CURRICULUM VITAE

Dr. A. Karthikeyan, Ph.D Research Professor Subtropical Horticulture Research Institute, Jeju National University Jeju-63243, South Korea	Age:35 D.O.B:03.06.1987 Nationality:Indian Email:karthik2373@gmail.com Mobile:+82-1096672373	ORCID; 0000-0002-6270-5597 Researcher ID: S-3920-2017 Scopus ID: 57193724162 Website; www.karthiklab.com

EXPERTISE

Karthik has been working in legumes and cereals for the last 10 years, from plant breeding to gene cloning. He is using genetics, genomics, and bioinformatics to discover and characterize the major genes involved in the expression of important agronomic traits. His other research interest is applying plant-derived natural products and their analogs to improve human and animal health and control insect pests.

ACADEMIC EDUCATION

- 2012-2016, Ph.D., Crop Genetics and Breeding, Nanjing Agricultural University, Nanjing, China.
- 2008-2010, M.Sc., Biotechnology, Tamil Nadu Agricultural University, Coimbatore, India.
- 2004-2008, B.Sc., Agricultural Sciences, Annamalai University, Chidambaram, India.

PROFESSIONAL EXPERIENCE

- July 2019 – To date, Research Professor, Subtropical Horticulture Research Institute, Jeju National University, Jeju, and South Korea.
- November 2021- December 2021, Visiting Researcher, Gordon Center for Medical Imaging, Department of Radiology, Massachusetts General Hospital and Harvard Medical School, Boston, United States of America.
- April 2017 - March 2019, Post Doctoral Fellow, Department of Biotechnology, Agricultural College and Research Institute, Tamil Nadu Agricultural University, Madurai, and India.
- November 2016 - March 2017, Senior Research Fellow, Department of Biotechnology, Agricultural College and Research Institute, Tamil Nadu Agricultural University, Madurai, and India.
- January 2011 - August 2011, Senior Research Fellow, Department of Entomology, Central Institute for Cotton Research, Regional Station, Coimbatore, and India.

HONORS AND AWARDS

- Co-operative Research Programme Fellowship, Trade and Agriculture Directorate, Organisation for Economic Co-operation and Development, Paris, France (2021)
- National Post-Doctoral Fellowship, Science and Engineering Research Board, Department of Science and Technology, Ministry of Science and Technology, India (2017)
- Doctoral Student Fellowship, Chinese Scholarship Council, Ministry of Education, China (2012)
- Monbukagakusho (MEXT) Research Student Fellowship, Ministry of Education, Culture, Sports, Science and Technology, Japan (2011) [Fellowship not availed].

GRANTS

- Creative and Challenging Research Program, National Research Foundation (NRF), Seoul, South Korea. Investigating the therapeutic potential and mechanism of curcumin nanospheres in inflammatory bowel disease (IBD) using deep sequencing analysis (2020R1I1A1A01060923), 2020-2023, 1, 50,000,000 KRW.
- Science and Engineering Research Board, Department of Science & Technology (DST), Government of India, New Delhi, India. Combining genome-wide association study and transcriptome profiling analyses to identify the genes conferring mungbean yellow mosaic virus resistance in mungbean (PDF/2016/003676), 2017-2019, 19,20,000 INR.

