

PROFESSIONAL RESUME

G. RAJALAKSHMI

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OBJECTIVE

Seeking a challenging career in a dynamic and leading organization that would help me cultivate and nurture my skills to the fullest with an opportunity to display my talent and become an asset to the organization.

EDUCATIONAL QUALIFICATION

Qualified UGC SET in Life Sciences conducted by Mother Teresa University, Kodaikanal during April 2017

2020 – 2022: B. Ed in Biological Sciences, R. V. S. College of Education, Dindugul.

2018: Ph.D in Biotechnology at Madras University

2009 -10: P.G. Diploma in Bioinformatics, Bharathiar University (First Class)

2006-07: Master of Philosophy in Biotechnology, Bharathidasan University (First Class with distinction).

2000-02: Master of Science in Biotechnology, Periyar University (First class).

1997-00: Bachelor of Science in Microbiology, Bharathiar University (First class).

1995-97: Higher Sec. in Alvernia Matric. Higher Sec. School (First class with distinction).

EMPLOYMENT PROFILE

- Director, Sponsored Research and Special Schemes and Professor, Department of Marine Biotechnology, Academy of Maritime Education and Training (AMET) Deemed to be University, Chennai (July 2023 – till date)
- Head of the Department, PG and Research Department of Biotechnology, Hindusthan College of Arts and Science, (June 2013 – May 2023)
- Worked as Assistant Professor, PG and Research Department of Biotechnology, Hindusthan College of Arts and Science, Coimbatore. (June 2004 to June 2013)
- Lecturer, Department of Biotechnology, Vivekanandha college of Arts and Science for Women, Tiruchengode. (June 2002 - April 2004).

COACHING CLASSES

- Served as a faculty handling coaching classes for GATE and TET courses at ECEC Education Centre, Coimbatore
- Served as a faculty handling coaching classes for NEET Exams at TIME studies centre, Coimbatore

TECHNIQUAL SKILLS

- Basic and recent techniques in the field of Microbiology, Biochemistry, Cell biology and Genetics, Immunology, Bioprocess technology, Molecular biology and Bioinformatics.

INSTRUMENTS FAMILIARISED

- Compound Microscope, Fluorescent Microscope, Lyophiliser, Gel Documentation, Thermal cycler, ELISA reader, Sonicator, Lab scale Fermentor, Benchtop Cooling Centrifuges, Nanodrop Reader, UV Vis Spectrophotometer, CO₂ incubator.

CREDITS

- **Co -ordinator for DBT STAR COLLEGE – Strengthening UG Components under MHRD New Delhi with a fund of Rs. 84 lakhs to the Institution**
- **President of Institution Innovation Council of Hindusthan College, MHRD IIC, New Delhi**
- **Co – ordinator for DST FIST and DBT BUIDER Schemes – Grant for Rs. 3,00,00,000 (Applied)**
- **Course Co – ordinator in 15 days DBT Sponsored Workshop on “Basic Techniques in Plant Tissue Culture and Animal Tissue Culture” and sanctioned a sum of Rs. 4,80,000/- (November 6 – 22, 2017).**
- **IQAC Co – ordinator of the Department and Criterion 1 Manager (NAAC) of the Institution**
- **Co – ordinator for “Creation of Scientific Awareness (CSA) Programme” for Coimbatore Zone and sanctioned with a sum of Rs. 65,000/- (December 2018)**
- **Co- ordinator in Science Academies Lecture Workshop “Role of Science in Sustaining Bioresources” and sanctioned a sum of Rs 1,33,000/- (July 21 and 22, 2017).**
- **Co – ordinator in Popularisation of Science Activities programmes - Mushroom Cultivation, Vermi Composting and Terrace Gardening Sponsored by Tamilnadu State Council for Science and Technology and sanctioned a sum of Rs. 45,000/- (June 2017)**
- **Co-ordinator in Science Academies Lecture Workshop “Prospects in Bioscience” and sanctioned a sum of Rs 1,33,000/- (August 22 and 23, 2016).**
- **Served as a Core faculty in DBT sponsored 15 days short term training on “Basic techniques in Plant and Animal Tissue Culture” (November 2006).**
- **Awarded with “Best Women Faculty Award” by Nature Science Foundation, Coimbatore February 2019**

