




# Bharathiar University

State University | "A<sup>++</sup>" Grade by NAAC | 46<sup>th</sup> Rank in MoE-NIRF  
Maruthamalai Road, Coimbatore, Tamil Nadu - 641 046.

<b>Dr KRISHNAN VASANTH</b> Associate Professor Department of Botany Bharathiar University Coimbatore, 641048 Tamil Nadu <b>E-mail:</b> krishnanvasanth1975@buc.edu.in <b>Phone:</b> 8056335369 <b>Office Number:</b> 0422-2428309	
<b>Research Area</b> <ul style="list-style-type: none"><li>• Plant Tissue Culture</li><li>• Animal Cell Culture</li><li>• Cancer Biology</li><li>• Molecular Biology</li><li>• Pharmacology</li></ul>	<b>Courses Teaching</b> <ul style="list-style-type: none"><li>• Microbiology, Forest Botany, Plant Tissue Culture, Taxonomy, Molecular Biology</li></ul>
<b>Research Experience:</b> 21	<b>Teaching Experience:</b> 17
<b>Research Credentials</b> (as on September 2025 – Source: Google scholar) H-index: 20                      Citations: 1293                      i10-index: 35	
<b>Patents :</b> Granted: 1	
<b>Publications</b> National Journals: 2                      International Journals: 61                      Books/Chapters: 4	
<b>Career</b> <b>At Bharathiar University</b> <ol style="list-style-type: none"><li><b>1. Designation : Associate Professor</b> Period : March 2021 - Till Date</li><li><b>2. Designation : Assistant Professor</b> Period : February 2011 - February 2021</li></ol> <b>Other Institutes</b> <ol style="list-style-type: none"><li><b>1. Designation : Post Doctoral Fellow</b> Institution Name : National Yang-Ming University, Taipei, Taiwan Period : May 2009 - February 2011</li><li><b>2. Designation : Faculty Fellow</b> Institution Name : Institute for Wine Biotechnology, Stellenbosch University, South Africa Period : April 2008 - March 2009</li><li><b>3. Designation : Post Doctoral Fellow</b> Institution Name : Institute for Wine Biotechnology, Stellenbosch University, South Africa Period : April 2005 - March 2008</li></ol>	
<b>Education</b> <b>Ph. D.</b> Subject : Botany Institution : Bharathidasan University, Trichy Affiliated University : Bharathidasan University, Trichy Year of Award : February 2005	



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Dr KRISHNAN VASANTH , Associate Professor , Department of Botany

## M. Sc.

Subject : Botany

Institution : Bharathidasan University, Trichy

Affiliated University : Bharathidasan University, Trichy

Year of Award : April 1999

## PG Diploma

Subject : Environmental Science

Institution : Bharathidasan University, Trichy

Affiliated University : Bharathidasan University, Trichy

Year of Award : April 1998

## B. Sc.

Subject : Botany

Institution : Government Arts College, Dharmapuri

Affiliated University : Madras University

Year of Award : April 1995

## Projects

### National Level

Ongoing - 2 completed - 3

## Research Guidance

### Completed

Ph.D. - 5

### On Going

Ph.D. - 4

## Institutional Responsibilities

### BHUTA (President)

Period :Sep 2023 to Till date

Nature of Responsibility :Role of Welfare Teachers and Students Community

### Herbal Garden (Co-ordinator)

Period :Jun 2021 to Till date

Nature of Responsibility :Establishment of Rare and High medicinal value plants

### SDE-Botany Department (Co-ordinator)

Period :Aug 2022 to Till date

Nature of Responsibility :Conducting a Class for Postgraduate Studenys

### Boards of Studies Member

Period :Jun 2023 to Till date

Nature of Responsibility :For various Universities and Colleges

## Programs organized

1. Organized National Conference on "Basic and Applied Biological Sciences" ( 2018-10-11 - 2018-10-10 )
2. Organized National Seminar on Millet Cultivation and Conservation of Plants in Herbal Garden" ( 2023-12-21 - 2023-12-22 )
3. Organized National Seminar on "Biodiversity Conservation and Sustainable Utilization" ( 2017-03-20 - 2017-03-21 )
4. Summer Short Term Training course on "Plant Tissue Culture and Transformation Technology ( 2016-06-17 - 2016-06-22 )
5. Plant Conservation Biotechnology ( 2017-03-09 - 2017-03-17 )
6. Basic Molecular Biology Techniques ( 2018-05-21 - 2018-05-29 )
7. Sophisticated Instruments and Software ( 2022-08-23 - 2022-08-26 )
8. Course Co-ordinator, Refresher course in Botany ( 2012-03-08 - 2012-03-28 )



