

CURRICULUM VITAE



Dr. A. Asha Monica,
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OBJECTIVE

Highly motivated and dedicated individual with a doctorate in biotechnology, an international patent, and excellent teaching and research skills. Looking for the permanent position of an assistant professor in biotechnology at St. Joseph's College, Trichy.

EDUCATIONAL DETAILS

| S.NO | EXAMINATION | INSTITUTION | % MARKS | CLASS | YEAR OF PASSING |
|------|---------------------------|------------------------------------|------------------|------------------|-----------------|
| 1 | Ph.D. Plant BIOTECHNOLOGY | St. Joseph's College Trichy-2. | Highly commended | Highly commended | 2019-22 |
| 2 | M. Phil BIOTECHNOLOGY | St. Joseph's College Trichy-2. | 91% | Distinction | 2016-17 |
| 3 | M.Sc., BIOTECHNOLOGY | St. Joseph's College Trichy-2. | 82% | Distinction | 2014-16 |
| 4 | B.Sc., BIOTECHNOLOGY | Cauvery College for Women, Trichy. | 88% | Distinction | 2011-14 |

PATENT GRANTED – 4

Patent Type – International.

Patent Origin – German.

Patent Details

1. Utility model number: 202022100605 IPQ G16H20/10. *Ocimum* extraction process against breast cancer. (APRIL -2022)

2. Utility model number: 202023101250 IPC GO1N30/88. System for extraction and purification of stingray debris. (**MAY – 2023**)
3. Utility model number: 202023100808 IPC G16C20/30. System for treating lung cancer with herbal compounds. (**JUNE 2023**)
4. Utility model number: 202024103634 IPC A61K36/752. System for qualitative phytochemical screening of *Limoniaacidissima L.* (**July 2024**)

PATENT ONGOING – 1

1. "Synergetic Micropipette and pH Probe System Enhancing Precision and Efficiency in Analytical Sample Manipulation."

PROFESSIONAL EXPERIENCE

1. **National Facility for Marine Cyanobacteria, Bharathidasan University, Tiruchirappalli - May 2016 to April 2017 - Technical Assistant** on *DBT* sponsored project.
2. **St. Joseph's College (Autonomous), Tiruchirappalli - April 2022 to June 2022 - Assistant Professor** in the Department of Biotechnology.
3. **Holy cross College (Autonomous), Tiruchirappalli - June 2022 to January 2023 - Assistant Professor** in the PG and Research Department of Biotechnology.
4. **St. Joseph's College (Autonomous), Tiruchirappalli - January 2023 to Present - Assistant Professor** in the Department of Biotechnology.

BOOK PUBLISHED

The blueprint of life: A road map to synthetic biology; Alpha international publication; ISBN – 978-93-5762-584-5

PAPERS PUBLISHED

1. Auxilia A, Helen Diana I and Asha Monica A, Green Synthesis and Characterization of Silver Nanoparticles from *Illicium Verum Hook. F* and their Antioxidant and Anti Diabetics Activity, International Journal of Biology, Pharmacy and Allied Sciences (**IF: 0.667**) Web of Science (2025)
2. **Asha Monica Alex**, Senthilkumar Subburaman, Shikha Chauhan, Vishal Ahuja, Gholamreza Abdi, and Maryam Abbasi Tarighat. "Green synthesis of silver nanoparticle prepared with *Ocimum* species and assessment of anticancer potential." *Scientific Reports* 14, no. 1 (2024): 11707. **Impact factor – 4.2**
3. Uthra Selvaraj, Sivaranjani Ganapathy, Arumugam Muthuvel, **Asha Monica Alex**, Javed Masood Khan, and Periyasamy Vijayalakshmi. "Evaluation of the toxicological properties

of Himantura imbricata Venom using a zebrafish model (Danio rerio)." *Toxicon* 243 (2024): 107739. **Impact factor – 2.6**

