Sethuramasundaram Pitchiaya

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PROFESSIONAL APPOINTMENTS

Assistant Professor 2021 - present
Department of Urology and Department of Pathology, Michigan Medicine, Ann Arbor, MI, USA

Research Investigator 2017 - 2021
Michigan Center for Translational Pathology and Department of Pathology, Michigan Medicine, Ann Arbor, MI, USA

EDUCATION AND TRAINING

Postdoctoral Fellow (Cancer Biology) 2015 - 2017
University of Michigan Medical School, Ann Arbor, MI, USA
Mentor: Arul M. Chinnaiyan

Postdoctoral Fellow (Molecular and Cell Biology, Instrumentation and Biophysics) 2014 - 2015
University of Michigan, Ann Arbor, MI, USA 2012 - 2013
Single-molecule analysis in Real-Time (SMART) center

Ph.D. in Chemistry (Chemical Biology) 2006 - 2012
University of Michigan, Ann Arbor, MI, USA
Mentor: Nils G. Walter, *GPA:* 4.0 / 4.0

B.Tech in Industrial Biotechnology 2002 - 2006
Anna University, Chennai, Tamil Nadu, India
GPA: 9.24 / 10.00, (equivalent to) summa cum laude

RESEARCH INTERESTS

The long-term goal of my research program is to understand how mammalian cells respond and adapt to stress and how regulation, aberrations and misappropriation of these foundational processes influence tissue homeostasis, degenerative diseases, and cancer. The ultimate aim is to translate our findings for diagnostic and therapeutic applications. To this end, we use contemporary imaging- and omics-based technologies that we develop and deploy and combine them with classical biochemical and biophysical tools.

Keywords: Stress response and adaptation, Regulation of gene expression, Degenerative diseases, Cancer biology, Single-cell analysis, Single-molecule imaging

RESEARCH STATEMENT

As a part of my graduate training in chemical biology and single-molecule biophysics, I resolved the mechanism-of-action and turnover principles of gene regulatory microRNAs at unprecedented spatiotemporal resolution. I combined these skills with training in molecular biology, cell biology and cancer biology to decode the regulatory function and translational potential of small and long non-coding RNAs in DNA damage response and prostate cancer during my postdoctoral fellowship. Leveraging this interdisciplinary training, I made two important discoveries as an independent research investigator – 1) subcellular membrane-less compartments, called biomolecular condensates, are integral components of the cellular stress

response and RNA regulation and 2) cellular heterogeneity contributes to distinct cellular decisions in viral infections, stress response and prostate cancer. Building on these findings, my lab seeks to dissect the link between sub-cellular organization, gene regulation and cell signaling in cellular homeostasis and cell fate decisions in health and disease. To address these critical points in stress biology, we use an arsenal of cutting-edge technologies, including single-molecule imaging, super-resolution microscopy, high-throughput imaging, single-cell sequencing, and spatial omics, and combine them with classical approaches.

Since starting my lab in July 2021, my group has discovered that stress response pathways are hyperactive in numerous cancers, including pediatric osteosarcoma and advanced prostate cancer, and represent therapeutically actionable vulnerabilities. On the other hand, we have found that stress response programs are dampened during aging and in neurodegenerative diseases, wherein activating these programs are valuable. My lab working towards understanding foundational mechanisms of stress response and how these programs are disrupted in cancers and degenerative pathologies, whilst working towards identifying methods of therapeutic interventions and accompanying diagnostics.

TEACHING AND MENTORING STATEMENT

As a graduate student, postdoctoral fellow, and a research investigator I have served as a research mentor for students at all levels including ten undergraduate students, seventeen graduate students, one research fellow and one technical assistant. As a mentor, I appreciate my mentees' sense of belonging, self-efficacy, and engagement as budding scientists. I also recognize the impact of self-learning powered by the internet era, which has shifted the balance away from instructor-led knowledge acquisition. With information available literally at the touch of a finger, I believe that my role is to get mentees excited about projects and enable them to contextualize and critically examine the information, so they creatively apply it to their research when appropriate. Having found that students tend to gain more confidence by arriving at solutions by themselves, I often invoke the "Jeopardy" route of posing a series of hypotheses guiding students to arrive at well thought out research questions and answers by employing a mix of theoretical and pragmatic considerations. Considering that students may come from various academic backgrounds, I strive to create an individualized training program for each of my mentees and help attain their short- and long-term goals through an individual development plan. Implementing this approach as a research mentor during my graduate and postdoctoral phases has provided holistic training to my mentees, with some of my undergraduate trainees pursuing graduate school in prestigious institutes like Harvard University, Stanford University, Cornell University, Columbia University, and the University of Michigan, and graduate trainees pursuing postdoctoral or medical fellowships at reputed places like Duke University and the University of Michigan. Many of these scientists have co-authored publications with me and have embarked on exciting career paths in academia and the industry.