PUBLICATIONS †Co-first author and *Corresponding author

Articles

1. Tongtong Jin†, **A. Karthikeyan**†, Liqun Wang, Tingxuan Zong, Lei Sun, Yongchun Cui, Tao Wang, Ting Tu, Yunhua Yang, Hui Liu, Bowen Li, Mengzhuo Liu, Tuanjie Zhao, Haijian Zhi (2022) Digs out and characterization of the resistance gene accountable to soybean mosaic virus in soybean. Theoretical of Applied Genetics; 135 (12); 000
2. M. Sudha†, **A. Karthikeyan†,** B. Madhumitha, R. Veera Ranjani, M. Dhasarathan, M. Kanimoli Mathivathana, J. Murukarthick, S. Madiha Natchi, K. Eraivan Arutkani Alyanathan, M. Pandiyan, M. Raveendran, and N. Senthil (2022) Dynamic transcriptome profiling of mungbean genotypes unveiling the genes respond to the infection of mungbean yellow mosaic virus. Pathogens 11 (2); 190
3. C. Neelima, R.M. Nagalakshmi, P. Bharathi, C.Sarankumar, M. Dhasarathan, **A. Karthikeyan**, K.N. Ganesan, M. Sudha, R. Ravikesavan, S.Vellaikumar, M. Vignesh, H. Firoz, H.S. Gupta, N. Senthil (2022) Development of β-carotene, lysine, and tryptophan-rich maize (Zea mays) inbreds through marker-assisted gene pyramiding (MAGP). Scientific reports. 12(8): 5551
4. M.Sathyabhama, L.Priyadharshini, **A. Karthikeyan**, S.Kalaiselvi, Taesun Min (2022) The credible role of curcumin in oxidative stress-mediated mitochondrial dysfunction in mammals. Biomolecules 12 (10); 1405
5. **A. Karthikeyan**, M. Akilan, S.M.Samyuktha, G. Ariharasutharsan, V.G. Shobhana, K. Veni, M.Tamilzharasi, K. Keerthivarman, M. Sudha, M. Pandiyan, and N. Senthil (2022) Untangling the physio-chemical and transcriptional alterations of black gram genotypes after infection with urdbean leaf crinkle virus. Frontiers in sustainable food systems 6; 916795
6. J.P.Kashmiri, S. Gajanan, P.M. Tamilarasi, R.Veera Ranjani, S. Devasree, C. Sarankumar, P. Bharthi, **A.Karthikeyan,** E. Vijayagowri, S. Arulselvi, K.N. Ganesan, V. Baranidharan, Sudha. K. Nair, R. Babu, J. Ramalingam, M.Raveendran, N. Senthil (2022) GBS-based SNP map pinpoints the QTLs associated with sorghum downy mildew resistance in maize. Frontiers in genetics 13; 890133
