



SHRIMATI INDIRA GANDHI COLLEGE

(Affiliated to Bharathidasan University)

Nationally Accredited at 'A' Grade (4th Cycle) by NAAC | An ISO 9001 : 2015 Certified Institution

Tiruchirappalli - 620 002

Name : Dr. R. Manikandan
Designation : Assistant Professor
Department : Biochemistry
Qualification : M.Sc., DMLT., Ph.D
Experience : Teaching: 16 Research: 14
Area of Specialization(s) : PhytoMedicine, Clinical Biochemistry
Email (Official ID) : manikandanr@sigc.edu
Aadhar Number : 8103 9013 1042

Academic Qualifications

Degree	Branch	Institution/UniversityName	Year of Graduation
Ph.D	Biochemistry	Manonmaniam Sundaranar University	2018
M.Sc	Biochemistry	MIET Arts and Science College/Bharathidasan University	2009
B.Sc	Biochemistry	MIET Arts and Science College/Bharathidasan University	2007

Additional Qualifications

Diploma / Vocational / Certification	Area of Specialization	Institution / University / Agency Name	Year
DMLT	Biochemistry	CIMA Institute/ AIMLTA Board	2006

Research Guidance

- Ph.D Guideship from Bharathidasan University, Tiruchirappalli, Ref.No: /009428/Ph.D/K12/Biochemistry/R.A./13.04.2024

Research Publications (Indexed)

Research Profile	Link	Total Citations	H-index	i10-index
Google Scholar Citation	https://scholar.google.com/citations?user=JNgCEFkAAAAJ&hl=en	463	11	13
Scopus Citaiton	https://www.scopus.com/authid/detail.uri?authorid=58659041700	152	7	-

LIST OF ARTICLES PUBLISHED IN JOURNALS IN CHRONOLOGICAL ORDER:

Total Number of Papers	SCOPUS	WoS (SCI & SCIE)	UGC-CARE	Peer-Reviewed
31	20	10	06	02

- Arumugam Vijaya Anand, **Ramasamy Manikandan**, Tajuddin Nargis Begum, Kalaiyarasan Vijaya Kumar, Govindarajan Akilandeswari, Maria Britto Jerline and Palanisamy Sampath Kumar (2011). Hypertension, diabetes, metabolic syndrome, inflammation and the risk of stroke. *Int J Biol Med Res.* 2(1): 429-432.
- G. DuraiMuthumani, A.Vijaya Anand and **R.Manikandan** (2013). Antioxidant, antihelmintic and antimicrobial activity of *Euphorbia thymifolia* Linn whole plant. *Int.J.Curr.Microbiol.App.Sci.* (2013) 2(1): 66-79.
- **R.Manikandan**, A.Vijaya Anand and G. DuraiMuthumani. (2013) Phytochemical and *in vitro* anti-diabetic activity of methanolic extract of *Psidium guajava* leaves *Int.J.Curr.Microbiol.Appl.Sci.* 2(2): 15–19.
- Shakeera Bhanu M, Sujatha K, Sridharan G and **Manikandan R.** (2013). Antihyperglycemic and antihyperlipidemic potentials of *Psidium guajava* in alloxan induced diabetic rats. *Asian journal of pharmaceutical and clinical research.* 6(1). (SCOPUS).