9. Additional Co-ordinator, Refresher course in Life Sciences ( 2012-09-11 - 2012-10-01 )
10. Course Co-ordinator, Refresher course in Life Sciences ( 2019-02-13 - 2019-03-05 )
11. Course Co-ordinator, Refresher course in Botany ( 2022-06-02 - 2022-06-15 )

## Publications

### International Journals - 61

#### 61. RNAi Technology Against Forest Pests: Opportunities, Challenges and Future Prospects. RNA

##### interference in Agriculture: Basic Science to Applications

Bioinformatics and Biological Sciences (May 2025)

Gurusamy, D., Sakthi, A. R., Selvi, C., Vasanth, K., Smagghe, G., & Roy, A.

#### 60. Structure–function relationships between the human bitter taste receptor TAS2R38 and propylthiouracil

IUBMB life (February 2025)

Subramanian, G., Ponnusamy, V., Murugesan, J., Vedagiri, H., Panneerselvan, P., Vasanthakumar, K., Vasanth, K., & Subramaniam, S.

#### 59. Effects of dietary approaches to prevent hypertension and enhance cardiovascular health

Discover Food (January 2025)

Vignesh, A., Amal, T. C., Shanmugam, A., Vasanth, K., & Selvakumar, S

#### 58. Exploring the dual impact of nanoparticles on human well-being: A comprehensive review of risks and benefits

Next Nanotechnology (January 2025)

Vignesh, A., Menaka, C., Amal, T. C., Selvakumar, S., & Vasanth, K.

#### 57. FAHFA promotes intracellular calcium signaling via activating the fat taste receptor, CD36 and Src protein kinases in mice taste bud cells.

Biochimica et Biophysica Acta (BBA) (December 2024)

Muthuswamy, K., Vasanthakumar, K., Panneerselvan, P., Thangamani, L., Krishnan, V., Piramanayagam, S., & Subramaniam, S.

#### 56. A Review on the Influence of Nutraceuticals and Functional Foods on Health

Food Chemistry Advances (December 2024)

Vignesh, A., Amal, T. C., Sarvalingam, A., & Vasanth, K. (2024)

#### 55. Food contaminants: Impact of food processing, challenges and mitigation strategies for food security

Food Research (September 2024)

Vignesh, A., Amal, T. C., & Vasanth, K.

#### 54. T1R2/T1R3 polymorphism affects sweet and fat perception: Correlation between SNP and BMI in the context of obesity development

Human Genetics (August 2024)

Ponnusamy, V., Subramanian, G., Vasanthakumar, K., Muthuswamy, K., Panneerselvan, P., Krishnan, V., & Subramaniam, S.

#### 53. Enlightening the biotechnological approaches of legumes: present and past scenario to mitigate the biotic and abiotic stress

Plant Biotechnology (July 2024)

Sivakumar, J. S., Gurusamy, D., Subramaniam, S., & Krishnan, V

#### 52. Plant ecosystems and sustainable development in the Western Ghats, India

Journal of Ecology (June 2024)

Vignesh<sup>1</sup>, A., Menaka, C., Amal, T. C., & Vasanth, K. (2024)

#### 51. The gustin gene variation at rs2274333 and PROP taster status affect dietary fat perception: a stepwise multiple regression model study

The Journal of Nutritional Biochemistry (June 2024)

Subramanian, G., Ponnusamy, V., Vasanthakumar, K., Panneerselvan, P., Krishnan, V., & Subramaniam, S.



## 50. Unraveling the impact of nanopollution on plant metabolism and ecosystem dynamics

Plant Physiology and Biochemistry (May 2024)

Vignesh, A., Amal, T. C., Sivalingama, R., Selvakumar, S., & Vasanth, K.

