SUJATHA JAGANNATHAN

University of Colorado Anschutz Medical Campus
Assistant Professor

EDUCATION AND TRAINING

Anna University, Chennai, India	Industrial Biotechnology	B. Tech	2006
Duke University, Durham, NC	Cell Biology	PhD	2013
Fred Hutch Cancer Res Center, Seattle, WA	mRNA surveillance	Postdoc	2013–2017

PROFESSIONAL APPOINTMENTS

Graduate Research Assistant	Duke University	2006–2013
Postdoctoral Fellow	Fred Hutch Cancer Res Center	2013–2017
Assistant Professor	University of Colorado Anschutz Medical Campus	2018–
Vice Chair for Equity	University of Colorado Anschutz Medical Campus	2023–

HONORS, SPECIAL RECOGNITIONS, AND AWARDS

Invited working group member, Muscular Dystrophy Coordinating Committee, NIH/NIAMS	2024
National Science Foundation CAREER Award	2024
Session Chair, EMBO Workshop RNA meets protein decay, Cavtat, Croatia	2023
Session Chair, CSHL RNA Processing Meeting	2021
BBA Rising Star in Molecular Basis of Disease Finalist	2021
Co-organizer and Session Chair, FSHD International Research Congress	2021, 2024
FSHD Society Young Investigator Award, FSHD Society	2020
Recognized as an Outstanding Postdoc at the Fred Hutch Postdoc Appreciation Week.	2016, 2017
RNA Society Award for the Best Poster Presentation, RNA stability meeting, Estes Park, CO.	2015
William J. Griffith University Service Award for Outstanding Service to Duke Community	2013
Jo Rae Wright Prize for the Best Poster Presentation, Duke University, Durham, NC.	2012
Grant-in-Aid of Research Award, Sigma Xi National Chapter	2011
Graduated First Class with Distinction, Anna University, Chennai, India,	2006
Summer Research Fellowship, Indian Academy of Sciences	2004

BIBLIOGRAPHY

Pubmed: https://www.ncbi.nlm.nih.gov/myncbi/sujatha.jagannathan.1/bibliography/public/
Google Scholar: https://scholar.google.com/citations?user=AhRVE-MAAAAJ&hl=en
Notation: * denotes equal contribution, #denotes corresponding author

1. Kolakada D, Fu R, Biziaev N, Shuvalov A, Lore M, Campbell AE, Cortazar MA, Sajek MP, Hesselberth JR, Mukherjee N, Alkaeva E, **Jagannathan S[#].** Peptidyl-tRNA hydrolysis rate influences the efficiency of nonsense-mediated mRNA decay. bioRxiv. 2024:2024.01.10.575080. doi: 10.1101/2024.01.10.575080.
2. Cortázar MA, and **Jagannathan S[#]**. SelectRepair Knockout: Efficient PTC-free gene knockout through selectable homology-directed DNA repair. *Methods Mol Biol.* 2024 *(In Press)*
3. Kolakada D, Campbell AE, Baquero Galvis L, Li Z, Lore M, and **Jagannathan S[#].** A system of reporters for comparative investigation of EJC-independent and EJC-enhanced nonsense-mediated mRNA decay. *Nucleic Acids Res.* 2024; gkae121, doi: 10.1093/nar/gkae121.
4. Campbell AE*, Dyle MC*, Albanese R, Matheny T, Sudheendran K, Cortázar MA, Forman T, Fu R, Gillen AE, Caruthers MH, Floor SN, Calviello L, and **Jagannathan S[#].** Compromised nonsense-mediated RNA decay results in truncated RNA-binding protein production upon DUX4 expression. *Cell Reports.* 2023;42(6):112642. Epub 2023/06/14. doi: 10.1016/j.celrep.2023.112642. PubMed PMID: 37314931; PMCID: PMC10592454.