- B. Varalakshmi, A. Vijaya Anand, T. Karpagam, J. Suguna Bai and **R. Manikandan**. (2014). *In vitro* antimicrobial and anticancer activity of *Cinnamomum zeylanicum* linn bark extracts. *Int J PharmPharmSci*. 6(1). 12-18.
- **R. Manikandan**, A. Vijaya Anand, K. Vijayakumar. (2014). A review on Hepatoprotective activity of *Psidium guajava*. *Am. J. PharmTech Res*. 4(5).
- **R. Manikandan** and A. Vijaya Anand. (2015). A review on antioxidative activity of *Psidiumguajava*. *Research J. Pharm. And Tech*. 8(3).
- K. Vijayakumar, A. Vijaya Anand and **R. Manikandan** (2015). *In vitro* antioxidant activity of ethanolic extract of *Psidium guajava* leaves. *International journal of Research Studies in Biosciences*. 3(5).
- **R. Manikandan** and A. Vijaya Anand. (2016). Evaluation of Antioxidant activity of *Psidium guajava* Linn in streptozotocin induced diabetic rats. *Free Radical and Antioxidant Journal*. 6(1).
- **R.Manikandan**, A.Vijaya Anand, P. Sampathkumar and Pushpa (2016). Phytochemical and *in vitro* anti-diabetic activity of *Psidium guajava* leaves. *Pharmacognosy Journal*. Vol. 8(4): 392-394. (WoS)
- Vijaya Anand, **Manikandan**, Vijaya Kumar, Sampath Kumar, Pushpa and AgaathHedina. (2017). Phytopharmacological overview of *Psidium guajava* Linn. *Pharmacognosy Journal*. Vol. 8(4): 314-320. (WoS).
- **Ramasamy Manikandan**, Arumugam Vijaya Anand, Rengasamy Lakshminarayan Rengarajan, Puthamohan Vinayakamoorthi, Radhakrishnan Ramalingam. (2017). *In vitro* Antioxidant activity of Extracts of *Psidium guajava* leaves. *PTB Reports*. 3(3): 50-54.
- **R. Manikandan**, A. VijayaAnand, P. Sampathkumar and N. Manoharan. (2018). Protective effect of *Psidium guajava* leaf ethanolic extract against streptozotocin induced diabetes and lipidosis in rats. *Indian Journal of Animal Research*. Vol. 52 (8): 1198-1205. (SCIE).
- Panneerselvam Punniyakotti, Rengasamy Lakshminarayanan Rengarajan, Shanmugam Velayuthaprabhu, Kalaiyaran Vijayakumar, **Ramasamy Manikandan** and Arumugam Vijaya Anand. (2019). Protective effect of *Terminalia catappa* leaves and *Terminalia chebula* fruits on the enzymatic and non-enzymatic anti-oxidants levels in the doxorubicin induced toxicity rats. *Pharmacognosy Journal*. Vol. 11(2): 346-349. (WoS)
- **Ramasamy Manikandan** and Kalaiyaran Vijayakumar (2020). *In vitro* anti-diabetic activity of *Syzygium cumini* seeds. *Asian Journal of Medical and Health Research*. 2020. 5(2):1-6.
- **R. Manikandan**, A. Vijaya Anand, S. Velayuthaprabhu, R.L. Rengarajan and V. Bharathi. Acute toxicity and dose fixation of the ethanolic extract of *Psidium guajava*. *Journal of Natural Remedies*. 21(4-S2): 2020.

- J. Jaychitra, M. Akshaya, V. Bharathi, C. Ruth Christiya and **R. Manikandan**.(2020). Phytochemical Analysis and GC-MS analysis of herbal formulation powder. *Journal of Natural Remedies*. 21(4-S2): 43-49.
- G. Akilandeswari, A. Vijaya Anand, K.M. Saradevi, **R. Manikandan** and V. Bharathi. An intended review on phytopharmacology of *Rhinacanthus nasutus* (Linn) Kurz. *Journal of Natural Remedies*. 21(4-S2): 2020.
- Jayachithra, Janani, Bharathi and **Manikandan**. (2020). Phytochemical analysis and mineral composition of methanolic extract of *Boerhavia diffusa* L. *Research Journal of Pharm and Tech*. 13(10): October-2020.
- K. Vijayakumar, A. Vijaya Anand, **R. Manikandan**, N. Manoharan, P. Sampathkumar and T. Nargis Begum. (2020). Hepatoprotective effects of *Psidium guajava* on mitochondrial enzymes and inflammatory markers in carbon tetra chloride induced hepatotoxicity. *Drug Development and Industrial Pharmacy*. (Taylor & Francis). (**SCIE**)
- B. Varalakshmi, Jannathul Firdous, T. Karpagam, A. Shanmugapriya V. Sugana, P. Anitha, S. Gomathi, **R. Manikandan**, T. Abarna, N. Abirami and Jeyarani. (2021). Nano phytoremediation for textile dye degradation using abutilon indicum silver nanoparticles: photo catalytic activities. *Journal of Medical Pharmaceutical and Allied Sciences*. 10.22270/jmpas.2021.V1016.1939. (**SCOPUS**).
- Gurupalraj Durai Muthu Mani, Balasubramaniam Balamuralikrishnan, **Ramasamy Manikandan**, Palanisamy Sampathkumar, Meyyazhagan Arun, Rengasamu R Lakshminarayanan, Wen-Chao Liu and Arumugam Vijaya Anand. (2022). Effects of *Euphorbia thymifolia* and *Euphorbia hirta* leaf extracts on membrane-bound, mitochondrial enzymes and lipid profile of carbon tetrachloride-induced hepatotoxicity rats. *Natural Resources for Human Health*. <https://doi.org/10.53365/nrfhh/146770>. (**SCOPUS**).
- **Ramasamy Manikandan**, Balamuralikrishnan Balasubramanian, Panneerselvam Punniyakotti, Arumugam Vijaya Anand, Arun Meyyazhagan, Shanmugam Velayuthaprabhu, Rengasamy Lakshminarayanan Rengarajan, Utthapon Issara and Wen-Chao Liu. (2022). Cardio-protective effects of *Terminalia catappa* leaves and *Terminalia chebula* fruit extract in doxorubicin-induced cardiomyopathy in rats. *Biomarkers*. <https://doi.org/10.1080.1354750X.2022.2064550>. (Impact factor: 2.6). (**SCIE**)
- Balamuralikrishnan Balasubramanian, wen-Chao Liu, Vijaya Anand Arumugam, Durai Muthu Mani Gurupalraj, **Manikandan Ramasamy** and Shenbagam Madhavan. (2022). Protective effect of *Euphorbia thymifolia* and *Euphorbia hirta* against carbon tetrachloride-induced