7. Li Bowen†, **A. Karthikeyan**†, Liqun Wang, Jinlong Yin, Tongtong Jin, Hui Liu, Kai Li, Junyi Gai and Haijian Zhi (2022) Discovery and characterization of differentially expressed soybean miRNAs and their targets during SMV infection unveils novel insight into Soybean-SMV interaction. BMC genomics 23; 171
8. S.M. Samyuktha, D. Malarvizhi, I. Mariyammal, **A. Karthikeyan**, S. Juliet Hepziba, A. Thanga Hemavathy, V. Sheela, and N. Senthil (2022) The hunt for sources of germplasms and introgressed lines resistance against South Indian bruchid strain in mungbean (Vigna radiata), Agriculture; 12 (7) ; 1050
9. G.Ariharasudharsan†, **A.Karthikeyan**†, V. G. Renganathan, V. Marthandan, A. Ambigapathi, M. Dhasarathan, M. Akilan, S.Palaniyappan, I. Mariyammal, M. Pandiyan, and N. Senthil (2022) Distinctive Physio-biochemical properties and transcriptional changes unfold the mungbean cultivars differing by their response to drought stress at flowering stage. Horticulturae 8 (5); 424
10. P.Muthuramalingam, R.Jeyasri, K.Rakkammal, L. Satish, S. Shamili, **A.Karthikeyan**, A.Valliammai, A.Priya, A. Selvaraj, P. Gowri, Q Sheng Wu, R. Sathishkumar, S.Karutha Pandian, Hyunsuk Shin, Jen-Tsung Chen, V. Baskar, M.Thiruvengadam, M. Akilan, and M.Ramesh (2022) Multi-omics and integrative approach towards understanding salinity tolerance in rice: A review. Biology 11 (7) ; 1022
11. Yunhua Yang†, **A. Karthikeyan†,** Jinlong Yin , Tongtong Jin , Rui Ren , Fei Fang , Han Cai, Mengzhuo Liu , Dagang Wang , Kai Li, and Haijian Zhi (2022) The E3 ligase GmPUB21 negatively regulates drought and salinity stress in soybean. International Journal of Molecular Sciences 23 (13); 6893
12. Maqbool Qutub, C. Sarankumar, R. Krishnakumar, S. Vellaikumar, R.Ravikesavan, M. Sudha, **A. Karthikeyan**, and N. Senthil (2021) Improvement of a Yaripok Chujak maize landrace from North Eastern Himalayan Region for β-Carotene content through molecular marker-assisted backcross breeding. Genes 12 (5); 762