4. Selvaraj, Chandrabose, Periyasamy Vijayalakshmi, **Asha Monica Alex**, Abdulaziz S. Alothaim, Rajendran Vijayakumar, and Vidhya Rekha Umopathy. "Metalloproteins structural and functional insights into immunological patterns." *Advances in Protein Chemistry and Structural Biology* (2024). **Impact factor – 5.4**
5. **Asha Monica Alex Rajarathinam**, Sathish kumar, Vivekanadam Swabna, Edward Arockiasamy, Green synthesis and characterization of Silver nanoparticles from Santalum album and their Antimicrobial Antioxidant and Anticancer activity, *International Journal of Zoological Investigations (IJZI)* MS17/Vol.10-1/2024 (web of science) **Impact factor – 0.95**
6. P. G. Geegi, A. Benno Susai Vijayakumar, T. Antony Diwakar Chandran, **Asha Monica A**, P. Elakkiya and T. Prabhash, Evaluation of the Anti-Cancer Potential of *Aloe Vera* and *Terminalia Chebula* Herbal Formulation against MCF-7 Breast Cancer Cell Line and Characterization of Silver Nanoparticles of the Herbal Formulation". *Res. Jr. Agril. Sci.* Vol. 5; Issue 6. UGC- care list **Impact factor – 1.4**
7. Auxilliya Anthonisamy , Revathi Mathiyazhagan , Manonmani Rajasekaran and **A. Asha Monica** * 'Evaluation Of Phytochemical, Antibacterial And Antioxidant Analysis of *Linum Usitatissimum* L. Seed Extract' - *International Journal of Pharmaceutical Sciences and Research (IF: 0.57)* Scopus
8. **Asha Monica A**, Auxilia A. 2023. Identification of palm varieties based on the DNA barcoding using mat K gene. *Res. Jr. Agril. Sci.* 14(2): 509-511. UGC- care list **Impact factor – 1.4**
9. **Asha Monica A**, Morphological and Molecular identification, Growth profile analysis and biochemical parameter estimation on blue – green algae - *International Journal of Biology, Pharmacy and Allied Sciences (IF: 0.667)* Web of Science
10. **Asha Monica A**, Identification And Validation Of Palustric Acid And Andrographolide From *Ocimum Basilicum* Leaf As A Promising Breast Cancer Inhibitor: An *In-Vitro* And *In-Silico* Analysis - *International Journal of Pharmaceutical Sciences and Research (IF: 0.57)* Scopus
11. **Asha Monica Alex**, Molecular Characterization of antibiogram activities and Bioactive Compound Saponin from the root of *Plectranthus barbatus* - *Bulletin of Environment, Pharmacology and Life Sciences (IF : 0.971)* Web of Science
12. **Asha Monica Alex**, Senthilkumar Subburaman, Green synthesis and characterization of silver nanoparticles from *Ocimum basilicum* and their antimicrobial antioxidant and

anticancer activity - Research Journal of Pharmacy and Technology Vol.:13, Issue:12, December 2020. [ISSN 0974-360X] Scopus **IF : 0.68**)

13. **Asha Monica Alex**, Senthilkumar Subburaman Molecular Docking Analysis of Bioactive Compounds from *Ocimum basilicum* Aqueous Leaf Extract against Estrogen Receptor - Bulletin of Environment, Pharmacology and Life Sciences Volume 9 [9] 2020. [ISSN 2277-1808] (**IF: 0.971**) Web of Science
14. Phytochemical Analysis, Anti-Microbial and Anti-Oxidant Activity of *Ocimum basilicum* - **Asha Monica A.** and Senthilkumar S. R. World Journal of Pharmaceutical and life science. VOLUME 6, FEBRUARY ISSUE 2 ISSN 2454-2229
15. **Asha Monica A.** Specificity Of Mycorrhizal Fungi Isolated From The Roots of *Vanda testacea* From Five Different Regions Using DNA Barcoding – Journal of Emerging Technologies and Innovative Research (JETIR) JULY 2018, VOLUME 5, ISSUE 7 (ISSN – 234-5162).
16. **Asha Monica A.** Molecular Characterization of Mycorrhizal Fungi Isolated From the Roots of *Cymbidium* Species – World Journal Of Pharmaceutical Research (Wjpr) VOLUME 7, ISSUE 10, 2018, 515-520. (ISSN – 2277-7105).