RESEARCH EXPERIENCE

- **Ph.D** research on “Anti – diabetic potential of compounds against type 2 diabetes and their influence on down regulation of VEGFR1 and VEGFR2 receptors that mediate angiogenesis in diabetic retinopathy” under Prof. Dr. R. Malathi, Univeristy of Madras.
- **M.Phil.** project work on “ Biochemical characterisation of *Chromobacterium violaceum* isolated from spoiled vegetable and the *invitro* assays of violacein pigment”
- **M.Sc.** project work on “RNA as A Drug Target – Effect of Tetracycline on *E.coli DH5α*”

FELLOWSHIPS AVAILABLE

- **INTERNATIONAL SUMMER RESEARCH FELLOWSHIP (MAY 2019 – JUNE 2019)** – Istanbul University, Turkey
- **VIRTUAL SUMMER RESEARCH PROGRAMME (June 2020 to August 2020)** – CSIR – SRTP, NEIST, Jorhat
- **SUMMER RESEARCH FELLOWSHIP (May 2016 – July 2016)** worked on “*Mechanism of interaction of proteins involved in RNA Degradaosome*” in Indian Institute of Science, Bengaluru.
- **SUMMER RESEARCH FELLOWSHIP (April 2008 – June 2008)** worked on “*Cloning of DNA encoding miRNA from Magnaporthe oryzae*” M.S. Univeristy, Baroda.

GRANTS APPLIED

- **Co -ordinator for DST FIST grant(Apllied)** – Rs. 1,50,00,000 (One crore and fifty lakhs)
- **Co –ordinator for DBT BUILDER (Applied)** – Rs. 3,30.00,000 (Three crores and thirty lakhs)
- **Minor Research Project Proposal (Applied) to Tamilnadu State Council for Science and Technology-** Rs. 5,00,000 (Five Lakhs only)

RESEARCH PUBLICATIONS

- **G Rajalakshmi** and Vimalin Hena. J. Optimization of physical parameters for the production of Amylase by Submerged fermentation. Readers Shelf: 2009; 6(3) 16-19.
- S Kavitha, Ramachandran, T, Murugalatha N and **Rajalakshmi. G.** Development of Antimicrobial Gloves using Aloe on Non – Wovens. J. Ecotoxicol. Environ. Monit. 2009; 19(5) 503 – 507.
- C Vani and **G Rajalakshmi.** Antimicrobial activity of the symbionts of entopathogenic nematodes against *Bacillus thuriengiensis* and *Serratia marcesans*. 2009. Journal of Theoretical and Experimental Biology p7-16.
- **G Rajalakshmi** and N.Murugalatha. "Bioremediation of paper mill effluent using *Pseudomonas aeruginosa* and *Staphylococcus aureus*". The IUP Journal of Biotechnology", 2010. Icfai University Press (p) Ltd.
- **G Rajalakshmi**, A Sankaravadvoo and S Prabhakaran. Characterization of *Chromobacterium violaceum* isolated from spoiled vegetables and antibiogram of violacein. Journal of Advanced Laboratory Research in Biology. 2011. pg 22-27.
- Komathi S, **Rajalakshmi G**, Savetha S and Ayyappa Das M P. *In vitro* regeneration of *Passiflora foetida* L. Journal of Research in Biology (2011) 8: 001-007.
- S Vijayakumar, **G. Rajalakshmi** and K. Kalimuthu. Propagation of *Dendrobium aggregatum* by green capsule culture. Lankesteriana 2012 12 (2): 131 -135.
- R Mohana Priya, **G. Rajalakshmi** and P. Pavithra. Molecular profiling of Methicillin Resistant *Staphylococcus aureus* isolated from clinical samples. 2012 Vol 6 (1)339 – 343.
- S. Komathi, **G. Rajalakshmi** and R. Rekha. *In vitro* antimicrobial assay and phytochemical analysis of *Calotropis procera*. World Journal of Science and Technology 2012 Vol 2 (11).

