

Aruna Kilaru

Assistant Professor, Department of Biological Sciences, East Tennessee State University, USA

<http://faculty.etsu.edu/kilaru/>

Professional Preparation

Institute	Major/Area	Degree and Year
Andhra University, India	Botany, Zoology & Chemistry	B.Sc., 1991
Maharaja Sayajirao University, India	Biotechnology	M.Sc., 1993
University of Louisiana at Lafayette, USA	Plant Physiology & Biochemistry	Ph.D., 2005

Appointments

2011 Aug.-present: Assistant Professor, Dept. of Biology, East Tennessee State University, USA
2009-11: Visiting Scientist, Dept. of Plant Biology, Michigan State University, USA
2005-09: Postdoctoral Associate, Dept. of Biology, University of North Texas, USA
2005 (May-Aug.): Research Associate, Dept. of Biology, University of Louisiana at Lafayette, USA
2000-05: Teaching/Graduate Research Assistant, Dept. of Biology, ULL, USA
1996-99: Director (Technical), Invitro Biotech, Eluru, India
1995-96: Scientist, EID Parry (I) Ltd., Bangalore, India
1994: Research Associate, Godrej Plant Biotech Ltd., Hyderabad, India

Selected Honors/Awards Received

- **The Arthur C. Neish Young Investigator Award**- Phytochemical Society for N. America (2011)
- **Pre-tenure Women Faculty Travel Award** - Phytochemical Society for North America (2011)
- **Travel award** - Gordon Conference on Plant Lipids (2009)
- **Travel Award** - American Society for Plant Biologists (2009, 2008, 2004, 2002)
- **Deans' fellowship** for the final semester, UL Lafayette (2005)
- **Grants-in-Aid of Research Award**, Sigma Xi (2005, 2001)
- **Phi Kappa Phi** Honors Society Recognition for **4.0/4.0 GPA** (2005)
- **Steuben Award** for dissertation work, UL Lafayette (2005)
- **National and State Merit Scholarship**, Government of India (1985-93)

Selected Publications (*Co-first author; # Corresponding author)

1. **Kilaru A**, and Ohlrogge JB (2012) Arthur Neish Young Investigator Award: Insights into storage oil biosynthesis: Comparative transcriptomics of seed and non-seed tissues. *Pharmaceutical Biology* 50: 666-666
2. **Kilaru A**, and Chapman KD (2012) N-Acylated phospholipid metabolism and seedling growth: Insights from lipidomics studies in Arabidopsis. *Plant Signaling and Behavior* 9 (7)
3. **Kilaru A**[#], Tamura P*, Isaac G, Welte R, Venables BJ, Seier E, and Chapman KD (2012) Lipidomic analysis of N-acylphosphatidylethanolamine molecular species in Arabidopsis suggests feedback regulation by N-acylethanolamines. *Planta* 236: 809-824
4. Teaster ND, Keereetawee J, **Kilaru A**, Wang Y-S, Tang Y, Tran N-QC, Ayre B, Chapman KD, Blancaflor E (2012) Overexpression of fatty acid amide hydrolase induces early flowering in Arabidopsis thaliana. *Frontiers in Plant Science* 3 (32), doi:10.3389/fpls.2012.00032
5. Troncoso-Ponce M, **Kilaru A***, Cao X, Durrett TP, Fan J, Jensen J, Thrower N, Pauly M, Wilkerson C and Ohlrogge J (2011) Comparative deep transcriptional profiling of four developing oilseeds. *Plant Journal* 68: 1014-27
6. Bourgis F, **Kilaru A***, Cao X, Ngando G, Drira N, Ohlrogge J, and Arondel V (2011) Comparative transcriptome and metabolite analysis of oil and date palm mesocarp that differ dramatically in carbon partitioning. *Proc. Natl. Acad. Sci.* 108:12527-32
7. **Kilaru A**[#], Herrfurth C, Kereetawee J, Hornung E, Venables BJ, Feussner I, and Chapman KD (2011) Lipoxygenase mediated oxidation of polyunsaturated N-acylethanolamines in Arabidopsis *Journal of Biological Chemistry* 286:15205-14
8. **Kilaru A**, Tamura P*, Garg P, Isaac G, Baxter D, Duncan SR, Welte R, Venables BJ, Koulen P, Chapman KD (2010) Changes in N-acylethanolamine pathway related metabolites in a rat model of cerebral ischemia/reperfusion. *Journal of Glycomics and Lipidomics* 1:101.doi:10.4172/2153-0637.1000101

