

Curriculum Vitae

Dr. Y. Amaravathi

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Education:

- **Ph.D., Molecular Biology and Biotechnology.** National Research Center on Plant Biotechnology. Indian Agricultural Research Institute (IARI). New Delhi. India. October 2005. **OGPA. 8.34/10.00**
Thesis title: Molecular mapping of genes for 'Basmati' grain quality traits in rice (*Oryza sativa* L.)
- **M.Sc., (Agriculture)** Plant Genetic Resources. National Bureau of Plant Genetic Resources. Indian Agricultural Research Institute (IARI). New Delhi. India. July 2001. **OGPA. 3.92/4.00**
Thesis title: DNA profiling and analysis of genetic diversity in Indian *Musa* cultivars using AFLP technique
- **B.Sc., (Agriculture).** Acharya N.G. Ranga Agricultural University, Hyderabad. India. July 1999. **OGPA. 8.51/10.00**

Research skills:

DNA Fingerprinting : RFLP, RAPD, AFLP, SSRs, locus specific PCR, multiplex PCR using Microsatellites, real time PCR, DNA sequencing etc.

Gene isolation : Genomic & cDNA library construction and screening, RT-PCR

Genetic Engineering : Construction and screening of genomic and cDNA libraries, Standardization of regeneration protocols, *Agrobacterium* mediated genetic transformation of rice, cotton, cucumber and radish.

Softwares : NTSYS-pc, MAPMAKER, QTL Cartographer, MultiQTL, Primer3, Genemark

Professional Experience:

- **Assistant Professor, ANGRAU, Guntur** **May 2013-till date**
DNA finger printing of crop varieties released form ANGRAU
Mapping stem rot resistance genes in groundnut (*Arachis hypogaea* L.) with SSR markers

Identification of SSR markers linked to drought related traits in advanced breeding lines of groundnut

Identification of Zn and Fe efficient groundnut genotypes through molecular markers

Development of gene based markers for MAS of drought tolerance in groundnut

- **Assistant Professor, SGR Institutes, Bangalore, India** Jun 2006 - May 2008

Handled theory and practical classes of **Prokaryotic and Eukaryotic Molecular genetics; Plant tissue culture; Techniques in Biotechnology**

- **Scientist 'B', DARL (Defense Agricultural Research Laboratory), DRDO, Ministry of Defense, New Delhi, India** Mar 2005 - Jun 2006

Finger printing of *Stevea rebaudiana*

Identification of potential genes/QTLs for cold tolerance

Standardization of regeneration protocol for Radish.

Genetic transformation of Radish with cold tolerance genes

- **Doctor of Philosophy, NRCPB, IARI, New Delhi** Aug 2001- Mar2005

Molecular genetic linkage map of 12 rice chromosomes of rice (Pusa1121 x Pusa1342) was developed with 111 STMS markers

Major QTLs for grain length, grain breadth, amylose content, alkali spreading value and grain aroma were identified.

QTL for grain aroma is validated

- **Master of Science, NBPGR, IARI, New Delhi** Sep 1999- Aug 2001

Fingerprinting of 126 accession of banana with AFLP

Thirty two duplicate accessions of banana were identified and eliminated

Thirty four banana cultivars of unknown genomic constitution were grouped into distinct clusters with unambiguously identified cultivars

This study proved India as the secondary center of diversity for cultivated bananas and plantains as high genetic diversity displayed among AAB and ABB genome Musa cultivars

Awards and Honors:

- Recipient of **Gold Medal**, for the outstanding academic performance and research achievements in **Doctoratal program, awarded by IARI** (Indian Agricultural Research Institute), New Delhi in the year 2006.