## 49. An Investigation into the Impact of Millets on Global Health and Sustainability

NUTRACEUTICALS AND HEALTH (March 2024)

Vignesh<sup>1</sup>, A., Amal, T. C & Vasanth, K.

## 48. Influence of ecological factors on the phytochemical composition and bioactivity of *Berberis tinctoria*

### Lesch. wild edible fruits

Biochemical Systematics and Ecology (February 2024)

Vignesh, A., Amal, T. C., Sivalingam, R., Selvakumar, S & Vasanth, K.

## 47. Unraveling the role of medicinal plants and Gut microbiota in colon cancer: Towards microbiota-based strategies for prevention and treatment

Health Sciences Review (December 2023)

Vignesh, A., Amal, T. C., Selvakumar, S & Vasanth, K.

## 46. An effective bio-inspired synthesis of palladium nanoparticles using *Crateva religiosa* G. Forst. leaf extract: a multi-functional approach for environmental and biomedical applications

Biomass Conversion and Biorefinery (November 2023)

Vignesh, A., Amal, T. C., Kalaiyarasan, J., Selvakumar, S., & Vasanth, K

## 45. Insights on the functional dualism of nitric oxide in the hallmarks of cancer

Biochimica et Biophysica Acta (BBA)-Reviews on Cancer (November 2023)

Panneerselvan, P., Vasanthakumar, K., Muthuswamy, K., Krishnan, V & Subramaniam, S.

## 44. CD36 genetic polymorphism and salivary cues are associated with oleic acid sensitivity and dietary fat intake

Nutrition Bulletin (August 2023)

Muthuswamy, K., Shanmugamprema, D., Subramanian, G., Ponnusamy, V., Vasanthakumar, K., Krishnan, V., & Subramaniam, S

## 43. Conservation linkages of endangered medicinal plant and exploration of phytochemicals, pharmaceutical screening and in silico validation of in vivo-wild and in vitro-regenerated plant *Boucerosia diffusa* Wight

3 Biotech (June 2023)

• Vignesh A., Amal TC., Selvakumar S & Vasanth K

## 42. Exercise modifies fatty acid perception and metabolism

Acta Physiologica (May 2023)

Shanmugamprema, D., Muthuswamy, K., Ponnusamy, V., Subramanian, G., Vasanthakumar, K., Krishnan, V., & Subramaniam,

## 41. A New organosulfur compound identified from *Striga angustifolia* (D. Don) C.J. Saldanha inhibits lung cancer growth and induces apoptosis via p53/mTOR signaling pathway

Applied Biochemistry and Biotechnology (March 2023)

Raja K., Vignesh A., Lavanya P., Ravi M., Selvakumar S & Vasanth K

## 40. Tongue papillae density and fat taster status-a cardinal role on sweet and bitter taste perception among Indian population

Food Research International (January 2023)

Ponnusamy, V., Subramanian, G., Muthuswamy, K., Shanmugamprema, D., Vasanthakumar, K., Krishnan, V., & Subramaniam, S

## 39. Identifying native endemic plant species in Nilgiris using the interval type 2 q-rung orthopair fuzzy

### Bonferroni mean operator.

Computational and Applied Mathematics (January 2023)

Janani, K., Vignesh, A., Veerakumari, K. P., Vasanth, K., & Rakkiyappan, R.

## 38. Exploration of phytochemicals and probing potential effects of *Priva cordifolia* active extract on PACAP 38 and its nociceptor in the human trigeminovascular system

3 Biotech (January 2023)

Motwani, D., Vignesh, A., Raja, K., Selvakumar, S & Vasanth, K.



**37. Genetic variation in sweet taste receptors and a mechanistic perspective on sweet and fat taste sensation in the context of obesity**

Obesity Reviews (October 2022)

Ponnusamy, V., Subramanian, G., Muthuswamy, K., Shanmugamprema, D., Krishnan, V., Velusamy, T., & Subramaniam, S.

