

## RAMAMURTHY MAHALINGAM

Associate Professor  
Biochemistry and Molecular Biology  
Oklahoma State University  
email: [ramamurthy.mahalingam@okstate.edu](mailto:ramamurthy.mahalingam@okstate.edu)



### (a) Professional Preparation

Undergraduate Institution: University of Agricultural Sciences, India Major: Agriculture  
Degree, Year: B.Sc, 1991

Graduate Institution: Clemson University Major: Agronomy Degree, Year: MS, 1994  
Clemson University Major: Genetics Degree, Year: Ph.D, 1998

Postdoctoral Institution: Pennsylvania State University Area: Functional genomics August  
1998- May 2003 (4.5 yrs)

### (b) Appointments

Oklahoma State University, Department of Biochemistry and Molecular Biology, Associate Professor	July 09-
Oklahoma State University, Department of Biochemistry and Molecular Biology, Assistant Professor	July 03 – June 09
Pennsylvania State University, State College. Postdoctoral fellow	August 98 - May 2003
Clemson University, Department of Agronomy, Clemson, South Carolina, Research Assistant.	1992-1998

### (c) i. Publications closely related to the proposed project

1. Michael Puckette, Lila Peal, Jarrod Steele, Yuhong Tang and R. Mahalingam. 2009. Ozone responsive genes in *Medicago truncatula*: Analysis by suppression subtraction hybridization *Journal of Plant Physiology* (doi:10.1016/j.jplph.2009.01.009)
2. Puckette, M., Tang, Y., and Mahalingam, R. 2008. Transcriptomic changes induced by acute ozone in resistant and sensitive *Medicago truncatula* accessions. *BMC Plant Biology* 8:46.
3. Puckette, M.C., Weng, H., and Mahalingam, R. 2007. Physiological and biochemical responses to acute-ozone-induced oxidative stress in *medicago truncatula*. *Plant Physiology and Biochemistry* 45:70-79
4. Mahalingam, R., Jambunathan, N., Gunjan, S.K., Weng, H., Aypubi, P. 2006. Analysis of oxidative signaling induced by ozone in *Arabidopsis*. *Plant Cell and Environment* 29: 1357-1371.
5. Mahalingam, R., N. Shah, A. Scrymgeour and N. V. Fedoroff. 2005. Temporal evolution of the *Arabidopsis* oxidative stress response. *Plant Molecular Biology* 57:709-730.

### ii. Other Significant Publications

1. Mahalingam, R., Jambunathan, N., and Penaganti, A. 2007. Pyridine nucleotide homeostasis in plant development and stress. *International Journal of Plant Developmental Biology* 1: 194-201.
2. Mahalingam, R., A. Gomez, N. Eckardt, N. Shah, P. Day, A.G. Garcia, R. Raina and N. V. Fedoroff. 2003. Characterizing the stress/defense transcriptome of *Arabidopsis* *Genome Biology*,

4: R20.

3. Mahalingam, R. and N. V. Fedoroff. 2003. Stress response, cell death and signaling: the many faces of ROS. *Physiologia Plantarum* 119:56-68.

4. Mahalingam, R. and N. V. Fedoroff. 2001. Screening insertion libraries for mutations in many genes simultaneously using DNA microarrays., *PNAS* 98:7420-7425.

5. Mahalingam, R. and H. T. Knap. 1999. Polygalacturonase in *Glycine max* - *Heterodera glycines* interactions. *Molecular Plant Microbe Interactions*, 12: 490-498.

### **Synergistic Activities:**

Mentor for a woman African-American student (Lila Peal) supported by the Oklahoma Louis-Stokes Alliance, Bridge-to-doctorate program. Mentored two African-American undergraduate students from small colleges in Oklahoma (Langston University and Cameron University) in the summer of 2004 and 2005. The summer internship was provided by funds from NIH-BRIN administered by Oklahoma University Health Sciences Center. Mentor for Undergraduate Wentz Scholars program (Nazia Tabassum). Mentor for HHMI funded Critical Thinking in Biological Sciences (Amanda Bostian). Developed a **new course** entitled "Functional Genomics" for graduate students in Fall 2005. Implemented Cluster Enrichment (CLENCH) program at Oklahoma State University to help other researchers make use of this **tool for microarray data analysis**.

**Technical editor** for the journal *Plant Pathology* published by Asian Network for Scientific Information (2004-2006). Editor for Global Science Publishing (*Functional Genomics*).

Reviewed **proposals** for NSF, Natural Environment Research Council, UK and Fonds zur Forderung, Austria, Consortium for Plant Biotechnology. Reviewed **manuscripts** for *Plant Cell*, *Plant Physiology*, *Plant Physiology and Biochemistry*, *Plant Pathology*, *Molecular plant microbe interactions*, *Physiologia Plantarum*, *Genetics*.

### **(d) Collaborators & Other Affiliations:**

#### **Collaborators and Co-Editors:**

Ayoubi Patricia, Oklahoma State University; Buford Joe, Langston University, Chen Fuquiang, Sigma Chemical Company; Day Philip, Pennsylvania State University, Eckardt Nancy, American Society of Plant Biologists; Faustin Enock, Cameron University; Fedoroff Nina, Pennsylvania State University, Guevara-Garcia Angel, Instituto de Biotecnologia-Mexico, Gunjan Samir, Kentucky State University, Lexington, Jambunathan Niranjani, OSU; Sunkar Ramanjulu, OSU; Sumner Lloyd, Samuel Roberts Noble Foundation; Puckette Michael, OSU, Raina Ramesh, Syracuse University; Raina Surabhi, Syracuse University, Scrymgeour Alexandra, Pennsylvania State University; Shah Nigam, Stanford University; Shepherd W. Colby, Redlands Community College, OK, Tang Yuhong, Samuel Roberts Noble Foundation, Weng Hua, OSU

#### **Graduate and Postdoctoral advisors:**

**Graduate Advisor:** Halina Knap, Clemson University

**Postdoctoral Advisor:** Nina Fedoroff, Pennsylvania State University

#### **Thesis advisor (undergraduate and graduate students) and post-doctoral scholar sponsor:**

**Undergraduate students:** Amanda Bostian (Honors Thesis), Nazia Tabassum (OSU) Joe Buford (Langston University, Honors thesis), Jessica Kerbo (OSU), Randilea Nichols (OSU)

**Graduate students:** Anuradha Penangati (MS), Michael Puckette (PhD), Kimberly Winkelman (MS), Lila Peal (PhD), Xin Zeng (PhD), Nazia Tabassum (PhD)

**Post-doctoral scholars:** Dr. Niranjani Jambunathan, Dr. Samir Kumar Gunjan, Dr. Aparna Kakani.