

SHU-BING QIAN, PH.D.

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Ithaca, NY 14850
607.319.5255

EDUCATION

2004 – 2008	Postdoc	University of North Carolina at Chapel Hill Advisor: Dr. Cam Patterson	Cell Biology
2000 – 2004	Postdoc	National Institutes of Health, NIAID Advisor: Dr. Jonathan W. Yewdell	Cell Biology
1997 – 2000	Ph.D.	Shanghai Jiaotong University Advisor: Dr. Shi-Shu Chen	Biochemistry
1994 – 1997	M.Sc.	Shanghai Jiaotong University	Molecular Biology

ACADEMIC APPOINTMENTS

2014 – Present	Associate Professor	Division of Nutritional Sciences, Cornell University, Ithaca, NY
2008 – 2014	Assistant Professor	Division of Nutritional Sciences, Cornell University, Ithaca, NY
2004 – 2008	Research Fellow (postdoc)	Carolina Cardiovascular Biology Center, University of North Carolina, Chapel Hill, NC
2000 – 2004	Visiting Fellow (postdoc)	Cell Biology Section, Laboratory of Viral Diseases, NIAID, NIH, Bethesda, MD
1994 – 2000	Research Assistant (graduate)	Department of Biochemistry & Molecular Biology, Shanghai Jiaotong University, Shanghai, P.R.China

TEACHING EXPERIENCE

2009 - present	NS3200	Human Biochemistry 4-credit undergraduate course Division of Nutritional Sciences, Cornell University
2011 - 2015	NS7030	Graduate Student Seminar 1-credit graduate course that consists of weekly paper presentation Division of Nutritional Sciences, Cornell University
2010 - 2013	BioMG8370	Problems in Biochemistry, Molecular and Cell Biology 2-credit graduate course that consists of weekly paper discussions Department of Molecular Biology & Genetics, Cornell University
2008 - present	NS4010	Empirical Research Laboratory research for biochemistry and molecular biology 3-credit undergraduate course Division of Nutritional Sciences, Cornell University
2006 - 2008	Biology 4050	Laboratory Research Department of Cell and Developmental Biology University of North Carolina, Chapel Hill, NC
1997 – 2000	Graduate Course	Biochemistry and Molecular Biology Department of Biochemistry & Molecular Biology Shanghai Second Medical University, Shanghai, P.R.China

PROFESSIONAL ORGANIZATIONS

- 2016 RNA Society
- 2011 American Society of Nutrition
- 2011 American Society for Cellular Biology
- 2010 American Society for Biochemistry and Molecular Biology

SERVICE TO THE DEPARTMENT

- 2015 - Awards and Nominations Committee, Division of Nutritional Sciences, Cornell University
- 2014 - 2016 Graduate Admission Committee, Biochemistry Molecular and Cellular Biology, Cornell University
- 2013 - 2016 Seminar Committee, Division of Nutritional Sciences, Cornell University
- 2011 - 2014 Curriculum Committee, Division of Nutritional Sciences, Cornell University
- 2010 - 2012 Graduate Admission Committee, Nutritional Sciences, Cornell University

SERVICE TO THE UNIVERSITY

- 2014 Graduate field of Biological and Biomedical Sciences, Cornell University
- 2012 Leadership Program for Veterinary Students, Cornell University
- 2010 Chemical Biology Interface (CBI) program, Cornell University
- 2010 Graduate field of Biochemistry, Molecular and Cellular Biology, Cornell University
- 2009 Center for Vertebrate Genomics, Cornell University
- 2009 Graduate field of Genetics & Development, Cornell University
- 2008 Graduate field of Nutritional Sciences, Cornell University

SERVICE TO THE PROFESSION

- 2012 - Ad Hoc Grant Reviewer:
US National Institutes of Health (NIH, study section: CAMP, 2017); Helmholtz Association (Young Investigator Award, 2016); French National Research Agency (ANR, 2016); US National Institutes of Health (NIH, study section: ZRG1, 2016); UK BBSRC (2015); US National Science Foundation (MCB, 2015); US Department of Agriculture (Human Nutrition, 2013); UK Medical Research Council (MRC, 2013); Israel Science Foundation (ISF, 2013); US National Institutes of Health (NIH, study section: CMAD, 2013); Human Frontier Science Program (HFSP, 2012); US Department of Defense (TSC Research Program, 2012)
- 2011 - Ad Hoc Manuscript Reviewer:
Molecular Cell (2), Nature Cell Biology, Nature Methods (2), PLOS Computational Biology, Journal of Immunology, Scientific Reports, Nature Chemical Biology (2), Nature Structural and Molecular Biology (3), Nature, Nature Communications (5), Bioinformatics, Nature Review Genetics, Molecular and Cellular Biology, Nucleic Acid Research (3), eLife, Genome Biology (3), RNA(3), Proc Natl Acad Sci USA, PLOS One, Aging Cell, Nature Protocol, Cell Metabolism, Cell Reports, Journal of Cell Stress and Chaperone, Advances in Nutrition, The Research and Biology of Cancer, Journal of Molecular and Cellular Cardiology