**36. Effects of root-knot nematode inoculum densities on morphological and phytochemical analysis of selected horse gram germplasm**

Indian Journal of Agricultural Research (September 2022)

Amal TC, Karthika P, Balamurugan V, Shanmugam G, Selvakumar S, Sundararaj P & Vasanth K (2020),

**35. Phytochemical Screening, Antioxidant, Antidiabetic and Anticancer Activities of *Elaeocarpus variabilis* Fruit**

Turkish Journal of Agriculture-Food Science and Technology (August 2022)

Balamurugan, V., Sridhivya, M., Dharani, R., Selvakumar, S., & Vasanth, K.

**34. CD36 and GPR120 mediated orogustatory perception of dietary lipids and its physiological implication in the pygmy mouse *Mus booduga*.**

Journal of Animal Physiology and Animal Nutrition (July 2022)

Shanmugamprema, D., Muthuswamy, K., Ponnusamy, V., Subramanian, G., Velusamy, T., Krishnan, V., & Subramaniam, S.

**33. Comparative LC-MS analysis of bioactive compounds, antioxidants and antibacterial activity from leaf and callus extracts of *Saraca asoca*.**

Phytomedicine Plus (February 2022)

Vignesh, A., Selvakumar, S., & Vasanth, K.

**32. Phytochemical screening, antioxidant, anti-diabetic and cytotoxic activity of leaves of *Pandanus canaranus* Warb**

Materials Today: Proceedings (January 2022)

Balamurugan V, Raja K, Selvakumar S, & Vasanth K

**31. Complex Pythagorean fuzzy Einstein Aggregation Operators in selecting the best breed of Horsegram**

Expert Systems with Applications (January 2022)

K Janani, KP Veerakumari, K Vasanth, & R Rakkiyappan

**30. A review on ethnomedicinal and phytopharmacological potential of traditionally wild and endemic plant *Berberis tinctoria* Lesch**

Thai Journal of Pharmaceutical Sciences (January 2022)

Vignesh A., Sivalingam R., Selvakumar S., & Vasanth K.

**29. Complex Pythagorean fuzzy Einstein aggregation operators in selecting the best breed of Horsegram.**

Expert Systems with Applications (January 2022)

Janani, K., Veerakumari, K. P., Vasanth, K., & Rakkiyappan, R.

**28. *Striga angustifolia* mediated synthesis of silver nanoparticles: Anti-microbial, antioxidant and anti-proliferative activity in apoptotic p53 signalling pathway**

Journal of Drug Delivery Science and Technology (January 2022)

Raja, K., Balamurugan, V., Selvakumar, S., & Vasanth, K.

**27. Diversity of Woody Flora and Physico-chemical Attributes of Soil in the Nilgiri Hills, Tamil Nadu, India.**

**Proceedings of the National Academy of Sciences**

Proceedings of the National Academy of Sciences, India Section B: Biological Sciences (January 2022)

Vignesh, A., Sivalingam, R., & Vasanth, K.

**26. Phytochemical screening and in vitro antibacterial, antioxidant, anti-inflammatory, anti-diabetic, and wound healing attributes of *Senna auriculata* (L.) Roxb. leaves**

Arabian Journal of Chemistry (September 2021)

M Prasathkumar, K Raja, K Vasanth, A Khusro, & S Sadhasivam,



**25. Anti-proliferative phytoconstituents from *Striga angustifolia* (D. Don) C.J. Saldanha – An in vitro and in silico approach**

Phytomedicine Plus (August 2021)

Raja K., Selvakumar S., Rakkiyappan R., Pradeepa Veerakumari K.&Vasanth K

**24. Nutritional assessment, antioxidant, anti-inflammatory and antidiabetic potential of traditionally used wild plant, *Berberis tinctoria* Lesch**

Trends in Phytochemical Research (June 2021)

Vignesh, A., Pradeepa Veerakumari, K., Selvakumar, S., Rakkiyappan, R., &Vasanth, K.

**23. Single nucleotide polymorphism in CD36: Correlation to peptide YY levels in obese and non-obese adults**

Clinical Nutrition (May 2021)

Karthi, M., Deepankumar, S., Vinithra, P., Gowtham, S., Vasanth, K., Raj, P. P., & Selvakumar, S.

