

**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 AND AWARDS**

- *Summer Research Fellowship*, Indian Academy of Sciences, 2004
- *Graduated First Class with Distinction*, Anna University, Chennai, India, 2006
- *Grant-in-Aid of Research Award*, Sigma Xi national chapter, 2011
- *Jo Rae Wright Prize for the Best Poster presentation*, Duke University, Durham, NC. 2012
- *William J. Griffith University Service Award* for Outstanding Service to Duke Community, 2013
- *RNA Society Award for the Best Poster Presentation*, RNA stability meeting, Estes Park, CO. 2015
- Recognized as an *Outstanding Postdoc* at the Fred Hutch Postdoc Appreciation Week. 2016, 2017
- *FSHD Society Young Investigator Award*, FSHD Society, 2020
- *BBA Rising Star* in Molecular Basis of Disease (finalist), 2021
- *NSF CAREER Award*, 2024

**PUBLICATIONS**

**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>

**ORCID:** <https://orcid.org/0000-0001-9039-2631>

**Notation:** #denotes Corresponding author; \* denotes Equal Contribution

**Research articles**

1. [Preprint] 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. 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.
3. 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.
4. 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
  5. 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.
  6. 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.
  7. **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.
  8. 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.
  9. 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.
  10. 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.
  11. **Jagannathan S** and Bradley R. Translational plasticity facilitates the accumulation of nonsense genetic variants in the human population. *Genome Res*. 2016 Sep 19.
  12. **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.
  13. 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.
  14. **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.
  15. **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.
  16. 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.
  17. 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.

**Reviews, Previews, and Book Chapters**

1. Sherlock ME#, Baquero Galvis L, Vicens Q, Kieft JS, **Jagannathan S#**. Principles, mechanisms, and biological implications of translation termination-reinitiation. *RNA*. 2023 Jul;29(7):865-884. doi: 10.1261/rna.079375.122.
2. Muñoz O\*, Lore M\*, and **Jagannathan S#**. The long and short of EJC-independent nonsense-mediated RNA decay. *Biochem Soc Trans*. 2023 Jun 28;51(3):1121-1129. doi: 10.1042/BST20221131.
3. **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)
4. **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. (Meeting Report)
5. **Jagannathan S**, Ramachandran S, and Rissland OS. Slow down to catch up. *Cell*. 2019; 178(4): 774-776. (Preview)
6. 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. (Review article)
7. **Jagannathan S** and Bradley RK. Congenital myotonic dystrophy-an RNA-mediated disease across a developmental continuum. *Genes & Development*. 2017; 31(11):1067-1068 (Preview)
8. **Jagannathan S**, Nwosu C, Nicchitta CV. Analyzing mRNA localization to the endoplasmic reticulum via cell fractionation. *Methods Mol Biol*. 2011; 714:301-21. (Book Chapter)

**SELECTED TALKS AND SEMINARS**

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|------------|--|
| Feb 2024   | Duke University Biochemistry Department, Durham, NC  |
| Nov 2023   | Frontiers in Myogenesis, Sao Paulo, Brazil (Invited Speaker)   |
| Nov 2023   | National Institute of Environmental Health Sciences (NIEHS), RTP, NC   |
| June 2023  | RNA Society meeting, Singapore (Session Chair for DEI plenary session)   |
| May 2023   | EMBO Workshop on RNA meets protein decay, Cavtat, Croatia (Invited Speaker and Session Chair)  |
| July 2022  | GRC on Post-transcriptional Gene Regulation; Newry, ME ( <i>Invited speaker</i> ).   |
| April 2022 | The Center for RNA Biology, Ohio State University ( <i>Invited Speaker</i> )   |
| Oct 2021   | The RNA Institute, SUNY Albany; virtual ( <i>Invited Speaker</i> )   |
| Sep 2021   | University of Illinois at Urbana-Champaign, Biochemistry Department; virtual ( <i>Invited Speaker</i> )                                    |
| Aug 2021   | CSHL RNA Processing Meeting; virtual ( <i>Session Chair &amp; Speaker</i> ).   |
| July 2021  | ACS Chem Bio Connections Summer Seminar Series; virtual ( <i>Invited Speaker</i> )   |
| July 2021  | FSHD International Research Congress; virtual ( <i>Session Chair</i> )   |
| Feb 2021   | Emory University Biochemistry Department virtual ( <i>Invited Speaker</i> )  |
| June 2020  | FSHD Circulating Biomarker Workshop; virtual ( <i>Invited Speaker and Panelist</i> )   |
| March 2020 | Maximizing Access to Research Careers (MARC) Program Seminar Series, California State University, Fullerton, CA ( <i>Invited speaker</i> ) |
| March 2020 | Metropolitan State University of Denver, Denver CO ( <i>Invited speaker</i> )  |