AWARDS AND HONORS

- 2016 HHMI Faculty Scholar
Associate Professor, Cornell University
- 2014 DOD Idea Award
Assistant Professor, Cornell University
- 2013 Peter J. Reeds Young Investigator Award
American Association of Nutrition
- 2010 DOD Exploration-Hypothesis Development Award
Assistant Professor, Cornell University
- 2009 NIH Director's New Innovator Award
Assistant Professor, Cornell University
- 2009 Ellison Medical Foundation New Scholar Award
Assistant Professor, Cornell University
- 2005 Gordon Research Conference Travel Awards, Gordon Research Conferences

	Postdoc Fellow, University of North Carolina
2003	NIH Fellows Award for Research Excellence (FARE2004) Postdoc Fellow, NIAID, NIH
2002	NIH Fellows Award for Research Excellence (FARE2003) Postdoc Fellow, NIAID, NIH
2000	Young Scientist Travel Fellowship, the Biochemical Society, FEBS, IUBMB Graduate Student, Shanghai Jiao Tong University
1999	National Baogang Fellowship, Department of Education, China Graduate Student, Shanghai Jiao Tong University
1999	Predocctoral Student Travel Award, American Society for Cell Biology Graduate Student, Shanghai Jiao Tong University
1999	Unilever Young Scientist Award, Shanghai Unilever Corp., Shanghai, China Graduate Student, Shanghai Jiao Tong University
1998	Young Investigator Award, International Association of Biological Therapy Graduate Student, Shanghai Jiao Tong University

PUBLICATIONS

Peer-Reviewed Publications (corresponding author)*

1. Saikia M*, Wang X, Mao Y, Wan J, Pan T and Qian SB*. Codon optimality controls differential mRNA translation during amino acid starvation. **RNA** 2016; 22(11):1719-1727
2. Liu B and Qian SB*. Characterizing inactive ribosomes in translational profiling. **Translation** 2016 4(1):e1138018
3. Qian SB. Step back for seminal translation. **Nat Struct Mol Biol** 2016; 232(5):362-3
4. Zhou J, Rode KA, and Qian SB*. m⁶A: A novel hallmark of translation. **Cell Cycle** 2015; 10:1-2
5. Meyer KD, Patil DP, Zhou J, Zinoviev A, Skabkin MA, Elemento O, Pestova TV, Qian SB and Jaffrey SR. 5' UTR m⁶A promotes cap-independent translation. **Cell** 2015; 163(4):999-1010
6. Zhou J, Wan J, Gao X, Zhang X and Qian SB*. Dynamic m⁶A mRNA methylation directs translational regulation of heat shock response. **Nature** 2015; 526(7574):591-4
 - Highlighted in **Nat Chem Biol**
 - Recommended by **Faculty 1000**
7. Gao X, Wan J, and Qian SB*. Genome-wide profiling of alternative translation initiation sites. **Methods Mol Biol** 2016; 1358:303-16
8. Wei S and Qian SB*. Ribosome profiling: principles and variations. **eLS** 2015 John Wiley & Sons, Ltd: Chichester. DOI: 10.1002/9780470015902.a0025984
9. Zhang X, Gao X, Roots RA, Conn CS, Liu B, and Qian SB*. Translational control of cytosolic stress proteins by mitochondrial ribosomal protein L18. **Nat Struct Mol Biol** 2015; 22(5):404-10
 - Featured on News and Views of **Nat Struct Mol Biol**
 - Highlighted in **Science**
10. Bettencourt C1, de Yébenes JG, López-Sendón JL, Shomroni O, Zhang X, Qian SB, Bakker IM, Heetveld S, Ros R, Quintáns B, Sobrido MJ, Bevova MR, Jain S, Bugiani M, Heutink P, Rizzu P. Clinical and neuropathological features of spastic ataxia in a Spanish family with novel compound heterozygous mutations in STUB1. **Cerebellum** 2015; 14(3):378-81
11. Gao X, Wan J, Liu B, Ma M, Shen B, and Qian SB*. Quantitative profiling of initiating ribosomes in vivo. **Nat Methods** 2015; 12(2):147-53. PMID: PMC4344187
12. Han Y, Gao X, Liu B, Wan J, Zhang X, and Qian SB*. Ribosome profiling reveals sequence-independent post-initiation pausing as a signature of translation. **Cell Res** 2014; 24(7):842-51. PMID: PMC4085768
13. Liu B and Qian SB*. Invited review: Mechanisms of translational regulation during stress. **Wiley Interdiscip Rev RNA** 2014; 5(3):301-5. PMID: PMC3991730

