

BIO DATA OF Dr.B.VARALAKSHMI

Dr.B.VARALAKSHMI, M.Sc., M.Phil., B.Ed., PhD., SLST.,
Assistant Professor, Department of Biochemistry,
Shrimati Indira Gandhi College, Trichy – 620002.
Specialization: Phytochemistry, Antioxidants and Antihepatotoxicity,
Bioremediation of oil spills.



PROFESSIONAL MEMBERSHIP

TEACHING EXPERIENCE

Total Teaching Experience	- 26 Years
UG	- 26 years
PG	- 17 years

RESEARCH EXPERIENCE

M.Phil Research Advisor –Bharathidasan University

Ref.No: 002032/RA/M.Phil/Biochemistry

No. of M.Phil scholars produced : 4

No. of M.Sc projects guided till date : more than 35

FUNDED PROJECTS

- Seed money of **Rs.10, 000/-** towards a minor project on “Antioxidant Responses Evoked *in vitro* by *Cinnamomum zeylanicum* Linn Bark” funded by The Management, Shrimati Indira Gandhi college. (2012-13).
- Seed money of **Rs.10, 000/-** towards a minor project on “Anti oxidant and anticancer efficacy of proanthocyanidins from *Cinnamomum zeylanicum* bark on hep-G2 cancer cells” funded by The Management, Shrimati Indira Gandhi college. (2015-16).
- **Received fund of Rs.75,000/-** for the conduct of a three day training programme on “Training On Diet And LifestyleModifications To Combat Polycystic Ovary Syndrome Among SC/ST Adolescent Girls In Tiruchirappalli” 14.3.22 to 16.3.22. Funding agency - Raajiv Gandhi National institue for Youth Development, Department of Youth Affairs, Ministry of Youth Affairs & Sports, Government of India, Sriperumbudur.
- Participated as Mentor in zonal level competition on Tamilnadu Sustainable Developmental Goals, Girls Championship 2022 (an avenue of ideate and create impact) conducted by "Start up TN", at Bishop Heber college on 14.02.2023 and Won the **cash award of Rs.12,500/-** at zonal level.

PATENT:

1. **Production of Eco-friendly Bio plastic Cups from Agro wastes'.** Inventor(s): Dr.B.Varalakshmi, Ms.N.Vijayalakshmi, Ms. K.Chitra devi, **Dr.V.Suganya**, Dr.S.Rethinavalli, Dr. N.Hemalatha, Ms. C.Mamtha, Ms. V.Sathyapriya, Ms. R.Ramya. **Published: 2023-03-17;** Patent Application No: **202341014517**.
 2. **Investigate the Potential Antidiabetic and hypolipidemic Effects of *Psidium guajava* leaves Ethanolic Extract against Streptozotocin-induced Diabetes and Lipidosis in Rats.** Inventor(s): Dr.R.Manikandan, Dr. A. Vijaya Anand, Dr. B.Balamuralikrishnan, Dr.T.Karpagam, Dr.A.Shanmugapriya, Dr.B.Varalakshmi and **Dr.V.Suganya**. **Published: 2023-08-18; Patent Application No: 202341037660**.
 3. **Smart Device For Detecting Frozen Shoulder.** Inventor(s): Dr. P. Gajalakshmi, Dr. T.Karpagam, Dr. R. Manikandan, **Dr. V. Suganya**, Dr. B. Varalakshmi and Dr. A.Shanmugapriya. **Published: 2023-09-27; Design No: 392678-001**.
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PUBLICATIONS

Total publications: 35

Research articles	: 33
Review articles	: 2
NO. of articles published in UGC/Scopus/WOS/ Pubmed Journals	20

Publication metrics:

