Srujana Samhita Yadavalli

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Department of Genetics
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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**
Waksman Institute of Microbiology, Rutgers University, New Brunswick, NJ

2012-17 **Postdoctoral Researcher**
Department of Biology, University of Pennsylvania, Philadelphia, PA

2006-12 **Graduate Assistant**
Department of Microbiology, The Ohio State University, Columbus, OH

AWARDS AND RECOGNITION

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

2024 Rutgers FIGS (First-Year Interest Group Seminars) Faculty Mentor of the Year Award presented at the FIGS 25th anniversary celebration

2022-24 Top 20 Reviewing Editor for 2023 and 2024 at Microbiology Spectrum (ASM), highlighted at the Peer Review Week

FUNDING

Current

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

2024-29 NICHD R01 HD113761, Role: Co-I, PI: Gleb Shumyatsky (Rutgers University)
The Role of Corticolimbic Circuits in Maternal Behavior

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

Completed

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

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

2020-22 Busch Biomedical Grant, Role: PI

PUBLICATIONS

Google Scholar: https://scholar.google.com/citations?user=cw43C1cAAAAJ&hl=en
Pubmed: https://www.ncbi.nlm.nih.gov/myncbi/srujana.yadavalli.1/bibliography/public/

Bold: Members of Yadavalli Lab

At Rutgers

27. **Adeleye SA**, Mechesso AF, **Mukherjee A**, Wang G*, **Yadavalli SS*** (2025) *Mechanistic Insights into Human Antimicrobial Peptide-Induced Activation of a Broadly Conserved Bacterial Signaling System.* bioRxiv doi:10.1101/2025.05.06.652532v1 (submitted to PNAS) *Corresponding author

26. **Vellappan S**, **Sun J**, Favate J, **Jagadeesan P**, **Cerda D**, Shah P, **Yadavalli SS*** (2025) *Analysis of stress-induced small proteins in Escherichia coli reveals that YoaI mediates crosstalk between distinct signaling systems.* Science Signaling doi: 10.1126/scisignal.adu7253, *Corresponding author
Featured on the *Theobald Smith Society* website, *Phys.org*, *Rutgers SAS news*.

25. **Sun J**$^{\Phi}$, **Vellappan S**$^{\Phi}$, **Akdemir J**, Steier L, Feinbloom RE, **Yadavalli SS*** (2025) *Imaging of porphyrin-specific fluorescence in pathogenic bacteria in vitro using a wearable, hands-free system.* Journal of Microbiological Methods doi:10.1016/j.mimet.2025.107225, $^{\Phi}$Equal contribution, *Corresponding author

24. Lumkong L, Nyiro B, Russo S, Westervelt I, Sullivan RF, Boyd JM, Carabetta VJ, **Yadavalli SS**, Sun JS (2025). *Challenges and innovations in resistance, remediation, and regulation: key findings from the spring 2025 ASM Theobald Smith Society meeting*. mSphere doi:10.1128/msphere.00374-25.

23. Sant D, Mateen AI, Sullivan RF, Boyd JM, Carabetta VJ, **Yadavalli SS**, Sun JS (2025) *Emerging themes in microbial stress response and mechanistic insights: key findings from the fall 2024 ASM Theobald Smith Society meeting.* mSphere doi:10.1128/msphere.01008-24.

22. **Adeleye SA**, **Yadavalli SS*** (2024) *Queuosine biosynthetic enzyme, QueE moonlights as a cell division regulator.* PLoS Genetics 20(5): e1011287, *Corresponding author

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$^{\Phi}$, **Vellappan S**$^{\Phi}$, 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. $^{\Phi}$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): e00305-20 *Spotlight selection*, *Corresponding author

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.* Proceedings of the National Academy of Sciences 116 (3): 744-752

Before Rutgers

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.* Proceedings of the National Academy of Sciences 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, 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$^{\Phi}$, **Yadavalli SS**$^{\Phi}$, 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)dendrimersomes with bacterial membranes.* Proceedings of the National Academy of Sciences 113 (9): E1134–41, $^{\Phi}$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$^{\Phi}$, **Yadavalli SS**$^{\Phi}$, Euro L, Isohanni P, Gatz A, Carroll C, Valanne L, Alkuraya FS, Uusimaa J, Paetau A, Caruso EM, Pihko H, Ibba M, Tyynismaa H, Suomalainen A (2012) *Mitochondrial phenylalanyl-tRNA synthetase mutations underlie fatal infantile Alpers encephalopathy.* Human Molecular Genetics 21 (20): 4521–9, $^{\Phi}$Equal contribution