BOOK CHAPTER – Accepted yet to published

- 1) Algal products to cope with antimicrobial drug resistance – Nova science publishers, USA (science direct Scopus)
- 2) "Scope of Bioremediation of Wastewater for Emerging Water Contaminants Like Pharmaceuticals, Microplastics, Antibiotics, etc. (Elsevier)

TOTAL SEQUENCES SUBMITTED:

Whole genome

- JBFLGM000000000 *Bacillus cereus*

Plant sequences

- MN186585 *Ocimum basilicum (rbcL gene)*
- MN660046 *Ocimum americanum (rbcL gene)*
- MN660047 *Ocimum tenuiflorum (rbcL gene)*
- MN660048 *Ocimum gratissimum (rbcL gene)*
- MN816238 *Ocimum basilicum (trnH-psbA)*
- MN755613 *Ocimum americanum (trnH-psbA)*
- MN239512 *Ocimum tenuiflorum (trnH-psbA)*

- MN816239 *Ocimum gratissimum (trnH-psbA)*
- MN816237 *Ocimum basilicum (TrnL-TrnF)*
- MN816234 *Ocimum americanum (TrnL-TrnF)*
- MN816235 *Ocimum tenuiflorum (TrnL-TrnF)*
- MN816236 *Ocimum gratissimum (TrnL-TrnF)*
- MF446879 *Vanda tessellata (rbcL gene)*
- MF446880 *Vanda tessellata (rbcL gene)*
- MF446881 *Vanda spathulata (trnH-psbA)*
- MF446882 *Cymbidium alifolium (rbcL gene)*
- MF446883 *Cymbidium bicolour (trnH-psbA)*
- MF446877 *Vanda testacea (rbcL gene)*
- MF446878 *Vanda testacea (rbcL gene)*
- MF446879 *Vanda tessellata (rbcL gene)*
- MF446880 *Vanda tessellata (rbcL gene)*
- MF446881 *Vanda spathulata (trnH-psbA)*
- MF446882 *Cymbidium alifolium (rbcL gene)*
- MF446883 *Cymbidium bicolour (trnH-psbA)*
- OQ360642 *Borassus flabellifer (mat K)*
- OQ360643 *Latania lontaroides (mat K)*
- OQ360644 *Phoenix dactylifera (mat K)*

Fungi sequences

- MK322733 *Epulorhiza sps.(ITS gene)*
- MK322734 *Epulorhiza sps.(ITS gene)*
- MK322735 *Epulorhiza sps.(ITS gene)*
- MK322736 *Epulorhiza sps.(ITS gene)*
- MK322737 *Epulorhiza sps.(ITS gene)*
- PP725767 *Aspergillus chevalleri (ITS gene)*

Bacteria sequences

- MK343100 *Nostoc sps. BDU80591 16sRrna*
- MK343099 *Nostoc sps. BDU80701 16sRrna*
- OM403667 *Acinetobacter sp.*
- OM403683 *Staphylococcus sp*
- OM419192 *Oscillatoria sp.*