Google scholar H index : 9 i10 index : 9 Citations : 298
Scopus H index: 3

Vidwan Id : 380269

Google scholar Id: ZDwc4rwAAAAJ

LIST OF ARTICLES PUBLISHED IN JOURNALS WITH JOURNAL LINK

National: 1

1. ThirunethiranKarpagam, **B.Varalakshmi**. A comparative study on the antidiabetic effects of *Trigonellafoenumgraecum* and *Caesalpinia bonduc* in alloxan induced diabetic rats BCAIJ, 4(2), 2010: 89-97. ISSN (P): 0974-7427.
https://www.researchgate.net/publication/299584310_A_comparative_study_on_the_antidiabetic_effects_of_Trigonella_foenum_graecum_and_Caesalpinia_bonduc_in_alloxan_induced_diabetic_rats_Regular_Paper

International: 34

2. **B.Varalakshmi**, ThirunethiranKarpagam *Caesalpinia bonduc (l.)roxb* as a novel drug having hypoglycemic effect on alloxan induced diabetic rats. International Journal of

Pharma and Bio Sciences 2010; 2 (1): 384 – 391.ISSN 0975-6299.

<https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=06ea51730a924556b8e22da48eb1426c3161a130>

3. ThirunethiranKarpagam, **B.Varalakshmi**, J.SugunaBai, S.Gomathi Effect of different doses of *Cucurbita Pepo* Linn extract as an antiinflammatory and analgesic nutraceutical agent on inflamed rats. International Journal of Pharmaceutical Research and Development 2011; 3(3):184 – 192. Online ISSN: 2664-6870.
[https://www.researchgate.net/publication/281304533 Effect of different doses of Cucurbita pepo linn extract as an anti-Inflammatory and analgesic nutraceutical agent on inflamed rats](https://www.researchgate.net/publication/281304533_Effect_of_different_doses_of_Cucurbita_pepo_linn_extract_as_an_anti-Inflammatory_and_analgesic_nutraceutical_agent_on_inflamed_rats)
4. Prabha P, Karpagam T, **Varalakshmi B**, Sohna Chandra Packiavathy A An Indigenous antiulcer activity of *Musa sapientum* on peptic ulcer. Phcog Res 2011;3:232-8.(**Pubmed Indexed Journal**). Online ISSN 0974-8490.
<https://pubmed.ncbi.nlm.nih.gov/22224045/>
5. **B.Varalakshmi**,ThirunethiranKarpagam, P.Lakshmi Prabha, S.Jannathul Firdous, S.Gomathi. A comparative study on the effects of herbal and conventional medicine on cardio vascular disease International Journal of Pharmaceutical Research and Development, 2011; 3(6):221 – 225. Online ISSN: 2664-6870.
[https://www.researchgate.net/publication/299578538 A COMPARATIVE STUDY ON THE EFFECTS OF HERBAL AND CONVENTIONAL MEDICINE ON CARDIO VASCULAR DISEASE](https://www.researchgate.net/publication/299578538_A_COMPARATIVE_STUDY_ON_THE_EFFECTS_OF_HERBAL_AND_CONVENTIONAL_MEDICINE_ON_CARDIO_VASCULAR_DISEASE)
6. M.Bharani, ThirunethiranKarpagam, **B. Varalakshmi**,G.Gayathri and K. Lakshmi Priya. Synthesis and Characterization of Silver Nano Particles From *Wrightia Tinctoria*. International Journal of Applied Biology and Pharmaceutical Technology2012; 3 (1): 58 – 63. ISSN 0976-4550.
[https://www.researchgate.net/publication/267230211 SYNTHESIS AND CHARACTERIZATION OF SILVER NANO PARTICLES FROM WRIGHTIA TINCTORIA](https://www.researchgate.net/publication/267230211_SYNTHESIS_AND_CHARACTERIZATION_OF_SILVER_NANO_PARTICLES_FROM_WRIGHTIA_TINCTORIA)
7. M. Vanitha, T. Karpagam ,**B.Varalakshmi**, R. Suja Pandian. Comparative Study on the Anti-Diabetic Potential of *Aloe vera* Gel and Fenugreek Seeds on experimentally induced Diabetic Rats. Pharmacognosy Communications. 2012; 2(1)57-61.ISSN: 2249-0167.
<https://phcogcommn.org/article/890>
8. S.Gomathi, A.Shanmuga Priya, V.Bharathi, **B.Varalakshmi**and T. Karpagam. Antimicrobial activity and phytochemical studies of flowers of *Tribulus terrestris*. Joseph's International Journal of Biological Sciences. 2012; 1(1): 47 - 50.
9. M.Bharani, **B. Varalakshmi**, T. Karpagam, P.Anitha, and K.Sathya. Isolation and characterization of marine sponges –*Sigmadociafibulatus*. Joseph's International journal of