7. **Yadavalli SS**, Ibba M (2012) *Quality control in aminoacyl-tRNA synthesis: its role in translational fidelity.* Advances in Protein Chemistry and Structural Biology 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 phenylalanyltRNA 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.*
Proceedings of the National Academy of Sciences 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

INVITED TALKS

2026 *Human antimicrobial peptide-induced activation of a broadly conserved bacterial signaling system*
25. Pathology, Microbiology and Immunology seminar series, Univ of Nebraska Medical Center, Omaha, NE (scheduled)

2025 *Small proteins make big connections: Decoding bacterial stress networks*
24. Biochemistry and Cellular and Molecular Biology seminar series, Univ of Tennessee, Knoxville, TN

23. Keynote lecture at the 2025 New York Bacillus Interest Group (NYBIG) conference, New York City, NY

2024 *Queuosine biosynthetic enzyme, QueE moonlights as a cell division regulator*
22. National Centre for Biological Sciences (NCBS), Bengaluru, Karnataka, India

Translational profiling of stress-induced small proteins uncovers an unexpected connection among distinct signaling systems
21. Keynote lecture at the Theobald Smith Society - NJ Branch of ASM's Fall 2024 Symposium, New Brunswick, NJ

2023 *Small proteins and their roles in bacterial stress responses*
20. 2023 Global webinar series, PAR (Prevent Antibiotic Resistance) Foundation

Low magnesium stress-induced small proteins in E. coli
19. Annual microbiology symposium, Rutgers-New Brunswick, NJ

Epitranscriptomic enzymes and small proteins: Emerging regulators of stress response
18. Genetics, Cell Biology and Anatomy seminar series, Univ of Nebraska, Omaha, NE (Virtual)

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

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

2022 *Dual Functions of a Biosynthetic Enzyme (QueE) in tRNA Modification and Bacterial Stress Response*
15. Biology seminar series, La Salle Univ, 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, 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, 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 Univ, Piscataway, NJ (Virtual)

Small proteins and epitranscriptomic factors: Emerging regulators of bacterial gene expression
8. Division of Life Sciences – New faculty symposium, Rutgers-New Brunswick, NJ (Virtual)

2020 *Bacterial stress response to antimicrobial peptides*
7. Annual microbiology symposium, Rutgers-New Brunswick, NJ

2018 *Bacterial stress response to antimicrobial peptides*
6. Genetics seminar series, Rutgers-New Brunswick, 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*
4. Interdisciplinary Graduate Programs Career Day Symposium, The Ohio State Univ, Columbus, OH

Antimicrobial peptide stress response in E. coli
3. Microbiology and Immunology, Univ of Oklahoma, Oklahoma City, OK

2. Molecular Genetics, Univ of Toronto, Toronto, Canada

Antimicrobial stress response in bacteria
1. Microbiology, Univ of California at Riverside, Riverside, CA

CONFERENCE AND OTHER PRESENTATIONS

2025 Vellappan S, Sun J, Favate J, Jagadeesan P, Cerda D, Shah P, **Yadavalli SS**
Analysis of stress-induced small proteins in Escherichia coli reveals that YoaI mediates crosstalk between distinct signaling systems.
24. Molecular Genetics of Bacteria and Phages Meeting, Univ of Wisconsin, Madison, WI

2025 **Yadavalli SS**
An introduction to bacterial stress response.
23. Biotechnology High School student orientation, Rutgers, Piscataway, NJ

2024 **Yadavalli SS**
Importance of scientific method and research in biomedicine.
22. Guest lecture, First-Year Interest Group Seminars (FIGS), Rutgers-New Brunswick, NJ

Vellappan S, Sun J, Favate J, Jagadeesan P, Cerda D, Shah P, **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, Piscataway, NJ

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, Univ 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

2017 **Yadavalli SS**, Carey J, Leibman R, Stern A, Roggiani M, Lippa A, Goulian M
Antimicrobial peptides trigger a division block in E. coli through PhoQ signaling.
17. Waksman Annual Retreat, Rutgers, Piscataway, NJ
16. Chemical and Biomolecular Engineering Conference, Dow Chemicals & Univ of Pennsylvania, Philadelphia, PA

2016 **Yadavalli SS**, Carey J, Leibman R, Stern A, Roggiani M, Lippa A, Goulian M
Antimicrobial peptides trigger a division block in E. coli through PhoQ signaling.
15. Microbial Stress Response Gordon Research Conference (GRC), Mount Holyoke College, South Hadley, MA