In my own lab, I currently mentor two senior scientists, a postdoctoral research fellow, an MD-PhD graduate student, a research assistant and two undergraduate researchers. I have also had the distinct pleasure of training two high-school students on the principles of scientific enquiry, laboratory operations and science communication. Alumni from my lab include one clinical research fellow and four research assistants, who have gone onto complete their clinical fellowship at Luisiana State University, attend medical school at Wayne State University or pursue successful career paths in the industry. My extensive mentoring experience and strengths in cross-disciplinary quantitative biology, coupled with the expansive resources available to our lab, provides a fertile ground for effectively training the next generation of scientists.

FUNDING

Secured $5.4 million in independent funding as a principal investigator from federal agencies and private foundations. Have helped secure $18.4 million in additional funding and served as a co-investigator in those awards.

Current

NIH R35 Maximizing Investigator's Research Award — 2024 - 2029
NIH/National Institute of General Medical Sciences
Title: Dissecting Mechanisms of Transcriptional Regulation During Stress
Role: Principal Investigator

Spatial Analytics of Cancer Challenge — 2024 - 2025
Biointerfaces Institute, Rogel Cancer Center, Single Cell Spatial Analysis Program (SCSAP), University of Michigan
Title: Spatiotemporal Dynamics of Castration Resistance in Prostate Cancer

Role: Principal Investigator, Other PI: Changyang Linghu

SCSAP -VIZGEN award 2023 - 2024
VIZGEN and SCSAP, University of Michigan
Title: Investigating cellular mechanisms of stress-induced impairment in male fertility
Role: Principal Investigator

NIH R01/R37 2023 - 2028
National Cancer Institute
Title: Defining the Biological Arc of Grade Group 1 Prostate Cancer
Role: Co-Investigator; PI: Simpa Salami

Urology Catalyst Award 2021 - 2027
Department of Urology, University of Michigan
Title: Advancing treatments in prostate cancer
Role: Principal Investigator

Urology Catalyst Award 2021 - 2027
Department of Urology, University of Michigan
Title: Stress-induced granules in male infertility
Role: Co-Principal Investigator; Other PI: Jim Dupree

Urology Incubator Award 2021 - 2027
Department of Urology, University of Michigan
Title: Stress granules in male infertility
Role: Co-Principal Investigator; Other PI: Cathy Nam

Startup funds 2021 - 2027
Department of Urology, Michigan Center for Translational Pathology and Rogel Cancer Center, University of Michigan
Role: Principal Investigator

Completed

Pilot/Feasibility Award + Supplement 2021 - 2023
The George M. O'Brien Kidney Translational Core Center, University of Michigan
Title: Biomolecular condensates in renal osmotic stress response
Role: Principal Investigator

P30 Supplementary Award 2020 - 2021
National Cancer Institute
Title: Targeting transcriptional regulation of SARS-CoV2
Role: Co-Investigator; PI: Arul M. Chinnaiyan

Prostate SPORE 2019 - 2024
National Cancer Institute
Title: Michigan Prostate SPORE
Role: Co-Investigator; PI: Arul M. Chinnaiyan, Ganesh Palapattu and Elizabeth Heath

Idea Development Award 2019 - 2022
Department of Defense (Prostate Cancer Research Program)
Title: Unraveling tumor microenvironment heterogeneity in advanced prostate cancer
Role: Principal Investigator

Technology Impact Award 2019 - 2021
Cancer Research Institute
Title: TCR-FISH: A novel method for spatially and clonally resolved profiling of tumor-infiltrating lymphocytes
Role: Co-Investigator; PI: Marcin Cieslik