14. Wan J and [Qian SB*](#). TISdb: a database for alternative translation initiation in mammalian cells. **Nucleic Acids Res** 2014; 42(1):D845-50. PMID: PMC3965020
15. Sherman MY* and [Qian SB*](#). Less is more: improving proteostasis by translation slow down. **Trends Biochem Sci** 2013; 13:00158-8. PMID: 24126073
16. Conn CS, and [Qian SB*](#). mTORC1 in protein homeostasis: increase in protein quantity at the expense of quality. **Sci Signal** 2013; 6(271):ra24. PMID: PMC3992710
 - Editor's choice in **Science**
 - Recommended by **Faculty 1000**
17. Liu B, Han Y, and [Qian SB*](#). Co-translational response to proteotoxic stress by elongation pausing of ribosomes. **Mol Cell** 2013; 49(3):453-463. PMID: PMC3570626
 - Featured on the cover of **Mol Cell**
 - Highlighted in **Nat Rev Genetics, Nat Struct Mol Biol**
 - Recommended by **Faculty 1000**
18. Liu B, Conn CS, and [Qian SB*](#). Viewing folding of nascent polypeptide chains from ribosomes. **Expert Rev Proteomics** 2012; 9(6):579-81. PMID: PMC3971927
19. Stern-Ginossar N, Weisburd B, Michalski A, Le VT, Hein MY, Huang SX, Ma M, Shen B, [Qian SB](#), Hengel H, Mann M, Ingolia NT, Weissman JS. Decoding human cytomegalovirus. **Science** 2012; 338(6110):1088-93. PMID: PMC3817102
20. Lee S, Liu B, Lee S, Huang SX, Shen B, and [Qian SB*](#). Global mapping of translation initiation sites in mammalian cells at single-nucleotide resolution. **Proc Natl Acad Sci USA**. 2012; 109(37):E2424-32. PMID: PMC3443142
 - Highlighted on **GenomeWeb**
21. Han Y, David A, Liu B, Magadán JG, Bennink JR, Yewdell JW, and [Qian SB*](#). Monitoring co-translational protein folding in mammalian cells at codon resolution. **Proc Natl Acad Sci USA**. 2012; 109(31):12467-72. PMID: PMC3411940
22. Park WJ, Kothapalli KS, Reardon HT, Lawrence P, [Qian SB](#), Brenna JT. A novel FADS1 isoform potentiates FADS2-mediated production of eicosanoid precursor fatty acids. **J Lipid Res** 2012; 53(8):1502-12. PMID: PMC3540860
23. Liu B, and [Qian SB*](#). Translational regulation in nutrigenomics. **Adv Nutr** 2011; 2(6):511-9. PMID: PMC3226388
 - Featured on the cover of **Adv Nutr**
24. Zhang X, and [Qian SB*](#). Chaperone-mediated hierarchical control in targeting misfolded proteins to aggresome. **Mol Biol Cell** 2011; 22(18):3277-88. PMID: PMC3172255
25. Conn CS and [Qian SB*](#). mTOR signaling in protein homeostasis: less is more? **Cell Cycle** 2011; 10(12):1940-7. PMID: PMC3154417
26. Sun J, Conn CS, Han Y, Yeung V, and [Qian SB*](#). PI3K-mTORC1 attenuates stress response by inhibiting cap-independent Hsp70 mRNA translation. **J Biol Chem** 2011; 286(8):6791-800. PMID: PMC3057780
27. [Qian SB*](#), Zhang X, Sun J, Bennink JR, Yewdell JW, Patterson C. mTORC1 links protein quality and quantity control by sensing chaperone availability. **J Biol Chem** 2010; 285(35):27385-95. PMID: PMC2785368
 - Paper of the week **J Biol Chem**
28. [Qian SB*](#), Waldren L, Choudhary N, Klevit RE, Chazin WJ, Patterson C. Engineering a ubiquitin ligase reveals conformational flexibility required for ubiquitin transfer. **J Biol Chem** 2009; 284(39):26797-802. PMID: 19648119
29. McDonough H, Charles PC, Hilliard EG, [Qian SB](#), Min JN, Portbury AL, Cyr DM, Patterson C. Stress-dependent chip/DAXX interaction suppresses the p53 apoptotic program. **J Biol Chem** 2009; 284(31): 20649-59. PMID: PMC2742829
30. Xia T, Dimitropoulou C, Zeng J, Antonova GN, Snead C, Venema RC, Fulton D, [Qian SB](#), Patterson C, Papapetropoulos A, Catravas JD. Chaperone-dependent E3 ligase CHIP ubiquitinates and mediates proteasomal degradation of soluble guanylyl cyclase. **Am J Physiol Heart Circ Physiol** 2007; 293:H3080-3087
31. [Qian SB](#), McDonough H, Boellmann F, Cyr DM, Patterson C. CHIP-mediated stress recovery by sequential ubiquitination of substrates and Hsp70. **Nature** 2006; 440: 551-555. PMID: PMC4112096
 - Highlighted in **J Cell Biol**