13. Yingchao Shen†, **A. Karthikeyan†**, Yunhua Yang, Na Ma, Jinglong Yin, Yuan Yuan, Liqun Wang, Haijian Zhi (2021) Functional analysis of a soybean ferredoxin-NADP reductase (FNR) gene in response to soybean mosaic virus. Agronomy 11 (8); 1592
14. K. Ashokkumar, S. Vellaikumar, M. Murugan, M.K. Dhanya, **A. Karthikeyan**, G. Ariharasutharsan , P. Arjun, P. Sivakumar, and S. Aiswarya (2021) GC/MS analysis of essential oil composition from selected seed spices National Academy Science Letters 44 (6); 503-506
15. V.G.Renganathan, C. Vanniarajan**,** N.Senthil, A. Nirmalakumari, **A.Karthikeyan,** K. Veni, and J. Ramalingam (2021), Genetics and molecular marker for anthocyanin pigmentation in barnyard millet (Echinochloa frumentacea). Plant Breeding 140 (2): 246-253
16. **A.Karthikeyan,** Kim Na Young, M. Moniruzzaman, A. M. Beyene, Kyoungtag Do**,** S. Kalaiselvi, and Taesun Min (2021) Curcumin and its modified formulations on inflammatory bowel disease (IBD): the story so far and future outlook. Pharmaceutics 13 (4); 483
17. M.Dhasarathan, S. Geetha, **A.Karthikeyan**, D. Sasikumar, and N. Meenakshi Ganesan (2021) Development of novel blackgram (Vigna mungo) mutants and deciphering Genotype×environment interaction for yield-related traits of mutants, Agronomy 11 (7);1287
18. M. Moniruzzaman, Hun Hwan Kim, Haewon Shin , Hyunsoo Kim , Nayoung Kim , Sungyeun Chin, **A. Karthikeyan**, Hyo-Jick Choi, Gon Sup Kim, and Taesun Min (2021) Evaluation of dietary curcumin nanospheres in a weaned piglet model. Antibiotics 10 (11); 1280
19. K. Ashokkumar, M. Murugan, M.K. Dhanya, S. Vellaikumar, **A. Karthikeyan**, M. Akilan, G. Ariharasutharsan, M. Nimisha, and S. Aiswarya (2021) Assessment of phytochemical diversity in essential oil composition of Piper nigrum accessions from southern India. Journal of essential oil research 33 (6); 549-558
20. Tae Sun Min, **A.Karthikeyan**, Ki-Ho Lee (2021) Assessment of testicular steroidogenic enzymes expression in experimental animal model following withdrawal of nandrolone decanoate. Journal of animal science and technology 63 (6); 1247-1264
21. K. Ashokkumar, S. Vellaikumar, M.Murugan, M.K. Dhanya, M. Akilan , G.Ariharasutharsan, S. Aiswarya, Tom Warkentin and **A. Karthikeyan** (2021) Essential oil profile diversity in cardamom accessions from southern India. Frontiers in Sustainable Food Systems 5:639619.
22. Anteneh Marelign Beyene, M. Moniruzzaman, **A. Karthikeyan** and Taesun Min (2021) Curcumin Nano formulation with metal oxide nanomaterials for biomedical applications. Nanomaterials 11 (2) :460
23. **A.Karthikeyan†,** Hun Hwan Kim†, V. Preethi, M. Moniruzzaman, S. Kalaiselvi, Gonsup Kim and Taesun Min (2021) Assessment of anti-inflammatory and antioxidant effects of Citrus unshiu peel (CUP) flavonoids on LPS-Stimulated RAW 264.7 Cells. Plants 10 (10); 2209
24. M. Kanimoli Mathivathana, **A. Karthikeyan**, N. Jagadeeshselvam, R. Veera Ranjani, B. Madhumitha, S. Madiha Natchi, N. Senthil, M. Raveendran,M. Sudha (2021) Development of genome-wide simple sequence repeat markers from whole genome sequence of mungbean. Legume research ; 000
25. N. Senthil, D. Thirusendura Selvi, P. Bharathi, C. Sarankumar, N. Jagadeeshselvam, **A.Karthikeyan**, M. Dhasarathan, S. Vellaikumar, M. Samuel, M. Laishram Joykumar, T. Nepolean, K.N. Ganesan and R. Ravikesavan (2020) Enhancing β-carotene concentration in parental lines of CO6 maize hybrid through marker-assisted backcross breeding (MABB). Frontiers in Nutrition 7:134
26. K. Sumathi, K.N.Ganesan, P. Aarthi, V. Sruthimenan, M. Devasree, **A. Karthikeyan**, V. Baranidharan and N. Senthil (2020) Introgression of QTLs determining sorghum downy mildew (SDM) resistance into elite maize line UMI79 through Marker-assisted back cross-breeding (MABC). Australasian Journal of Plant Pathology 49 (2): 159-265
27. V.G.Renganathan, C. Vanniarajan, **A.Karthikeyan** and J. Ramalingam (2020) Barnyard Millet for Food and Nutritional Security: Current Status and Future Research Direction. Frontiers in Genetics 11:500

