

Dr. Lakshmi Narayana R. Vemireddy (VLN Reddy)

Dr. VLN Reddy did his doctoral research in Centre for DNA Fingerprinting and Diagnostics (CDFD), Hyderabad where he studied molecular genetics of unique traits of Basmati rice. He was also involved in the development of high throughput capillary electrophoresis based microsatellite marker technique for unambiguous detection and quantification of adulteration in Basmati rice. After PhD, he joined in Institute of Biotechnology, Acharya NG Ranga Agricultural University. There he worked on application of molecular markers for gene discovery and genetic diversity analysis in rice. He has done his Post Doctoral Fellow in Oklahoma State University, Stillwater, OK, USA under “Raman Post Doctoral Fellowship” sponsored by the University Grants Commission (UGC), New Delhi. Recently, he moved to Institute of Frontier Technology, Regional Agricultural Research Station, ANGRAU, Tirupati.



Research

My broad area of research interest is in plant molecular genetics. Application of advanced and innovative molecular biology tools for unraveling the problems in crop plants with main emphasis on rice.

Collaborating Institutes/Universities

Agricultural Research Station, Nellore

Regional Agricultural Research Station, Maruteru

Gauhati University, Guwahati, Assam

National Rice Research Institute, Hazaribagh

Publications

1. **Lakshminarayana R Vemireddy**, Sabahat Noor, VV Satyavathi, A Srividya, A Kaliappan, SRN Parimala, Prathibha M Bharathi, Dondapati A Deborah, KV Sudhakar Rao, N Shobharani, EA Siddiq and Javaregowda Nagaraju (2015) Discovery and mapping of genomic regions governing economically important traits of Basmati rice. *BMC Plant Biology* DOI: 10.1186/s12870-015-0575-5 (Impact Factor: 3.81) (**NAAS ID** :B015, **NAAS Rating** :9.94, **No. of Citations**:0)
2. **Lakshminarayana R. Vemireddy***, N Ranjithkumar, A Vipparla, M Surapaneni, G Choudhary, KV Sudhakar Rao, EA Siddiq (2014) Molecular Profiling of Major Indian Rice Cultivars Using a Set of Eight Hypervariable Microsatellite Markers. *Cereal Research Communications*. DOI: 10.1556/CRC.2014.0035 (Impact Factor :0.624) (*Corresponding author) (**NAAS ID** :C043, **NAAS Rating** :6.62, **No. of Citations**:1)
3. Shailesh Yadav, Ghanta Anuradha, Ravi Ranjan Kumar, **Lakshminarayana R Vemireddy**, Ravuru Sudhakar, Krishnaveni Donempudi, Durgarani Venkata, Farzana Jabeen, Yamini Kalinati Narasimhan, Balram Marathi, and Ebrahimali Abubacker Siddiq (2015) Identification of QTLs and possible candidate genes conferring sheath blight resistance in rice (*Oryza sativa* L.) SpringerPlus, 4:1754:175 DOI 10.1186/s40064-015-0954-2
4. Shailesh Yadav, Ghanta Anuradha, Ravi Ranjan Kumar, **Vemireddy LR**, Ravuru Sudhakar, Balram M and Siddiq EA (2015) Bulk Segregant Analysis to Detect Main Effect of QTL Associated with Sheath Blight Resistance in BPT-5204/ARC10531 Rice (*Oryza sativa* L) *J Rice Res* 2015, 3:4
5. **Lakshminarayana R. Vemireddy***, V. V. Satyavathi, E. A. Siddiq, J. Nagaraju (2014) Review of methods for the detection and quantification of adulteration of rice: Basmati as a case study *J Food Sci Technol* DOI 10.1007/s13197-014-1579-0 (*Corresponding author) (**NAAS ID** :J198, **NAAS Rating** :8.02, **No. of Citations**:1)
6. **Lakshminarayana R. Vemireddy*** (2014) Food and Nutrition Security: Biotechnology Intervention. *Springer Science Reviews*. DOI 10.1007/s40362-014-0018-y (*Corresponding author) (**NAAS ID** : NA, **NAAS Rating** :NA, **No. of Citations**: Nil)
7. Malathi Surapaneni, Vijay Yepuri, **Lakshminarayana R. Vemireddy**, Anuradha Ghanta E. A. Siddiq (2014) Development and characterization of microsatellite markers in Indian sesame (*Sesamum indicum* L.). *Mol Breeding*. DOI 10.1007/s11032-014-0109-0 (**NAAS ID** : M050, **NAAS Rating** :8.28, **No. of Citations**: 2)
8. Gangaprasad C, Ranjit kumar N, Malathi S, DAK Deborah, Abhilash V, G Anuradha, EA Siddiq and **LR Vemireddy** (2013) Molecular genetic diversity of major Indian rice cultivars over decadal periods. *PlosOne* 8(6): e66197. doi:10.1371/journal.pone.0066197 (*Corresponding author) (**NAAS ID** : 004, **NAAS Rating** :9.53, **No. of Citations**: 10)