- biological sciences. 2012; 1(1):31 – 35.
10. .V.Bharathi, **B.Varalakshmi**,S.Gomathi, A.Shanmugapriya, T. Karpagam. Antibacterial Activity of *Tridax Procumbens Linn*. International Journal of Pharma Sciences and Research 2012; 3(4): 364 – 367. ISSN: 0975-9492.
[https://www.researchgate.net/publication/284571005 Antibacterial activity of Tridax procumbens Linn](https://www.researchgate.net/publication/284571005_Antibacterial_activity_of_Tridax_procumbens_Linn)
11. **B Varalakshmi**, A Vijaya, K Vijayakumar, R Prasanna. *In vitro* antioxidant activity of *Cinnamomum zeylanicum* linn bark. International Journal of Institutional Pharmacy and Life Sciences 2012;2(3) 154- 166. ISSN 2249- 6807.
[https://www.researchgate.net/publication/297737701 In Vitro Antioxidant Activity Of Cinnamomum Zeylanicum Linn Bark](https://www.researchgate.net/publication/297737701_In_Vitro_Antioxidant_Activity_Of_Cinnamomum_Zeylanicum_Linn_Bark)
12. **B Varalakshmi**, A Vijaya, K Vijayakumar, R. Manikandan Antioxidant status of *Cinnamomum zeylanicum* linn bark. International Journal of Universal Pharmacy and Life Sciences 2012; 2(3): 409-421. (ISSN): 2249-6793.
13. **B. Varalakshmi**, T. Karpagam, S.Gomathi, G.Gayathiri, V.Rathinakumar, B.Supraja. Studies on salinity removal capacity of cost-effective adsorbents. International Journal of Pharmaceutical Research and Development 2014; 5(11):67-71. Online ISSN: 2664-6870.
[https://www.researchgate.net/publication/299584469 studies on salinity removal by cost effective adsorbents](https://www.researchgate.net/publication/299584469_studies_on_salinity_removal_by_cost_effective_adsorbents)
14. **B.Varalakshmi**, A. VijayaAnand, T. Karpagam, J. Suguna Bai, R. Manikandan. *In vitro* Antimicrobial and Anticancer Activity of *Cinnamomum zeylanicum* Linn Bark Extracts. International Journal of Pharmacy and Pharmaceutical Sciences 2014; 6, (Suppl 1):12-18. Impact per publication 0.609 (**SCOPUS**). ISSN: 0975-1491.
[https://www.researchgate.net/publication/289056348 In vitro antimicrobial and anticancer activity of Cinnamomum Zeylanicum linn bark extracts](https://www.researchgate.net/publication/289056348_In_vitro_antimicrobial_and_anticancer_activity_of_Cinnamomum_Zeylanicum_linn_bark_extracts)
15. J. Sugunabai, M. Jayaraj, T. Karpagam, **B. Varalakshmi**. Antidiabetic Efficiency of *Moringa Oleifera* and *Solanum nigrum*. International Journal of Pharmacy and Pharmaceutical Sciences. 2014;6, (Suppl 1):40-42. 12-18.Impact per publication 0.609. (**SCOPUS**). ISSN: 0975-1491.
<https://worldveg.tind.io/record/51454?ln=en>
16. **Varalakshmi B**, Vijaya anand, Sampath kumar.“*In vitro* Biomolecular Protective Effect *Cinnamomum zeylanicum* Bark Extracts against Oxidative Damage” International Journal of Pharmacy and Pharmaceutical Sciences 2016; 8(7): 369-372. Impact per publication 0.609. (**SCOPUS**). ISSN: 0975-1491.
<https://innovareacademics.in/journals/index.php/ijpps/article/view/12205>