28. K. Ashokkumar, M. Govindaraj, Vellaikumar, V.G. Shobhana, **A. Karthikeyan**, M. Akilan, J. Sathishkumar (2020) Comparative profiling of volatile compounds in popular south Indian traditional and modern rice varieties by GC-MS analysis. Frontiers in Nutrition 7: 599119
29. P. Bharathi, M. Dhasarathan, **A.Karthikeyan**, G.M.Sandesh, R.M. Nagalakshmi, C.Sarankumar, S.Vellaikumar R. Ravikesavan, A. Kavithapushpam, S. Kalaiselvi, M. Vignesh, H. Firoz, and N. Senthil (2020) Marker aided introgression of opaque 2 (o2) allele improving lysine and tryptophan in maize. Physiology and Molecular Biology of Plants 26 (9): 1925-1930
30. B. Madhumitha, **A. Karthikeyan**, G. Poornima Devi, K. Eraivan Arutkani Aiyanathan and M. Sudha (2020) Comparative evaluation of biochemical changes in the leaves of resistant and susceptible mungbean plants infected by mungbean yellow mosaic virus. Research Journal of Biotechnology 15 (2): 40-46
31. K.Ashokkumar, M.Govindaraj**, A.Karthikeyan**, V.G.Shobhana, and Tom Warkentin (2020) Genomics integrated breeding for carotenoids and folates in staple cereal grains to reduce malnutrition. Frontiers in Genetics 11:414
32. V.G.Renganathan**,** C. Vanniarajan, A. Nirmalakumari, P. Arunachalam, S. Thiyageshwari, **A.Karthikeyan** M.Govindaraj (2020) Gene effects and heterosis for grain Fe and Zn content in barnyard millet (Echinochloa Frumentacea). Genetika 52(2):621-639
33. **A.Karthikeyan,** N. Senthil, and Taesun Min (2020) Nanocurcumin; A promising candidate for therapeutic applications. Frontiers in Pharmacology 11:487
34. V. Marthandan, R. Geetha, K. Kumutha, V.G.Renganathan, **A.Karthikeyan** and J. Ramalingam (2020) Seed Priming: Feasible strategy to enhance drought tolerance in crop plants. International Journal of Molecular Sciences 21 (21): 8258
35. N. Senthil, T. Surchandra Singh, D. Thirusenduraselvi, C. Neelima, C. Sarankumar, **A. Karthikeyan**, M. Samuel, S. Vellaikumar, K.N. Ganesan, M. Raveendran, M. Laishram Joykumar (2020) Characterization of crtRB1 Gene Polymorphism and β-carotene content in Maize Landraces Originated from North Eastern Himalayan Region (NEHR) of India. Frontiers in Sustainable Food System 4:78
36. M.Tamilzharasi, C. Vanniarajan, **A. Karthikeyan**, J. Souframanien, M. Arumugam Pillai and P. Meenakshisundram (2020) Evaluation of urdbean (Vigna mungo) genotypes for mungbean yellow mosaic virus resistance through phenotypic reaction and genotypic analysis. Legume Research 43 (5): 728-734
37. S.M. Samyuktha, D. Malarvizhi, **A. Karthikeyan**, M. Dhasarathan, A. Thanga Hemavathy, C. Vanniarajan, V. Sheela, S. Juliet Hepziba, M. Pandiyan, N. Senthil (2020) Delineation of genotype×environment interaction for identification of stable genotypes to grain yield in mungbean. Frontiers in Agronomy 2: 577911
38. M.Kanimoli Mathivathana, J. Murukarthick, **A.Karthikeyan**, Woojong Jang, M. Dhasarathan, M. Sudha, N. Jagadeesh Selvam, G. Karthikeyan, Tae-Jin Yang, M.Raveendran, M. Pandiyan, N. Senthil (2019). Detection of QTLs associated with mungbean yellow mosaic virus (MYMV) resistance using the interspecific cross of Vigna radiata × Vigna umbellata. Journal of Applied Genetics 60 (3-4): 255-268
39. J. Murukarthick, M.Manimekalai, **A.Karthikeyan,** P.Sampath, M.Dhasarathan, K.Thangaraj, Tae-Jin Yang, and N. Senthil (2019). Transcriptomes of Indian barnyard millet (Echinochloa frumentacea) and barnyard grass (E. crus-galli) reveal candidate genes involved in drought adaptation and micronutrient accumulation. Acta Physiologiae Plantarum 41 (5): 66
40. P. Sivakumar, M.Dhasarathan, **A.Karthikeyan,** P. Bharathi, K. Ganesamurthy and N.Senthil (2019) Population structure and association mapping studies for yield-related traits in maize (Zea mays). Current Plant Biology 18:100103
41. C. Sarankumar, P. Bharathi, **A. Karthikeyan**, M. Dhasarathan, S. Vellaikumar, C. Vanniarajan, E. Kokiladevi, A. Kavithapushpam, M. Laishram Joykumar, R. Ravikesavan, M. Vignesh, H. Firoz Hossain, N. Senthil (2019) Marker-assisted selection to pyramid the opaque-2 (o2) and β-carotene (crtRB1) genes in maize. Frontiers in Genetics 10: 859

