

# Vishal H. Oza

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University of Alabama  
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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<sup>A</sup>T<sub>E</sub>X

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)  
Dept. of Biological Sciences,  
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Dr. Christina Staudhammer  
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Dr. Kevin Kocot  
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