




Bharathiar University

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

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| Dr G KAPILDEV Assistant Professor Department of Microbial - Biotechnology Bharathiar University Coimbatore, 641041 Tamil Nadu E-mail: drgkdev16@buc.edu.in Phone: 8973907717 Office Number: 0422-2428654 |  |
| Research Area <ul style="list-style-type: none">• Plant Biotechnology• Plant Microbe Interactions• Biodiversity Conservation | Courses Teaching <ul style="list-style-type: none">• Plant Biotechnology• Agricultural Microbiology• Bioinformatics and Nanobiotechnology• Organic farming |
| Research Experience: 18 | Teaching Experience: 9 |
| Research Credentials (as on September 2025 – Source: Google scholar) H-index: 15 Citations: 1859 i10-index: 21 | |
| Publications National Journals: 6 International Journals: 23 | |
| Career Other Institutes 1. Designation : Lecturer Institution Name : Department of Biotechnology, Srinivasan College of Arts and Science, Perambalur, Tamil Nadu Period : June 2008 - May 2010 At Bharathiar University 1. Designation : Assistant Professor Period : November 2016 - Till Date 2. Designation : Guest Faculty Period : July 2016 - November 2016 | |
| Education Ph. D. Subject : Biotechnology Institution : Bharathidasan University, Tiruchirappalli Affiliated University : Bharathidasan University, Tiruchirappalli Year of Award : April 2016 M. Phil. Subject : Biotechnology Institution : Bharathidasan University, Tiruchirappalli Affiliated University : Bharathidasan University, Tiruchirappalli Year of Award : October 2006 M. Sc. Subject : Biotechnology Institution : Bharathidasan University, Tiruchirappalli Affiliated University : Bharathidasan University Year of Award : April 2003 | |



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Maruthamalai Road, Coimbatore, Tamil Nadu - 641 046.

Dr G KAPILDEV , Assistant Professor , Department of Microbial - Biotechnology

B. Sc.

Subject : Biochemistry

Institution : Bharathidasan University, Tiruchirappalli

Affiliated University : Bharathidasan University

Year of Award : April 2001

Projects

National Level

Ongoing - completed - 3

Research Guidance

Completed

Ph.D. - 1 M.Phil. - 1

Submitted

Ph.D. - 1

On Going

Ph.D. - 3

Programs organized

1. National Conference on Ecological Impacts of Microbiome (NCEIM'20) - 2020-01-24)
2. Pre workshop National Conference on Translational Research in Medicinal and Aromatic Plants for Cancer Therapeutics – Current Strategies and Future Prospects. (2023-03-14 - 2023-03-14)
3. Seven Days National Level Workshop on "Plant Tissue Culture and Genetic Engineering Techniques (PTCGET-2023) (2023-03-14 - 2023-03-21)
4. Three Days Training program on Mass vegetative propagation of medicinally and economically important herbs in low cost hi-tech nursery for livelihood development of tribes in Coimbatore. (2023-07-25 - 2023-07-27)

Publications

International Journals - 23

23. Bioprospecting of exopolysaccharides from the endophytic fungi *Epicoccum sorghinum* AMFS4, for its structure, composition, bioactivities and application in seed priming.

Natural Product Research (July 2025)

Balasubramaniam, S., Sakthivel, A., Ramesh, K., Manisseeri, C., Ganeshan, S., Subramani, M., & Gnanajothi, K.

22. In Silico Evaluation of Bioactive Compounds from *Cucumis anguria* L. as Potential Inhibitors of Antibiotic-Resistant New Delhi Metallo-β-Lactamase (NDM-1)

ACS Omega, 10 (22), 23684-23695 (May 2025)

Soundar Rajan Kulandhaivel, Pandiyan Muthuramalingam, Balasubramanian Sivaprakasam, Manikandan Ramesh, Arun Muthukrishnan, Kapildev Gnanajothi, Vidhyavathi Ramasamy, Thamaraiselvi Chandran, Hyunsuk Shin, and Jesudass Joseph Sahayarayan

21. A review on genetic diversity, micropropagation and transformations in the high-value medicinal plant of Himalayas-Seabuckthorn (*Hippophae* sp.).

