rutgers
SciOPS (Scientist Opinion Panel Survey)

WORKSHOPS

2024 Navigating the Diversity of the University to Support Our Graduate Students
2021 Rutgers Connection Network (RCN) Mentoring Program
2020 Faculty Workshop in Mentoring Biomedical PhD Students
2020 Summer Institutes on Scientific Teaching, On-line
2019 Faculty Workshop in Mentoring Biomedical PhD Students
2009 Seventh Annual Dawn of the New Enzymology Kinetics, conducted by Dr. Kenneth Johnson, Austin TX

OUTREACH EXPERIENCE

2024 Two-week shadow and basic research training experience for high-school student, Saanvi Gambhira, from Benjamin Franklin High School, New Orleans LA.
2022 Interviewed by Ms. Ciara Weller, a freshman student at the Ernest Mario School of Pharmacy for her scientific writing class assignment, "Interview with a Scientist" conducted by Dr. Donald Dow, Rutgers University, Piscataway NJ.
2021 Shadowing experience for high-school student, Enna Chiu, from Highland Park High School, Highland Park NJ.
2020 Knowledge and power: Issues in women's leadership - interviewed by Ms. Olivia Becker, a freshman Honors College and Douglass Residential College student at Rutgers University, Piscataway NJ.
2018 Judge for 2017 Waksman Student Scholars Program (WSSP) Forum Poster Session held at Rutgers University Busch Campus Center, Piscataway NJ.
2016 Judge for the middle school student poster presentations at the Annual Science Fair at Penn Alexander School, Philadelphia PA.
2016 Volunteered as biology expert at the first annual Science Expert Expo at Penn Alexander School, Philadelphia PA.
2014 Co-mentored a middle-school student, Donte Carr through the Philadelphia public school SPARK Apprenticeship program, Philadelphia PA.
2011 Demonstrations using liquid nitrogen to freeze different substances and ice cream making. Understanding physical and chemical properties of matter with Ms. Carnate at Hilltonia Middle School, Columbus OH.
2010 Mentored and trained a high-school student (Andrew Bogart) from Metro Early College High School, Columbus OH through the BODIES Internship program.
2010 Shadow mentor for high-school student (Andrew Klingel) from Metro Early College High School, Columbus OH.
2010 Demonstrations with heating of gases trapped in airtight jars and laughing gas (N_2O). Understanding Global warming with Ms. Rucker at Hilltonia Middle School, Columbus OH.

2010 Demonstrations using dry ice and make-your-own glowstick. Experiments for Halloween with Ms.Carnate at Hilltonia Middle School, Columbus OH.