9. Kereetawee J, **Kilaru A***, Feussner I, Venables BJ, and Chapman KD (2010) Lauroylethanolamide is a potent competitive inhibitor of lipoxygenase activity. *FEBS Letters* 584: 3215-3222
10. **Kilaru A**, Isaac G, Tamura P, Baxter D, Duncan SR, Venables BJ, Welti R, Kouleen P, and Chapman KD (2010) Lipid profiling reveals tissue-specific differences for *N*-acylethanolamines and their precursors in mice lacking fatty acid amide hydrolase. *Lipids* 45: 863-75
11. Liu M, **Kilaru A**, and Hasenstein KH (2008) Abscissic acid changes in primary roots and root protoplasts of *Zea mays* L. to lanthanum stress. *Journal of Plant Growth Regulation* 27: 19-25
12. **Kilaru A**, Bailey BA and Hasenstein KH (2007) *Moniliophthora perniciosa* produces hormones and alters endogenous auxin and salicylic acid in infected cocoa leaves. *FEMS Microbiology Letters* 274: 238-244
13. Teaster ND, Motes CM, Tang Y, Wiant WC, Cotter MQ, Wang Y, **Kilaru A**, Venables BJ, Hasenstein KH, Gonzalez G, Blancaflor EB and Chapman KD (2007) *N*-Acylethanolamine metabolism interacts with abscissic acid signaling in *Arabidopsis thaliana* seedlings. *Plant Cell* 19: 2454-2469
14. **Kilaru A**, Blancaflor EB, Venables BJ, Tripathy S, Mysore K, and Chapman KD (2007) The *N*-Acylethanolamine-mediated regulatory pathway in plants. *Chemistry & Biodiversity* 4: 1933-1955
15. Wang YS, Shrestha R*, **Kilaru A**, Wiant W, Venables BJ, Chapman KD, and Blancaflor EB (2006) Manipulation of *Arabidopsis* fatty acid amide hydrolase expression modifies plant growth and sensitivity to *N*-acylethanolamines. *Proc. Natl. Acad. Sci.* 103: 12197-12202
16. **Kilaru A** and Hasenstein KH (2005) Development and pathogenicity of the fungus *Crinipellis perniciosa* on interaction with cacao leaves. *Phytopathology* 95: 101-107 (Featured cover)

Abstracts Presented (2010-2013)

1. **The Plant Lipids: Structure, Metabolism & Function Gordon Research Conference**, Galveston, TX, USA 2013. Lipidomic Approaches to understanding *N*-acylethanolamine metabolism and signaling in *Arabidopsis* and Moss
2. **Plant and Animal Genome XX Conference**, San Diego, CA, USA 2013. Unlocking the secrets of avocado oil biosynthesis (**Speaker**)
3. **International Conference on Genomics in the Americas**, Philadelphia, PA USA 2012. Wrinkled 1 is conserved in various species and expressed in association with fatty acid synthesis genes.
4. **International Plant Lipid Meeting, Seville, Spain** 2012. Comparison of transcriptome changes associated to oil accumulation in oil palm mesocarp and in oil seeds
5. **Phytochemical Society of North America**, 50th Anniversary Meeting, Big Island, HI, USA 2011. Insights into storage oil biosynthesis: comparative transcriptomics of seed and non-seed tissues (**Speaker**)
6. **American Society of Plant Biologists**, Annual Meeting, Minneapolis, MN, 2011. Transcriptome analysis to address > 100-fold difference in oil content between oil palm and date palm. (**Speaker**)
7. Transcriptome analysis of avocado mesocarp provides insight into lipid biosynthesis. **Avocado Brain Storming**, Waiheke Island, New Zealand, 2011
8. Comparative deep transcriptional profiling of four-developing oilseeds. Annual meeting of **American Society of Plant Biologists**. Montreal, Canada, 2010
9. **19th International Symposium on Plant Lipids**. Cairns, Australia, 2010. What more can 100 million ESTs tell us about oil synthesis? (**Speaker**)

Lab Personnel (ETSU): 2011-Present:

- Doctoral Students: **2** (*Bangladesh & India*; one female)
- Master Students: **3** (*Cameroon, South Korea, & USA*; one female)
- Undergraduates: **5** (*USA*; one African-American and one female)

Professional Affiliations

- American Society of Plant Biologists
- Association for Women in Science
- Indian Science Congress
- Phi Kappa Phi Honors Society
- Phytochemical Society of North America
- Society of Sigma Xi