Journal of Pharmacognosy and Phytochemistry, 13(1), 360-366 (January 2025)

Santhanalakshmi Balasubramaniam, Sivanandhan Ganeshan, Selvaraj Natesan, Kapildev Gnanajothi.

20. Nanomaterials as Potential Plant Growth Modulators: Applications, Mechanism of Uptake, and Toxicity: A

Comprehensive Review.

BioNanoSci., 15, 53 (December 2024)

Sakthivel Anitha, Rajkuberan Chandrasekaran, Santhanalakshmi Balasubramaniam, Haritha Sathyanarayanan, and Kapildev Gnanajothi

19. Ethnopharmacological potential of *Anisomeles malabarica*: a systematic review on traditional uses and bioactive compounds.

Plant Biosystems - An International Journal Dealing with All Aspects of Plant Biology. 158(5), 925–941 (September 2024)

Santhanalakshmi, B., Sivanandhan, G., Manojkumar, S., Anitha, S., Sharmistha, G., Selvaraj, N., & Kapildev, G.



18. DNA barcoding and annotation study on *Anisomeles malabarica* (L.) R.Br in BOLD system v.4.

International Journal of Bioinformatics Research and Applications, 20(2), 142-160 (May 2024)
Santhana Lakshmi Balasubramaniam, Sivanandhan Ganeshan, Selvaraj Natesan, Kapildev Gnanajothi.

17. Phytochemical Screening, In Silico Molecular Docking, ADME Properties, and In Vitro Antioxidant, Anticancer, and Antidiabetic Activity of Marine Halophyte *Suaeda maritima* (L.) Dumort

ACS Omega, 9 (10), 11200-11216 (February 2024)
Sampath Manojkumar, Murugesan Thandeewaran, Sathiya Kamatchi Thangavel, Annavi Arjunan, Manickam Muthuselvam, Giriraj Kalaiarasi, and Kapildev Gnanajothi.

16. The effect of chitosan and β - cyclodextrin on glucosinolate biosynthesis in *Brassica rapa* ssp. *pekinensis* (Chinese cabbage) shoot culture. meta-Topolin and β -cyclodextrin enhance multiple shoot and root production in black gram *Vigna mungo* (L.) Hepper

Plant Physiology and Biochemistry, 194, 570-575 (January 2023)
Sivanandhan, G., Kapildev, G., Selvaraj, N., Lim, Y. P. Kapildev, G., Chinnathambi, A., Sivanandhan, G., Rajesh, M., Jeyaraj, M., Selvaraj, N., Ganapathi, A

15. Dataset on antitumor properties of silver nanoparticles from *Gloriosa superba* (L.) seed on Dalton Lymphoma Ascites (DLA) tumor: Facile and biocompatible approach

Data in Brief (August 2017)
Saradhadevi, M., Gnanadesigan, M., Kapildev, G., Vasanth, D

14. High efficient Agrobacterium mediated in planta transformation in black gram (*Vigna mungo* (L.) Hepper).

Acta Physiologiae Plantarum, 38(8), 12. Kapildev G, Chinnathambi A, Sivanandhan G, Rajesh M, Vasudevan V, Mayavan S, Arun M, Jeyaraj M, Alharbi S. A, Selvaraj N & Ganapathi A High efficient Agrobacterium mediated in planta transformation in black gram (*Vigna mungo* (L.) Hepper). Acta Physiologiae Plantarum, 38(8), 205 (July 2016)
12. Kapildev G, Chinnathambi A, Sivanandhan G, Rajesh M, Vasudevan V, Mayavan S, Arun M, Jeyaraj M, Alharbi S. A, Selvaraj N & Ganapathi A High efficient Agrobacterium mediated in planta transformation in black gram (*Vigna mungo* (L.) Hepper). Acta Physiologiae Plantarum, 38(8), 205 (July 2016)

13. Factors affecting Agrobacterium- mediated transformation in *Hybanthus enneaspermus* (L.) F. Muell

Plant Biotechnology Reports, 10, 49-60. (March 2016)
Sivanandhan G, Chinnathambi A, Vasudevan V, Kapildev G, Alharbi S, Selvaraj N, Ganapathi A & Lim Y.P

12. Sonication, Vacuum Infiltration and Thiol Compounds Enhance the Agrobacterium- Mediated Transformation Frequency of *Withania somnifera* (L.) Dunal.