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42. I. Mariyammal, Devina Seram, S.M. Samyuktha, **A.Karthikeyan**, M. Dhasarathan, J. Murukarthick, J.S. Kennedy, Tae-Jin Yang, M.Pandiyan, and N. Senthil (2019). QTL mapping in Vigna radiata × Vigna umbellata population uncovers major genomic regions associated with bruchids resistance. Molecular Breeding 39 (7): 11
43. P. Bharathi, M. Dhasarthan, C. Sarankumar, **A.Karthikeyan,** S.Vellaikumar, R. Ravikesavan, A. Kavithapushpam, G. Hemalatha, C.Vanniarajan, M. Vignesh, H. Firoz, and N. Senthil (2019). Incorporation of opaque-2 into UMI1200 an elite maize inbred line through marker-assisted backcross breeding. Biotechnology and Biotechnological Equipment 33(1):144-153
44. **A.Karthikeyan,** Kai Li, Cui Li, Yin Jinglong, Li Na, Yang Yunhua, Song Yingpei, Rui Ren, Haijian Zhi, and Junyi Gai (2018) Fine-mapping and identifying candidate genes conferring resistance to soybean mosaic virus strain SC20 in soybean. Theoretical of Applied Genetics 131 (2): 461-476
45. GM Sandesh, **A. Karthikeyan**, D. Kavithamani, K.Thangaraj, K.N Ganesan, R. Ravikesavan, N. Senthil (2018). Heterosis and combining ability studies for yield and its component traits in Maize (Zea mays L.). Electronic Journal of Plant Breeding 9(3): 1012- 1023.
46. Ren Rui, Jinlong Yin, Huanfang Zheng, Tao Wang, Shichao Liu, **A. Karthikeyan**, Qinghua Yang, Le Gao, Haijian Zhi, Kai Li (2018) Characterization of broad-spectrum resistance to soybean mosaic virus in soybean cultivar RN-9. Plant breeding 137 (4): 605-613
47. M. Manimekalai, M. Dhasarathan**, A. Karthikeyan**, J. Murukarthick, V.G.Renganathan, K. Thangaraj, S. Vellaikumar C. Vanniarajan, and N. Senthil (2018) Genetic diversity in the barnyard millet (Echinochloa frumentacea) germplasms revealed by morphological traits and simple sequence repeat markers. Current Plant Biology 14: 70-78
48. **A. Karthikeyan†,** Kai Li†, Hua Jiang, Rui Ren, Cui Li, Haijian Zhi, Shoui Chen, and Junyi Gai (2017). Inheritance, fine-mapping and candidate gene analyses of resistance to soybean mosaic virus strain SC5 in soybean. Molecular Genetics and Genomics 292 (4): 811-822
49. Cui Li, **A. Karthikeyan**, Yuan Yuan, Jinlong Yin, Rui Ren, Na Li, Yongqing Yang, Haijian Zhi (2017) Identification of candidate genes for resistance to soybean mosaic virus strain SC3 by using fine mapping and transcriptome analyses. Crop Pasture and Science 68 (2):156-166
50. Rui Ren, Shichao Liu, **A. Karthikeyan,** Tao Wang, Haopeng Niu, Jinlong Yin, Yunhua Yang, Liqun Wang, Qinghua Yang, Haijian Zhi and Kai Li (2017) Fine mapping and candidate gene discovery of Rsc15: novel resistance gene for soybean mosaic virus strain (SC15) in soybean. Theoretical of Applied Genetics 130 (11)-2395-2410
51. N. Li, J.L. Yin, C. Li, D.G. Wang, Y.Q. Yang, **A. Karthikeyan**, H.X. Luan, H.J. Zhi (2016) NB-LRR gene family required for Rsc4 mediated resistance to soybean mosaic virus. Crop Pasture and Science 67 (5):541-552.
52. Ying-Pei Song , Cui Li , Lin Zhao , **A. Karthikeyan** , Na Li, Kai Li and Haijian Zhi (2016) Disease spread of a popular soybean mosaic virus strain (SC7) in Southern China and effects on two susceptible soybean cultivars. The Philippine Agricultural Scientist 99 (4): 355-364
53. M.Sudha, **A.Karthikeyan**, V.G.Shobhana, P.Nagarajan, N.Senthil, M.Raveendran, M.Pandiyan, K.Angappan, and P.Balasubramanian (2015). Search for Vigna species conferring resistance to mungbean yellow mosaic virus (MYMV) in mungbean. Plant Genetics Resources and Characterization 13(2):442-446
54. Le Gao, Xueni Ding, Kai Li, Wenlin Liao, Yongkun Zhong, Rui Ren, Zhitao Liu, **A. Karthikeyan** and Haijian Zhi (2015). Characterization of soybean mosaic virus resistance of multiple soybean cultivars derived from inverted repeat-SMV-HC-Pro genes. Theoretical of Applied Genetics. 128 (8): 1489–1505