32. [Qian SB](#), Reits E, Neefjes J, Deslich JM, Bennink JR, and Yewdell JW. Tight linkage between translation and MHC-class I peptide ligand generation implies specialized antigen processing for defective ribosomal products. **J Immunol** 2006; 177: 227-233. PMID: 16785518
33. [Qian SB](#), Princiotta MF, Bennink JR, Yewdell JW. Characterization of rapidly degraded polypeptides in mammalian cells reveals a novel layer of nascent protein quality control. **J Biol Chem** 2006; 281(1):392-400. PMID: 16263705
34. Dai Q, [Qian SB](#), Li HH, McDonough H, Borchers C, Huang D, Takayama S, Younger JM, Ren HY, Cyr DM, Patterson C. Regulation of the cytoplasmic quality control protein degradation pathway by BAG2. **J Biol Chem** 2005; 280(46):38673-38681. PMID: 16169850
35. Shaffer AL, Shapiro-Shelef M, Iwakoshi NN, [Qian SB](#), Zhao H, Yu X, et al. XBP1 acts downstream of Blimp-1 to regulate ER biogenesis, organelle expansion, and protein synthesis during plasma cell differentiation. **Immunity** 2004; 21(1):81-93. PMID: 15345222
36. Princiotta MF, Finzi D, [Qian SB](#), Gibbs J, Schuchmann S, Buttgerit F, Bennink JR, Yewdell JW. Quantitating protein synthesis, degradation, and endogenous antigen processing. **Immunity** 2003; 18(3):343-354. PMID: 12648452
37. [Qian SB](#), Ott DE, Schubert U, Bennink JR, Yewdell JW. Fusion proteins with COOH-terminal ubiquitin are stable and maintain dual functionality in vivo. **J Biol Chem** 2002; 277(41):38818-38826. PMID: 12163494
38. [Qian SB](#), Li Y, Qian GX, and Chen SS. Efficient tumor regression induced by genetically engineered tumor cells secreting interleukin-2 and membrane-expressing allogeneic MHC class I antigen. **J Cancer Res Clin Oncol** 2001; 127(1): 27-33. PMID: 11206268
39. [Qian SB](#), and Chen SS. Blocked transport of soluble Kb molecules containing connecting peptide segment involved in calnexin association. **Int Immunol** 2000; 12(10): 1409-1416. PMID: 11007758
40. Xie Q, Liao D, Zhou XQ, [Qian SB](#), Cheng SS. Transduction of primary rat hepatocytes with bicistronic retroviral vector. **World J Gastroenterol** 2000; 6(5):725-729. PMID: 11819682
41. [Qian SB](#), Qian GX, and Chen SS. Enhanced immunogenicity of human hepatocellular carcinoma cells transduced with human gamma-interferon gene via retroviral vector. **Acta Univ Med 2nd Shanghai** 1999; 11(2): 90-94
42. [Qian SB](#), and Chen SS. Transduction of human hepatocellular carcinoma cell lines transduced with human gamma-interferon gene via retroviral vector. **World J Gastroenterol** 1998; 4(3): 210-213. PMID: 11819277
43. [Qian SB](#), Zhang TF, and Chen SS. Enhanced expression of HLA class I molecules in human hepatocellular carcinoma cell lines transduced with human gamma-interferon gene. **Chin Med J (Eng)** 1998; 111(4): 319-322