PLOS ONE, 10(4) (April 2015)
Sivanandhan G, Kapildev G, Theboral J, Selvaraj N, Ganapathi A and Manickavasagam M

11. Establishment of somatic embryogenesis and podophyllotoxin production in liquid shake cultures of *Podophyllum hexandrum* Royle

Industrial Crops and Products, 60, 66-74. (September 2014)
Rajesh M, Sivanandhan G, Subramanyam, Kapildev G, Jaganath Kasthuriangan S, Manickavasagam M, Ganapathi A

10. An evidence on G2/M arrest, DNA damage and caspase mediated apoptotic effect of biosynthesized gold nanoparticles on human cervical carcinoma cells (HeLa)

Materials Research Bulletin, 52, 15-24. (April 2014)
Jeyaraj M, Arun R, Sathishkumar G, Mubarak Ali D, Rajesh M, Sivanandhan G, Kapildev G, Manickavasagam M, Thajuddin N, Ganapathi A

9. Biogenic production of silver nanoparticles using *Sesbania grandiflora* for cancer treatment: an experimental report

Colloids and Surfaces B: Biointerfaces, 106, 86-92 (June 2013)
M. Jeyaraj, G. Sathishkumar, G. Sivanandhan, D. Mubarak Ali, M. Rajesh, R. Arun, G. Kapildev, M. Manickavasagam, N. Thajuddin, K. Premkumar, A. Ganapathi

8. Agrobacterium tumefaciens- mediated in planta seed transformation strategy in sugarcane

Plant Cell Reports, 32, 1557-1574. (June 2013)
S. Mayavan, Subramanyam, K., M. Arun, M. Rajesh, G. Kapildev, G. Sivanandhan, B. Jaganath, M. Manickavasagam, N. Selvaraj, A. Ganapathi



7. Agrobacterium- mediated transformation of high valued endangered medicinal plant- Podophyllum

hexandrum Royle (syn. P. emodi Wall.Ex Hook.f. &Thomas).

Plant Cell Tissue Organ Culture, 114, 71-82 (February 2013)

M.Rajesh.,M.Jeyaraj.,G. Sivanandhan.Subramanyam, K.,G.Kapildev.,M.Arun.S.Mayavan.,T.S.Mariashibu, VR. Anbazhagan, M. Manickavasagam.,N. Selvaraj.,A. Ganapathi

6. Increased production of withanolide A, withanone and withaferin A in hairyroot culture of Withania

somnifera (L.)Dunal.

Plant Cell Tissue Organ Culture, 114, 121-129. (February 2013)

G.Sivanandhan.G.Kapildev M. Jeyaraj., M.Rajesh, A.Arjunan,M.Muthuselvam., N.Selvaraj.,M. Manickavasagam.,A. Ganapathi

5. An investigation on the cytotoxicity and caspase-mediated apoptotic effect of biologically synthesized

silver nanoparticles using Podophyllum hexandrum on human cervical carcinoma cells.

Colloids and Surfaces B: Biointerfaces, 102, 708-717. (February 2013)

M.Jeyaraj, M.Rajesh, R. Arun,D. MubarakAli,G. Sathishkumar,G. Sivanandhan, G. Kapildev, M. Manickavasagam, K.Premkumar, N.Thajuddin A.Ganapathi

4. A promising approach on biomass accumulation and withanolides production in cell suspension culture of

Withania somnifera(L.) Dunal.