Outstanding Investigator Award 2018 - 2025

National Cancer Institute
Title: Exploring Precision Oncology: From Gene Fusions to lncRNAs
Role: Co-Investigator; PI: Arul M. Chinnaiyan

Young Investigator Award 2018 - 2021
Prostate Cancer Foundation
Title: Unraveling molecular heterogeneity in advanced prostate cancer at single cell resolution
Role: Principal Investigator

SPORE Career Enhancement Award 2017 - 2019
National Cancer Institute
Title: Unraveling cellular heterogeneity in advanced prostate cancer at single cell resolution
Role: Principal Investigator

AACR-Bayer Prostate Cancer Research Fellowship 2016 - 2017
American association for Cancer Research
Title: Androgen receptor regulation by lncRNA PRCAT47 in prostate cancer
Role: Principal Investigator

PUBLICATIONS

Google Scholar: https://scholar.google.com/citations?user=flPaAgUAAAAJ&hl=en&oi=ao
*Number of publications: 30, Citations: 3198, [1] First author, * Equal Contribution, [C] Corresponding author*

1. Cho H[1*], Zhang Y[1*], Tien JC, Mannan R, Luo J, Narayanan SP, Mahapatra S, Hu J, Shelley G, Cruz G, Shahine M, Wang L, Su S, Wang R, Cao X, Dhanasekaran SM, Keller ET, **Pitchiaya S[1*,C]**, Chinnaiyan AM[C], Cellular cartography reveals mouse prostate organization and determinants of castration resistance, *bioRxiv* (2024)

2. Patel P[1*], Nallandhighal S[1*], Scoville D, Cotta B, Knuth Z, Triner D, Tran L, Udager AM, Rao A, Morgan TM, Palapattu GS, Dadhania V, **Pitchiaya S**, Salami SS[C], Spatial Transcriptomic Profiling to Characterize the Nature of Peripheral- Versus Transition-zone Prostate Cancer, *European Urology Focus* (2024)

3. Gao G[1], Sumrall E, **Pitchiaya S**, Bitzer M, Alberti S and Walter N[C], Biomolecular Condensates in Kidney Physiology and Disease, *Nature Reviews Nephrology* (2023)

4. Duran E[1], Schmidt A, Welty R, Jalihal AP, **Pitchiaya S** and Walter NG[C], Utilizing functional cell-free extracts to dissect ribonucleoprotein complex biology at single-molecule resolution, WIREs RNA (2023)

5. Larouche J[1*], Mohiuddin M[1*], Choi JJ[1*], Ulintz PJ, Fraczek PM, Sabin K, **Pitchiaya S**, Kurpiers SJ, Castor-Macias J, Liu W, Hastings RL, Brown LA, Markworth JF, De Silva K, Levi BD, Merajver SD, Valdez G, Chakkalakal JV, Jang Y[C], Brooks S[C] and Aguilar CA[C], Murine muscle stem cell response to perturbations of the neuromuscular junction are attenuated with aging, *Elife* (2021)

6. Zhang Y[1*], Narayanan SP[1*], Mannan R, Raskind G, Wang X, Vats P, Su F, Hosseini N, Cao X, Kumar-Sinha C, Ellison SJ, Giordono TJ, Morgan TM, **Pitchiaya S**, Alva A, Mehra R, Cieslik M, Dhanasekaran SM, Chinnaiyan AM[C], Single Cell Analyses of Renal Cell Cancers Reveal Insights into Tumor Microenvironment, Cell of Origin, and Therapy Response, *PNAS* (2021)

7. Peltier D[1], Radosevich M, Decoville T, **Pitchiaya S**, Wood SC, Hou G, Zajac C, Oravecz-Wilson K, Sokol D, Henig I, Wu J, Kim S, Taylor A, Fujiwara H, Sun Y, Chinnaiyan AM, Goldstein DR and Reddy P[C], RNA-seq of Human T-Cells After Hematopoietic Stem Cell Transplantation Identifies Linc00402 as a Novel Regulator of T-Cell Alloimmunity. *Science Translational Medicine* (2021)

