

## 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–current

### 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
- Postdoctoral Fellowship, FSHD Society, 2014 - 2017
- 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

### SELECTED PEER-REVIEWED PUBLICATIONS:

Pubmed: <https://www.ncbi.nlm.nih.gov/myncbi/sujatha.jagannathan.1/bibliography/public/>

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

#### Research articles

1. Jagannathan S<sup>#</sup>, 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.
2. 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.
3. 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.
4. 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.
5. Jagannathan S and Bradley R. Translational plasticity facilitates the accumulation of nonsense genetic variants in the human population. *Genome Res*. 2016 Sep 19.
6. Jagannathan S<sup>\*</sup>, Shadle SS<sup>\*</sup>, 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.

7. 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.
8. **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.
9. **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.
10. 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.
11. 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. **Jagannathan S**, Ramachandran S, and Rissland OS. Slow down to catch up. *Cell*. 2019; 178(4): 774-776. (Preview)
2. 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)
3. **Jagannathan S** and Bradley RK. Congenital myotonic dystrophy-an RNA-mediated disease across a developmental continuum. *Genes & Development*. 2017; 31(11):1067-1068 (Preview)
4. **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)

### **RESEARCH SUPPORT:**

Research Grant from Friends of FSH Research: Deciphering the role of aberrant protein synthesis in FSHD, 2018 – 2019 (PI)

Outstanding Investigator Award (R35), National Institute for General Medical Sciences: Understanding the variability in nonsense-mediated RNA decay, 2019–2023. (PI)

### **SELECTED TALKS AND SEMINARS**

#### **National**

- |            |   |
|------------|---|
| May 2019   | RNA Interest Group, University of Utah, Salt Lake City, UT ( <i>Invited speaker</i> ).                    |
| April 2019 | Stowers Institute for Medical Research, Kansas City, MO ( <i>Invited speaker</i> ).                       |
| Feb 2019   | GRC on Translation machinery in health and disease; Galveston, TX ( <i>Invited speaker</i> ).             |
| June 2018  | FASEB SRC on Ubiquitin and Cellular Regulation, Snowmass, CO ( <i>Talk</i> ).                             |
| Oct 2017   | Symposium on RNA Biology XII: RNA Tool and Target; Chapel Hill, NC ( <i>Talk</i> ).                       |
| May 2017   | Western Washington University, Bellingham, WA ( <i>Invited speaker</i> ).                                 |
| Nov 2016   | FSHD International Research Consortium Workshop; Boston, MA ( <i>Talk</i> ).                              |
| Dec 2015   | The Center for NeuroGenetics 2nd Annual Brainstorm Symposium; Gainesville, FL ( <i>Invited speaker</i> ). |

*Updated Dec 2019*

Oct 2015 FSHD International Research Consortium Workshop; Boston, MA (*Talk*).  
 Oct 2011 Symposium on RNA Biology IX: RNA Tool and Target; RTP, NC (*Talk*).

### ***Regional***

2018, 2019 Lunch Seminar for RNA Bioscience Initiative Summer Internship Program, CU Anschutz, Aurora, CO.  
 June 2019 Neurology Grand Rounds, CU Anschutz, Aurora, CO.  
 June 2019 University of Colorado Muscle Group Research Summit, CU Anschutz, Aurora, CO.  
 April 2019 Informatics Symposium, CU Anschutz, Aurora, CO.  
 April 2019 Department of Medicine Research Day, CU Anschutz, Aurora, CO.  
 March 2019 An Evening with RNA, CU Boulder, Boulder, CO.  
 Oct 2018 Molecular Biology Program Annual Retreat, CU Anschutz, Aurora, CO.  
 April 2018 University of Colorado, Denver; Integrative Biology Department Seminar (*Student-invited seminar*).  
 Jan 2018 University of Colorado Molecular Biology Training Program, Membership Seminar, CU Anschutz, Aurora, CO.

### **TEACHING**

Spring 2019 Course Director, Computational biology for biologists with R, University of Colorado Denver Graduate School (MOLB 7910)  
 Fall 2018 Core Topics in Biomedical Sciences University of Colorado Denver Graduate School (IDPT 7810-008)  
 Spring 2017 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**

2019 - current *Mentor*, WiSTEM at CU Anschutz, Aurora, CO.  
 2019 - current *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**

#### ***National***

2019 *Ad hoc reviewer* of NIH Study section (MGB), Bethesda, MA.  
 2016 - *Reviewer* for Nature Biotechnology; Nucleic Acids Research; Genetics and  
 current Molecular Biology

#### ***Regional***

2019 *Panelist*, Postdoc career panel, Postdoc Appreciation Week, CU Anschutz, Aurora, CO.  
 2019 *Member*, CSD Graduate Advisory Committee, CU Anschutz, Aurora, CO.  
 2019 *Member*, CSD Preliminary Exam Committee, CU Anschutz, Aurora, CO.

2018/2019	<i>Member, Structural Biology Initiative Faculty Search Committee, CU Anschutz, Aurora, CO.</i>
2018 - current	<i>Co-organizer, Colorado RNA Salon, RNA Society.</i>
2018, 2019	<i>Member, Molecular Biology Seminar Committee, CU Anschutz, Aurora, CO.</i>
2018, 2019	<i>Reviewer, RNA Bioscience Initiative Grants Committee, CU Anschutz, Aurora, CO.</i>
2018	<i>Reviewer, RNA Bioscience Initiative Scholar Award committee, CU Anschutz, Aurora, CO.</i>
2017	<i>Reviewer, Weintraub Graduate Student award, Fred Hutch Cancer Research Center, Seattle, WA.</i>
2016	<i>Reviewer, Hutch United Fellowships for under-represented minorities, Fred Hutch Cancer Research Center, Seattle, WA.</i>

## COMMUNITY OUTREACH

Sep 2019	<i>Invited Speaker, FSHD Walk and Roll Fundraiser, Castle Rock, CO.</i>
June 2019	<i>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.</i>
Nov 2018	<i>Curator for BioTweeps, a twitter community of biologists with 18,000 followers (&amp; 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.</i>
Oct 2018	<i>Invited speaker for the FSH Society Denver chapter launch, Denver, CO.</i>
April 2018	<i>Invited speaker at the Denver FSHer meeting; Discussed the current state of FSHD research and answered questions from patients and families. Denver, CO.</i>
2018, 2019	<i>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.</i>