- Recipient of **Gold Medal**, for the outstanding academic performance and research achievements in **Masters Degree program, awarded by IARI** (Indian Agricultural Research Institute), New Delhi in the year 2002.
- Secured **1st rank at National level for pursuing doctoral program in Molecular biology and Biotechnology in IARI** (Indian Agricultural Research Institute) and recipient of Senior Research Fellowship, awarded by Indian Council of Agricultural Research (ICAR), New Delhi for pursuing doctoral program in the year 2001.
- Recipient of **Junior Research Fellowship**, awarded by Indian Council of Agricultural Research (ICAR), New Delhi for pursuing postgraduate studies in Plant Genetic Resources.
- Qualified for Council of Scientific and Industrial Research (CSIR) **JRF, Lectureship and NET** combined examination in **Life Sciences** and recipient of **Senior Research Fellowship**.
- Qualified in **National Eligibility Test (NET) in Bio-Technology** conducted by Agricultural Scientists Recruitment Board (ASRB).

Publications

1. G. K. Srividya, **Y. Amaravathi***, P. Lavanya Kumari, R.P.Vasanthi and E. Aparna **“Diversity of Resistance Gene Analogues (RGAs) in cultivated groundnut (*Arachis hypogaea* L.)”** Contributed Talk at National Conference on Challenges, opportunities and informatics for futuristic Humanosphere especially in Agriculture (COSIFHA) 29th to 30th March 2019 at S.V. Agricultural College, Tirupati under the theme Genomics and Bio-informatics.
2. G.K. Srividya, **Y. Amaravathi***, R.P.vasanthi, NP Eswara Reddy and E Aparna (2019). **Identification of LLS and rust resistance genes linked to SSR markers in cultivated groundnut (*Arachis hypogaea* L.)** oral presentation in NCPGS on **“Novel Approaches for Doubling Farmer’s Income Through Sustainable Agricultural Production Systems”** 7th to 8th March, 2019 at S.V. Agricultural College, Tirupati under the theme **Frontier Technologies in Agriculture Food and Community Sciences Towards Farmers Sustainability**
3. **Y. Amaravathi***, G.K. Srividya, P.Lavanyakumari and R.P.vasanthi (2018) **“In silico analysis of Resistance Gene Analogues (RGAs) in groundnut (*Arachis hypogaea* L.) genome ”** poster presentation in **1st National Genetics Congress 2018 14th-16th December, 2018** at Indian Agricultural Research Institute, NewDelhi, India under the theme **Advanced Genetic Tools for Enhancing Breeding Efficiency**
4. E Aparna, **Y Amaravathi**, RP Vasanthi, AR Nirmal Kumar and NP Eswara Reddy (2018) **Identification of differentially expressed transcripts in groundnut genotypes subjected to different levels of mid-season moisture stress** Journal of Pharmacognosy and Phytochemistry; 7(6): 1456-1461 E-ISSN: 2278-4136 P-ISSN: 2349-8234
5. E. Aparna, **Y. Amaravathi**, N.P. Eswara Reddy, R.P. Vasanthi and A.R. Nirmal Kumar (2018) **Effect of Mid Season Drought Stress on Root Traits, Root Shoot Ratio and Proline Content in Groundnut Genotypes with Contrasting Drought Tolerance.** Andhra Pradesh J Agril. Sci : 4(1): 1-6, 2018
6. Anamika Roy, M. Lal Ahamed, **Y. Amaravathi**, K. Viswanath, J.P.B. Dayal and B. Sreekanth (2018). **Diversity Analysis and Assessment of Association of SSR Markers to Late Leaf**

Spot and Rust Resistance in Groundnut (*Arachis hypogaea* L.).
Int.J.Curr.Microbiol.App.Sci. 7(08): 1-11. doi: <https://doi.org/10.20546/ijcmas.2018.708>.
NAAS Score: *5.38 (2018) [Effective from January 1, 2018]