Book Chapters

1. Gao X, Wan J, and [Qian SB](#)*. Genome-wide profiling of alternative translation initiation sites. **Methods Mol Biol** 2016; 1358:303-16 Humana Press Inc., Totowa, NJ
2. [Qian SB](#), Patterson C. Up and down: CHIP-regulated stress response. Cell Stress Proteins. **Protein Reviews** (2007) Springer, New York, NY
3. [Qian SB](#), Bennink JR, Yewdell JW. Quantitating defective ribosome products. Ubiquitin-proteasome protocols. **Methods Mol Biol** 2005; 301:271-281 Humana Press Inc., Totowa, NJ
4. [Qian SB](#). Molecular biology of antigen presentation and immune recognition. **Cell and Molecular Biology in Medicine**. 2nd Ed. 2003; 681-701 Science Press, Beijing, P.R.China

INVITED & SELECTED ORAL PRESENTATIONS

1. Invited speaker, *Translational control of heat shock response*. **Gordon Research Conference: Translation Machinery in Health and Disease**. Galveston, TX, March, 2017
2. Invited speaker, *Translational control in stress response: from ribosomes to mRNA*. **University of Rochester**, Rochester, NY. October 2016
3. Invited speaker, *m6A-mediated cap-independent translation: scope and mechanism*. **RNA modifications and epitranscriptomics conference**. University of Chicago. Chicago, IL, September, 2016
4. Selected speaker, *m6A-mediated cap-independent translation: scope and mechanism*. **Cold Spring Harbor Laboratory Meeting: Translational Control**. Cold Spring Harbor, NY, September, 2016

5. Invited speaker, *Translational control in stress response: from ribosomes to mRNA*. **University of Georgia**, Athens, GA. April 2016
6. Invited speaker, *Translational control in stress response: from ribosomes to mRNA*. **Indiana University School of Medicine**, Indianapolis, IN. April 2016
7. Invited speaker, *Translational control in stress response revealed by ribosome profiling*. **National Institutes of Health**, NICHD, Bethesda, MD. May 2015
8. Invited speaker, *Regulation of gene expression by alternative translation*. *Translational Control: From Basics to Cancer*. **Génopolys**, Montpellier, France, April 2015
9. Invited speaker, *Decoding translational control by ribosome profiling*. **Zhejiang University Medical School**, Hangzhou, Zhejiang, P. P. China, April 2015
10. Invited speaker, *Translational control in stress response revealed by ribosome profiling*. Department of Cell Biology Seminar, **Duke University**, Durham, NC, September, 2014
11. Selected speaker, *Quantitative profiling of initiating ribosomes in vivo*. **Cold Spring Harbor Laboratory Meeting: Translational Control**. Cold Spring Harbor, NY, September, 2014
12. Invited speaker, *Decipher alternative translation by quantitative profiling of initiating ribosomes*. **EMBO Workshop: Recoding: Reprogramming genetic decoding**, Killarney, Ireland, May, 2014
13. Selected speaker, *Translational control of chaperone biosynthesis via stress ribosomes*. **Cold Spring Harbor Laboratory Meeting: Molecular Chaperones & Stress Responses**. Cold Spring Harbor, NY, May, 2014
14. Invited speaker, *Monitoring translational control using real-time ribosome profiling*. Department of Cell Biology Seminar, **Yale University**, New Haven, CT, April, 2014
15. Invited speaker, *Translational control in gene expression: from nutrients to ribosome*. *Animal Physiology and Biochemistry*, **Nanjing Agricultural University**, Nanjing, P. R. China, December, 2013
16. Invited speaker, *Nutrient signaling in protein homeostasis: increase in protein quantity at the expense of quality*. **Gordon Research Conference: Biology of Aging**. Lucca, Italy, August, 2013
17. Selected speaker, *Linking Nutrient signaling and protein homeostasis in Growth and Aging*. **EMF Colloquium on the Biology of Aging**. Woods Hole, MA, August, 2013
18. Selected speaker, *Discovering Stress Ribosome in Mammalian Cells*. **Gordon Research Conference: Stress Proteins in Growth, Development & Disease**. West Dover, VT, July, 2013
19. Invited speaker, *Translational control in gene expression: from nutrients to ribosome*. Microbiology and Immunology Seminar, **Cornell University**, Ithaca, NY, December, 2012
20. Selected speaker, *Deciphering translational re-programming using high-resolution ribosome profiling*. **Cold Spring Harbor Laboratory Meeting: Translational Control**. Cold Spring Harbor, NY, September, 2012
21. Invited speaker, *Translational control in gene expression: from nutrients to ribosome*. VERGE Seminar, **Cornell University**, Ithaca, NY, May, 2012
22. Invited speaker, *Co-translational response to proteotoxic stress by early ribosome pausing*. **2011 ASCB Annual Meeting**, Denver, CO. December, 2011
23. Invited speaker, *Linking Nutrient Signaling and Protein Homeostasis in Growth and Aging*. **The Institute of Nutritional Sciences, Chinese Academy of Sciences**, Shanghai, China. October 2011
24. Selected speaker, *Co-translational response to proteotoxic stress by chaperone-controlled ribosome dynamics*. **Cold Spring Harbor Laboratory Asia Meeting: Protein Homeostasis in Health and Diseases**. Suzhou, China, September, 2011
25. Invited speaker, *Linking Nutrient Signaling and Protein Homeostasis in Growth and Aging*. **The Buck Institute for Research on Aging**, Novato, CA. September 2011
26. Selected speaker, *Co-translational response to proteotoxic stress by chaperone-controlled ribosome dynamics*. **Gordon Research Conference: Stress Proteins in Growth, Development and Diseases**. Lucca, Italy, July, 2011