- Jan 2020 Pharmacology Department, University of Washington, Seattle, WA (*Invited speaker*)
- Dec 2019 Uniformed Services University, Bethesda, MD (*Invited speaker*).
- May 2019 RNA Interest Group, University of Utah, Salt Lake City, UT (*Invited speaker*).
- April 2019 Stowers Institute for Medical Research, Kansas City, MO (*Invited speaker*).
- Feb 2019 GRC on Translation machinery in health and disease; Galveston, TX (*Invited speaker*).
- June 2018 FASEB SRC on Ubiquitin and Cellular Regulation, Snowmass, CO (*Talk*).
- Oct 2017 Symposium on RNA Biology XII: RNA Tool and Target; Chapel Hill, NC (*Talk*).
- May 2017 Western Washington University, Bellingham, WA (*Invited speaker*).
- Nov 2016 FSHD International Research Consortium Workshop; Boston, MA (*Talk*).
- March 2017 University of California Santa Cruz, Santa Cruz, CA (*Invited speaker*).
- Feb 2017 RNA Therapeutics Institute, University of Massachusetts Medical School, Worcester, MA (*Invited speaker*).
- Feb 2017 Department of Biochemistry and Biophysics, University of Pennsylvania, Philadelphia, PA (*Invited speaker*).
- Jan 2017 University of Washington at St. Louis, St. Louis, MI (*Invited speaker*).
- Jan 2017 Institute of Molecular Biology, University of Oregon, Eugene, OR (*Invited speaker*).
- Jan 2017 Department of Genetics, Rutgers University, Piscataway, NJ (*Invited speaker*).
- Dec 2016 RNA Bioscience Initiative, CU Anschutz, Aurora, CO (*Invited speaker*).
- Nov 2016 FSHD International Research Consortium Workshop; Boston, MA (*Talk*).
- Dec 2015 The Center for NeuroGenetics 2nd Annual Brainstorm Symposium; Gainesville, FL (*Invited speaker*).
- Oct 2015 FSHD International Research Consortium Workshop; Boston, MA (*Talk*).
- Oct 2011 Symposium on RNA Biology IX: RNA Tool and Target; RTP, NC (*Talk*).

## RESEARCH SUPPORT AND FELLOWSHIPS

- 2024 - 2029 CAREER award, National Science Foundation.
- 2022 - 2025 CU Anschutz Translational Research Scholar Award.
- 2021 - 2023 Research Grant from FSHD Society.
- 2020 - 2021 Research Grant from Friends of FSH Research.
- 2019 - 2024 National Institute of General Medical Sciences, Maximizing Investigators' Research, Award for Early Stage Investigators (R35).
- 2018 - 2019 Research Grant from Friends of FSH Research.
- 2014 - 2017 FSH Society Postdoctoral Fellowship.
- 2004 Summer Research Fellowship, Indian Academy of Sciences, India

## TEACHING

- Spring '24 Co-organizer and teaching lead, After-school BioScience Club, Aurora Science and Tech Middle School & High School (~30 contact hours)
- Spring '23, '24 Teaching Lead, 7<sup>th</sup> grade curricular exercise in DNA extraction at Aurora Science and Tech Middle School, Aurora, CO (6 contact hours)
- Fall '20 Instructor; Informatics and Statistics for Molecular Biology (MOLB 7950; 10 contact hours)

Spring '19; Course Director & Instructor, Computational biology for biologists with R, University of Colorado Denver Graduate School (MOLB 7910; 30 contact hours)  
 '20; '22  
 Fall '18; '19, Instructor; Core Topics in Biomedical Sciences University of Colorado Denver Graduate School (IDPT 7810-008; 4 contact hours)  
 '21, '22, '23  
 Spring '17 Science Teaching Experience for Postdocs (STEP) program, University of Washington, Seattle, WA. (Designed and co-taught a 10-week class on Precision Medicine to a class of 25 undergraduate seniors majoring in Biology).

## MENTORING

2020 - *Mentor*, The RNA Society Mentoring program.  
 2019 - *Mentor*, WiSTEM at CU Anschutz, Aurora, CO.  
 2019 - 2020 *Mentor*, Mentor Collective, CU Anschutz, Aurora, CO.  
 2017 - 2018 *Mentor*, The New York Academy of Sciences (NYAS) Next Scholars Program.  
 2010 - 2011 *Mentor*, Women and Mathematics Mentoring Program, Durham County, NC. (Mentored three under-represented minority 8th grade girls).