7. Anamika Roy, Lal Ahmed M, **Y Amaravathi**, K Viswanath, J Dayal Prasad Babu and B Sreekanth (2018) **Genetic variability, heritability and genetic advance of yield and yield attributes in groundnut (*arachis hypogaea* l.)** *The Andhra Agric. J* 65 (1): 88-91, 2018
8. E. APARNA, **Y. AMARAVATHI**, R.P. VASANTHI, A.R. NIRMAL KUMAR and N.P. ESWARA REDDY (2018) Impact of midseason drought on physiological and biochemical parameters in groundnut *J.Res. ANGRAU* 46(1) 30-39, 2018
9. K.V. Naga madhuri, R.P. Vasanthi, **Y. Amaravathi**, and P.V.R.M. Reddy (2018) Identification of zinc and iron density Groundnut genotypes **Souvenir of National Seminar on “Futuristic Agriculture for Sustainable Food Security” 21 – 23 February, 2018, Tirupati – 517 502 Andhra Pradesh, INDIA**
10. Y. Amaravathi*, E. Aparna, R.P. Vasanthi, P. Latha and T. C. M. Naidu (2018) **Rapid identification of major genes involved in drought stress tolerance by transcriptome analysis. Oral presentation in National Seminar on “Futuristic Agriculture for Sustainable Food Security” 21 – 23 February, 2018, Tirupati – 517 502 Andhra Pradesh, INDIA**
11. **Y. Amaravathi** (2017) “Molecular breeding in Groundnut: An in-silico analysis of genomic resources” oral presentation in National Conference on EMERGING TRENDS IN AGRINANOTECHNOLOGY -2017 (AgriNano-2017) held on November, 2 - 3, 2017.
12. E. Aparna, **Y. Amaravathi***, N.P. Eswara Reddy, R.P. Vasanthi and A.R. Nirmal Kumar (2017). Transcriptome profiling and identification of differentially expressed transcripts in response to mid season drought in groundnut *Arachis hypogaea* L. *Can J Biotech*, Volume 1, Special Issue, Page 197 <https://doi.org/10.24870/cjb.2017-a183>
13. P. Lavanya Kumari and **Y. Amaravathi** (2016) “Computation of Melting Temperatures (Tm) of oligonucleotides for high throughput PCR using MS-Excel” *IOSR Journal of Biotechnology and Biochemistry (IOSR-JBB)* ISSN: 2455-264X, Volume 2, Issue 6 (Sep. – Oct. 2016), PP 06-11 www.iosrjournals.org
14. **Y. Amaravathi***, R.P. Vasanthi, N.K. Poojitha B. A. Sankar, N.P. Eswar Reddy and T.C.M. Naidu (2016) **Biotic stress resistance/tolerance genes identification and their validation by e-PCR in groundnut: an Insilico Approach: National Seminar 2016** *Plant Genomics and Biotechnology: Challenges and Opportunities in 21st Century*: pp: 53-60
15. **Y. Amaravathi** (2016) **Novel approaches to increase polymorphism in differentially expressed genes in response to biotic and abiotic stress tolerance breeding in groundnut (*Arachis hypogaea* L.)** Conference on National Priorities in Plant Health Management held at RARS, Tirupati.
16. N.K. Poojitha, **Y. Amaravathi***, R.P. Vasanthi, B. Arpitha, N.P. Eswar Reddy and T. Giridhara Krishna (2016). **Biotic stress resistance/tolerance genes identification and their validation by e-PCR in groundnut: an Insilico Approach** at NATIONAL SEMINAR On Plant Genomics and Biotechnology: Challenges and Opportunities in 21st Century
17. E. Aparna, **Y. Amaravathi***, R. P. Vasanthi, N.K. Poojitha and N.P. Eswar Reddy (2016). **Comparative analysis and insilico validation of differentially expressed genes in response to mid season drought in Groundnut (*Arachis hypogaea* L.)** at NATIONAL

SEMINAR On Plant Genomics and Biotechnology: Challenges and Opportunities in 21st Century