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55. Kai Li, Rui Ren, **A. Karthikeyan**, Le Gao, Yuan Yuan, Zhitao Liu, Yongkun Zhong, and Haijian Zhi (2015) Genetic analysis and identification of two SMV-resistant genes in Soybean. Plant Breeding 134 (6): 684-795
56. L. Gao, R. Zhai, Y. K. Zhong, **A. Karthikeyan**, R. Ren, K. Li, K. Zhang, and H. J. Zhi, (2015). Screening isolates of soybean mosaic virus for infectivity in a model plant Nicotiana benthamiana. Plant Disease. 99 (4):442-446.
57. **A.Karthikeyan***, V.G.Shobhana, M.Sudha, M.Raveendran, N.Senthil, M.Pandiyan, and P.Nagarajan (2014). Mungbean yellow mosaic disease (MYMD): A threat to Green gram (Vigna radiata) production in Asia. International Journal of Pest Management 60 (4): 315-325.
58. Wang Haitang, Guo Na, Zhao Jinming, **A.Karthikeyan**, Xue Dong, Xue Chengcheng, Xu Jinyan, Xu Zhihua, Gai Junyi, and Xing Han (2014) Cloning and expression analysis of a stress-induced GmIMT1 gene in soybean. Genetics and Molecular Research 13 (1):806-818.
59. Kai Zhang, Yingpei Song, Yu Wang, Kai Li, Le Gao, Yongkun Zhong, **A.Karthikeyan**, Haijian Zhi (2014) Differential necrosis resistance response in the soybean cultivars induced by soybean mosaic virus. European Journal of Plant Pathology 139 (3): 525-534.
60. M.Sudha, **A.Karthikeyan**, P.Nagarajan, M. Raveendran, N. Senthil, M. Pandiyan, K. Angappan, J. Ramalingam, M. Bharathi, R. Rabindran, K. Veluthambi, P. Balasubramanian (2013) Screening of mungbean germplasm for resistance to mungbean yellow mosaic virus using agroinoculation. Canadian Journal of Plant Pathology. 35 (3):424-430
61. **A.Karthikeyan***, M.Deivamani, V.G.Shobhana, M.Sudha and T. Anandhan (2013) RNA interference: Evolutions and applications in plant disease management. Archives of Phytopathology and Plant Protection 46 (12):1430--1441.
62. M.Sudha, **A.Karthikeyan,** P. Anusuya, N.M.Ganesh, M.Pandiyan, N.Senthil, M.Raveendran**,** P.Nagarajan, and K.Angappan and, (2013) Inheritance of resistance to mungbean yellow mosaic virus in inter and intraspecific crosses of mungbean. American Journal of Plant Sciences 4 (10):50-54
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64. A. **Karthikeyan***, R.Valarmathi, S.Nandini, and M.R.Nandhakumar (2012) Genetically modified crops: Insect resistance. Biotechnology 11(3) 119-126.
65. **A.Karthikeyan***, M.Sudha, N.Senthil, M.Pandiyan, M.Raveendran, and P.Nagarajan (2012) Screening and identification of RAPD markers linked to mungbean yellow mosaic virus resistance in mungbean. Archives of Phytopathology and Plant Protection (45) 6:712-716.
66. N.Senthil, J.Murukarthick, M.Pandiyan, **A.Karthikeyan**, M.Sudha, M.Raveendran, P.Jayamani, S.Kalaiselvi, and P.Nagarajan (2012) Paithumbase - Biometrical traits based query system for studying mungbean phenomics. International Journal of Applied Information Systems. (4) 10:36-39
67. **A.Karthikeyan***, M.Sudha, M.Pandiyan, N.Senthil, V.G.Shobana, and P.Nagarajan, (2011) Screening of mungbean yellow mosaic virus resistant mungbean progenies through agroinoculation. International Journal of Plant Pathology 2(3): 115-125.