8. Zaslavsky A[1,C], Adams M, Cao X, Hawley M, Henderson J Busch-Ostergren P, Udager A, **Pitchiaya S**, Tourdot B, Kasputis T, Church SJ, Lee SK, Ohl S, Patel S, Morgan TM, Alva A, Wakefield TW, Reichert Z, Holinstat M and Palapattu GS[C]. Antisense oligonucleotides and nucleic acids generate hypersensitive platelets. *Thrombosis research* (2021)

9. Jalihal AP[1], Schmidt A, Gao G, Little SR, **Pitchiaya S** and Nils G. Walter[C], Hyperosmotic phase separation: Condensates beyond inclusions, granules and organelles, *Journal of Biological Chemistry* (2021) 296:100044

10. Qiao Y[1*], Wang X[1*], Mannan R[1*], **Pitchiaya S**, Zhang Y, Wotring JW, Xiao L, Robinson DR, Wu Y, Tien JC, Cao X, Simko SA, Apel IJ, Kregel S, Narayanan SP, Raskind G, Ellison SJ, Parolia A, Zelenka-Wang S, McMurry L, Su F, Wang R, Cheng Y, Delekta AD, Mei Z, Pretto CD, Wang S, Mehra R[C], Sexton JZ[C] and Chinnaiyan AM[C], Targeting transcriptional regulation of SARS-CoV-2 entry factors ACE2 and TMPRSS2, *PNAS* (2021)

11. Jalihal AP[1*], **Pitchiaya S[1,C*]**, Xiao L, Bawa P, Jiang X, Bedi K, Cieslik M, Ljungman M, Chinnaiyan AM[C] and Walter NG[C], Multivalent proteins rapidly and reversibly phase-separate upon osmotic cell volume change. *Molecular Cell* (2020)
Featured in Majumder et al., Molecular Cell, 2020 (Preview)

12. Shankar S[1*], Tien JC[1*], Siebenaler RF[1*], Chugh S[1*], Dommeti VL, Zelenka-Wang S, Wang XM, Apel IJ, Waninger J, Eyunni S, Xu A, Mody M, Goodrum A, Zhang Y, Tesmer JJ, Mannan R, Cao X, Vats P, **Pitchiaya S**, Shi J, Kumar-Sinha C, Crawford H and Chinnaiyan AM[C]. An Essential Role for Argonaute 2 in EGFR-KRAS Signaling in Pancreatic Cancer Development. *Nature Communications* (2020)

13. Pitchiaya S[1,C], Mourao MDA, Jalihal AP, Xiao L, Jiang X, Chinnaiyan AM, Schnell S and Walter NG[C], Dynamic recruitment of single RNAs to processing bodies depends on RNA functionality. *Molecular Cell* (2019)
Featured in Chowdhury et al., Molecular Cell, 2019 (Preview)

14. Parolia A[1*], Cieslik M[1*], Chu SC, Xiao L, Ouchi T, Zhang Y, Wang X, Vats P, Cao X, **Pitchiaya S**, Su F, Wang R, Feng FY, Wu YM, Lonigro RJ, Robinson DR and Chinnaiyan AM[C]. Distinct structural classes of activating FOXA1 alterations in advanced prostate cancer. *Nature* (2019)
Featured in Stone L, Nature Reviews Urology, 2019 (In Brief)

15. Zhang Y[1*], **Pitchiaya S[1*]**, Cieslik M[1*], Niknafs YS, Tien JC, Hosono Y, Iyer MK, Yazdani S, Subramaniam S, Shukla SK, Jiang X, Wang L, Liu TY, Uhl M, Gawronski AR, Qiao Y, Xiao L, Dhanasekaran SM, Juckette KM, Kunju LP, Cao X, Patel U, Batish M, Shukla GC, Paulsen MT, Ljungman M, Jiang H, Mehra R, Backofen R, Sahinalp CS, Freier SM, Watt AT, Guo S, Wei JT, Feng FY, Malik R and Chinnaiyan AM[C], Analysis of the androgen receptor–regulated lncRNA landscape identifies a role for ARLNC1 in prostate cancer progression, *Nature Genetics* (2018)