5. Campbell AE, Arjomand J, King OD, Tawil R, **Jagannathan S#.** A Targeted Approach for Evaluating DUX4-Regulated Proteins as Potential Serum Biomarkers for Facioscapulohumeral Muscular Dystrophy Using Immunoassay Proteomics. *J Neuromuscul Dis.* 2023;10(6):1031-1040. doi: 10.3233/JND-221636
6. *(Review article)* Sherlock ME#, Baquero Galvis L, Vicens Q, Kieft JS, **Jagannathan S#.** Principles, mechanisms, and biological implications of translation termination-reinitiation. RNA. 2023;29(7):865-84. Epub 2023/04/07. doi: 10.1261/rna.079375.122. PubMed PMID: 37024263; PMCID: PMC10275272
7. Hamm DC, Paatela EM, Bennett SR, Wong CJ, Campbell AE, Wladyka CL, Smith AA, **Jagannathan S**, Hsieh AC, Tapscott SJ. The transcription factor DUX4 orchestrates translational reprogramming by broadly suppressing translation efficiency and promoting expression of DUX4-induced mRNAs. *PLoS Biol.* 2023 Sep 25;21(9):e3002317. doi: 10.1371/journal.pbio.3002317
8. *(Review article)* Muñoz O, Lore M, **Jagannathan S#.** The long and short of EJC-independent nonsense-mediated RNA decay. *Biochem Soc Trans.* 2023;51(3):1121-9. Epub 2023/05/05. doi: 10.1042/BST20221131. PubMed PMID: 37145092.
9. *(Review article)* **Jagannathan S#**. The evolution of DUX4 gene regulation and its implication for facioscapulohumeral muscular dystrophy. *BBA Molecular Basis of Disease*. 2022; 1868(5): 166367. (Mini Review for BBA Rising Stars in Biochemistry and Biophysics Special Issue)
10. *(Meeting Report)* **Jagannathan S,** de Greef JC, Hayward LJ, Yokomori K, Gabellini D, Mul K, Sacconi S, Arjomand J, Kinoshita J and Harper SQ. Meeting report: the 2021 FSHD International Research Congress. *Skeletal Muscle*. 2022; 12:1.
11. Child JR, Chen Q, Reid DW, **Jagannathan S#**, Nicchitta CV#. Recruitment of endoplasmic reticulum-targeted and cytosolic mRNAs into membrane-associated stress granules. *RNA*. 2021; rna.078858.121.
12. **Jagannathan S#**, Ogata Y, Gafken PR, Tapscott SJ, and Bradley RK. Quantitative proteomics reveals key roles for post-transcriptional gene regulation in the molecular pathology of FSHD. *Elife*. 2019; 8:e41740.
13. *(Preview)* **Jagannathan S**, Ramachandran S, and Rissland OS. "Slow down to catch up." *Cell*. 178: 774–776. 2019
14. *(Review article)* Dyle MC, Kolakada D, Cortazar MA, **Jagannathan S#.** How to get away with nonsense: Mechanisms and consequences of escape from nonsense-mediated RNA decay. *Wiley Interdiscip Rev RNA*. 2019 Jul 29:e1560.
15. Campbell AE, Shadle SC, **Jagannathan S**, Lim JW, Resnick R, Tawil R, van der Maarel SM, Tapscott SJ. NuRD and CAF-1-mediated silencing of the D4Z4 array is modulated by DUX4-induced MBD3L proteins. *Elife*. 2018 Mar 13;7. pii: e31023.
16. Feng Q, **Jagannathan S**, and Bradley R. The RNA Surveillance Factor UPF1 Represses Myogenesis via Its E3 Ubiquitin Ligase Activity. *Molecular cell.* 2017; 67(2):239-251.e6.
17. Shadle SC, Zhong JW, Campbell AE, Conerly ML, **Jagannathan S**, Wong CJ, Morello TD, and Tapscott SJ. DUX4-induced dsRNA and MYC mRNA stabilization activate apoptotic pathways in human cell models of facioscapulohumeral dystrophy. *PLoS Genetics*. 2017; 13(3):e1006658.
18. *(Preview)* **Jagannathan S** and Bradley RK. Congenital myotonic dystrophy-an RNA-mediated disease across a developmental continuum. Genes & Development. 2017; 31(11):1067-1068
19. **Jagannathan S** and Bradley R. Translational plasticity facilitates the accumulation of nonsense genetic variants in the human population. *Genome Res.* 2016 Sep 19.
20. **Jagannathan S***, Shadle SS*, Resnick R, Snider L, Tawil RN, van der Maarel SM, Bradley RK and Tapscott SJ. Model systems of DUX4 expression recapitulate the transcriptional profile of FSHD cells. *Hum Mol Genet.* 2016 Aug 15.