hepatotoxicity in Wistar rats. Drug Development and Industrial Pharmacy. <https://doi.org/10.1080/03639045.2022.2122985>. (SCIE)

- Govindraj Akilandeswari., **Ramasamy Manikandan.**, Shanmugam Velayuthaprabhu., Muthukrishnan Saradhadevi., Balamuralikrishnan Balasubramanian. and Arumugam Vijaya Anand. (2022). Antioxidant and antidiabetic activity of *Andrographis paniculata* and *Rhinacanthus nasutus* in isoniazid and rifampicin induced Wistar rats. *Natr Resour Human Health* 2023; 3 (1): 21-27. (SCOPUS).
- **Ramasamy Manikandan**, Balamuralikrishnan Balasubramanian, Arthi Boro, Pushparaj Karthika, Arun Meyyazhagan, Shanmugam Velayuthaprabhu, Arunkumar Malaisamy, Rengasamy Lakshminarayanan Rengarajan. and Arumugam Vijaya Anand. (2023). Impact on cardioprotective effect of *Psidium guajava* leaves extract in streptozotocin-induced Wistar mice with molecular in silico analysis. *Quality Assurance and Safety of Crops and Foods*. 15(2):209-221. (Impact factor: 4.0) (SCIE)
- Maria Jerline, **Ramasamy Manikandan**, Muthukrishnan Saradhadevi, Balasubramanian Balamuralikrishnan, Mohd Younis and Arumugam Vijayaanand. (2023). Influences of Ethanolic extract of *Peltophorum pterocarpum* leaves and bark on lipid profile, liver and carbohydrate metabolizing enzymes on toxin-induced wistar rats. *Free Radicals and Antioxidants*. 13(1): 1-7.
- **Ramasamy Manikandan**, Arumugam Vijaya Anand, Purushothaman Gajalakshmi, Natarajan Divya, Thirunethiran Karpagam, Angappan Shanmuga Priya, Badrinarayanan Varalakshmi, Vasudevan Suganya. (2023). Anti-diabetic potential of *Macrotyloma uniflorum* leaves in an in vitro and in vivo model. *Studies on Ethno-Medicine*. 17(3-4): 133-139. (SCOPUS).
- Maria Jerline Babu, **Ramasamy Manikandan**, Balasubramanian Balamuralikrishnan, Bharathi Kathirvel, Rajakrishnan Rajagopal, Ahmed Alfarrhan, Arun Meyyazhagan, Arumugam Vijaya Anand (2024). Hepatoprotective activity of *Peltophorum pterocarpum* leaf and bark in the isoniazid rifampicin-induced hepatotoxicity rats. *Journal of King Saud University-Science*. 36 (8); 103282. (SCIE)
- **Manikandan Ramasamy**, P. Karuppiyah, H. Ranganathan, S. Djearmane, E. Muthukrishnan, S. Kayarohanam, N. Arumugam, A.I. Almansour, L. Shing Wong. (2024). Nanomedicine potential of *Cymbopogon citratus* Linn. –Biogenic synthesized silver nanoparticles: A study

on antimicrobial and anticancer efficacy, Journal of King Saud University – Science. 36 (11). doi: <https://doi.org/10.1016/j.jksus.2024.103533>. (SCIE).

