

Vishal H. Oza

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Education

University of Alabama

Ph.D., Biological Sciences, Dec 2019 (expected)

Bangalore University

MSc., Biotechnology, 2007

Bioinformatics Institute of India

PG Diploma, Pharmacoinformatics, 2006

Saurashtra University

BSc., Biotechnology, 2005

Dissertation

“Constructing a graphical model of the *Drosophila* metabolome”

My dissertation focuses on using Probabilistic graphical models, particularly Bayesian networks to identify the network structure of the *Drosophila melanogaster* metabolome from high dimensional untargeted metabolomics data and connect it to the genome and proteome, thus developing a multi-layer “omics” network for *Drosophila*

Work

Reliance Life Sciences

Database Programmer, Clinical Informatics, 2007-2010

Teaching

Dept. of Biological Sciences, University of Alabama

Instructor, Laboratory Biology I and II, 2014-2018

Instructor, Microbiology and Man, 2019

Awards and Fellowships

Graduate School Writing Fellowship

University of Alabama, Tuscaloosa, USA, 2019 (Award amount: \$31,314)

Graduate School Research and Travel Fund

University of Alabama, Tuscaloosa, USA, 2014-2019 (Award amount: \$4000)

Annual Southeastern Pediatric Research Conference Travel Award

Annual Southeastern Pediatric Research Conference, Atlanta, USA, 2019

Metabolomics Society Travel Award

Columbus, USA, 2018 (Award amount: \$500)

BioFest Student Research Poster Colloquium Award

Second place, University of Alabama, Tuscaloosa, USA, 2018 (Award amount: \$500)

Metabolomics Society Early Career Travel Award

San Francisco, USA, 2015 (Award amount: \$500)

Publications

Oza, V.H.; Aicher, J.K.; Reed, L.K. Random Forest Analysis of Untargeted Metabolomics Data Suggests Increased Use of Omega Fatty Acid Oxidation Pathway in *Drosophila melanogaster* Larvae Fed a Medium Chain Fatty Acid Rich High-Fat Diet. *Metabolites* 2019, 9, 5.

Oza, V.H.; Reed, L.K. Constructing a graphical model of *Drosophila melanogaster* metabolome from untargeted metabolomics data using Bayesian networks. *In prep.*

Oza, V.H.; Reed, L.K. FlyNet – a graphical database of the *Drosophila melanogaster* multiome. *In prep.*

Presentations

Vishal H. Oza “Basics of Network Theory, Data Analytics Club, University of Alabama, Tuscaloosa, 2019

Vishal H. Oza, Laura K. Reed “Constructing a graphical model of *Drosophila* metabolome”, Invited talk, Christ College, Rajkot, India, 2018

Vishal H. Oza “Clinical Data Standards”, Annual meeting, Reliance Life Sciences, Bangalore, India, 2010

Vishal H. Oza “Darwin 200- A tribute to Charles Darwin”, Annual meeting, Reliance Life Sciences, Bangalore, India, 2009

Vishal H. Oza “Medicines of the Future”, Annual meeting, Reliance Life Sciences, Bangalore, India, 2008

Vishal H. Oza “Human Genome Project and its impact on Alzheimer’s Disease”, Graduate seminar, Bangalore University, India, 2007

Vishal H. Oza “Gene Regulation in Prokaryotes”, Graduate seminar, Bangalore University, India, 2006

Posters

Vishal H. Oza, Laura K. Reed “Strategies to Analyze High Dimensional Untargeted Metabolomics Data”, Annual Southeastern Pediatric Research Conference, Atlanta, USA, 2019

Vishal H. Oza, Laura K. Reed “Constructing a graphical model of *Drosophila* metabolome” , NetSci (Network Science Society), Burlington, USA, 2019

Vishal H. Oza, Laura K. Reed “Constructing a graphical model of *Drosophila* metabolome”, 16th Annual Conference of the Midsouth Computational Biology & Bioinformatics Society, Birmingham, USA, 2019

Vishal H. Oza, Laura K. Reed, “Random Forest and Gaussian Graphical Model analysis of untargeted metabolomics data reveals strong dietary effect but little association with obesity phenotypes in the metabolome of genetically diverse *Drosophila melanogaster* larvae”, 2nd Annual Ohio Mass Spectrometry & Metabolomics Symposium, Columbus, USA, 2018

Vishal H. Oza, Laura K. Reed, “Constructing a graphical model of *Drosophila* metabolome”, 58th Annual Drosophila Research Conference, San Diego, USA, 2017

Vishal H. Oza, Laura K. Reed, “Metabolomics approach to understand the effect of genotype and diet on metabolic profile of *Drosophila*”, 11th Annual International Conference of Metabolomics Society, San Francisco, USA, 2015

Vishal H. Oza, Laura K. Reed, “Metabolomics approach to understand the effect of genotype and diet on metabolic profile of *Drosophila*”, 56th Annual Drosophila Research Conference, Chicago, USA, 2015

Technical Skills

R, Python, L^AT_EX

Outreach Activities

Undergraduate student advising, University of Alabama, 2018

Volunteer, Biology dept. outreach, Homecoming Parade,

University of Alabama, 2016

Student Organizer, Research Symposium, SRN Adarsh College,

Bangalore University, 2006

Student Organizer, Research Symposium, Christ College,

Saurashtra University, 2004

Professional Societies

Genetics Society of America, 2014 - Present

International Metabolomics Society, 2014 - Present

Midsouth Computational Biology & Bioinformatics Society, 2019 - Present

American Association for the Advancement of Science, 2019 - Present

References

Dr. Laura K. Reed (PhD Advisor)

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Dr. Christina Staudhammer

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Dr. Kevin Kocot

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