16. Hosono Y[1*], Niknafs YS[1*], Prensner JR, Iyer MK, Dhanasekaran SM, Mehra R, **Pitchiaya S**, Tien J, Escara-Wilke J, Poliakov A, Chu SC, Saleh S, Sankar K, Su F, Guo S, Qiao Y, Freier SM, Bui HH, Cao X, Malik R, Johnson TM, Beer DG, Feng FY, Zhou W and Chinnaiyan AM[C], Oncogenic Role of THOR, a Conserved Cancer/Testis Long Noncoding RNA. *Cell* (2017)

17. Michelini F[1], **Pitchiaya S**, Vitelli V, Sharma S, Gioia U, Pessina F, Cabrini M, Wang Y, Capozzo I, Iannelli F, Matti V, Francia S, Shivashankar GV, Walter NG and d'Adda di Fagagna F[C], Damage-induced lncRNAs control the DNA damage response through interaction with DDRNAs at individual double-strand breaks. *Nature Cell Biology* (2017)
Featured in Storici et al., Nature Cell Biology, 2017 (News & Views)

18. Pitchiaya S[1], Heinicke LA, Park JI, Cameron E and Walter NG[C], Resolving sub-cellular miRNA trafficking and turnover at single-molecule resolution. *Cell Reports* (2017)

19. Wang X[1], Qiao Y, Asangani IA, Ateeq B, Poliakov A, Cieślik M, **Pitchiaya S**, Chakravarthi BVSK, Cao X, Jing X, Wang CX, Apel IJ, Wang R, Tien JC, Juckette KM, Yan W, Jiang H, Wang S, Varambally S and Chinnaiyan AM[C], Development of peptidomimetic inhibitors of the ERG gene fusion product in prostate cancer. *Cancer Cell* (2017)

20. Rossiello F[1], Aguado J, Sepe S, Iannelli F, Nguyen Q, **Pitchiaya S**, Carninci P and d'Adda di Fagagna F[C], DNA damage response inhibition at dysfunctional telomeres by modulation of telomeric DNA damage response RNAs. *Nature Communications* (2017)

21. Niknafs YS[1*], Han S[1*], Ma T, Speers C, Zhang C, Wilder-Romans K, Iyer MK, **Pitchiaya S**, Malik R, Hosono Y, Prensner JR, Poliakov A, Singhal U, Xiao L, Kregel S, Siebenaler RF, Zhao SG, Uhl M, Gawronski A, Hayes DF, Pierce LJ, Cao X, Collins C, Backofen R, Sahinalp CS, Rae JM, Chinnaiyan AM[C] and Feng FY[C], The lncRNA landscape of breast cancer reveals a role for DSCAM-AS1 in breast cancer progression. *Nature Communications* (2016)

22. Shankar S[1], **Pitchiaya S**, Malik R, Kothari V, Hosono Y, Yocum AK, Gundlapalli H, White Y, Firestone A, Cao X, Dhanasekaran SM, Stuckey JA, Bollag G, Shannon K, Walter NG, Kumar-Sinha C and Chinnaiyan AM[C], KRAS engages AGO2 to enhance cellular transformation. *Cell Reports* (2016)
Featured in Kiberstis PA, Science, 2016 (Editor's choice)

23. Nyati S[1], Schinske-Sebolt K, **Pitchiaya S**, Chekhovskiy K, Chator A, Chaudhry N, Dosch J, Van Dort ME, Varambally S, Kumar-Sinha C, Nyati MK, Ray D, Walter NG, Yu H, Ross BD and Rehemtulla A[C], The kinase activity of the Ser/Thr kinase BUB1 promotes TGF-β signaling. *Science Signaling* (2015)
Featured in Moustakas et al., Science Signaling, 2015 (Focus) and Barcellos-Hoff MH, Neoplasia, 2015 (Commentary)

24. Bartke RM, Cameron EL, Cristie-David AS, Custer TC, Denies MS, Daher M, Dhakal S, Ghosh S, Heinicke LA, Hoff JD, Hou Q, Kahlscheuer ML, Karslake J, Krieger AG, Li J, Li X, Lund PE, Vo NN, Park J, **Pitchiaya S**, Rai V, Smith DJ, Suddala KC, Wang J, Widom JR and Walter NG[C], Meeting report: SMART timing-principles of single molecule techniques course at the University of Michigan 2014. *Biopolymers* (2015)