9. Malathi S, **Lakshminarayana R Vemireddy**, H.Begum, B.P. Reddy, C. Netasri, J. Nagarau, S.Y. Anwar, E.A. Siddiq (2013) Population structure and genetic analysis of different utility types of mango (*Mangifera indica* L.) germplasm of Andhra Pradesh state of India using microsatellite markers. *Plant Systems and Evolution*. Volume 299, Issue 7, pp 1215-1229 DOI:10.1007/S00606-013-07901 (NAAS ID: P097, NAAS Rating:7.15, No. of Citations: 6)
10. Vijaya Sudhakara Rao Kola, Vijay Yepuri, Malathi Surapaneni, Jyothi Badri, **L.R Vemireddy**, Anuradha Ghanta, Ebrahimali Abubaker Siddiq (2012) Genetic Diversity and DNA Fingerprinting in Sesame (*Sesamum indicum* L.) Cultivars of ANGRAU. *The Asian and Australasian Journal of Plant Science and Biotechnology*. 10/2012; 6((special issue I)):98-101. (NAAS ID: NA, NAAS Rating: NA, No. of Citations: Nil)
11. P. Balaji Suresh, B. Srikanth, V. Hemanth Kishore, I. Subhakara Rao, **L. R. Vemireddy**, N. Dharika, R. M. Sundaram, M. S. Ramesha, K. R. S. Sambasiva Rao, B. C. Viraktamath C. N. Neeraja (2012) Fine mapping of Rf3 and Rf4 fertility restorer loci of WA-CMS of rice (*Oryza sativa* L.) and validation of the developed marker system for identification of restorer lines. *Euphytica* Volume 187, Issue 3, pp 421-435 DOI 10.1007/s10681-012-0737-6 (NAAS ID: E089, NAAS Rating:7.69, No. of Citations: 20)
12. P. Venkata ramana rao, G. Anuradha², A. Srividhya², **VLN reddy**, V. Gouri shankar, K. Prasuna, K. Raja reddy, NP Eswara Rreddy and EA Siddiq (2012) Genetics of important agro-botanic traits in sesame. *SABRAO journal of breeding and genetics* 44 (2) 292-301. (NAAS ID: S002, NAAS Rating:5.00, No. of Citations: 14)
13. D. Sravani, Y.vijay, D. Bharathi, **V. L. N. Reddy**, M.V. Brahmeswara rao and G. Anuradha (2012) Genetics of powdery mildew resistance in sesame (*Sesamum Indicum* L.) *J.Res. ANGRAU* 40(1)73-74. (NAAS ID: T035, NAAS Rating: 3.86, No. of Citations: Nil)
14. Vijay Yepuri, Malathi Surapaneni, Vijaya Sudhakar Rao Kola, **Vemireddy L. R**, Jyothi.B, Dineshkumar.V, Anuradha G. and Siddiq E. A (2013) Assessment Of Genetic Diversity In Sesame (*Sesamum Indicum* L.) Genotypes, Using EST-Derived SSR Markers. *J. Crop Sci. and Biotech.* Volume 16, Issue 2, pp 93-103. (NAAS ID: NA, NAAS Rating:NA, No. of Citations: 6)
15. Siddiq EA, **L. R. Vemireddy**, J. Nagaraju (2012) Basmati Rices: Genetics, Breeding and Trade. *Agricultural Research*, Volume 1, Issue 1, pp 25-36 DOI 10.1007/s40003-011-0011-5 (NAAS ID: A067, NAAS Rating: 5.88, No. of Citations: 16)
16. Puan Puspasree, Abhilash Vipparla, **Lakshminarayana R Vemireddy**, G Anuradha and EA Siddiq (2012) An efficient and universal regeneration protocol for *Agrobacterium*-mediated transformation of rice. *Journal of Plant Biochemistry and Biotechnology* 21(2). DOI 10.1007/s13562-011-0101-2 (NAAS ID:J340, NAAS Rating: 6.81, No. of Citations: 1)
17. Rao IS, B Srikanth , V. Hemanth Kishore, P. Balaji Suresh, U. Chaitanya, **L. R. Vemireddy**, S. R. Voleti, L. V. Subbarao, N. Shobha Rani, R. M. Sundaram, M. S. Madhav,