Books/ Chapters

1. **A. Karthikeyan***, V.G. Renganathan, M. Pandiyan and N. Senthil (2022) Genomics of abiotic stress in ricebean (Vigna umbellata). In: M. Prakash, R. Anandan, C. Viswanathan, B. Sunil Kumar. (Eds), Legumes: Physiology and Molecular Biology of Abiotic Stress Tolerance. Springer-
2. **A. Karthikeyan***, C. Sarankumar, and N. Senthil (2022) Molecular breeding for resistance against Pythium root rot. In: Wani, S.H., Sofi, N.U.R., Bhat, M.A., Lin, F. (Eds). Soybean Improvement; Physiological, Molecular and Genetic Perspectives, Springer; 153-167
3. **A. Karthikeyan**, V.G. Renganathan, N. Senthil (2022) Role of proteomics in understanding the abiotic stress tolerance in minor millets. In: Pudake, R.N., Solanke, A.U., Sevanthi, A.M., Rajendrakumar, P. (Eds). Omics of Climate Resilient Small Millets, Springer; 125-139
4. V.G. Shobhana, **A. Karthikeyan***, and R. Veera Ranjani (2021) Biotechnological applications for cardamom improvement. In: K. Ashokkumar, M.K. Dhanya, M.Murugan. (Eds). Cardamom production, breeding, management, phytochemistry and health benefits, Nova Science; 83-102

Nucleotide Sequences Submitted to Gene Bank (NCBI)

- **A. Karthikeyan,** M. Dhasarathan, M. Sudha, M.Pandiyan, N. Senthil (2023) Leaf transcriptome datasets of Ricebean (Vigna umbellata) Bio project; PRJNA900023; Bio sample ID; SAMN31676708-09; SRA ID: SRR22252572-73
- S. Divya, M. Bharani, **A. Karthikeyan**, S. Kalaiselvi, N. Senthil (2022) Comprehensive transcriptome analysis of saponin and cadambin biosynthesis genes in Neolamarckia cadamba (Roxb.) Bio project: PRJNA871050; Bio sample ID; SAMN30400848-30400850, SRA ID: SRR21134068-21134070
- M. Sudha, **A. Karthikeyan**, M. Pandiyan, M. Raveendran, and N. Senthil (2021) Transcriptome datasets of mungbean (Vigna radiata) genotypes in response to mungbean yellow mosaic infection Bio project; PRJNA742191; Bio sample ID; SAMN19945470-19945473; SRA ID: SRX11379693-11379696

PROFESSIONAL AFFILIATIONS AND MEMBERSHIPS

- World Society of Virology (WSV)
- Indian Science Congress Association (ISCA)
- Indian Society of Plant Breeders

ADMINISTRATIVE EXPERIENCE

- As a resource personnel and organizing committee member actively engaged in various hands-on training workshops on genomics and proteomics conducted by the Department of Biotechnology, Centre of Innovation, Agricultural College and Research Institute, Tamilnadu Agricultural University, Madurai, Tamil Nadu, India

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OUTREACH SERVICE

- **Journal editor/Reviewer:** Frontiers in Genetics, Plose one, Genomics, Peer J, Frontiers in Plant Sciences, mSystems, European Journal of Plant Pathology, Plants, AMB express, The Crop Journal, Journal of Plant Growth Regulation, Agronomy, Plant Genetics Resources, Genetika, Atmosphere, International Journal of Molecular Sciences, Pharmaceutics, Frontiers in Agronomy, Cells, and 3 Biotech

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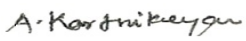
Declaration

I hereby solemnly affirm that the details given above are true to the best of my knowledge

Place: Jeju, South Korea

Yours faithfully



Date: 21.11.2022

A. Karthikeyan

REFERENCES

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1. **Prof. Dr. Gai Junyi**, Director, State Key Laboratory of Biology and Genetic Improvement of Soybean, National Center for Soybean Improvement, Nanjing Agricultural University, Nanjing, China, Mobile: +86-13770792580, Email: sri@njau.edu.cn
2. **Prof. Dr. Senthil Natesan**, Director, Center for Plant molecular biology, Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu, India, Mobile: +91-9842232057, Email: senthil_natesan@tnau.ac.in
3. **Prof. Dr. Raveendran Muthurajan**, Director of Research, Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu, India, Mobile: +91-9842181968, Email: raveendrantnau@gmail.com
4. **Prof. Dr. Min Taesun**, Faculty of Biotechnology, College of Applied Life Science, Sustainable Agriculture Research Institute (SARI), Jeju National University, Jeju-63243, Republic of Korea, Email: tsmin@jejunu.ac.kr

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