25. Pitchiaya S[1], Heinicke LA[1], Custer TC[1] and Walter NG[C], Single molecule fluorescence approaches shed light on intracellular RNAs. *Chemical Reviews* (2014)
Featured in F1000 prime

26. Pitchiaya S[1], Krishnan V, Custer TC and Walter NG[C], Dissecting non-coding RNA mechanisms in cellulo by single molecule high resolution localization and counting. *Methods* (2013)

27. Ma J[1], Liu Z, Michelotti N, **Pitchiaya S**, Veerapaneni RS, Androsavich JR, Walter NG and Yang W[C], High-resolution three-dimensional mapping of mRNA export through the nuclear pore. *Nature Communications* (2013)

28. Pitchiaya S[1], Androsavich JR and Walter NG[C], Intracellular single molecule microscopy reveals two kinetically distinct pathways for microRNA assembly. *EMBO reports* (2012)

29. Kuszak AJ[1], **Pitchiaya S**, Anand JP, Mosberg HI, Walter NG and Sunahara RK[C], Purification and functional reconstitution of monomeric μ-opioid receptors: Allosteric modulation of agonist binding by Gi2. *Journal of Biological Chemistry* (2009)

30. Pitchiaya S[1] and Krishnan Y[C], First blueprint, now bricks: DNA as construction material on the nanoscale. *Chemical Society Reviews* (2006)

PATENTS AND DISCLOSURES OF INVENTIONS

1. Chinnaiyan AM**,** Malik R, Zhang Y, Cieslik M and **Pitchiaya S**, Compositions and methods for treating cancer / ARlnc1 in Prostate Cancer Progression. U.S. Provisional Patent Application No. 62/655,308, filed April 2018

AWARDS AND HONORS

Early Career Service Award, Program in Cell and Molecular Biology, University of Michigan	2024
Early Career Travel Award, American Society for Biochemistry and Molecular Biology	2023
ASBMB, JMB Career Advancement Initiative – Spotlight and invited contribution	2021
RNA Society spotlight	2021
Conference Award, RNA Society	2021
Young Investigator Award, Prostate Cancer Foundation	2018
AACR-Bayer Prostate Cancer Research Fellowship	2016
Travel fellowship, RNA Society	2016
Travel fellowship, Cold Spring Harbor Laboratory	2013
Travel fellowship, RNA Society	2012
Best poster award, Vaughan symposium, University of Michigan	2011
Travel grant, Rackham graduate school, University of Michigan	2010
Travel grant, Rackham graduate school, University of Michigan	2009
Best poster award, Vaughan symposium, University of Michigan	2008
Summer research fellowship, National Center for Biological Sciences, India	2005
Summer research fellowship, National Center for Biological Sciences, India	2004

PRESENTATIONS

Invited Talks (extramural)

Medical Research Council, Laboratory of Molecular Biology, Cambridge, UK	2024
ONI super-resolution summit, Boston, MA, USA	2023
Indian Institute of Science, Bangalore, India	2023
10x Genomics User Group Meeting, Ann Arbor, MI, USA	2022
RNA collaborative seminar series (virtual)	2021
Cancer Institute (WIA), Chennai, India	2020
Indian Institute of Science, Bangalore, India	2018
Indian Institute of Science Education and Research, Pune, India	2014
National Center for Biological Sciences, Bangalore, India	2014
Indian Institute of Technology, Chennai, India	2014
Principles of Single Molecule Techniques, Ann Arbor, MI, USA	2014
Zing – Nucleic Acids Conference, Playa del Carmen, Quintana Roo, Mexico	2012

Invited talks (intramural)

10th Annual protein folding diseases symposium, Ann Arbor, MI, USA	2023
21st Annual Pathology Research Symposium, Ann Arbor, MI, USA	2022

Selected Talks (extramural)

Discover BMB, Seattle, MI, USA	2023
Gordon-Merck Research Seminar- Post Transcriptional Gene Regulation, Newport, RI, USA	2014
Annual Meeting of the RNA Society, Ann Arbor, MI, USA	2012
Rustbelt RNA Meeting, Dayton, OH, USA	2011

Selected Talks (intramural)

6th Annual RNA Symposium, Center for RNA biomedicine, University of Michigan, Ann Arbor, MI, USA	2022