21. Feng Q, Snider L, **Jagannathan S**, Tawil R, van der Maarel SM, Tapscott SJ, Bradley RK. A feedback loop between nonsense-mediated decay and the retrogene DUX4 in facioscapulohumeral muscular dystrophy. *Elife.* 2015 Jan 7;4.
22. **Jagannathan S**, Reid DW, Cox AH, Nicchitta CV. *De novo* translation initiation on membrane-bound ribosomes as a mechanism for localization of cytosolic protein mRNAs to the endoplasmic reticulum. *RNA*. 2014 Oct; 20(10):1489-98.
23. **Jagannathan S***, Hsu JC*, Reid DW, Chen Q, Thompson WJ, Moseley AM, Nicchitta CV. Multifunctional roles for the protein translocation machinery in RNA anchoring to the endoplasmic reticulum. *J Biol Chem.* 2014 Sep 12; 289(37): 25907-24.
24. Lacsina JR, Marks OA, Liu X, Reid DW, **Jagannathan S**, Nicchitta CV. Premature translational termination products are rapidly degraded substrates for MHC class I presentation. *PLoS One.* 2012; 7(12):e51968.
25. Chen Q*, **Jagannathan S***, Reid DW*, Zheng T, Nicchitta CV. Hierarchical regulation of mRNA partitioning between the cytoplasm and the endoplasmic reticulum of mammalian cells. *Mol Biol Cell.* 2011 Jul 15; 22(14):2646-58.
26. **Jagannathan S**, Nwosu C, Nicchitta CV. Analyzing mRNA localization to the endoplasmic reticulum via cell fractionation. *Methods Mol Biol.* 2011; 714:301-21.

SELECTED INVITED LECTURES AND PRESENTATIONS

Cystic Fibrosis Foundation Research Conference, Stowe, VT (Invited Speaker)	2024
FSHD International Research Congress, Denver, CO (Session Chair & Speaker)	2024
FSHD Patient Connect Conference, Denver, CO (Speaker & Breakout group leader)	2024
RNA Society meeting, Edinburg, UK (Speaker, Plenary session on DEI)	2024
Duke University Biochemistry Department, Durham, NC	2024
Frontiers in Myogenesis, Sao Paulo, Brazil (Invited Speaker)	2023
National Institute of Environmental Health Sciences (NIEHS), RTP, NC	2023
EMBO Workshop RNA meets protein decay, Cavtat, Croatia (Session Chair & Speaker)	2023
The Center for RNA Biology, Ohio State University, Columbus, OH	2022
GRC on Post-transcriptional Gene Regulation, Newry, ME (Invited Speaker)	2022
Friends of FSH Research Patient Research meeting; Virtual (Invited Speaker)	2022
The RNA Institute, SUNY Albany; virtual	2021
University of Illinois at Urbana-Champaign; virtual	2021
CSHL RNA Processing Meeting; virtual (Session Chair & Speaker)	2021
ACS Chem Bio Connections Summer Seminar Series; Virtual	2021
FSHD International Research Congress; virtual (Session Chair)	2021
Emory University Biochemistry Department; virtual	2021
FSHD Circulating Biomarker Workshop; virtual (Speaker and Panelist)	2020
MARC Program Seminar Series, California State University, Fullerton, CA	2020
Metropolitan State University of Denver, Denver CO	2020
Pharmacology Department, University of Washington, Seattle, WA	2020
GRC on Translation machinery in health and disease; Galveston, TX	2019
Uniformed Services University, Bethesda, MD	2019
RNA Interest Group, University of Utah, Salt Lake City, UT	2019
Stowers Institute for Medical Research, Kansas City, MO	2019
Western Washington University, Bellingham, WA	2017
University of California Santa Cruz, Santa Cruz, CA	2017
University of Massachusetts Medical School, Worcester, MA	2017
University of Pennsylvania, Philadelphia, PA	2017
University of Washington at St. Louis, St. Louis, MI	2017
Institute of Molecular Biology, University of Oregon, Eugene, OR	2017
Department of Genetics, Rutgers University, Piscataway, NJ	2017

RNA Bioscience Initiative, CU Anschutz, Aurora, CO 2016
The Center for NeuroGenetics 2nd Annual Brainstorm Symposium; Gainesville, FL 2015