- Nithyatharani Ramalingam, **Ramasamy Manikandan**, Arumugam Vijaya Anand, Ahmad R. Alhimaidi, Aiman A Ammari and Anis Ahamed (2024). Hypolipidemic and Cardioprotective efficacy of *Peltophorum pterocarpum* linn in doxorubicin induced cardiotoxicity in rats. Indian Journal of Animal Research. 58(12), pp. 2191–2197 (SCIE).

Book Publications

- **R. Manikandan**. Cell and Molecular Biology. ISBN:978-93-87654-15-9. JAMI Publications.
- **R. Manikandan**. Basics of BioMolecules. ISBN : 978-93-87360-37-2. JAZYM Publications.
- **Dr. R. Manikandan** and Dr. A. Vijaya Anand. Phyto-pharmacological studies of the leaf extract of *Psidium guajava* against the streptozotocin induced animal models. ISBN:978-93-5757-711-3. Scientific International Publishing House.

Book Chapters: (10)

- “Neuroendocrinology of Fishes” – Aquaculture Science and Engineering. **Springer** Publication. Pg: 209-234.
- “The Different and Basic Functions of Organ system of Fishes”- Aquaculture Science and Engineering. **Springer** Publication. Pg: 255-274.
- Manipulation of cell wall components and enzymes on plant-microbe interactions. Plant-Microbe Interaction-Recent Advances in Molecular and Biochemical Approaches. **Apple Academic Press**. 303-326.
- Molecular aspects in pharmacological actions of Quercetin targeting Life cycle in SARS-CoV2. Anti SARS- CoV-2 activity of Flavonoids. **Taylor & Francis**. DOI:10.1201/9781003433200-14.
- Review of *Psidium guajava*. Plants, Animals and Microbes. IOT Academy.
- Acute toxicity of the ethanolic leaf extract of *Euphorbia thymofilia*- Thanuj International Publishers.
- A Review of Pharmacological potential of some Medicinal Plants. Contemporary Trends in Chemical, Pharmacolgoical and Life Sciences. Vol-III. Bhumi Publications. Nov-2024.
- A Short Review of *Andrographis paniculata*. Trends in Arts, Science and Humanities. AGAR Publications. Dec-2024

- A Short Review of *Rhinacanthus nasutus*. Trends in Arts, Science and Humanities. AGAR Publications. Dec-2024
- Determination of Milk Adulterants. Trends in Arts, Science and Humanities. AGAR Publications. Dec-2024.

Presentations in Conference

- Paper entitled on Compound identification and *in-silico* anti-diabetic potential of caryophyllene from *P. guajava* leaves. Integrated nature of life science and its challenges in Research, organized by Dept of Biochemistry (DST-FIST sponsored department), Theivanai Ammal College for Women, Villupuram, held on 06.09.2019.
- Paper entitled on Activity of *P. guajava* leaves and caryophyllene on hepatic enzymes in streptozotocin-induced diabetic rats. Novel approach in cancer research and therapy, organized by PG & Research Department of Biochemistry, STET women's college, Mannargudi, held on 26.09.2019.
- Paper entitled on Impact of *P. guajava* leaves extract on the streptozotocin-induced diabetic rats. 5th International Symposium on Phytochemicals in Medicine and Food. Nanchang University, China, held on 25.08.2021 – 01.09.2021
- Presented a poster in “International Conference on Research Trends Strategies and Technical Advancements in Biomedical Sciences for Sustainability” on 14.12.22 and 15.12.22, Organized by Research Department of Zoology, SRC, Trichy.
- Paper presented in “International Conference on Phytotherapeutics (ICPT-2023) on 10th February organized by STET College, Mannargudi.
- Paper entitles Antioxidant Potential of *Mentha piperita* leaves in an *in vitro* model on “Exploring the frontiers of Life Sciences: Interdisciplinary (EFLS'24) organized by Department of Botany by Seethalakshmi Ramasamy College, Trichy on 23rd December-2024.
- Paper entitled “*Pergularia daemia*: A Novel Bio Indicator” at National Conference on New Paradigms in Biotechnology and Sustainability organized by the Department of Biotechnology, School of Life Sciences, St. Joseph's College, Trichy on 07th January-2025.
- Presented in Ideathon entitled “Luminescent Food plates” at the National Conference on New Paradigms in Biotechnology and Sustainability organized by the Department of Biotechnology, School of Life Sciences, St. Joseph's College, Trichy on 07th January-2025.
- Poster presented entitled “Low Cost technique to treat polluted water” at National Conference on New Paradigms in Biotechnology and Sustainability organized by the Department of Biotechnology, School of Life Sciences, St. Joseph's College, Trichy on 07th January-2025.