Invited Posters (extramural)

PCF Retreat, Carlsbad, CA, USA	2019
SPORE – Prostate Cancer Meeting, Ft. Lauderdale, FL, USA	2019
PCF Retreat, Carlsbad, CA, USA	2018
SPORE – Prostate Cancer Meeting, Ft. Lauderdale, FL, USA	2018
SPORE – Prostate Cancer Meeting, Ft. Lauderdale, FL, USA	2016
HHMI Meeting, Janelia Farms, Ashburn, VA, USA	2016

Selected Posters (extramural)

Annual Meeting of the RNA Society, Edinburgh, UK	2024
Annual Meeting of the RNA Society, Singapore	2023
Keystone Symposia on Bimolecular Condensates, Vancouver, CA	2023
Annual Meeting of the RNA Society, Boulder, CO, USA	2022
Annual Meeting of the RNA Society (Virtual), USA	2021
Annual Meeting of the RNA Society (Virtual), USA	2020
Riboclub annual meeting (Virtual), Canada	2020
Keystone Symposia on Bimolecular Condensates, Snowbird, UT, USA	2019
AACR Annual Meeting, Chicago, IL, USA	2018
Keystone Symposia on Noncoding RNAs, Keystone, CO, USA	2018
Phase Separation and RNA Processing Meeting, San Diego, CA, USA	2018
AACR Annual Meeting, Washington D.C., USA	2017
Gordon Research Conference – Post transcriptional gene regulation, Newport, RI, USA	2014
CSHL Meeting on Eukaryotic mRNA Processing, Cold Spring Harbor, NY, USA	2013
Annual Meeting of the RNA Society, Seattle, WA, USA	2010
Annual Meeting of the RNA Society, Madison, WI, USA	2009

Experimental Biology Conference (ASBMB), New Orleans, LA, USA 2009

Selected Posters (intramural)
The Vaughan Symposium (PECRUM), Ann Arbor, MI, USA 2011
The Vaughan Symposium (PECRUM), Ann Arbor, MI, USA 2008

TEACHING AND MENTORSHIP EXPERIENCE

Mentor, University of Michigan (26 trainees) 2021 - Present
Current (10 trainees):
Scientist (2): Sengar A, Banerjee C.
Postdoctoral fellow (1): De CK.
Graduate student (3): Mullin-Kasbauer C, Giem C and Dudley JN.
Research assistant (2): Le N and Vydiswaran N.
Undergraduate student (2): Kanakam S and Reddy L.

Past (16 trainees):
Postdoctoral fellow (1): Nagaraja S.
Medical resident/fellow (1): Berends J.
Graduate student (5): Crespo AR, Vasquez C, Robins T, Rozumek G and Chen B.
Research assistant (3): Ravishankar R, Carras S and Dommeti VL.
Undergraduate student (4): Saigh S, Mahesh A, Tiwari A and Porter E.
High school student (2): Gehlaut V and Chimalakonda M.

Research Mentor, University of Michigan (30 trainees) 2007 - 2021
Postdoctoral fellow (1): Narayanan SP.
Graduate students (18): Cho H, Rabbani M, Strand E, Siebenaler R, Islam M, Jalihal A, Denies M, Cameron E, Joiner C, Park I, Arthur E, Haynes C, Brumbaugh A, Leslie R, Sripathi K, Krishnan V, Androsavich JA and Marek MS.
Research assistant (1): Jiang X.
Undergraduate students (10): Zhang J, Wang R, Patel N, Coleski A, Raskind G, Stoldt M, D'Silva J, Park JI, Doxtader KA and Agostini M.

Instructor, University of Michigan
Lecture: PATH 582, One module, Biomolecular condensates: form and function in health and disease, instructed 8 students 2023 - 2024
Lecture: BIOPHYS 440, Guest lecture, Biophysical tools to study disease pathology, instructed 50 students 2023
Lecture: PIBS 503, Research Responsibility & Ethics, Mentoring Relationships and Power Dynamics in Academic Research, instructed 8 students 2023
Lecture: PIBS 503, Research Responsibility & Ethics, Research in the Global Workplace, instructed 8 students 2022
Faculty evaluator: CMB 850, Student Seminar 2022 - present

