Jyoti R. Misra, PhD

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EDUCATION

Ph.D.	**University of Utah School of Medicine**, Human Genetics, 2013
DVM	**Orissa University of Agriculture and Technology**, Veterinary Medicine with **highest honors** of the University, 2004

RESEARCH INTEREST

In multicellular organisms, different tissues grow to a characteristic final size and shape and this is achieved by precise coordination of growth and morphogenesis during development. Misregulation of growth and morphogenesis during development results in structural birth defects that last into adulthood and often lead to organ malfunction. My research uses an interdisciplinary approach to understand how organ size and shape is so precisely controlled during development. We employ genetics, genomic engineering and quantitative imaging to understand how the Hippo signaling pathway and the evolutionarily conserved protocadherins control organ size and shape using the fruit fly, *Drosophila melanogaster* as a model system.

PROFESSIONAL EXPERIENCE

2019-present	Assistant Professor, Department of Biological Sciences, University of Texas at Dallas.
2016-2019	Research Associate, Kenneth Irvine Lab, Rutgers University. **NIH Pathway to Independence Award (K99/R00)**
2013-2016	HHMI Postdoctoral Associate, Kenneth Irvine Lab, Howard Hughes Medical Institute /Rutgers University
2007-2013	Graduate student, University of Utah School of Medicine, Department of Human Genetics, Dr. Carl Thummel lab Dissertation: Transcriptional regulation of xenobiotic detoxification in *Drosophila.*
2004-2007	Graduate Research Scholar, Tata Institute of Fundamental Research (TIFR), India. Department of Biological Sciences, Dr. R. Mittal lab Department of Chemical Sciences, Dr. R.V. Hosur lab (Collaborator) Project: NMR based structure determination of *Drosophila* SUMO.

PUBLICATIONS

Misra JR & Irvine KD. Early girl is a novel component of Fat-Hippo signaling network. ***PLOS Genetics.*** *2019*

Misra JR & Irvine KD. The Hippo signaling network and its biological functions. ***Annual Reviews of Genetics***. 2018; 52:65-87.

Misra JR & Irvine KD. Vamana couples Fat-signaling to the Hippo pathway. ***Developmental Cell.*** 2016; 39:254-266

Misra JR, Lam G, Thummel CS. Constitutive activation of the Nrf2/Keap1 pathway in the insecticide-resistant strains of *Drosophila.* ***Insect Biochem. & Mol. Biol****.* 2013; 43: 1116-1124.

Misra JR, Horner MA, Lam G, Thummel CS. Transcriptional regulation of xenobiotic detoxification in *Drosophila.* ***Genes & Development****.* 2011; 25(17): 1796-1806.

Kumar D*, **Misra JR***, Kumar A, Chugh J, Sharma S, Hosur RV. NMR-derived solution structure of SUMO from *Drosophila melanogaster* (dSmt3)*.* ***Proteins.*** 2009; 75(4): 1046-50 *** Equal contribution**.

Chugh J, Sharma S, Kumar D, **Misra JR**, Hosur RV. Effect of a single point mutation on the stability, residual structure and dynamics in the denatured state of GED: relevance to self-assembly. ***Biophysical Chemistry*****.** 2008; 137(1): 13-8

Kumar D, Kumar A, **Misra JR**, Chugh J, Sharma S and Hosur RV. ^{1}H, ^{15}N, ^{13}C resonance assignment of folded and 8 M urea-denatured state of SUMO from *Drosophila melanogaster.* ***Biomolecular NMR Assignment.*** 2008; 2(1): 13-5