27. Selected speaker, *Chaperone-mediated hierarchical control in targeting misfolded proteins to aggresome*. **FASEB Summer Research Conference: The Basic Origins and Medical Consequences of Protein Aggregation**. Snowmass Village, Colorado, June, 2011
28. Invited speaker, *Genome-wide analysis of ribosome dynamics and mRNA translation*, **National Institutes of Health, NIAID**, Bethesda, MD. September 2010
29. Invited speaker, *Chaperone stress in growth and aging*. Biomedical Sciences Departmental Seminar, School of Veterinary Sciences, **Cornell University**, Ithaca, NY, March, 2010
30. Invited speaker, *Lost in translation: a tale of protein birth and protein death*. Molecular Biology & Genetics Seminar, Department of Molecular Biology and Genetics, **Cornell University**, Ithaca, NY, March, 2010
31. Selected speaker, *Chaperone-regulated mTOR signaling links protein quality and quantity control*. **Gordon Research Conference: Stress Proteins in Growth, Development and Diseases**. Proctor Academy, New Hampshire, June, 2009
32. Selected speaker, *Engineering co-chaperone ubiquitin ligase CHIP*. **Cold Spring Harbor Laboratory Meeting: The Ubiquitin Family**. Cold Spring Harbor, NY, April, 2009
33. Invited speaker, *Sensing nutrients to growth: the role of chaperone network in mTOR signaling*. Molecular Biology & Genetics Seminar, Department of Molecular Biology and Genetics, **Cornell University**, Ithaca, NY, October 2008
34. Invited speaker, *Engineering ubiquitin ligase*. Human & Molecular Nutrition Seminar, Division of Nutritional Sciences, **Cornell University**, Ithaca, NY, October 2008
35. Special Seminar, Section of Comparative Medicine, **Yale University** School of Medicine, New Haven, CT, April 2008
36. Special Seminar, Department of Biochemistry and Molecular Biology, **Louisiana State University** Health Sciences Center, Shreveport, LA, February 2008
37. Special Seminar, Ben May Department for Cancer Research, **University of Chicago**, Chicago, IL, February 2008
38. Molecular recognition and bioinformatics special seminar, Department of Biochemistry, **SUNY Buffalo**, Buffalo, NY, January 2008
39. Special Seminar, Institute for Diabetes, Obesity and Metabolism, **University of Pennsylvania** School of Medicine, Philadelphia, PA, January 2008
40. Special Seminar, Department of Physiology, **University of Pennsylvania** School of Medicine, Philadelphia, PA, January 2008
41. Special Seminar, Division of Nutritional Sciences, **Cornell University**, Ithaca, NY, December 2007
42. Special Seminar, Department of Physiology, **University of Texas Southwestern Medical Center**, Dalas, TX, November, 2007
43. Special Seminar, Department of Molecular Medicine, **Wake Forest University** School of Medicine, Winston-Salem, NC, November, 2007
44. Invited speaker, *Chaperoning mTOR: linking protein homeostasis in insulin signaling*. Cell and Developmental Biology Seminar, Department of Cell and Developmental Biology, **University of North Carolina** at Chapel Hill, Chapel Hill, NC. October 2007
45. Special Seminar, Department of Genetics & Complex Diseases, **Harvard University** School of Public Health, Boston, MA, June, 2007
46. Special Seminar, Cell Biology Program, **Sloan Kettering Institute** Cancer Center, New York, NY, March, 2007
47. Invited speaker, *A dynamic mechanism of protein ubiquitination*. Cell and Developmental Biology Seminar, Department of Cell and Developmental Biology, **University of North Carolina** at Chapel Hill, Chapel Hill, NC. October 2006
48. Selected Speaker, *Substrate-dependent autoregulation of Hsp70 by CHIP-regulated autocatalysis*. **Gordon Research Conferences**, New Port, RI, July 2005
49. Invited speaker, *The CHIP story*. **National Institutes of Health**, NIAID, Bethesda, MD. May 2005