Graduate Student Instructor, University of Michigan 2006 - 2007
Lab and lecture: CHEM 215/216 Organic Chemistry-II, instructed 37 students
Lecture: CHEM 130 General Chemistry, instructed 91 students

PROFESSIONAL SERVICES

Leadership positions:
Assistant Director, Shared Services, Rogel Cancer Center 2025 - 2027
Member, Emerging Leader's Council, Rogel Cancer Center 2023 - 2026
Chair, Graduate admissions committee, Program in Cell and Molecular Biology 2023 - 2026

Member, Graduate admissions committee:

Program in Cell and Molecular Biology, University of Michigan	2022 - present
Program in Molecular and Cellular Pathology, University of Michigan	2022 - present

Graduate student committee:

Chair (thesis), Jeffrey Dudley, Program in Cell and Molecular Biology	2022
Member (thesis), Jae Bucknor, Program in Cell and Molecular Biology	2024
Member (thesis), Zhihao (Albert) Ding, Molecular, Cellular and Developmental Biology	2024
Member (thesis), Grace McIntyre, Program in Molecular and Cellular Pathology	2024
Member (thesis), Franchesca Fonseca-Lanza, Program in Molecular and Cellular Pathology	2024
Member (thesis), Nick Rossiter, Program in Cell and Molecular Biology	2023
Member (prelim), Andrea Alvarez, Program in Cell and Molecular Biology	2024
Member (prelim), Rodolfo Murguia, Program in Cell and Molecular Biology	2024
Member (prelim), Emily Slobodenyuk, Program in Molecular and Cellular Pathology	2024
Member (prelim), Paula Reichel, Program in Cell and Molecular Biology	2024
Member (prelim), Jae Bucknor, Program in Cell and Molecular Biology	2024
Member (prelim), Franchesca Fonseca-Lanza, Program in Molecular and Cellular Pathology	2023
Member (prelim), Kayla Loenshek, Program in Cell and Molecular Biology	2022
Member (prelim), Nick Rossiter, Program in Cell and Molecular Biology	2022

Manuscript reviewer: 2014 - present

Nature Cell Biology, Nature Methods, Nature Communications, Cellular & Molecular Biology Letters, Structure, Scientific Reports, Scientific Data, Cell Reports, Advanced Materials, JoVE, Small, European Urology, Nucleic Acids Research, Nanoscale, Angewandte Chemie, PLoS one, Molecules, International Journal of Molecular Sciences, Medicine, Biomarker Insights, Central European Journal of Biology

Grant reviewer:

Swim Across America Foundation	2024
Department of Defense, Prostate Cancer Research Program	2024
Molecular and Cellular Pathology Student Research Grants	2024
Prostate Cancer Foundation	2018 - 2023
Innovation and Technology Support Program (Hong Kong)	2014

Judge (talks, posters, and awards):

Award judge, Outstanding service award, Program in Molecular and Cellular Pathology	2023
Poster judge, Annual meeting of the Protein Folding Diseases Initiative	2023
Poster judge, Discover BMB, American Society for Biochemistry and Molecular Biology	2023
Poster judge, Annual meeting of the RNA Society	2022 - 2023
Poster judge, Annual Pathology Research Symposium	2021 - present

Workshop Coordinator:

Principles of Single Molecule Techniques Workshop, University of Michigan	2015

Member: Graduate recruitment activities, Department of Chemistry, University of Michigan 2014 - 2015

PROFESSIONAL AFFILIATIONS

Member: American Society for Andrology	2022 - Present
Member: SigmaXi	2022 - Present
Member: Society for Basic Urologic Research	2022 - Present
Member: American Urological Association	2022 - Present
Member: American Society for Biochemistry and Molecular Biology	2019 - Present
Member: American Association for the Advancement of Science	2016 - Present

Member: American Association of Cancer Research	2015 - Present
Member: Biophysical Society	2012 - 2017
Member: RNA Society	2009 - Present

OUTREACH

Faculty mentor: Transfer connections program, University of Michigan, MI, USA	2022 - 2024
Volunteer: ACS-Huron Valley Division, Hands-on Chemistry Demo Day, MI, USA	2012
Volunteer: ASHA for Education – Non-Profit Organization, Ann Arbor, MI USA	2007 - 2012