2015 **Yadavalli SS**, Carey J, Leibman R, Stern A, Roggiani M, Lippa A, Goulian M
Modulation of cell division by a signal transduction system in E. coli.
14. Prokaryotic Seminar Series, Microbiology and Molecular Biology, Univ of Pennsylvania, Philadelphia, PA
13. Molecular Genetics of Bacteria and Phages meeting, Univ of Wisconsin, Madison, WI

Yadavalli SS, Carey J, Leibman R, Stern A, Roggiani M, Lippa A, Goulian M
PhoQ/PhoP-dependent filamentation of E. coli.
12. Biochemistry and Molecular Biophysics Research Discussion seminar series, Univ of Pennsylvania, Philadelphia, PA

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, Univ of Wisconsin, Madison, WI

Yadavalli SS, Carey J, Leibman R, Stern A, Roggiani M, Lippa A, Goulian M
Filamentation of E. coli by hyperactivation of PhoQ-PhoP two-component system.
10. Prokaryotic Seminar Series, Microbiology and Molecular Biology, Univ of Pennsylvania, Philadelphia, PA

2013 **Yadavalli SS**, Carey J, Leibman R, Stern A, Roggiani M, Lippa A, Goulian M
Filamentation of E. coli by hyperactivation of PhoQ-PhoP two component system.
9. Bacteria, Archaea and Phages meeting at Univ of Wisconsin, Madison, WI

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, Univ of Pennsylvania, Philadelphia, PA

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

2011 **Yadavalli SS** and Ibba M
To edit or not to edit: the Mycoplasma question.
6. Microbiology department annual seminar series, The Ohio State Univ, Columbus, OH

2010 **Yadavalli SS**, Klipcan L, Zozulya A, Svergun D, Safro M, Ibba M
Conformational change essential for productive tRNA recognition by an aminoacyl-tRNA synthetase.
5. Microbiology department annual seminar series, The Ohio State Univ, Columbus, OH

Yadavalli SS, Ignatov M, Musier-Forsyth K, 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, 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 Univ, Columbus, OH

2008 **Yadavalli SS**, Ling J, So BR, Shoji S, Roy H, Fredrick K, Musier-Forsyth K, Ibba M.
Resampling and editing of mischarged tRNA prior to translation elongation.
1. Rustbelt RNA Meeting at Mount Sterling, OH

MENTORING

Rutgers University

Faculty

1. Jennifer Sun (Assistant Professor, Department of Biochemistry and Microbiology; 2025-)
2. Ekaterina Semenova (Lab Director, Waksman Institute of Microbiology; 2024-)

Graduate students

1. Arpita Mukherjee (Master of Science in Microbial Biology, 2024-)
2. Sangeevan Vellappan (Microbiology & Molecular Genetics Ph.D. student, 2020-25)
3. Samuel Adeleye (Microbiology & Molecular Genetics Ph.D. student, 2020-25)
4. Pranavi Jagadeesan (Master of Science in Biomedical Sciences, 2021-22)
5. McKenzie Burge (Master of Science in Molecular Biosciences, 2020-21)

Postdocs and technicians

1. Sangeevan Vellappan (Postdoctoral researcher, 2025-)
2. Madhulika Singh (Postdoctoral researcher, 2024-)
3. Nitish Sharma (Postdoctoral researcher, 2024-)

4. Salma Al Saai (Postdoctoral researcher, 2024), Rutgers-NIH INSPIRE/IRACDA finalist
5. Junhong Sun (Lab technician, 2023-)
6. Kyle Skalenko (Research technician, 2020-22)
7. Shun Liang (Lab researcher, 2019-20)

Undergraduate students

1. Natalie Stein (Genetics Major, Summer 2025-2026)
2. Alexandra Sicat (Biological Sciences Major, University of Vermont, Summer 2025)
3. Simran Samal (Genetics Major, Fall 2023, 2024-25)
4. Yaneli Hernandez (Biology Major, Duke University; Summer 2024 RISE/REU fellow)
5. Isabella Ang (UG freshman, Fall 2024)
6. Sarah Khan (Genetics Major, 2023-2024)
7. Kaneshia Freeman (Biotechnology Major - honors thesis, 2023 Ronald E. McNair Summer research scholar; George H. Cook scholar 2023-24)
8. Johnathan Akdemir (Genetics Major, 2023-24)
9. Maryam Mohammed (Microbiology Major-Project SUPER, 2023)
10. Janki Patel (Biological Sciences Major, Spring 2023)
11. Varun Chovatia (UG freshman, University of Illinois at Urbana-Champaign, Summer 2022)
12. Hifsa Abbasi (Microbiology Major 2021-23; 2021 RISE/REU-IMSD fellow, Summer 2022 Waksman Undergraduate Research Fellow)
13. Hannah Lake (Genetics Major - honors thesis 2022-23, 2021 & 2022 Summer DLS-SURF)
14. Shokufeh Nourollahi (Volunteer, Fall 2021)
15. Debbie Cerda (Genetics Major, 2019-20, Summer 2020 DLS-SURF)