Protoplasma, 250, 885-898. (December 2012)

G.Sivanandhan.G.Kapildev M.Jeyaraj.,M.Rajesh., M.Muthuselvam., M.Manickavasagam., N.Selvaraj.,A.Ganapathi

3. Optimization of Carbon Source on Hairy Root Growth and Withaferin A and Withanone Production in

Withania somnifera (L.)Dunal

Natural Product Communications, 7, 1-2 (October 2012)

G.Sivanandhan., M.Rajesh., M. Arun., M. Jeyaraj., G. Kapildev., M.Manickavasagam., N.Selvaraj., A.Ganapathi

2. Effect of culture conditions, cytokinins, methyl jasmonate and salicylic acid on the biomass accumulation

and production of withanolides in multiple shoot culture of Withania somnifera (L.) Dunal using liquid culture.

Acta Physiologiae Plantarum, 35, 715-728. (October 2012)

G.Sivanandhan., M. Rajesh., M.Jeyaraj., G. Kapildev, M.Arun.,A. Arjunan, M. Manickavasagam., M. Muthuselvam., N.Selvaraj., A. Ganapathi

1. Optimization of Elicitation Conditions with Methyl Jasmonate and Salicylic Acid to Improve the Productivity

of Withanolides in the Adventitious Root Culture of Withania somnifera (L.) Dunal

Applied Biochemistry and Biotechnology, 168, 681-696. (July 2012)

Sivanandhan,G.,M.Arun., S.Mayavan., M. Rajesh., M. Jeyaraj.,G.Kapildev., M.Manickavasagam., N.Selvaraj.,A.Ganapathi

National Journals - 6

6. Role of polyamines on in vitro regeneration and podophyllotoxin production in Podophyllum

hexandrum Royle

10. Rajesh,M.,Sivanandhan,G.,Kapildev,G.,Ganapathi,A Role of polyamines on in vitro regeneration and podophyllotoxin production in Podophyllum hexandrum Royle Indian Journal of Experimental Biology, 58, 777-787 (November 2020)

Rajesh,M.,Sivanandhan,G., Kapildev,G.,Ganapathi,A

5. Effect of carbon and nitrogen sources on in vitro flower and fruit formation and withanolides production in

Withania somnifera (L.) Dunal

Indian journal of experimental biology, 53, 177-183. (March 2015)

Sivanandhan, G, Thebora, J Kapildev, G, Nivetha, N & Manickavasagam, M & Ganapathi, A.

4. Genetic Diversity of Mango (Mangifera indica Linn.) Accessions of Andaman and Nicobar Islands

Characterized by Biochemical Markers

Journal of the Indian Society of Coastal Agricultural Research, 30(2), 65-69. (January 2012)

Kannan, R. T, Damodaran Medhi, R. Kapildev, G. Rb, Rai & Umamaheswari, S

3. Genetic diversity analysis among the open pollinated clones of mango in Andaman and Nicobar Islands

using RAPD markers

Indian Journal of Horticulture, 66, 13-17. (May 2009)

T. Damodaran, Singh, D.R. Kapildev Gnanajothi, A., Balasubramanian, Mathiyazhagan, Kavino & R.P., Medhi.



2. Evaluation of Ginger genotypes for yield and genetic variability under the island ecosystem of Andaman and Nicobar islands.

Indian Journal of Horticulture, 64, 231-233. (September 2007)
Medhi,R.P. T.,Damodaran Damodaran,V.Venkatesh, Kapildev Gnanajothi

1. Identification of molecular markers linked with differential flowering behavior of mangoes in Andaman and Nicobar Islands.

Current Science, 92(8), 1-3 (April 2007)
Damodaran T, Medhi RP, Kapildev G, Damodaran V and Rai RB.

Projects

Completed - 3

1. Establishment of Hairy root culture and elicitor application to improve phytochemical production in *Hippophae rhamnoides*. UGC-MRP 10,000,00/- (June 2018 - June 2020)
2. Optimization of in vitro culture and mass production of diterpene glycosides from *Stevia rebaudiana* Bertoni for commercialization RUSA 2.0 - BEICH 6,00,000/- (January 2020 - June 2020)
3. "Bioprospecting of anticancer compounds from microbial sources" RUSA 2.0 - BCTRC 7,88,000/- (January 2021 - January 2023)