17. Vijaya Anand, **Varalakshmi B**, Prasana, Sampath Kumar, Pushpa, AgaathHedina. *Cinnamomum zeylanicum* Linn. The spice with multi potential. Systematic Reviews in Pharmacy 2016; 7(1):24-29.ISSN: 0976-2779.
<http://www.sysrevpharm.org/article/87>
18. M. Ariba Begum, **B.Varalakshmi**, K.Umamagheswari. Biodegradation of polythene bag using bacteria isolated from soil" International journal of current Microbiology and applied sciences. 2015; Vol 4:(11) ; 674-680. ISSN : 2319-7706.
<https://www.ijcmas.com/vol-411/M.%20Ariba%20Begum.%20et%20al.pdf>
19. Aslam Khan, Vijaya Anand, **B. Varalakshmi**, KarpagamThirunethiran, Pushpa Natarajan. *In vitro* Antioxidant and Cytotoxicity Analysis of Leaves of *Ficus racemosa*. Free Radicals and Antioxidants.2017;7(1):08-12. UGC no:48850. ISSN: 2231-2536.<https://www.antiox.org/article/52>
20. **Varalakshmi B**, Anand V, Karpagam T, Shanmugapriya A, Gomathi S, Sugunabai J, V.Suganya, S.Geetha, S.SathiaNachiyar. Phytochemical Analysis of *Cinnamomum zeylanicum* Bark and Molecular Docking of Procyanidin B₂ against the Transcription factor Nf- κB. Free radicals and Antioxidants, 2017; vol 79 (2): 195-199. UGC no:48850 ISSN: 2231-2536.
<https://www.antiox.org/article/80>
21. Suganya V, Jannathul Firdous, T Karpagam, **Varalakshmi B**, Shanmugapriya A, Gomathi S, Sugunabai J. Genotyping of Angiotensin converting enzyme ACE-1 gene in study subject with hypertension and chronic kidney disease. Research Journal of Pharmacy and Technology, 2017: Vol 10, Issue 1, pp 2607-2010. (SCOPUS). UGC no:10467 ISSN: 0974-360X(online).
<http://rjptonline.org/HTMLPaper.aspx?Journal=Research%20Journal%20of%20Pharmacy%20and%20Technology:PID=2017-10-8-32>
22. J. Sugunabai, M. Jeyaraj, T. Karpagam, **B.Varalakshmi**, S. Senthil Rani, A. Shanmugapriya, G. Kalaiyarasi, R. Renuga, S. Gomathi. Outlining of Phytochemicals and GC-MS profile of *Centella asiatica*" in International Journal of Pharmaceutics and drug analysis. 2018: Vol 6, Issue 2, pp 252-256, (UGC: 44824). ISSN: 2348-8948.
<http://www.ijpda.com/admin/uploads/XMzEnh.pdf>
23. A. Shanmugapriya, S. Maneemegalai, **B.Varalakshmi**, T. Karpagam, J. Sugunabai, B. Ramya, A. Abinaya, S. Kamali, G. Praveena, C. Jeyachitra, M. Jeyapriya. A combinative evaluation of antioxidant potential of *Tridox procumbens* and *Boerhaviadiffusa*" in