- ON500652 *Oscillatoria nigro-viridis*
- OQ555606 *Bacillus licheniformis*
- OQ555613 *Chryseobacterium bernardetii*
- OQ555659 *Pseudomonas aeruginosa*
- OQ555662 *Pseudomonas putida*
- OQ555665 *Staphylococcus aureus*
- OQ555667 *Rhodococcus erythropolis*
- OQ119718 *Staphylococcus aureus*
- OR242493 *Microcoleus sp*
- OR242492 *Microcoleus autumnalis*
- OR243899 *Chlorella sorokiniana*
- OR243900 *Micractinium sp'*
- OR250419 *Microcoleus autumnalis*
- OR250420 *Oscillatoria sp.*
- OR257833 *Nostoc commune*
- OR898256 *Microcoleus autumnalis*
- OR889413 *Baaleninema*
- OR898257 *Tychonema bourrellyi*
- OR898258 Oscillatoriaceae
- OR898259 Oscillatoriaceae
- OR889409 *Paracandidimonas soli*
- OR889355 Alcaligenaceae bacterium
- OR889353 *Pseudomonas saudiphocaensis*
- OR889352 *Stutzerimonas stutzeri*
- PP712905 *Enterobacter ludwigii*
- PP712907 *Enterobacter asburiae*
- PP712915 *Brevundimonas vancouverii*
- PP718015 *Bacillus amyloliquefaciens*
- PP718026 *Bacillus subtilis*
- PP724362 *Pseudomonas aeruginosa*
- PP724365 *Pseudomonas sp*
- PP724751 *Brevundimonas diminuta*

Algae sequences

- OM287442 *Hindakia tetrachotoma* strain
- ON506694 *Chlorella vulgaris*
- ON500673 *Spirogyra* sp
- OR250718 *Chlorella* sp
- OR243899 *Chlorella sorokiniana*
- PP725267 *Aspergillus chevalieri*

Ant sequences

- OR889097 *Paratrechina longicornis*
- OR889100 *Camponotus compressus*
- OR889116 *Anoplolepis gracilipes*
- OR889152 *Tetraoponera rufonigra*
- OR889153 *Solenopsis geminate*
- PP702400 *Leucauge decorata*
- PP702393 *Apis cerana*
- PP694488 *Argiope anasuja*
- PP683100 *Apis mellifera*
- PP681318 *Camponotus compressus*
- PP681317 *Tegrolcinia mirotibialis*
- PP702409 *Oecophylla smaragdina*
- PP702411 *Amata passalis*
- PP725722 *Apis florea*

FDP ATTENDED

- Attended the Faculty Development Program from May 18th to 20th, 2023, hosted by the **All Indian Association for Christian Higher Education (AIACHE) and Bishop Heber College (Autonomous)**.
- Participated in the Faculty development programmed on “**Emerging Trends in intellectual property rights**” with A+ grade during 14th – 21st August 2023 at **Vimala College (Autonomous), Thrissur, Kerala, in collaboration with inter university centre for IPR Studies, CUSAT & Rathnavel subramaniam (RVS) College of Arts and Science, Coimbatore.**
- Participated in the Faculty development programmed on “**Emerging Trends in intellectual property rights**” with A+ grade during 14th – 21st August 2023 at

Vimala College (Autonomous), Thrissur, Kerala, in collaboration with inter university centre for IPR Studies, CUSAT & Rathnavel subramaniam (RVS) College of Arts and Science, Coimbatore.

- Attended the One day Faculty Development Program on Academic research in science organized by St, Joseph's College (Autonomous) **Tiruchirappalli on 9th December 2023**
- Participated in the online Faculty development programmed on “**CADD & SYSTEM BIOLOGY**” during 18th – 22nd December 2023 at **PG & Research Department of Biotechnology and Bioinformatics, Holy Cross College (Autonomous) Tiruchirappalli in collaboration with Theevanam Additives & Nutraceutics Pvt. Ltd., IITM Research Park, Chennai.**

Resource Person

- The workshop on Molecular Docking, organized by Department of Botany, St. Joseph's College, Tiruchirappalli. (1th march 2023)
- The workshop for internship students on Molecular techniques, organized by Department of Botany, St. Joseph's College, Tiruchirappalli.(10th march 2023)
- The workshop on DNA isolation from human cell, organized to Department of physics, St. Joseph's College, Tiruchirappalli (22 February 2024)
- The workshop on Nanoparticle Synthesis using Plant extract, organized to Department of physics, St. Joseph's College, Tiruchirappalli (27 February 2024)

