



Dr. G. SIVA

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Academic Qualifications:

M.Sc., Ph.D., (Plant Biotechnology)

Teaching Experience: 6 Months

2010 – 2012	Technical Assistant (UGC SAP Programme)
2018 – 2019	Guest Lecturer
2019 – 2021	Technical Assistant

Research Experience:

2012-2015 under UGC - Major Research Project entitled “**Isolation, characterization and enhancing the production of Psoralen from *Psoralea corylifolia* L. through *in vitro* culture**”.

Areas of Research

- ❖ Plant Tissue Culture
- ❖ Phytochemistry
- ❖ Plant Genetic Transformation
- ❖ Phytodrug analysis

Publications

International		National		Others
Journals	Conferences	Journals	Conferences	Book Chapters
10	5	6	10	1

Cumulative Impact Factor (as per JCR)	:	15
h - index	:	07
i-10 index	:	05
Total Citations	:	148

Conferences / Seminars / Workshops:

1. **National:** Participated and presented a paper entitled “High frequency multiplication of peanut (*Arachis hypogaea* L.) through direct regeneration for preliminary transformation studies” in the **International Seminar on “World Bioheritage concerns over climate change, with a special reference to ethnic vegetables”** organized by the Department of Botany, Sree Narayana College, Chempazhanthy, Tiruvananthapuram, Kerala, South India on September 7th-8th, 2012. APSP 11, Page No:130.
2. Participated and presented a paper entitled “Effect of plant growth regulators on *in vitro* plant regeneration from leaf explant of *Arachis hypogaea* L. (Groundnut)” in the **National Conference on “Recent Trends in Plant Biotechnology”** on 27th – 28th February, 2013 organized by Bharathidasan University, Tiruchirappalli- 620 024. Abstract No: PTC-O-17, Page No:31.
3. Participated and presented a paper entitled “HPLC analysis of Psoralen from *Psoralea corylifolia* L. through direct regeneration” in **National Symposium on: Himalayan Biodiversity: Prospects and Challenges** held during 20th and 21st March 2014 at Centre for Advanced Studies in Botany, North-Eastern Hill University, Shillong-793022, Meghalaya. Abstract No: ABS-88, Page No-57.
4. Participated and presented a paper entitled “HPLC analysis of Psoralen from *Psoralea corylifolia* L. through indirect regeneration” in **National conference on “Recent Trends in Bioprospecting of Plants”** on 28th -29th March, 2014 organized by Bharathidasan University, Tiruchirappalli- 620 024. Abstract No: PTC-O-13, Page No:81.
5. Participated and presented a paper entitled “Adventitious root culture and enhancement of psoralen production through elicitors treatment in *Psoralea corylifolia* L.” in **International conference on “IAAT and Trends in Plant Systematics (TIPS)”** on 31st October – 2nd November 2014 organized by IAAT and Bharathidasan University, Tiruchirappalli- 620 024. Abstract No: BAC-O-34, Page No-79.
6. Participated and presented a paper entitled “Phytomediated synthesis of silver nanoparticles using *Andrographis paniculata* (Acanthaceae) leaf extract and its antibacterial activity” in **“Silver jubilee Conference of IAAT and council meeting of IAPT and international seminar on Advancements in Angiosperm Systematics and Conservation”** held at the Department of Botany, University of Calicut, Kerala, India on November 19-21, 2015. Abstract No: BAC-O-34, Page No-79.
7. Participated and presented a paper entitled “Green synthesis of gold nanoparticles from leaf extract of *Psoralea corylifolia* L. with evaluation of antioxidant and cytotoxic activities” in **National Conference on "Emerging Trends in Plant Science"** held at the Department of Plant Science, Bharathidasan University, Tiruchirappalli 620024 on March 10 and 11, 2016. Abstract No: PPNB24, Page No-60.
8. Participated and presented a paper entitled “Mass production of *Psoralea corylifolia* hairy roots through bubble type bioreactor and estimation of psoralen content” in **National conference on “Recent innovations in Biotechnology”** held at the Department of Biotechnology, Aarupadai Veedu Institute of Technology, Vinayaka Missions University, Chennai on 18th April 2016.
9. Served as a resource person in DBT sponsored **Short Term Training Course “Commercial plant tissue culture and gene transfer techniques in plants (STTC-2012)”** held during 12th-25th March, 2012 in Department of Plant Science, Bharathidasan University, Tiruchirappalli – 620 024.