HONORS AND AWARDS

2019	Rising STARs Award, University of Texas System Board of Regents
2017	**K99/R00 Pathway to Independence Award (NIH)**
2017	**Delill Nasser award** for Professional Development (Genetics Society of America)
2016	The Allied Genetics Conference Travel Award (Genetics Society of America)
2012	DST-INSPIRE Faculty Fellowship. Department of Science and Technology, Government of India. (Declined)
2012	Thematic Best Poster award in the Gene Regulation, Annual Meeting of the American Society for Biochemistry and Molecular Biology (ASBMB).
2012	University of Utah Graduate School Travel Assistance Award
2009	University of Utah Graduate School Travel Assistance Award
2004-2007	Tata Institute of Fundamental Research (TIFR) Research Scholarship
2004-2007	TIFR Alumni Association Fellowship for Career Development
2004	Summer Research Fellowship-Indian Academy of Sciences
2004	University Gold Medal for the best graduate of Veterinary Science
2004	Basudev Prasad Modi Memorial Gold Medal for the best graduate of OUAT
2004	Dr. Dharmananda Mishra Memorial Gold Medal for the best graduate of Veterinary Science
2004	Dr. Guruprasad Mohanty Memorial Gold Medal for securing highest GPA in Veterinary Science
2004	Dr. Ganesh Biswal Memorial Gold Medal for securing highest GPA in Bacteriology, Virology, Immunology, Pathology and Parasitology
2004	Dr. J.N.Prusty Memorial Gold Medal for securing first position in Anatomy and standing first in Veterinary Science
2004	Dr. B.Samal Memorial Gold Medal for securing highest GPA in Animal Nutrition, Animal Breeding & Genetics and Animal Production
1995-2004	National Scholarship, Department of Higher Education, Govt. of India
1998-2004	OUAT-University Merit Scholarship
1998-2004	Dr. Radhanath Rath Trust Scholarship
1998-2004	Sahu Jain Trust Fellowship

CONFERENCE PRESENTATIONS

2018 Gordon Research Conference on Cell polarity and signaling
Interplay of ubiquitination and palmitoylation in regulation of Fat-Hippo signaling
2018 Annual Conference of the American Society for Cell Biology
Interplay of ubiquitination and palmitoylation in Organ size control.
2017 Annual *Drosophila* Research Conference
Ubiquitylation and palmitoylation coordinately regulate trafficking of Dachs and Vam
2016 The Allied Genetics Conference.
Vamana couples Fat signaling to the Hippo pathway.
2015 HHMI science meeting:
Regulation of Hippo signaling by two novel regulators, Vamana and Early girl.
2014 Annual Conference of the American Society for Cell Biology.
Vamana and Early girl, two novel regulators of the Hippo signaling pathway.
2013 Annual *Drosophila* Research Conference,
A novel genetic screen to identify new regulators of the Hippo signaling pathway.
2012 Annual Meeting of the American Society for Biochemistry and Molecular Biology (ASBMB)
Constitutive activation of the Nrf2/Keap1 pathway in the insecticide-resistant strains of *Drosophila.*
2012 Annual *Drosophila* Research Conference
CncC plays a central role in transcriptional regulation of xenobiotic detoxification in *Drosophila*.
2009 Annual *Drosophila* Research Conference
Transcriptional regulation of xenobiotic detoxification in *Drosophila*.

INVITED TALKS

"Novel regulators of growth and morphogenesis" State University of New York, Albany, February 11, 2018
"Novel regulators of growth" Hormel Institute" University of Minnesota, July 10, 2018
"Novel regulators of organ size control" Department of Physiology, Wayne State University School of Medicine
"Novel mechnaisms of growth control" Fels Institute of Cancer Research, Temple University School of Medicine

TEACHING EXPERIENCE

Spring 2020 BIOL5410 Biochemistry (Graduate)
Spring 2020 BIOL6VO2 Art of Scientific Presentation (Graduate)
Fall 2019 Guest Instructor- Bio5420-Molecular Biology- University of Texas at Dallas
Fall 2018 Guest Lecturer- Graduate course in Cell Biology, Rutgers University.
Fall 2008 Teaching Assistant, BIO2030-Genetics, University of Utah.

PROFESSIONAL MEMBERSHIP

Genetic Society of America
Society for Developmental Biology
American Society for Cell Biology

PROFESSIONAL SERVICE

Adhoc reviewer for:
Development
Developmental Biology

Developmental Cell
Genetics
PLOS One
Insect Biochemistry and Molecular Biology
Insect Science
Associate Faculty member of F1000 Prime (http://f1000.com/prime/thefaculty/member/499999771097565452)

FUNDING SUPPORT

NIH/NICHD K99/R00 Pathway to independence award

4R00HD092553-03	09/01/2019-08/31/2022 ($249,000/Year, $747,000 total)
5K99HD092553-02	08/01/2018-07/31/2019 ($109,520)
1K99HD092553-01	08/01/2017-07/31/2018 ($109,520)