PATENT

1. GTI-Seq: A Genome Wide Translational Initiation Assay (5611-02-US, LR Ref. 29543.6980)
Inventor: Shu-Bing Qian, Sooncheol Lee, Botao Liu

RESEARCH SUPPORT**ACTIVE SUPPORT**

- 2016 – 2021 **HHMI Faculty Scholar Award** (55108556)
Role: PI (1.2 calendar months) direct costs (5 years) = \$ 1,250,000
Title: Re-programming of mRNA translation: from mechanisms to disease
- 2014 – 2017 **DOD Idea Development Award** (W81XWH-14-1-0068)
Role: PI (1.2 calendar months) direct costs (3 years) = \$ 425,000
Title: Defining Translational Re-programming in Tuberous Sclerosis Complex
- 2013 – 2018 **NIH R01** (1R01AG042400-01A1)
Role: PI (1.2 calendar months) direct costs (5 years) = \$ 1,025,000
Title: Linking Nutrient Signaling and Protein Homeostasis in Mammalian Aging

WITHDRAWN SUPPORT

- 2013 – 2018 **NSF CAREER Award**
Role: PI (1.2 calendar months) direct costs (5 years) = \$ 500,000
Title: Deciphering Proteome Diversity and Complexity by High-Resolution Ribosome Profiling

FINISHED SUPPORT

- 2014 – 2016 **NIH R21** (1R21AI105520-01A1)
Role: Co-PI (0.5 calendar months) direct costs (2 years) = \$ 150,000
Title: Studies of the Global Translational Response to Human Virus Infection
- 2014 **CU-WCMC Seed Grant** (2015)
Role: Co-PI (0.5 calendar months) direct costs (1 year) = \$ 32,500
Title: Studies of the Global Translational Response to Human Virus Infection
- 2009 – 2014 **NIH Director's New Innovator Award** (1DP2 OD006449-01)
Role: PI (3.0 calendar months) direct costs (5 years) = \$ 1,500,000
Title: Engineering Ubiquitin Ligases to Investigate Protein Aggregation and Neurodegeneration
- 2011 – 2013 **DOD Exploration-Hypothesis Development Award** (W81XWH-11-1-0236)
Role: PI (0.6 calendar months) direct costs (2 years) = \$ 100,000
Title: Genome-Wide Analysis of Translational Control in Tuberous Sclerosis Complex
- 2009 – 2013 **Ellison Medical Foundation New Scholar Award** (AG-NS-0605-09)
Role: PI (1.2 calendar months) direct costs (4 years) = \$ 400,000
Title: The Role of Stress Signaling in mTOR Signaling and Aging
- 2009 – 2010 **NBTC Integrated Research Grant** (NCB12)
Role: PI (1.2 calendar months) direct costs (1 year) = \$ 50,000
Title: Functional Nano-Molecules: Engineering Ubiquitin Ligases to Target Disease Proteins
- 1998 – 2001 **China National Science Foundation** (# 39800132) direct costs (3 years) = RMB \$ 120,000
Title: Isolation of Antigenic Peptides Using Green Fluorescent Protein (GFP) Tagged Soluble Class I MHC Molecules
- 1999 – 2000 **China Educational Bureau Foundation** (# 98BJ01) direct costs (1 year) = RMB \$ 50,000
Title: Preparation and Application of Genetically Engineered Human Hepatoma and Gastroma Cells Secreting Interleukin-2

SUPERVISED SUPPORT

- 2014 – 2016 **AHA Postdoc Fellowship** (14POST20100022)

	Awardee: Mridusmita Saikia	direct costs (2 years) = \$ 100,000
2013 – 2014	Cornell CVG Scholar Award Awardee: Botao Liu	direct costs (2 years) = \$ 20,000