**22. Plant regeneration from direct organogenesis of *Pandanus canaranus* Warb. an endemic medicinal plant.**

Vegetos (May 2021)

Balamurugan V, Karthika P, DhandapaniG, Pradeepa Veerakumari K, &Vasanth K

**21. Green synthesis and characterization of zinc oxide nanoparticles using *Berberis tinctoria* Lesch. leaves and fruits extract of multi-biological applications**

Nanomedicine Research Journal (April 2021)

Vignesh A., Selvakumar S., &Vasanth K.

**20. Anti-Obesity Effect of *T. Chebula* Fruit Extract on High Fat Diet Induced Obese Mice: A Possible**

**Alternative Therapy**

Molecular Nutrition & Food Research (March 2021)

Subramanian, G., Shanmugamprema, D., Subramani, R., Muthuswamy, K., Ponnusamy, V., Tankay, K., Velusamy, T., &Krishnan,

**19. Anti-Cancer Activity of *Leonurus sibiricus* L.: Possible Involvement of Intrinsic Apoptotic Pathway**

Nutrition and Cancer (January 2021)

Krishnan, V., Subramaniam, S., Chia-Chuan, C., Venkatachalam, B., Thomas Cheeran, A., & Chi-Ying F, H.

**18. A simple and efficient Agrobacterium-mediated In-planta transformation protocol for Horse gram**

**(*Macrotyloma uniflorum* Lam. Verdc.).**

Journal of Genetic Engineering and Biotechnology (December 2020)

Amal TC, Karthika P, Dhandapani G, Selvakumar S, &VasanthK

**17. Fat taste signal transduction and its possible negative modulator components**

Progress in Lipid Research (July 2020)

Deepankumar S., Karthi M., Gowtham S., Vinithra P., Vasanth K., & Selvakumar S.

**16. Morphological traits of drought tolerant Horse gram germplasm: Classification through machine learning**

Journal of the Science of Food and Agriculture (June 2020)

Amal TC, Asif TT, Pradeepa VK, Rakkiyappan R, &Vasanth K

**15. Insights on modulators in perception of taste modalities –a review**

Nutrition Research Review (July 2019)

Deepankumar S, Muthuswamy Karthi M, Vasanth, K, & Selvakumar S.

**14. Dietary supplementation of Zeolite on growth performance, immunological role, and disease resistance in**

***Channa striatus* against *Aphanomyces invadans***

Fish and Shellfish Immunology (April 2016)

Jawahar S, Nafar A, Vasanth K, Musthafa MS, Arockiaraj J, Balasundaram C, &Harikrishnan R

**13. Protective efficacy of Azomite enriched diet in *Oreochromis mossambicus* against *Aeromonas hydrophila*.**

Aquaculture (January 2016)

Musthafa MS, Ali ARJ, Mohamed MJ, Jaleel MMA, Arun Kumar MS, Rani KU, Vasanth K, Arockiaraj J, Preetham E, Balasundaram C, & Harikrishnan R



## 12. Functional characterisation of three members of the *Vitis vinifera* L. carotenoid cleavage dioxygenase gene family.

BMC Plant Biology (October 2013)  
Lashbrooke JG, Young PR, Dockrall SJ, Vasanth K, & Vivier MA

## 11. Optimization of improved cryopreservation procedure for long term storage synchronised culture of grapevine (*Vitis vinifera* L.).

Biologia Plantarum (April 2011)  
Vasanth K, & Vivier MA

## 10. Induced twining and boll abnormalities in *Gossypium hirsutum* (L)

SAARC (October 2010)  
Muthusamy AK, Vasanth. K, & Jayabalan N

## 9. Enhanced somatic embryogenesis and plant regeneration in groundnut (*Arachis hypogaea* L.) within vitro mutagenesis

Biologia Plantarum (September 2007)  
Muthusamy AK, Vasanth K, Sivasankari BR, Chandrasekar, & Jayabalan N

## 8. Induced high yielding mutants in cotton (*Gossypium hirsutum* L.).

Mutation Breeding Newsletter (MBNL) (December 2006)  
Muthusamy AK, Vasanth K, & Jayabalan N

## 7. Amino acid enhancing multiple shoot induction in peanut (*Arachis hypogaea* L.).

Indian Journal of Crop Science (January 2006)  
Vasanth K, Lakshmi Prabha A, & Jayabalan N (2006)