Conferences participated

1. Participated in **international E-Conference on Cyanobacterial and Algal Biotechnology (CAB - 2020)** organized by Department of Microbiology, Bharathidasan University, Tiruchirappalli 620024 on December 18th – 20th 2020.
2. Participated in **National Seminar on Bioinformatics (NSB'15)** organized by Department of Bioinformatics, Bharathidasan University, Tiruchirappalli 620024 on January 28th and 29th, 2015.
3. Participated in **Regional conference on Fern diversity of India** conducted by the Centre for Biodiversity and Biotechnology on 24th February 2007.
4. Participated in **Colloquium on 3R Concept and its Practice in Academia and Research** organized by Mahatma Gandhi-Doernkamp Center for Alternatives to use of animals in life science education held at Bharathidasan University, Tiruchirappalli 620024 on 2nd October, 2011.
5. Participated in **One day seminar on Biotechnology based entrepreneurship awareness** organized by Department of Industrial Biotechnology, Bharathidasan University, Tiruchirappalli 620024 on 22nd January, 2015.
6. Participated in 8th **National level biological congress on “Biotechnology: Glimpses of Future prospects”** organized by Department of Biological Science, Muthayammal College of Arts and Science, Rasipuram – 637 408, Tamil Nadu.
7. Participated in **State level seminar on Ethical concerns in the information society** organized by the Department of Foundation Courses, St. Joseph's College, Tiruchirappalli on 27th September 2005.

Recent Publications

1. **Siva, G.,** Venkatesh, S., Prem Kumar, G. M. Muthukumar, *et al.* (2021) Rapid bio-reduction of *Trivalent aurum* using in vitro Babchi leaf powder and its cytotoxicity against breast cancer MCF-7 cell lines. *Appl Nanosci*.
2. G. Prem Kumar, S. Sivakumar, **G. Siva**, M. Vigneswaran, T. Senthil Kumar, N. Jayabalan (2021) Optimization and establishment of genotype-independent seed-based in planta transformation system in cotton (*Gossypium hirsutum* L.cv. SVPR-2) *Plant Gene*, <https://doi.org/10.1016/j.plgene.2021.100296>.
3. S. Sivakumar, G. Prem Kumar, S. Vinoth, **G. Siva**, M. Vigneswaran, P. Gurusaravanan, M. Kanakachari, T. Senthil Kumar, P. Baskaran, N. Jayabalan (2021) Temporal expression profiling of GhNAC transcription factor genes in cotton cultivars under abiotic stresses, *Plant Gene*, <https://doi.org/10.1016/j.plgene.2021.100334>.
4. Krishnamoorthi R, Sivakumar SR, Vigneswaren M, Rathinam A, and **Siva G** (2021) *In vivo* Toxicological Evolution of Protein Extract from *Ulva lactuca* L. in Marine Seaweed using Male Wistar Rats. *Diagnos Pathol Open* S7: 027.
5. S. Sivakumar, G. Siva, S. Sathish, G. Prem Kumar, M. Vigneswaran, S. Vinoth, T. Senthil Kumar, R. Sathishkumar, N. Jayabalan (2019) Influence of exogenous polyamines and plant growth regulators on high frequency in vitro mass propagation of *Gloriosa superba* L. and its colchicine content, **Biocatalysis and Agricultural Biotechnology**, <https://doi.org/10.1016/j.bcab.2019.101030>.

