

RESEARCH PROFILE

Contact Information

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Department of Agriculture & Natural Resources
147 Ag Annex
Delaware State University
Dover, DE 19901

cars.desu.edu/departments/agriculture-natural-resources

Doctoral Degree

Plant Science, Oklahoma State University

Research Interest Area(s)

Genomics

Germplasm improvement breeding of small fruits (blueberries, strawberries, blackberries) and some specialty vegetable crops

Integration of classical plant breeding and modern genomic tools to improve horticultural and nutraceutical traits

Professional Affiliations

American Society for Horticultural Science (ASHS)

Crop Science Society of America (CSSA)

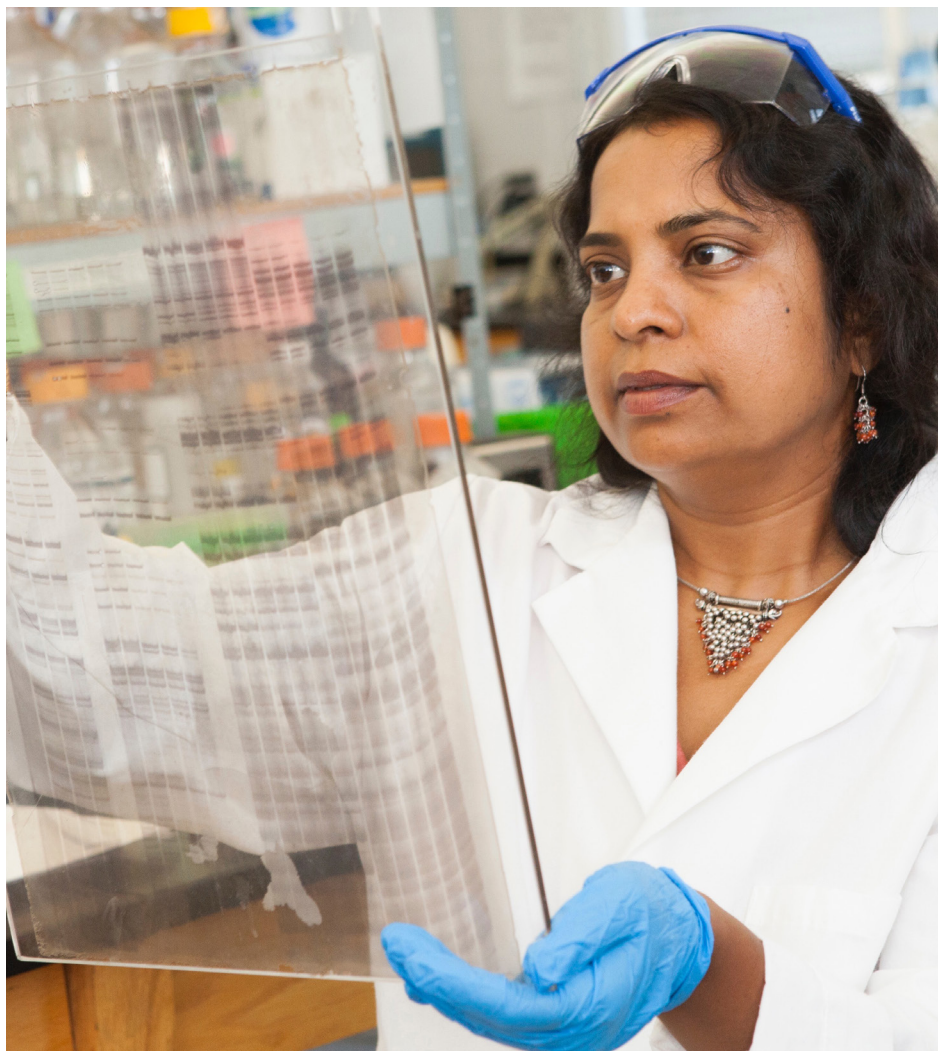
American Association for Advancement of Science (AAAS)

Publications (last three years)

Hayford, Rita Kusi-Appiah, Ayalew Ligaba-Osena, Mayavan Subramani, Adrienne Brown, Kalpalatha Melmaiee, Khwaja Hossain, and Venu Kal Kalavacharla. "Characterization and Expression Analysis of Common Bean Histone Deacetylase 6 during Development and Cold Stress Response." *International Journal of Genomics* 2017 (2017).

Kalpalatha Melmaiee, Michael Anderson, Sathya Elavarthi, Arron Guenzi, and Patricia Canaan. "Transcriptional Analysis of Resistance to Low Temperatures in Bermudagrass Crown Tissues." *PloS one* 10, no. 9 (2015): e0136433.

Kalpalatha Melmaiee, Venu Kal Kalavacharla, Adrienne Brown, Antonette Todd, Yaqoob Thurston, and Sathya Elavarthi. "Quantification and Gene Expression Analysis of Histone Deacetylases in Common Bean during Rust Fungal Inoculation." *International Journal of Genomics* 2015



KALPALATHA MELMAIEE

Assistant Professor

Kalpalatha Melmaiee

Delaware State University

Title and Department: Associate Professor, Dept. of Agriculture and Natural Resources,
Delaware State University, Dover, DE 19901

Professional Background:

Oklahoma State University:	Plant Science (Cell and Molecular Biology)	PhD.
Annamalai University: India:	Genetics and Plant Breeding	M.Sc.,
Andhra Pradesh Agricultural University, India:	Agricultural Sciences	B.Sc.,

Professional Appointments:

August 2020-	Associate Professor: Department of Agriculture and Natural Resources, Delaware State University, Dover, DE
August 2016-2020	Assistant Professor: Department of Agriculture and Natural Resources, Delaware State University, Dover, DE
August 2012-July 2016	Research Scientist: Department of Agriculture and Natural Resources, Delaware State University, Dover, DE
Aug 2008 – July 2012	Post Doctoral Research Associate: Department of Agriculture and Natural Resources, Delaware State University
Dec 2007 – July 2008	Assistant Scientist II: Dept. of Agronomy, Iowa State University, Ames, IA 0011
Feb 2007 – Dec 2007	Post Doctoral Research Associate: Dept. of Biology, University of Northern Iowa, Cedar Falls, IA
Aug 2002 – Dec 2006	Graduate Research Associate: Dept. of Plant & Soil Sciences, Oklahoma State University, Stillwater, OK 74078
May 1999 – Feb 2002 India	Agricultural Officer: Department of Agriculture, Janagam, AP,
Sept 1996 – April 1999	Research Associate: International Crops Research Institute for the Semi –Arid Tropics (ICRISAT) Asia center, Patancheru, India
July 1995 – Aug 1996	Post Graduate Apprentice: National Watershed Management Program, Chittoor, India
Jan 1994 – June 1995	Graduate Research Assistant: Faculty of Agriculture, Annamalai University, Chidambaram, India

Selected Publications: (Blue font student authors)

[Callwood, Jodi](#), Kalpalatha Melmaiee, Krishnanand P. Kulkarni, Amaranatha R. Vennapusa, Diarra Aicha, Michael Moore, Nicholi Vorsa, Purushothaman Natarajan, Umesh K. Reddy, and Sathya Elavarthi. "Differential Morpho-Physiological and Transcriptomic Responses to Heat Stress in Two Blueberry Species." *International Journal of Molecular Sciences* 22, no. 5 (2021): 2481

Kulkarni, Krishnanand P., Nicholi Vorsa, Purushothaman Natarajan, Sathya Elavarthi, Massimo Iorizzo, Umesh K. Reddy, and Kalpalatha Melmaiee. "Admixture Analysis Using Genotyping-by-Sequencing Reveals Genetic Relatedness and Parental Lineage Distribution in Highbush Blueberry Genotypes and Cross Derivatives." *International Journal of Molecular Sciences* 22, no. 1 (2021): 163.

[Biswas, Anju](#), Kalpalatha Melmaiee, Sathya Elavarthi, [Julian Jones](#), and Umesh Reddy. "Characterization of strawberry (*Fragaria* spp.) accessions by genotyping with SSR markers and phenotyping by leaf antioxidant and trichome analysis." *Scientia Horticulturae* 256 (2019): 108561.

[Hayford, Rita Kusi-Appiah](#), Ayalew Ligaba-Osena, Mayavan Subramani, [Adrienne Brown](#), **Kalpalatha Melmaiee**, Khwaja Hossain, and Venu Kal Kalavacharla. "Characterization and Expression Analysis of Common Bean Histone Deacetylase 6 during Development and Cold Stress Response." *International*

Journal of Genomics (2017).

Kalpalatha Melmaiee, Michael Anderson, Sathya Elavarthi, Arron Guenzi, and Patricia Canaan. "Transcriptional Analysis of Resistance to Low Temperatures in Bermudagrass Crown Tissues." *PloS one* 10, no. 9 (2015): e0136433.

Kalpalatha Melmaiee, Venu Kal Kalavacharla, [Adrianne Brown](#), [Antonette Todd](#), [Yaqoob Thurston](#), and Sathya Elavarthi. "Quantification and Gene Expression Analysis of Histone Deacetylases in Common Bean during Rust Fungal Inoculation." *International Journal of Genomics* 2015

Michael Anderson, **Kalpalatha Melmaiee**, Sathya Elivarthi and Arron Guenzi (2012) Gene Expression in Cold Acclimating Bermudagrass Crown. *Turfgrass and Environmental Research Online* 11(1): 1-8.

Synergistic Activities

State Representative- for the State of Delaware in National Plant Breeding Coordinating Committee

Committee Member- Capital School District's Parent and Community-Engagement Committee

Through USDA funded Farm experience program, NSF funded REU and EPSCoR programs, I have mentored more than 45 undergraduate students (summer internships and year long) under my direct supervision

I have coordinated to provide undergraduate research opportunities (to nearly 200 students) in molecular biology, bioenergy, environmental sciences through the above mentioned programs and through NEWBio consortium (<http://ciber.desu.edu/> , www.newbio.psu.edu) during my tenure at DSU.

Some of the students' mentored/co-mentored are listed below

Student name	Time period	Current address
Graduate level		
Lungowa Mulozi	2019-present	Delaware State University
Aicha Diarra	2015- present	Delaware State University
Rosalyn Battle	2017-present	Delaware State University
Byron Manzanero	2019-present	Delaware State University
Jodi Callwood	2017-2019	Delaware State University
Philip Bissiwu	2017-2019	Delaware State University
Anju Biswas	2016-2018	Delaware State University
Rita Kusi appiah	2013-2015	Delaware State University
Undergraduate level		
Wayne Piper	2019-present	Delaware State University
Aditi Muppavaram	2019-present	Delaware State University
Carl Michael James	2018- 2019	Delaware State University
Kierra Johnson	2015-2017	Tuskegee University
Lajune Harris	2013- 2014	Perdue Farms Inc.,
Isaac Fisher	2013-2015	Delaware State University
Jesse Gray	2013	Virginia Union University
Priscilla Rodriguez	2011	University of Puerto Rico
Natalie Kendall	2011	Cheyney University
Elizabeth Fiedler	2010-2014	Delaware State University
Adrianne Brown	2010-2015	Delaware State University