18. **Y. Amaravathi***, R.P. Vasanthi, T. Giridhara Krishna and K. Raja Reddy (2015). **Development of novel SSR makers within resistance gene analogues for groundnut (*Arachis hypogaea* L.)** poster presentation in 8th International Conference on Advances in Arachis through Genomics & Biotechnology Brisbane, Australia
19. **Y. Amaravathi***, Jhansi Rani, E. Siva kumar R.P. Vasanthi and T. Giridhara Krishna (2015). **Parental lines screening for identification of stem rot resistance genes in groundnut (*Arachis hypogaea* L.) using SSR marker.** 1st National Conference on EMERGING TRENDS IN AGRINANOTECHNOLOGY (AgriNano-2015)
20. **Y. Amaravathi***, Poojitha, Jhansi Rani, R.P. Vasanthi, B.V. Bhaskar Reddy, Reddi Kumar and T. Giridhara Krishna (2015) **Mass multiplication of *Sclerotium rolfsii* for development sick plots to screen groundnut germplasm.** 1st National Conference on EMERGING TRENDS IN AGRINANOTECHNOLOGY (AgriNano-2015).
21. R.P. Vasanthi*, **Y. Amaravathi**, P. Sudhakar, P. Latha , E. Siva kumar, P. Jhansi Rani, M. Purushotham , G. Kiran Jyothi and T. Giridhara Krishna (2015). **Identification and pyramiding of genes for drought resistance , yield and yield attributes in advanced breeding lines of groundnut** 1st National Conference on EMERGING TRENDS IN AGRINANOTECHNOLOGY (AgriNano-2015).
22. **Y. Amaravathi***, R.P. Vasanthi, E. Siva Kumar, M. Purushotham and T. Giridhara Krishna (2014). DNA fingerprinting of groundnut (*Arachis hypogaea* L.) varieties of Tirupati using SSR markers. Electronic Journal of Plant Breeding, 5(4): 677- 687 (Sep 2014) ISSN 0975-928X
23. **Amaravathi Y**, Sai Shruthi, Vasanthi RP. **2014 Application of bioinformatics in peanut genomics. J Clin Sci Res;3(Suppl 1):S46.**
24. **Y. Amaravathi**, V. Sai Sruthi and R.P. Vasanthi (2014) **“Application of Bioinformatics in peanut genomics” poster presentation** in 5th National Seminar on Bioinformatics.
25. **Y. Amaravathi**, Rakesh Singh, A.K. Singh, V.P. Singh, T. Mohapatra, T.R. Sharma and N.K. Singh (2008). “Mapping of quantitative trait loci for basmati quality traits in rice (*Oryza sativa* L.)” **Molecular Breeding**, 21(1): 49-65.
26. K.V. Bhat, **Y. Amaravathi**, P.L. Gautam, and K.C. Velayudan (2004). “AFLP characterization and genetic diversity analysis of Indian banana and plantain cultivars (*Musa* spp.)” **Plant Genetic Resources**, 2: 121-130.
27. **Y. Amaravathi**, V.P. Singh, A.K. Singh and N.K. Singh. (2004). Attended **9th national rice biotechnology network meeting** and presented a paper titled “Development of a recombinant inbred line (RIL) population for mapping quality traits in rice” from April 15th to 17th, New Delhi, India. Pp: 33
28. S. Anand, **Y. Amaravathi**, A.K. Singh, K. Gaikwad, T.R. Sharma, T. Mohapatra and N.K. Singh. (2004). “Segregation for yield component traits in recombinant inbred line population of rice” **9th national rice biotechnology network meeting**, India. Pp35.
29. N.K. Singh, M.H.M. Ammar, **Y. Amaravathi**, S. Anand, S.K. Srivastava, A.Bhargav, A.K. Pal, V. Dalal, A. Singh, M. Yadav, A. Dixit, K. Batra, K. Gaikwad, T.R. Sharma, T. Mohapatra, A.K. Singh, V.P. Singh and R.K. Singh. (2003). “Functional genomics for complex genetic traits

in rice using immortal segregating populations” **International Rice Functional Genomics Symposium**. pp:92

30. N.K. Singh, T. Mohapatra, T.R. Sharma, K. Gaikwad, K. Batra, A. Singh, Ragiba, S. Pal, S. Swain, M. Yadav, S. Srivastav, K.S. Babu, A. Bhargav, H.M.M. Ammar, **Y. Amaravathi**, R.K. Singh, V.P. Singh, and A.K. Singh. (2002) “Functional genomics of naturally occurring alleles of agronomic important traits” **Rice functional genomics workshop**. pp: 33.