- International Journal of Pharmaceutics and drug analysis. 2018:Vol 6, Issue 2, pp 197-202 (UGC: 44824). ISSN: 2348-8948.
<http://www.ipdaj.com/admin/uploads/XUf2Zj.pdf>
24. **B.Varalakshmi**, T.Karpagam, A.Shanmugapriya, J.Sugunabai, B.Ramya, P.Anitha, N.Abirami, K.Parkavi, W. Esther Rani, S.Kaviyalakshmi. Evaluation of anti hepatotoxic effect of *Avicennia marina* against alcohol induced liver injury” in International Journal of Pharmaceutics and drug analysis. 2018: Vol 6, Issue 2, pp 225-2, (UGC: 44824). ISSN: 2348-8948.
<http://www.ipdaj.com/admin/uploads/gKp9Mv.pdf>
25. Geetha S, JannathulFirdous, Karpagam T, **Varalakshmi B**, Shanmuga Priya, Sugunabai J, Gomathi S. Studies on hepatoprotective and anti-inflammatory activity of *Coix lacryma-jobi* (linn). Asian Journal of pharmaceuticals and clinical research. 2018 Vol 11, (11), 290-293 (SCOPUS). ISSN Online - 2455-3891 Print - 0974-2441.
<https://innovareacademics.in/journals/index.php/ajpcr/article/view/26307/16061>
26. Karpagam.T, Jan nthul Firdous, Revathy, Shanmugapriya, **Varalakshmi B**, Gomathi S, Geetha S, NoorzaidMohamad. Anticancer activity of *Aloe vera* ethanolic leaf extract against cancer cells”. Research journal of pharmacy and technology. 2019: 12(5), Pp 2167-2170. (SCOPUS). ISSN Online - 0974-360X Print - 0974-3618.
<http://riptonline.org/AbstractView.aspx?PID=2019-12-5-19>
27. Jannathul Firdous, Karpagam T, **Varalakshmi B**, Sugunabai J, Gomathi S, Revathy, NoorzaidMohamad. Phytochemical study in ethanolic leaves extract of *Aloe vera* using gas chromatography. International journal of researasch in pharmaceutical sciences. 2019: 10(2), pp1473-73. (SCOPUS). ISSN: 0975-7538.
<https://www.pharmascopel.org/index.php/jirps/article/view/720>
28. S.Gomathi, P.Anitha, A.ShanmugaPriya, **B.Varalakshmi**,T.Karpagam, V.Suganya, C.Sumathi, Jannathulfirdous, V.Bharathi, Mahalakshmi. *In vitro* free radical scavenging potential and phytochemical screening of *Pedilanthustithymalooides*. Alochana Chakra Journal. 2019: Vol 9(5); 7033-7041. (UGC-CARE Group-1). ISSN: 2231-3990.
<https://app.box.com/s/nn7hoc6wh6uilmahbtmq5chc2h35idt7>
29. Jannathul Firdous, Karpagam T, **Varalakshmi B**, Shanmugapriya A, Sugunabai J, Anitha P, Gomathi S, Suganya V, Sumathy C, Nang ThinnThinnHtike, Noorzaid Muhamad. V.Bharath. A review on chaotic covid-19 infection: pathophysiology and treatment insight. Journal of natural remedies. 2020: vol. 21, no. 4(s2), page 50-59. (SCOPUS). ISSN: 2320-3358 (e) ISSN: 0972-5547(p).

<https://jnronline.com/ojs/index.php/about/article/view/215/208>

30. Jannathul Firdous, Emdadul Haque ATM, KarpagamT, **Varalakshmi B**, Bharathi V, Resni Mona, Noorzaid Muhamad. COVID-19 associated thromboembolism: causing the respiratory failure. Int. J. Res. Pharm. Sci., 2020, 11 (SPL)(1), 1303-1306. Online ISSN: 0975-7538. (**SCOPUS**).Impact Factor:0.24

<https://pharmascop.org/ijrps/article/view/3624>

31. A. Raja, **B. Varalakshmi**,Santhi K.Antibacterial, Antioxidant and Anticoagulant Efficacy of *C.verum*Mediated Silver Nanoparticles. LS - An International Journal of Life Sciences. Volume 9, Number 3, September-December,2020, pp. 214-220. (ICI, Goggle scholar). ISSN: 2319-1198.