- S. M. Balachandran, G. S. V. Prasad, B. C. Viraktamath, C. N. Neeraja (2011) Indel polymorphism in sugar translocation and transport genes associated with grain filling of rice (*Oryza sativa* L.) *Mol Breeding* 28:683-691(**NAAS ID** : M050, **NAAS Rating** :8.28, **No. of Citations**: 4)
18. Narshimulu G[†], Jamaluddin M[†], **Lakshminarayana R Vemireddy**^{*†}, Anuradha G and Siddiq EA (2011) Potentiality of evenly distributed hypervariable microsatellite markers in marker assisted breeding of rice. *Plant Breeding*. 130(3): 314-320 ([†]Equal contribution and *Corresponding Author) (**NAAS ID**: P074, **NAAS Rating**:7.34, **No. of Citations**: 13)
19. Srividhya A[†], **Lakshminarayana R Vemireddy**^{*†}, Sakile Sridhar, Mudduluru Jayaprada, Puram V Ramanarao, Arremsetty S Hariprasad, Hariprasad K Reddy, Ghanta Anuradha, Ebrahimali Siddiq (2011) Molecular Mapping of QTLs for Yield and its Components under Two Water Supply Conditions in Rice (*Oryza sativa* L.), *J. Crop Sci. Biotech.* 14(1): 45-56 ([†]Equal contribution and *Corresponding Author) (**NAAS ID**: NA, **NAAS Rating**: NA, **No. of Citations**: 6)
20. Srividhya A[†], **Lakshminarayana R Vemireddy**^{*†}, Puram V Ramanarao, Sakile Sridhar, Mudduluru Jayaprada, Ghanta Anuradha, Battiprolu Srilakshmi, Hariprasad K Reddy, Arramsetty S Hariprasad and Ebrahimali A Siddiq (2011) Molecular mapping of QTLs for drought related traits at seedling stage under PEG induced stress conditions in rice. *American Journal of Plant Sciences*, 2:190-201 (*Equal contribution and *Corresponding Author) (**NAAS ID**: NA, **NAAS Rating**:NA, No. of Citations: 2)
21. Srividhya A, **Lakshminarayana R Vemireddy**, Hariprasad AS, Jayaprada M, Sridhar S, Ramanarao P, Anuradha G and Siddiq EA. (2010) Identification and mapping of landrace derived QTL associated with yield and its components in rice under different nitrogen levels and environments. *International Journal of Plant breeding and Genetics*. 4(4):210-227(**NAAS ID**: NA, **NAAS Rating**: NA, **No. of Citations**: 12)
22. **Lakshminarayana R Vemireddy**, Archak S and Nagaraju J (2007) Capillary electrophoresis is essential for microsatellite marker based detection and quantification of adulteration of Basmati rice (*Oryza sativa*) *J. Agric. Food Chem.*, 55, 8112–8117 (**NAAS ID**: J023, **NAAS Rating**: 9.11, **No. of Citations**:34)
23. Archak S, **Lakshminarayanareddy V** and Nagaraju J (2007) High-throughput multiplex microsatellite marker assay for detection and quantification of adulteration in Basmati rice (*Oryza sativa*) *Electrophoresis*, 28, 2396–2405. (**NAAS ID**: E031, **NAAS Rating**: 9.16, **No. of Citations**: 30)
24. Neeraja CN, **Lakshminarayana R Vemireddy**, Malathi S and Siddiq EA (2008) Identification of alternate dwarfing gene sources to widely used Dee-Gee-Woo-Gen (*sd1*) gene by molecular and biochemical assays in rice (*Oryza sativa* L.) *Electronic journal of Biotechnology*.12:1-5. (**NAAS ID**: E031, **NAAS Rating**:6.65, **No. of Citations**: 6)

25. Marri PR, Sarla N, **Lakshminarayana R. Vemireddy** and Siddiq EA (2005) Identification of yield enhancing Quantitative Trait Loci (QTLs) from *Oryza rufipogon* of Indian origin. *BMC Genetics* 6:33. (NAAS ID: B010, NAAS Rating:8.36, No. of Citations: 109)
26. M.P. Reddy, N. Sarla, **V.L.N. Reddy** and E.A. Siddiq (2004) Introgression and mapping of yield enhancing QTLs from *Oryza rufipogon* Vol. 21. *Rice Genetic News Letter* (NAAS ID: NA, NAAS Rating:NA, No. of Citations: Nil)
27. **V. Lakshmi Narayana Reddy**, M.Reddysekhar, K.Raja Reddy and K.Hariprasad Reddy, (2003) Genetic variability for yield and its components in Mungbean (*Vigna radiata* L. wilczek), *Legume Research*, 26(4), 248-253. (NAAS ID: L009, NAAS Rating: 6.14, No. of Citations: 9)
28. **V. Lakshmi Narayana Reddy**, M.Reddysekhar, K.Raja Reddy and K.Hariprasad Reddy, (2003) Heterosis for yield and its components in Mungbean (*Vigna radiata* L. wilczek), *Legume Research*, 26(4), 300-302. (NAAS ID: L009, NAAS Rating: 6.14, No. of Citations: Nil)

Teaching

Course	Degree
MBB601 (Advances in Bioinformatics) 1+1	PhD
MBB610 (Advances in Plant Molecular Biology) 3+0	PhD
MBB605 (Advances in Functional Genomics and Proteomics) 2(2+0)	PhD

Lab members

PhD (Biotechnology) student

JB Naik

M.Sc (Ag.) (Biotechnology) students

Swarajya Lakshmi

Suresh Naik

Junior Research Fellow

Gopalakrishna K.