## SERVICE

### International

2023 *External Thesis Examiner*, Indian Institute of Science, Bengaluru, India  
 2023, 2024 *Ad hoc reviewer*, Israel Science Foundation  
 2023 *Ad hoc grant reviewer for The French Muscular Dystrophy Association (AFM-Téléthon)*  
 2023 *Ad hoc grant reviewer for Israel Science Foundation*  
 2021 *Ad hoc grant reviewer for UK Muscular Dystrophy Association.*  
 2021 *Member*, International biomarker working group for FSHD Clinical Trial Research Network (CTRN).  
 2020 - current *Member*, RNA Society Diversity, Equity, and Inclusion Committee  
 2020 *Ad hoc Member of RNA Society Awards Nomination Committee*  
 2016 - *Ad hoc Reviewer for Nature Biotechnology; Nucleic Acids Research; Genetics and Molecular Biology; PLoS Genetics; Nature Communications; Molecular Cell; Trends in Genetics, Trends in Biochemical Sciences, Disease Models and Mechanisms, Biomedicines, Cell, Cell Genomics, G3, Database*

### National

2024 *Invited working group member*, Muscular Dystrophy Coordinating Committee, NIH/NIAMS.  
 2022 *Ad hoc reviewer for NSF Study Section (MCB).*  
 2021 *Ad hoc grant reviewer for Maryland Industrial Partnerships (MIPS).*  
 2020 *Ad hoc reviewer for Cystic Fibrosis Foundation Nonsense Mutation Therapies grant review committee.*  
 2019 *Ad hoc reviewer of NIH Study section (MGB), Bethesda, MA.*

### Regional

2023 - current *Chair*, Molecular Biology Graduate Advisory Committee, CU Anschutz, Aurora, CO  
 2023 - current *Member*, Seminar Committee; Human Medical Genetics and Genomics Program  
 2023 *Co-organizer*, Rocky Mountain RNA Symposium, Denver, CO  
 2022 - current *Member*, AMC/Aurora Science and Tech Advisory Council

- 2020 - current *Member*, BMG Diversity, Equity, and Anti-Racism (DEA-R) committee, CU Anschutz, Aurora, CO.
- 2020 *Member*, Dean's taskforce to identify caregiver options, CU Anschutz, Aurora, CO.
- 2019/2020 *Member*, Molecular Biology Admissions Committee, CU Anschutz, Aurora, CO.
- 2019 *Panelist*, Career panel, International Researcher Week, CU Anschutz, Aurora, CO.
- 2019 *Panelist*, Postdoc career panel, Postdoc Appreciation Week, CU Anschutz, Aurora, CO.
- 2019 - 2023 *Member*, CSD Graduate Advisory Committee, CU Anschutz, Aurora, CO.
- 2019 *Member*, CSD Preliminary Exam Committee, CU Anschutz, Aurora, CO.
- 2018/2019 *Member*, Structural Biology Initiative Faculty Search Committee, CU Anschutz, Aurora, CO.
- 2018 - 2023 *Co-organizer*, Colorado RNA Salon, RNA Society.
- 2018 - current *Member*, BMG Seminar Committee, CU Anschutz, Aurora, CO.
- 2018 - 2023 *Member*, MOLB Curriculum Committee, CU Anschutz, Aurora, CO.
- 2018, 2019 *Reviewer*, RNA Bioscience Initiative Grants Committee, CU Anschutz, Aurora, CO.
- 2018 *Reviewer*, RNA Bioscience Initiative Scholar Award committee, CU Anschutz, Aurora, CO.
- 2017 *Reviewer*, Weintraub Graduate Student award, Fred Hutch Cancer Research Center, Seattle, WA.
- 2016 *Reviewer*, Hutch United Fellowships for under-represented minorities, Fred Hutch Cancer Research Center, Seattle, WA.

### COMMUNITY OUTREACH

- 2022 - current *Speaker and mentor*, Aurora Science and Tech middle school, Aurora, CO.
- 2021, 2022 *Speaker*, CSD Developing Scholars Program.
- June 2021 *Invited Speaker*, Colorado FSHD 360 Conference, Parker, CO.
- 2021, 2022 *Invited Speaker*, Friends of FSH Research Patient Connect Conference; virtual
- Jan 2020 *Invited Speaker*, FSHD Patient Information Meeting, Friends of FSH Research Fundraiser, Seattle, WA.
- 2019, 2021 *Invited Speaker*, FSHD Walk and Roll Fundraiser, Castle Rock, CO.
- June 2019 *Host and Speaker*; World FSHD Day - Patient connect event, CU Anschutz, Aurora, CO. Brought together the local FSHD patient and research community for an evening of talks, lab tours, and activities.
- Nov 2018 *Curator* for BioTweeps, a twitter community of biologists with 18,000 followers (& growing). During the course of a week, I discussed my work, latest developments in RNA biology and its applications to disease research, and about being a scientist.
- Oct 2018 *Invited speaker* for the FSH Society Denver chapter launch, Denver, CO.
- April 2018 *Invited speaker* at the Denver FSHer meeting; Discussed the current state of FSHD research and answered questions from patients and families. Denver, CO.
- 2018, 2019 *Skype-a-scientist facilitator*; Discussed various topics in cell biology and about being a Cell Biologist with a 7th grade classroom for the Skype-a-scientist program.