<https://www.indianjournals.com/ijor.aspx?target=ijor:lsijls&volume=9&issue=3&article=04>

32. Karpagam T, **Varalakshmi B**, Shanmuga Priya, Sugunabai J, Gomathi S, BharathiV, Priyadarshini, Jannathul Firdous. Anti-Oxidant Evaluation and Molecular Docking Studies of Phytocompound from *Madhuca longifolia* as Potential Thymidylate Synthase Inhibitor. Journal of Natural Remedies. 2020: Vol. 21, No. 6(S2). (Scopus, Web of Science, PubMed, **UGC-CARE List Group II -Scopus SourceList**), Index Copernicus Value (ICV) for 2018 = 120.77. ISSN: 2320-3358 (e) ISSN: 0972-5547(p).

<https://www.jnronline.com/ojs/index.php/about/article/view/357>

33. Gomathi S, Firdous Jannathul, Shanmugapriya A, **Varalakshmi B**, Karpagam T, Bharathi V, Anitha P, Mahalakshmi P. Antibacterial action of *Pedilanthustithymalooides* leaves extract and FTIR phytochemical finger printing. Research Journal of Pharmacy and Technology, 2021: 14, (4); 2021-2025. (**Scopus**). ISSN: 0974-3618. Online ISSN: 0974-360X.

<https://riptonline.org/HTMLPaper.aspx?Journal=Research%20Journal%20of%20Pharmacy%20and%20Technology;PID=2021-14-4-34>

34. Shanmuga Priya A, Karpagam T, **Varalakshmi B**,Gomathi S, Anitha P. Screening of fungi for production and purification of omega-3 fattyacid. Journal of medical pharmaceutical and allied sciences, Volume 10 - Issue 4, 1098, July - August 2021, Page - 3089-3093. ISSN NO. 2320-7418. **Scopus and UGC care II**.

https://jmpas.com/admin/assets/article_issue/1629574864JMPAS_JULY-AUGUST_2021.pdf

35. **Varalakshmi B**, Karpagam T , Shanmuga Priya A , Suganya V , Anitha P , Gomathi S, Manikandan R, Abarna T. Nano phytoremediation for textile dye degradation using

Abutilon indicum silver nanoparticles: photo catalytic activities. Journal of medical pharmaceutical and allied sciences, Volume 10 - Issue 4, 1939, Nov - Dec 2021, Page - 3960-3964. ISSN NO. 2320-7418. **Scopus and UGC care II.**

https://jmpas.com/admin/assets/article_issue/1640973541JMPAS_NOVEMBER-DECEMBER_2021.pdf

- 36.** B.Varalakshmi *et al.*, Vaginitis phyto therapy against vaginal pathogen and molecular identification of isolated vaginal pathogen. “**Journal of Medical Pharmaceutical and Allied Science**”s. Vol 12 issue 2: pp 5762 – 5767. – Scopus.
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CONFERENCES /WORKSHOPS/ SEMINARS ATTENDED & ORAL/POSTER PRESENTATIONS