TRAINING AND ADVISING

POSTDOC FELLOWS

2016 – present	Xiao-Min Liu , Ph.D. Role: supervisor
2015 – present	Yuanhui Mao , Ph.D. Role: supervisor
2014 – present	Leiming Dong , Ph.D. Role: supervisor
2014 – 2016	Saisai Wei , Ph.D. Role: supervisor
2013 – 2016	Mridusmita Saikia , Ph.D. (current position: Baker Institute) Role: supervisor
2013 – present	Jun Zhou , Ph.D. Role: supervisor
2013 – present	Ji Wan , Ph.D. Role: supervisor
2012 – 2015	Xiangwei Gao , Ph.D. (current position: Zhejiang University) Role: supervisor
2011 – 2012	Sooncheol Lee , Ph.D. (current position: Harvard University) Role: supervisor
2011 – 2011	Soonhyun Lee , Ph.D. (current position: Harvard University) Role: supervisor
2009 – 2012	Yan Han , Ph.D. (current position: Shanghai Jiaotong University) Role: supervisor
2008 – present	Xingqian Zhang , Ph.D. Role: supervisor

GRADUATE STUDENTS

2015 – present	Wendy Beck , BMCB graduate student Role: Committee Member (minor)	
2016 – present	Erica (Xin) Shu , NS graduate student Role: Committee chair	Expected graduation: 2018
2015 – present	Longfei Jia , Visiting graduate student Role: advisor	
2015 – present	Yifei Gu , NS graduate student Role: Committee chair	Expected graduation: 2019
2014 – present	Peter Sullivan , BMCB graduate student Role: Committee Member (minor)	
2013 – 2014	Juliana Magdalon , Visiting graduate student Role: advisor	
2013 – 2015	Kristeen Pareja , Pharmacology graduate student Role: Committee Member (minor)	
2011 – 2016	Ryan A. Coots , NS graduate student Role: Committee chair	Graduated: 2016
2011 – 2016	Kevin Mazor , NS graduate student Role: Committee Member (minor)	
2010 – 2015	Botao Liu , G&D graduate student Role: Committee chair	Graduated: 2014
2009 – 2013	Crystal Conn , G&D graduate student	

2009 – 2012	Role: Committee chair Hong Chen , Nutrition graduate student	Graduated: 2013
2009 – 2012	Role: Committee Member (minor) Yingying Zhao , BMCB graduate student	Graduated: 2012
	Role: Committee Member (minor)	Graduated: 2012

UNDERGRADUATE STUDENTS

2015 – 2016	Xin Yuan , Biology Major Role: Research Advisor	BIOG 4990
2015 – 2016	Yunqi Li , HBHS Major Role: Research Advisor	NS 4010
2015 – 2016	Ian Lei Chan , HBHS Major Role: Research Advisor	
2014 – present	Holly Deng , HBHS Major Hunter Rawlings III College Presidential Research Scholar	NS 4010
2013 – 2014	David Ko , Biology Major Role: Research Advisor	
2013 – 2014	Joo Won Lee , HBHS Major Role: Research Advisor	
2012 – 2013	Blake Barr , HBHS Major Role: Research Advisor	NS 4010
2012 – 2014	Hyunsoo Lim , Biology Major Role: Research Advisor	BIOG 4990
2012 – 2014	Elizabeth Ferrie , Biology Major (honors research) Role: Research Advisor	BIOG 4990
2011 – 2012	Esther Kwon , Nutrition Major Role: Research Advisor	NS 4010
2011 – 2012	Ivor (Xiaoxing) Shen , Nutrition Major Role: Research Advisor	NS 4010
2010 – 2011	Kathleen Phung , HBHS Major Role: Research Advisor	
2009 – 2012	Hae Jin Kang , HBHS Major Hunter Rawlings III College Presidential Research Scholar Role: Research Advisor	NS 4010 NS 4010
2009 – 2012	Haerin Palk , HBHS Major (honors research) Role: Research Advisor	NS 4010
2009 – 2011	Josephine Lee , HBHS Major Role: Research Advisor	NS 4010
2009 – 2010	Jessie Luk , HBHS Major Role: Research Advisor	NS 4010
2008 – 2012	Vincent Yeung , Biology Major Role: Research Advisor	BIOG 4990
2008 – 2009	Najah Levers , Biology Major Hunter Rawlings III College Presidential Research Scholar Role: Research Advisor	NS 4010
2006 – 2008	Lauren Waldren , Biology Major University of North Carolina Role: Research Advisor	