Trainees – other

1. Barry Li (NJMS MD-Ph.D. thesis defense committee, 2025)
2. Harrison Tarbox (Molecular Biosciences, rotation Spring 2025)
3. Rachana Rao Battaje (Postdoc in Manhart lab, mentoring and advisory committee, 2024-)
4. Katelyn Edelbach (Genetics major, Honors thesis committee, 2024-25)
5. Riya Mamtora (Biological Sciences, Honors Capstone thesis committee, 2024)
6. Katherine Duseau (Molecular Biosciences, rotation Spring 2024)
7. Katherine Maniates (Postdoc in Singson lab, career advisory committee, 2023-24)
8. Sho Ogino (Genetics, Honors thesis committee, 2023-24)
9. Lena Schumacher (Molecular Biosciences, rotation Fall 2023)
10. Lily Lumkong (Molecular Biosciences, rotation Fall 2023)
11. Travis Santana (Microbial Biology, rotation Fall 2023)
12. Kyle Skalenko (Microbial Biology, Ph.D. thesis and defense committee, 2023-25)
13. Ronald Haines (Microbial Biology, Master's thesis committee, 2023)
14. Yuxuan Wang (Microbial Biology, Ph.D. qualifying exam committee, 2023)
15. Ahmad Salman Sirajee (Molecular Biosciences, rotation 2022-23)
16. Stephannie Rosario-Garrido (Microbiology, Biochemistry and Molecular Genetics-Rutgers NJMS Newark, Ph.D. thesis committee, 2023-)
17. Hoa Vu (Microbial Biology, Ph.D. thesis committee, 2023-25)
18. Gustavo Rios-Delgado (Microbiology & Molecular Genetics, Ph.D. qualifying exam and thesis committees, 2023-)
19. Saai Anugraha Tiruchendurai Suryanarayanan (Cell & Developmental Biology, Ph.D. qualifying exam and thesis committees, 2021-25)
20. Ayla Boyd (Genetics, Honors thesis committee, 2021)
21. Daryl Von Herbert (Volunteer, Master's in Clinical Research Management, Fall 2020)
22. Sukanya Das (Shah lab, Fall 2018)
23. Alex Gorbunov (Severinov-Nickels labs, Fall 2018)
24. Jiayu Shen (Molecular Biosciences, Nickels lab rotation 2017-18)

Trainee Awards

2024-26 Arpita Mukherjee (graduate) - Charles and Johanna Busch Pre-doctoral Fellowship
2024 Yaneli Guerra Hernandez (UG Biology major) - RISE/REU Summer Research Fellowship
2024 Sangeevan Vellappan (graduate) - Poster prize, Spring 2024 Theobald Smith Society (NJ Branch of ASM) meeting
2023-24 Sangeevan Vellappan (graduate) - Charles and Johanna Busch Pre-doctoral Fellowship
2023 Kaneshia Freeman (UG Honors, Biotechnology Major) - Ronald E. McNair summer research scholarship
2023 Maryam Mohammed (UG Microbiology major) - Douglass WiSE project SUPER summer research scholarship
2023 Sangeevan Vellappan (graduate) - RNA Society Research Presentation Fellowship
2023 Hannah Lake (UG Honors, Genetics major) - The Department of Genetics Award for Excellence in a Research Presentation
2022-23 Sangeevan Vellappan (graduate) - Charles and Johanna Busch Pre-doctoral Fellowship
2022 Samuel Adeleye (graduate) - The Sorge Prize (travel award) for the best oral presentation at the Annual Waksman Institute Scientific Retreat
2022 Hifsa Abbasi (UG Microbiology major) - Waksman Summer Undergraduate Research Fellowship
2021-22 Samuel Adeleye (graduate) - Benedict Michael Pre-doctoral Fellowship for the top-ranked applicant at the Waksman Institute of Microbiology
2021 Hifsa Abbasi (UG Microbiology major) - Rutgers University Pipeline - Initiative for Maximizing Student Development - Summer Undergraduate Research Fellowship
2021-22 Hannah Lake (UG Honors, Genetics major) - Honors College with Johnson & Johnson Women in STEM2D Life Sciences Summer Undergraduate Research Fellowship (2021), Division of Life Sciences Summer Undergraduate Research Fellowship (2022)
2021-22 McKenzie Burge (graduate) - Rutgers-NIH Biotech Training Fellowship
2020-21 Samuel Adeleye (graduate) - Charles and Johanna Busch Pre-doctoral Fellowship
2020 Debbie Cerda (UG Genetics major) - Division of Life Sciences Summer Undergraduate Research Fellowship