Workshop and technical feast Organized

- Acted as an Organizing Secretary and conducted. a workshop on “**Foldscope - smartphone based tiny scope**” on **1st September, 2023**
- Served as the Organizing Secretary and successfully conducted a technical event for life science students from various colleges on September 23rd , 2023.
- Best award in **CSIR sponsored national seminar on frontiers in biotechnology** held on 8th and 9th August 2013 at Nehru Memorial College.
- Participated in various “**NATIONAL LEVEL SEMINARS**”.
- Participated and won prizes for cultural and co-curricular activities.

M.Sc. AND M.Phil. PROJECT TITLE

- Identification of Palm Varieties Based On MatK Gene.
- Molecular characterization of some orchid varieties plants based on *RbcL* gene and *trnH-psbA* spacer region

Ph.D. PROJECT TITLE

- MOLECULAR CHARACTERIZATION, SILVER NANOPARTICLES SYNTHESIS, AND *IN-SILICO* ANALYSIS OF SELECTED *OCIMUM* SPECIES.

SEMINAR AND WORKSHOP PARTICIPATED

- Dynamically attended a **Hi-Impact FDP** which was organized by **Joseph's Hub for Languages (JHL)**, St. Joseph's College, Tiruchirappalli from **06th May, 2024 to 24th May, 2024**.
- Participated in **Orientation programme** conducted by **Higher Education Commission, Madurai Jesuit Province**, Madurai held from 05th June to 7th June, 2023.
- Successfully completed **Faculty Development Program** on "**Research Writing**" organized by **St. Joseph's College (Autonomous), Trichy** on **22nd July, 2023**.
- Completed seven-day **Faculty Development Program** on "**Emerging Trends in Intellectual Property Rights**" with **A⁺ grade** held from **14th to 21st August, 2023** organized by **Vimala College (Autonomous), Thrissur, Kerala**.
- Successfully completed a FDP on "**Intricacies of writing for research publications and projects**" organized by **St. Joseph's College (Autonomous)** on **27th October, 2023**.
- Participated in an FDP on "**Patent and Consultancy**" organized by **St. Joseph's College (Autonomous)**, which is held on **20th November, 2023**.
- Successfully completed a FDP on "**Academic Research in Science**" that was organized by **St. Joseph's College (Autonomous)** and held on **9th December, 2023**.
- Participated in a week FDP on "**CADD and system biology**" that was organized by **Holy Cross College (Autonomous), Tiruchirappalli** from **18th December to 22nd December, 2023**.
- Participated in the one-day seminar on "**OPEN AI TOOLS**" held on **15th JULY 2023** organized by the **Department of DATA SCIENCE, St. Joseph's College (AUTONOMOUS), Tiruchirappalli**.
- Participated in the short-term training course on "**Advance Research Techniques on Genomics, Proteomics, and Bioinformatics –ARTGPB'17**" during **7th – 21st November 2017** at **National Facility for Marine Cyanobacteria, Bharathidasan University, Tiruchirappalli**.
- Participated in the workshop on "**BIOINFORMATICS TECHNIQUES FOR MODELLING AND ANALYSIS**" held on **21st and 22nd March 2014** at **National Facility for Marine Cyanobacteria, Bharathidasan University, Tiruchirappalli**.