## 6. In vitro plant regeneration and multiple shoot induction in peanut (*Arachis hypogaea* L.)

Plant cell Biotechnology and Molecular Biology (June 2005)  
Vasanth. K, A. Muthusamy and A. Lakshmi Prabha & N. Jayabalan

## 5. In vitro regeneration of cotton plants from shoot tip explants: a simple and alternative method

Plant cell Biotechnology and Molecular Biology (May 2004)  
Muthusamy. A, Vasanth. K & N. Jayabalan

## 4. In vitro seed formation in *Panicum sumatrense* Roth ex Roem. et Schult (Little millet)

Physiology and Molecular Biology of Plants (September 2003)  
Vasanth. K, A. Lakshmi Prabha, M. Jeyakumar & N. Jayabalan

## 3. Organogenesis in *Panicum sumatrense* Roth ex Roem. & Schult (Little Millet)

Indian Journal of Biotechnology (August 2003)  
Vasanth. K & N. Jayabalan

## 2. Responses of physiological and biochemical contents in *Gossypium hirsutum* L. to mutagens

Journal of Nuclear Agriculture and Biology (May 2003)  
Muthusamy. A, Vasanth. K & N. Jayabalan

## 1. In vitro plant regeneration from shoot tip explants of *Panicum sumatrense* Roth ex Roem. et Schult (Little millet)

Plant cell Biotechnology and Molecular Biology (April 2003)  
Vasanth. K, A. Lakshmi Prabha, M. Jayakumar, A. Muthusamy & N. Jayabalan

## Books/Chapters - 4

### 4. Defensins in plants: Diversity and role in plant defense

In Defense-Related Proteins in Plants (January 2024)  
Moola, A. K., Gurusamy, D., Arya, S. K., Sivakumar, J. S., Elavarasan, K., Vasanth, K., & Balasubramani, S.

### 3. Somatic embryogenesis and plant regeneration in *Gloriosa superba* L.: An endangered medicinal plant.

In vitro Plant Breeding towards Novel Agronomic Traits: Biotic and Abiotic Stress Tolerance (November 2019)  
Balamurugan, V., Amal, T. C., Karthika, P., Selvakumar, S., & Vasanth, K.



## 2. Phytochemical screening of transgenic and non-transgenic leguminous plant species

Sustainable agriculture towards food security (ISBN) (November 2017)  
Amal TC, Dhandapani G, &Vasanth K

## 1. Somatic embryogenesis from immature anther explants: Toward the development of an efficient protocol production of grapevine

. Sustainable agriculture towards food security ISBN (September 2017)  
Vasanth K, Melané &A Vivier

### National Journals - 2

## 2. Organogenesis in *Panicum sumatrense* Roth ex Roem. & Schult (Little Millet).

Indian Journal of Biotechnology (August 2003)  
Vasanth. K& N. Jayabalan

## 1. Responses of physiological and biochemical components in *Gossypium hirsutum* L. to mutagens

Journal of Nuclear Agricultural Biology (March 2003)  
Muthusamy AK, Vasanth K, &Jayabalan N

### Patents

#### Granted - 1

1. A PROCESS OF ISOLATION AND PURIFICATION OF AN ANTI-PROLIFERATIVE COMPOUND FROM STRIGA ANGUSTIFOLIA 12-2023 202141046418 1.K. RAJA 2.Dr. K. VASANTH

### Projects

#### Ongoing - 2

1. Medicinal plants: their role in human health and drug discovery for cancer. RUSA 6,10,000/- (January 2021 - October 2025)
2. Establishment of Herbal Garden RUSA 2.0 - BCTRC 50,00,000/- (September 2020 - )

#### Completed - 3

1. In vitro propagation and anti- cancer investigation of *Gloriosa superba* L. - "Lab to Land"; A conservative approach. RUSA 5,00,000/- ( - )
2. "Development of protocols for genetic transformation of the legume *Macrotyloma uniflorum* (Lam.) Verdc. And cryopreservation of it somatic embryos" DST – SERB 24,50,000/- ( - )
3. "Cryopreservation of long term storage endangered plant species" TANSOST 4,20,000/- ( - )