TEACHING & MENTORING

Graduate School

Facilitator, BSP Journal Club 2021, 2022
Instructor, Informatics and Statistics for Molecular Biology (MOLB 7950) 2020 – 2021
Co-director and Instructor, Practical Computational Biology: R (MOLB 7910) 2019 – 2022
Instructor; Core Topics in Biomedical Sciences (IDPT 7810) 2018 – Present

Undergraduate Students

Science Teaching Experience for Postdocs (STEP) program UW, Seattle, WA 2017
(Designed and co-taught a 10-week class on Precision Medicine to a class of 25 undergraduate seniors majoring in Biology)

Middle School and High School Students

Strawberry DNA extraction in-class exercise for all 7th-grade classes, AST, Aurora, CO 2022 – Present
Director, Bioscience Club, AST, Aurora, CO (part of NSF CAREER outreach) 2024 – Present

Mentoring (outside the lab)

Mentor, The RNA Society Mentoring Program 2020 – Present
Mentor, WiSTEM at CU Anschutz, Aurora, CO 2019 – Present
Mentor, Mentor Collective, CU Anschutz, Aurora, CO 2019 – 2020
Mentor, The New York Academy of Sciences (NYAS) Next Scholars Program 2017 – 2018
Mentor, Women and Mathematics Mentoring Program, Durham County, NC 2010, 2011

RESEARCH SUPPORT

NIAMS R01 2024 – 2029
Simons Foundation Autism Research Initiative Pilot Award (Co-PI) 2024 – 2026
NSF CAREER Award 2024 – 2029
CU Anschutz Translational Research Scholar Award 2022 – 2025
Research Grant from FSHD Society 2021 – 2023
Research Collaboration Grant from FSHD Society 2021
Research Grant from Friends of FSH Research& Chris Carrino Foundation 2020 – 2022
NIGMS, ESI Maximizing Investigators' Research (R35) 2019 – 2024
Research Grant from Friends of FSH Research 2018 – 2019

Trainee Fellowships and Awards	*Awardee*	
FSHD Society postdoctoral fellowship	M. Dyle/A. Campbell	2018 – 2021
NIGMS Diversity Supplement	L. Baquero	2020 – 2021
RBI Scholar	D. Kolakada	2021
AHA predoctoral fellowship	D. Kolakada	2020 – 2022
Molecular Biology T32 fellowship	M. Lore	2022 – 2023
Molecular Biology T32 fellowship	O. Muñoz	2022 – 2024
AHA postdoctoral fellowship	M. Cortázar	2023 – 2024
CFF postdoctoral fellowship	Z. Li	2023 – 2025
HHMI Gilliam Fellowship	O. Muñoz	2024 – 2027

SERVICE

External: Regional, National & International Service

Invited working group member, Muscular Dystrophy Coordinating Committee, NIH/NIAMS *2024*

Thesis Examiner, Indian Institute of Science	2023
Member, AMC/Aurora Science and Tech Advisory Council	2022 – Present
Member, International biomarker working group for FSHD CTRN	2021
Cofounder and Member, RNA Society DEI Committee	2021 – Present
Member, RNA Society Working Group on DEI Initiatives	2020 - 2021
Mentor, The RNA Society Mentoring Program	2020 – Present
Member, RNA Society Awards Nomination Committee	2020
Content and Resource Coordinator, New PI Slack	2019 – Present
Poster Judge, Annual Biomedical Research Conference for Minority Students	2019, 2022
ABRCMS exhibitor, representing the RNA Society	2023
Faculty Advisor, Colorado RNA Club	2018 – 2023
Mentor, The New York Academy of Sciences (NYAS) Next Scholars Program	2017 – 2018
Mentor, Women and Mathematics Mentoring Program, Durham County, NC	2010 – 2011

Service on scientific study sections

Grant Reviewer, French National Research Agency (ANR)	2024
Ad hoc reviewer for Israel Science Foundation	2023, 2024
Ad hoc reviewer for AFM Téléthon (French Muscular Dystrophy Association)	2023
Ad hoc reviewer for NSF Study Section (MCB)	2022
Reviewer, Maryland Industrial Partnerships (MIPS) (ad hoc reviewer)	2021
Reviewer, UK Muscular Dystrophy Association	2021
Ad hoc member, Cystic Fibrosis Foundation	2020
Ad hoc member, NIH Study Section (MGB)	2018