- Participated in the two day national seminar on **“RECENT TRENDS AND FUTURE ADVANCES IN LIFE SCIENCES”(RTFALS)** held on 26th and 27th February 2015 organized by the **Department of Life Sciences, Central University of Tamil Nadu, Thiruvarur.**
- Participated in one day STATE LEVEL WORKSHOP ON **“TECHNIQUES IN DNA BARCODING”** held on 10th December 2014 organized by the **Department of Biotechnology St. Joseph’s College, Tiruchirappalli.**
- Participated in the national seminar on **“PROSPECTS AND CHALLENGES IN STEM CELL RESEARCH”** held on 12th January 2015 organized by the **Department of Biotechnology St. Joseph’s College, Tiruchirappalli.**
- Participated in the one-day hands-on training on” **ELECTROPHORETIC TECHNIQUES** “sponsored by Department of Biotechnology, Govt Of India (DBT-STAR College scheme) held in January 19th, 2016 organized by **Department of Botany St. Joseph’s College, Tiruchirappalli.**
- Participated in the seminar on **“NANOSCIENCE AND TECHNOLOGY”** Sponsored by DBT-STAR College scheme held on January 20th, 2016 organized by **Department of Botany. St. Joseph’s College, Tiruchirappalli**
- Participated in the national level technical workshop on **“NEXT GENERATION SEQUENCING”** in collaboration with Thermo Fisher Scientific held on 10th September 2015, organized by the PG and Research Department of **Biotechnology St. Joseph’s College, Tiruchirappalli.**
- Participated in the UGC sponsored national seminar on **“CLINICAL RESEARCH (NSCR)”** held on 21st January 2015 organized by The **Department of Biochemistry, St. Joseph’s College, and Tiruchirappalli.**
- Participated in the UGC sponsored national symposium on recent advances in medicinal and aromatic plants (NASYMP’15) held on 05th February 2015, organized by **Department of Botany. St. Joseph’s College, Tiruchirappalli.**
- Participated in the **SCIENCE ACADEMIES LECTURE WORKSHOP ON “ADVANCES IN BIOLOGY** “held on 10th September to 12th September 2014, organized by The **Department of Biotechnology, Cauvery College for Women. Tiruchirappalli.**
- Participated in the **SCIENCE ACADEMIES LECTURE WORKSHOP ON “BIOPROSPECTING AND BIORESOURCES** held on 10th February to 12th

February 2016, organized by the **PG and Research Department of St. Joseph's College, Tiruchirappalli.**

- Participated in the **SCIENCE ACADEMIES LECTURE WORKSHOP ON “PROGRESS AND PROSPECTS IN BIOSCIENCES”** organized by the **PG And Research Department of Biotechnology St. Joseph's College, Tiruchirappalli**, on 04th and 05th October 2016.
- Participated in the **INTERNATIONAL SCIENTIST MEET** organized by The **Department of Biotechnology St. Joseph's College, Tiruchirappalli**, on 7th December 2015.
- Participated in the **Dr V BALAKRISHNAN CME PROGRAMME** organized by The **Department of St. Joseph's College, Tiruchirappalli**, on 5th march 2015.
- Participated in the one day workshop on - **FARM FOOD PROCESSING In Association With Indian Institute of Crop Processing Technology, Govt of India and Sponsored by Department of Biotechnology –Star College Scheme** held on January 11th, 2016 Organized By the **Department of Botany St. Joseph's College, Tiruchirappalli.**

PERSONAL INFORMATION

Name : Dr. A. Asha Monica.
Age : 31.
Gender : Female.
Date of Birth : 26/08/1993.
Marital Status : Married.
Spouse Name : T. Jones Andrew.
Spouse Occupation : Data Analyst Lead (BSv).
Qualification : Ph.D. Biotechnology.
Nationality : Indian.
Religion : Christian, Roman Catholic.
Address : 20/O/26A, Annai Nagar, 3rd Street, Palakarai,
Trichy – 620001.
Mobile Number : 8526208969.
Languages Known : Tamil, English. (Written and Spoken).

Declaration: I Hereby Declare That The Particulars Furnished Herein By Me Are True To The Best Of My Knowledge And Belief.

Place: Tiruchirappalli, Tamilnadu, India.

Yours Truly



Dr. A. Asha Monica