University of Pennsylvania

1. Ted Goh (Undergraduate Honors Thesis, Swarthmore University, 2013-14)
2. Shiying 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 (Goulian lab, graduate student rotation, 2014)

The Ohio State University

1. Eric Caruso (Undergraduate researcher, 2011-2012)
2. Eileen Gulertekin (Undergraduate researcher, 2011-12)
3. Chaojie Wang (Ibba lab, grad student rotation, 2011)
4. Diana Norden (Ibba lab, grad student rotation, 2011)
5. Rajat Banarjee, University of Calcutta, India (Visiting Professor, Ibba lab, 2008-09)

TEACHING

Faculty

Fall 2020-	Genetic Analysis I 01:447:384 for Genetics majors every Fall
Spring 2024	Genetic Analysis II 01:447:385 for Genetics majors (2 lectures)
Spring 2021, 2022	Ethical Scientific Conduct 16:115:556-558 for grad students and postdocs

Graduate Teaching Assistant

Fall 2006 - Spring 2010	General Microbiology I, II, Basic and Practical Microbiology

PROFESSIONAL SERVICE

Scientific review

2025-	Editor at Microbiology Spectrum (ASM)
2024-	FEBS Letters Advisory Board
2024	Guest Reviewing Editor, eLife
2023	Reviewer for the 2023 Busch Biomedical Grant Program, Rutgers University
2022-24	Reviewing Editor at Microbiology Spectrum (ASM)
2020-	Ad-hoc reviewer at eLife, PLoS Genetics, PLoS Pathogens, mBio, Journal of Bacteriology, Molecular Microbiology, mSystems, Frontiers in Molecular Biosciences, microLife, Journal of Oral Microbiology
2017-	Reviewer at Bio-protocol

Leadership/Organization

2025-26	Organizer for the Theobald Smith Society, the NJ Branch of ASM Fall and Spring scientific symposia
2025-26	President of the Theobald Smith Society, the NJ Branch of ASM
2024-25	President (elect) of the Theobald Smith Society, the NJ Branch of ASM
2024-25	Organizer for the annual Evelyn M. Witkin seminar at the Waksman Institute of Microbiology, Rutgers University
2023	Organizer for the Annual Waksman Scientific Retreat
2021-23	Co-leader and administrator for Slack group for Small Protein research community of over 120 trainees and faculty members, “Small proteins, Big questions”

Intramural service

2025-	Rutgers University Laboratory Safety and Design Committee, Rutgers Environmental Health and Safety
2024-	Executive Planning and Policy Committee, Waksman Institute of Microbiology, Rutgers University
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
2023-24	Peer Evaluation Committee (PEC) as part of the Faculty Compensation Program (FCP), Waksman Institute of Microbiology, Rutgers University
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-	Undergraduate academic advisor for Genetics majors, Department of Genetics, 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 the 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, Department 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

WORKSHOPS

2025 Rutgers Identity and Leadership (I-LEAD) Program
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, Virtual
2019 Faculty Workshop in Mentoring Biomedical PhD Students
2009 Seventh Annual Dawn of the New Enzymology Kinetics, by Dr. Kenneth Johnson, Austin, TX

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)

OUTREACH EXPERIENCE

2025 One-week shadow and research training at Yadavalli lab in the Waksman Institute for a high-school student, Lenna Hari, from James Caldwell High School, West Caldwell, NJ.

2025 Two-week shadow and research training at Yadavalli lab in the Waksman Institute for a high-school student, Mrinalini Kaul, from Mount Olive High School, Flanders, NJ.

2025 “Good germs and bad germs”, microbiology demo for the kindergarten class at the Preschool Place and Kindergarten, Bridgewater, NJ.

2025 Introduction to bacterial research in Yadavalli lab at the Waksman Institute for high school senior students from Biotechnology High School, Freehold, NJ.

2024 Two-week shadow and research training at Yadavalli lab in the Waksman Institute for a 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 at Yadavalli lab in the Waksman Institute for a 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.