Participation in Conference: 05

Participation in Seminars

- State level seminar on Recent Trends in Pharmacotherapeutics
- State level seminar on Nanotechnology in Biology and Medicine
- Attended one day (07-01-2011) State Level Seminar on Recent Research in Biological Science organized by Biological and Bioinformatics Research Centre, Trichy.

Participation in Workshop

- Analytical Instrumentation Techniques Workshop Held on 22nd and 23rd February-2025

Participation in Orientation Programme/Short Term Courses

- International online certificate course on Bio-Entrepreneurship, Organized by the Microbiologists Society, India from 18.11.2024 to 24.11.2024.

Participation in Faculty Development Programme

- Attended faculty development program on Investor Education-Bishop Heber's College, from 02.02.22 to 09.02.22.
- Attended the Faculty Development Program on Aligning with the new educational Era-Primax Foundation from 21.02.22 to 26.02.22.
- Attended the Faculty Development Program on "Innovative Pedagogies of the Future in Teaching Learning Process. SIGC, Trichy, from 17.03.22 to 19.03.22.
- Attended Seven days national level Faculty Development Program on "Basics of Research and Funding Opportunities"- Organized by IOT Academy, from 4th July-2022 to 12th July-2022.
- Shape Yourself with Siddha, Organized by Department of Chemistry, SIGC, Trichy on 14-07-22.
- Participated in IP awareness program under "National Intellectual Property Awareness Mission. Organized by Intellectual Property Office, India, on 26.04.2023.
- FDP on Innovation management technology commercialization and techno-entrepreneurship on agri-biotechnology for Sustainable future at Kaushalya The Skill University from 06.01.2025 to 11.01.2025.
- FDP on Agri Tech Innovations: Creating opportunities for Gen Z at Indian Institute of Plantation Management from 27.01.25 to 01.02.25.

Conference/Seminar / Workshop Organized

- Organize the one day National Seminar entitled "Impact of Non-Communicable Diseases in India". Funded by Indian Council of Social Science Research (ICSSR), New Delhi. Sanctioned Amount: Rs. 90,000/- Date of program: 11.10.23. UC settled.

- Organize the one day Faculty Development Program entitled “ Women who advocate for equity, diversity and Inclusion”. Funded by National Human Rights Commission (NHRC), New Delhi. Sanctioned Amount Rs. 75,000/- Date of Program: 21.03.25.

InvitedSpeaker / SessionChair-Conference/ Seminar/ Workshop

- Acted as a Resource Person and delivered a Lecture on “New Perspective in Biological Sciences” in the one day International Conference on “Recent Trends in Bio-Science (BBN2K24) organized by Department of Biochemistry, Edayathangudy. G.S. Pillay Arts and Science College (Autonomous), Nagapattinam on 05.04.24
- Delivered an invited talk on “Nucleic acid and its important” held on 01.12.2018 conducted by the Department of Biochemistry, RVS Agricultural College, Tanjore.
- Delivered Guest Lecture on “Therapeutics of Cancer” held on 28.02.2025 conducted by the Department of Biochemistry, MIET Arts and Science College, Trichy.

Editorial / ReviewBoardMember

- Archives of Physiology and Biochemistry.
- Indian Journal of Human Genetics.
- Asian Journal of Research in Biochemistry.
- Natural Resources for Human Health.
- BMC Pharmacology and Toxicology (Springer Nature)
- Discover Toxicology (Springer Nature)

Membership in Professional Bodies

Name of the Professional Body	Nature of membership	Duration
Scientific International Publishing House (SIPH2023206).	Life Time Member	Life Long
Microbiological Society of India	Annualy	November-2025
Association of Global Academicians and Researchers.	Life Time Member	Life Long

Awards/ Honors

Awards/ Honors	Agency/ Institute	YearofAward
Researcher Excellence Award	Scientific International	2023

	Publishing House	
Research Excellence Award	Association of Global Academicians and Researchers	2024
Research Excellence Award	IOT Academy	2025