6. Subiramani, S., Sundararajan, S., Govindarajan, S. et al. (2019) Optimized in vitro micro-tuber production for colchicine biosynthesis in *Gloriosa superba* L. and its anti-microbial activity against *Candida albicans*. *Plant Cell Tiss Organ Cult* 139, 177–190.
7. G. Prem Kumar, S. Sivakumar, **G. Siva**, M. Vigneswaran, T. Senthil Kumar and N. Jayabalan (2016) Silver nitrate promotes high-frequency multiple shoot regeneration in cotton (*Gossypium hirsutum* L.) by inhibiting ethylene production and phenolic secretion. **In Vitro Cellular and Developmental Biology - Plant**. DOI: 10.1007/s11627-016-9782-5.
8. Sadasivam Vinoth, Sundari, Packiaraj Gurusaravanan, Subiramani Sivakumar, **Govindarajan Siva**, Ganesan Prem Kumar, Manju, Kalamani Velmurugan, Vemuri Lakshminarayana and Narayanasamy Jayabalan, 2017. Evaluation of Seagrass Liquid Extract on Salt Stress Alleviation in Tomato Plants. **Asian Journal of Plant Sciences**, 16: 172-183.
9. **G. Siva**, S. Sivakumar, G. Prem Kumar, M. Vigneswaran, S. Vinoth, A. Muthamil Selvan, A. Parveez Ahamed, K. Manivannan, R. Rajeshkumar, N. Thajudin, T. Senthil Kumar and N. Jayabalan (2015) Optimization of elicitation condition with Jasmonic Acid, characterization and antimicrobial activity of Psoralen from direct regenerated plants of *Psoralea corylifolia* L. **Biocatalysis and Agricultural Biotechnology** 4; 624–631.
10. **G. Siva**, S. Sivakumar, G. Premkumar, T. Senthil Kumar and **N. Jayabalan** (2015). Enhanced production of psoralen through elicitors treatment in adventitious root culture of *Psoralea corylifolia* L. **International Journal of Pharmacy and Pharmaceutical Science** 7 (1): 146-149.
11. **G. Siva**, S. Sivakumar, G. Prem Kumar, M. Vigneswaran, S. Vinoth, S. Arunachalam, B. Elango, T. Senthil Kumar and N. Jayabalan (2015) Multiple shoot production from nodal explant and FTIR analysis of *in vitro* regenerated plants of *Psoralea corylifolia* L. **Pharmaceutical and Biological Evaluations** 2 (4): 105-109.
12. G. Prem Kumar, Sivakumar Subiramani, **Siva Govindarajan**, Vinoth Sadasivam, Vigneswaran Manickam, Kanakachari Mogilicherla, Senthil Kumar Thiruppathi, Jayabalan Narayanasamy (2015) Evaluation of different carbon sources for high frequency callus culture with reduced phenolic secretion in cotton (*Gossypium hirsutum* L.) cv. SVPR-2. **Biotechnology Reports** 7 (2015) 72–80.
13. **G. Siva**, K. Kamalakkannan, S. Sivakumar, G. Premkumar, P. Gurusaravanan, S. Vinoth, S. Rajanarayanan, T. Senthil Kumar and N. Jayabalan (2014). Analysis of genetic variability in *Arachis hypogaea* L. using RAPD markers. **Journal of Swamy Botanical Club** 31: 29 – 36.
14. **G. Siva**, S. Sivakumar, G. Premkumar, P. Baskaran, T. Senthil Kumar and N. Jayabalan (2014) Enhanced seed germination of *Psoralea corylifolia* L. by heat treatment. **World Journal of Agricultural Research** 2(4): 151-154.
15. Subiramani Sivakumar, Ganesan Premkumar, **Govindarajan Siva**, Mogilicherla Kanakachari, Manickam Vigneswaran, Sadasivam Vinoth, Thiruppathi Senthil Kumar and Narayanasamy Jayabalan (2014). Optimization of factors influencing microinjection method for *Agrobacterium* - mediated transformation of Embryonic Shoot Apical Meristem in cotton (*Gossypium hirsutum* L. cv. SVPR-2). **International Journal of Current Biotechnology** 2(12):35-40.
16. S. Sivakumar, N. Jayalakshmi, G. Premkumar, **G. Siva**, S. Vinoth and N. Jayabalan (2014). The effect of amino acids on shoot multiplication in *Cichorium intybus* L. **Journal of Swamy Botanical Club**. 31: 21-28.
17. P. Gurusaravanan, S. Vinoth, Roy John, **G. Siva**, N. Boopala Bhagavan, V. Pandiyarajan and N. Jayabalan (2012). Evaluation of physiological, biochemical and enzymatic activity during accumulation of CoCl_2 in *Cyamopsis tetragonoloba* (L.) TAUB and its impact on protein profile. **International Research Journal of Biotechnology**. 3(10); 198-206.

BOOK CHAPTERS

- ❖ G. Siva, S. Sivakumar, G. Prem Kumar, M. Vigneswaran, P. Baskaran, T. Senthil Kumar and N. Jayabalan (2016) Abiotic elicitor treatment for enhanced production of psoralen in adventitious root cultures of *Psoralea corylifolia* L. 24th Annual Conference of Indian Association for Angiosperm Taxonomy and International Conference on Trends in Plant Systematics.

Extracurricular activities

1. Participated in the **Awareness rally and human chain for the Abolition of child labour** conducted by St. Joseph's College, Tiruchirappalli – 620 002 on 23rd February 2006.
2. Participated and completed three years of service in **NSS programme** during 2004-2007 in Bharathidasan University, Tiruchirappalli 620024.
3. Participated in the **World AIDS Day Programme** held on 20.12.2006 at St. Joseph's College, Tiruchirappalli – 620 002.
4. Participated in the **Awareness Rally** conducted on 25.06.2005 on **International day against drug abuse and illicit trafficking** organized by De-Addiction cum Rehabilitation centre of Khajamalai Ladies Association, Trichy.
5. Successfully taken the **Kaya Kalpa Course** held at Pattiveeranpatti on 25.06.2003.
6. Successfully completed **one year certificate course in C language** in the academic year 2002-2003.

Workshops Participated

1. Served as a resource person in DBT sponsored **Short Term Training Course “Commercial plant tissue culture and gene transfer techniques in plants (STTC-2012)”** held during 12th-25th March, 2012 in Department of Plant Science, Bharathidasan University, Tiruchirappalli – 620 024.