Publications in Conference Proceedings: - 5

National level -2

International level-6

FDP-4

Workshops-2

Online Webinars -13, FDP- 6,

International Conferences & Publications in Conference Proceedings

1. Encapsulation of Aloe vera using natural polymer. Food Processing Technologies – Challenges and Solution for Sustainable Food Security. Proceedings of MOFPI sponsored International Seminar at IICPT, Thanjavur. 4th and 5th January 2013. 439 – 442. (Proceedings)
2. Attended International Conference on “Greening food processing sector for sustainable safe food supply” on 30th & 31st October 2010, organized by IICPT, Thanjavur. Encapsulation Model presented at International Conference conducted by IICPT on 30th & 31st Oct 2010. . (Proceedings)
3. Two day International conference on Phytocongress on 7.3.2013 and 8.3.2013 by SASTRA University. Presented a poster on “*In vitro* Antimicrobial and Anticancer Activity Of *Cinnamomum zeylanicum* Linn Bark Extracts. . (Proceedings)
4. International conference on “Clinical Research- ICCR 2016” by department of Biochemistry, Shrimati Indira Gandhi college, Trichy, on 25. 1. 16. Presented a paper on “*Invitro* biomolecular protective effect of *Cinnamomum zeylanicum* bark extracts”. . (Proceedings)

5. International conference on “New Frontiers and challenges in Environmental sciences” by school of bioscience, Marudupandiyar college, Tanjore on 11.2.16 and 12.2.16. Presented a paper on “Isolation and Production of biosurfactant from *Bacillus licheniformis* strain. . (Proceedings)
6. International conference on “Cardiovascular Research” by Department of Biochemistry, St.Joseph’s college, Trichy on 15.2.16. Presented a poster on Vascular disease and pregnancy.
7. Participated in the International Conference on **Research Trends, Strategies, and Advancements in Biological and Biomedical Sciences for Sustainability** held on 14th& 15th December, 2022 organized by Research Department of Zoology, Seethalakshmi Ramaswami College, Trichy.
8. Presented a paper entitled “**Hypoglycemic effect of Beta-Caryophyllene from the ethanolic extract of *P.guajava* Leaves**” inthe “**International Conference on Phytotherapeutics (ICPT-2023)**” organized by PG & Research Department of Biochemistry, SengamalaThayar Educational Trust Women’s College (Autonomous), Thituvvarur on 10th February 2023.

National Conferences

1. TNSCST sponsored “National conference on phymed-2015” BDU Constituent college for women, Orathanadu on 31.7.15 and 1.8.15.Presented a paper on “Phytochemical analysis and Anti-cervical cancer activity of *Mukia madrarpatana*”.
2. National seminar on “Whole grains for healthy life- Whole grains 2015” at IICPT, Tanjor on 16.10.15. paper on “Germinated black and brown rice – a value added black product”

FDP

1. Attended a FDP/ Skill based training program on “e – LITERACY” conducted by ICT Academy of Tamil Nadu and Bharathidasan University on 11th - 13th August 2011 held at Shrimati Indira Gandhi College, Tiruchirappalli.
2. Role of teachers in quality enhancement and Accreditation. Santhiram engineering College, Nandyal (online) 05.06.2020 to 11.06. 2020.
3. “Mobility in the Noble Profession”, conducted by SIGC, Trichy, on 23.11.2020
4. Participated in Faculty enrichment program on “Shape yourself with siddha” on 14.7.22, by Department of chemistry Shrimati indira Gandhi college, Trichy.

Workshops

5. Attended the “One Day Workshop on SPSS 19.0 Software” conducted by Shivani School of Business Management in association with SPSS South Asia on 9th September 2011 held at Shivani School of Business Management, Tiruchirappalli.
 6. Hands on training on 28.09.2015 and 29.09.2015 at St.Joseph’s college, Trichy. Laboratory animal handling.
 7. Attended the One day Workshop on “**Cytochemical Staining Techniques**” held on 15th September, 2022 organized by the Department of Biochemistry, Shrimati Indira Gandhi College, Trichy.
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BOOK/ CHAPTER PUBLICATIONS

BOOK **1**

BOOK CHAPTERS: 7

BOOK PUBLICATION : 1

Cinnamomum zeylanicum- A spicy Antioxidant. LAMBERT Academic Publishing, Germany.
ISBN: 978-3-659-71518-1

