Tejas Baba C. Kalastavadi, PhD

Assistant Professor
Department of Studies in Genetics and Genomics
University of Mysore, Manasagangotri, Mysore- 570006

Research Interests:
My research focuses on broadly understanding the mechanisms of protein homeostasis in health and disease. We are particularly interested in the role that AAA+ proteins have in identifying and resolving misfolded and aggregated proteins in cells.

EDUCATION

Washington University School of Medicine, St. Louis 2003-2010
Ph.D., Molecular Genetics and Genomics
Thesis: Mechanism of yeast prion protein aggregation and strain formation.

University of California, Davis, CA 1999-2003
B.S, (**Highest Honors**), Major: Genetics
Honors Thesis: Identification of a novel mucin gene MUC19 in humans and mice.

Sri Ramakrishna Vidyashala, Mysore, Karnataka 1997-1999
P.U.C (PCMB**): 88.13%**

Sri Ramakrishna Vidyashala, Mysore, Karnataka 1994-1997
SSLC: **89.92%**

RESEARCH EXPERIENCE

Post-doctoral associate, MIT/Howard Hughes Medical Institute, Cambridge, MA 2010-present
Advisor: Dr. Tania A. Baker
Research interest: Role of sHSPs and AAA+ proteases in protein quality control.

Doctoral Research, Washington University, St. Louis, MO 2003-2010
Advisor: Dr. Heather L. True-Krob
Thesis: Mechanism of yeast prion protein aggregation and strain formation.

Undergraduate Research Assistant, University of California, Davis, CA 1999-2003
Advisor: Dr. Reen Wu
Identification and characterization of a novel mucin gene MUC19

PUBLICATIONS

Kalastavadi T and Baker, TA (in preparation). Characterization of the ClpB AAA+ disaggregase from *Mycobacterium tuberculosis*.

Kalastavadi T, Brown B, Vieux, EF, Chen J, and Baker, TA (in preparation). A novel mechanism for substrate discrimination by the AAA+ Lon protease

Kalastavadi T and True H.L. (2010). Analysis of the [RNQ^{+}] prion suggests common mechanism for the generation of prion strains. J Biol. Chem. 2010, 285, 20748-55.

True HL, **Kalastavadi T**, Tank EM. (2008). Insights into intragenic and extragenic effectors of prion propagation using chimeric prion proteins. Prion. 2008 Apr;2(2):45-7.

Kalastavadi T and True H.L. (2008). Prion protein insertional mutations increase aggregation propensity but not fiber stability. BMC Biochemistry 2008, 9:7 (**designated: Highly Accessed**)

Chen Y, Zhao YH, **Kalastavadi TB**, Hamati E, Nehrke K, Le AD, Ann DK, Wu R. (2004). Genome-wide search and identification of a novel gel-forming mucin MUC19/Muc19 in glandular tissues. Am J Respir Cell Mol Biol. 2004 Feb;30(2):155-65.

PROFESSIONAL ACTIVITES

Founding VP of MIT Post-Doctoral Association, MIT, Cambridge, MA	2012
Member, Karnataka Association for Advancement of Science, Bangalore, Karnataka	2012
Senior Resident Advisor, Student Housing, University of California, Davis CA	2003
Ad hoc reviewer for Biochemistry Journal, ACS publication	

HONORS and AWARDS

Best Talk Award, Washington University Molecular Genetics and Genomics Retreat	2007
Best Poster Award, Washington University Molecular Genetics and Genomics Retreat	2006
Lucille P. Markey Special Emphasis Pathway in Human Pathobiology	2006
Citation, Outstanding performance in academics and an independent research project	2003
Dean's Honor List	2003
Phi Beta Phi	2002
Phi Sigma Honor Society	2002
Golden Key Honor Society	2002
National Society for Collegiate Scholars	2000

RECENT PRESENTATIONS

Oral

Kalastavadi T and Baker T.A "Interplay between the AAA+ Lon protease and substrates: New insights into substrate selection" Protein Homeostasis in Health and Disease, CSHL, NY (2016)

Kalastavadi T and Baker T.A "Interplay between the AAA+ Lon protease and substrates: New insights into substrate selection" Protein Society Symposium Young Investigator Speaker, San Diego, CA (2014)

Kalastavadi T and Baker T.A "Protein folding, unfolding and quality control: Lessons from bacteria" KAAS invited lecture, MLA College, Bangalore, India (2013)

Kalastavadi T and Baker T.A "Interplay between the AAA+ Lon protease and sHsps: New insights into control of degradation" Gordon Research Conference on Microbial Stress Response, South Hadley, MA (2012)

Kalastavadi T and True H.L. "Mechanism of yeast prion aggregation and strain formation" KAAS invited lecture. Bangalore University, Bangalore, India (2012)

Kalastavadi T and True H.L. "Physical basis for prion strains." Molecular Cell Biology Program Retreat. Cedar Creek, MO (2008)

Kalastavadi T and True H.L. "Prion protein insertional mutations increase aggregation propensity but not fiber stability." Molecular Genetics and Genomics Program Retreat. Cedar Creek, MO (2007)

Kalastavadi T and True H.L. “Development of a standardized biochemical purification protocol to isolate prion protein aggregates to identify novel yeast prions.” Prion Biology CSHL/Wellcome Trust Conference, Hinxton, UK (2005)

Poster

Kalastavadi T and True H.L. “Unraveling the secrets of prion strains and infectivity: Clues from the yeast prion [*RNQ*$^{+}$].” 4th Annual Symposium on Translational Neuroscience, Saint Louis, MO (2010)

Kalastavadi T and True H.L. “Prion protein insertional mutations increase aggregation propensity of chimeric yeast-mammalian prion protein.” 6th Leonard Berg Symposium: Novel Therapies for Protein Misfolding Disorders. St. Louis, MO (2007)

Kalastavadi T and True H.L. “*IN VITRO* characterization of PrP octapeptide repeats expansion in the context of Sup35NM protein” 12th Midwest Stress Response and Molecular Chaparone Meeting. Northwestern University, Evanston, Il (2007)

Kalastavadi T and True H.L. “Prion protein insertional mutations increase aggregation propensity of chimeric yeast-mammalian prion protein.” Molecular Genetics and Genomics Program Retreat. Cedar Creek, MO (2006)

Shah, N., Filkov, V., Liao, Y., and Kalastavadi, T. Visual Integration of Gene Expression and Protein-DNA Interaction Data. International Conference on Systems Biology, Saint Louis, MO (2003)