Ad hoc reviewer for: 2017 – Present

Nucleic Acids Research, GMB, PLoS Genetics, Nature Communications, Molecular Cell, Trends in Genetics, Trends in Biochemical Sciences, Disease Models and Mechanisms, Biomedicines, Cell, Cell Genomics, G3, Database Journal of Clinical Epigenetics, Genome Research, RNA

University

Graduate Advisory Committee; Molecular Biology Program (Chair)	2023 – Present
Basic Science Equity Working Group	2023 – Present
Blumenthal Lectureship Series Selection Committee	2023 – Present
Seminar Committee; Human Medical Genetics and Genomics Program	2023 – Present
Office of Vice Chancellor's Limited Grant Submission Advisory Board	2024
Faculty Organizer, Rocky Mountain RNA Symposium	2023
Annual Retreat Poster Judge, Molecular Biology Program	2021, 2023
Invited speaker; WiSTEM annual symposium, CU Anschutz	2021
Panelist, Women's History Month; WiSTEM & UC Denver Women in Engineering	2021
Dean's Taskforce on caregiver options during COVID-19 pandemic	2020
Graduate Advisory Committee Cell, Stem Cells, and Developmental Biology	2019 – 2023
Panelist, Career panel; International Researcher Week, CU Anschutz, Aurora, CO	2019
Panelist, Postdoc Career Panel, Postdoc Appreciation Week, CU Anschutz, Aurora, CO	2019
Mentor, Women in STEM (WiSTEM) Mentoring Program, CU Anschutz	2018 – Present
Mentor, Mentor's Collective, CU Anschutz	2019 – 2020
Curriculum Committee, Molecular Biology Program	2018 – 2023
Graduate Student Admissions Committee, Molecular Biology Program	2019 – 2020
RBI Summer Internship Program Review Committee	2018, 2024
Preliminary Exam Committee; Cell, Stem Cells, and Developmental Biology Program	2019
RBI Scholar Award Review Panel	2018

Departmental

Vice Chair for Equity, BMG	2023 – Present
BMG Diversity, Equity, and Anti-Racism Committee	2020 – Present
BMG Seminar Series Committee	2018 – Present
BMG Faculty Search Committee (hired L. Heasley, A. McClure, and N. Zhang)	2021 – 2022
BMG Faculty Search Committee (hired C. Musselman)	2019 – 2020
RBI Grant Strategist Search Committee (Chair; hired S. Johnson)	2019 – 2020

Local

Office of Vice Chancellor's Limited Grant Submission Advisory Board, CU Anschutz	2024
RGB NSF REU Application Review Panel, CU Anschutz	2024
RBI RNA-seq Grant Review Panel, CU Anschutz	2018, 2019
Reviewer, Weintraub Graduate Student Award, FHCRC, Seattle, WA	2017
Reviewer, Hutch United Fellowships for under-represented minorities, FHCRC, Seattle, WA	2016
RBI Scholar Award Review Panel, CU Anschutz	2018

OUTREACH AND ADVOCACY

Morning assembly presentation, AST Middle School, Aurora, CO	2022 – Present
Strawberry DNA extraction in-class exercise, AST 7th grade, Aurora, CO	2022 – Present
Afterschool Bioscience Club, AST, Aurora, CO (part of NSF CAREER outreach)	2024 - Present
Career Day Speaker, AST High School, Aurora, CO	2024
Speaker & Breakout group leader, FSHD Patient Connect Conference, Denver, CO	2024
Speaker, Plenary session on DEI at RNA Society meeting, Edinburg, UK	2024
Invited Speaker, Friends of FSH Research Patient Research meeting; Virtual	2022
Speaker, CSD Developing Scholars Program	2021
Invited Speaker, Colorado FSHD 360 Conference, Parker, CO	2021
Invited Speaker, Friends of FSH Research Patient Connect Conference; virtual	2021
Invited Speaker, Friends of FSH Research Fundraiser, Seattle, WA.	2020
Invited Speaker, FSHD Walk and Roll, Castle Rock, CO	2019, 2021
Host and Speaker; World FSHD Day – Patient connect event, CU Anschutz, Aurora, CO.	2019
Curator for BioTweeps, a Twitter community of biologists with 18,000 followers (& growing)	2018
Invited speaker for the FSHD Society Denver chapter launch, Denver, CO	2018
Invited speaker at the Denver FSHer meeting	2018
Skype-a-scientist facilitator	2018, 2019