BOOK CHAPTERS: 7

1. **Book title:** Physical, chemical and Biological sciences: Emerging trends and mile stones in 2020. Published in FEB 2020. **Chapter 2:** Effect of organic fertiliser on seed germination and seedling vigour of fenugreek. ISBN : 978-81-942052-9-6 Publisher: V.H.N.SenthikumaraNadar College (Autonomous). (Accredited with ‘A’ grade by NAAC & 53rd rank (College Category) in India ranking NIRF 2020 by MHRD, Virudhunagara, Tamil nadu, India. Co- Published by PEARL- A Foundation for educational excellence, Bengaluru, Karnataka, India.
2. **Book title:** Emerging Nanomaterials for Advanced Technologies, **Chapter title:** Nanoscale smart drug delivery systems and techniques of drug loading to nanoarchitectures. **Springer eBook.** ISBN number 978-3-030-80370-4.
<https://www.springer.com/gp/book/9783030803704#aboutAuthors>
3. **Book title:** Emerging Nanomaterials for Advanced Technologies,**Chapter title:** An insight on emerging nanomaterials for the delivery of various nutraceuticals applications to betterment of heath. **Springer eBook.** ISBN number 978-3-030-80370-4.
<https://www.springer.com/gp/book/9783030803704#aboutAuthors>
4. **Book title:** Plants, Animal and Microbes **Chapter title:** “A review of *Psidium guajava*”. ISBN Number 978-93-93622-22-8.
5. **Book Title:** Aquaculture Science and Engineering. **Chapter Title:** “Bacterial Fish diseases and Treatment” Page number 518-565 Springer Publications
<https://doi.org/10.1007/978-981-19-0817-0>

6. T. Karpagam, A. Shanmugapriya, V. Suganya, B. Varalakshmi, Jannathul Firdous. **Chapter 10 - Advanced study of plant-microbe interactions in photosynthesis**,Editor(s): Prashant Swapnil, Mukesh Meena, Harish, AvinashMarwal, Selvakumar Vijayalakshmi, Andleeb Zehra, **Plant-Microbe Interaction - Recent Advances in Molecular and Biochemical Approaches**,Academic Press,2023,Pages 205-228,ISBN 9780323918756,<https://doi.org/10.1016/B978-0-323-91875-6.00011-6>.
7. B. Varalakshmi, V. Suganya, A. Shanmugapriya, T. Karpagam, S. Jannathul Firdous, R. Manikandan, R. Sridevi, V. Saradhasri, M. Abinaya, **Chapter 14 - Manipulation of cell wall components and enzymes on plant-microbe interactions**,Editor(s): Prashant Swapnil, Mukesh Meena, Harish, AvinashMarwal, Selvakumar Vijayalakshmi, Andleeb Zehra, **Plant-Microbe Interaction - Recent Advances in Molecular and Biochemical Approaches**,Academic Press,2023,Pages 303-326, ISBN 9780323918756,<https://doi.org/10.1016/B978-0-323-91875-6.00010-4>.

REVIEWER IN JOURNALS

- Journal of Medicine and Medical Sciences
- Indian Journal of Experimental Biology
- Chemistry Central Journal

EXTENSION ACTIVITIES/ OTHER SERVICES

- **Co-ordinator of students' EXNORA** (2008-2010), at Shrimati Indira Gandhi College, Trichy.
- **NSS Programme Officer** (2012-2013) at Shrimati Indira Gandhi College, Trichy.
- Placement training - Communicative English for UG students (2020-2021). At shrimati Indira Gandhi college.
- **Member in Institution Innovative Council (IIC)** at Shrimati Indira Gandhi College, Trichy. (2023- till date)
- **Member Board of studies Both B.Sc and M.Sc Biochemistry, Bharathidasan University from 1.10.2021 to three years.**

INVITED TALKS

FDP on “Impact of positive thinking on health & welfare” on 7.2.2020 to the faculty members of shrimati Indira Gandhi college, Trichy.

Seminar on Life style modifications and cancer on 8.2.2023. Sri Sankara Matriculation School, Trichy -2.