- S. Komathi, **G. Rajalakshmi** and R. Rekha. Phytochemical analysis and invitro antibacterial activity of leaf extracts of *Acalypha indica* Linn. International Journal of Engineering and Technology, Vol 2. Issue 1, January 2013.
- **G.Rajalakshmi**, R.Ramnarendran and N. Gomathi. Phytochemical screening and antifungal activity of Medicinal Plant. Global Research Analysis, Vol 2 Issue 3, March 2013 pp 8 – 9.
- S. Komathi, **G.Rajalakshmi**, S. Savetha and S. Balaji. Isolation, production and partial purification of L – Asparaginase from *Pseudomonas aeruginosa* by solid state fermentation. Scholars Academic Journal of Pharmacy (SAJP), 2013; 2(2): 55-59.
- Komathi.S and **G.Rajalakshmi**. Phytochemical screening and antibacterial activity of the medicinal plant momordica charantia. *Indian journal of applied research*, 2013, 3;9.
- **G. Rajalakshmi**, S. Komathi and S.Savetha. Antibacterial potential of ocimum Gratissimum Leaf Extracts. Int. J. Pharm. Sci. Rev. Res., 2013;19 (2), 70-71.
- Mohanapriya R, **Rajalakshmi G**, Komathi. S and Pavithra. A Comparative Study and Growth Potentials of Bacteria Isolated from Petrol Spilled Soil on Different Hydrocarbons. *Sch. Acad. J. Biosci.* 2013 1(2):46-49.
- **G.Rajalakshmi**, S. Komathi, Banu Raviganesh, N. Poongodi and T.Sasikala. *In-vitro* Micropropagation and antimicrobial activity of *Chrysanthemum indicum*. *Sch. Acad. J. Pharm.*, 2013, 2(4):285-288.
- T.Sasikala N. Poongodi **G.Rajalakshmi** Banu Raviganesh S. Komathi. Effect of Lead toxicity on Germination and Seedling Growth of *Vigna Mungo* (L.) Hepp. 2013 Volume 2, issue 4.
- **G. Rajalakshmi**, S.Komathi, N.Poongodi, T.Sasikala and Banura viganesh, Antimicrobial Activity and Phytochemical Screening of *Catharanthus Roseus*. *Global research analysis*, 2013, 2; 1-2.
- Deepika Paramanik and **G.Rajalakshmi**. Biodegradation of petroleum hydrocarbons pollutants in soil using microbial consortium. *International Journal of Plant, Animal and Environmental Sciences*. Vol 3, Issue 3, July – Sep 2013, PP 173 -178.
- Deepika Paramanik and **G.Rajalakshmi**. *In-vivo* evaluation of potential toxicity of vanadium pentoxide in male wistar rats. *International Journal of Applied Biology and Pharmaceutical Technology*. Vol 4 Issue 3, July – Sept 2013, pp 260 – 271.
- Rathipriya.C.S., **Rajalakshmi.G.**, Komathi.S, Surendran.L. Mass multiplication, phytochemical, antibacterial and molecular analysis of an important medicinal plant *Achyranthes aspera* Linn. *International Journal of Research Studies in Biosciences (IJRSB)* Vol 3, Issue 3, March 2015, PP 34-42.
- Sahini.C.K ,**G.Rajalakshmi**, Sunil.G.Nayar. Evaluation of Sperm DNA Fragmentation Index (DFI) for the outcome of assisted reproductive technique in infertile male. *JMSCR* Vol 2 Issue 12 December-2014 Page 3222-3233.
- **Rajalakshmi G** and R. Malathi. *In vivo* evaluation of antidiabetic properties of Caffeic acid, Salvianolic acid and Vanadium pentoxide in Swiss albino mice. *European Journal of Biomedical and Pharmaceutical Sciences*, 2017; 4(1); 216-220.
- Sithara NV, **Komathi S, Rajalakshmi G**. Identification of bioactive compounds using different solvents through FTIR studies and GCMS analysis. *Journal of Medicinal Plants Studies*, 2017; 5(2); 192-194.

- Queen J, **Rajalakshmi G**, Komathi S, Bharathi D, Sithara N V, Mythili S. Strain improvement of bacteria isolated from rhizosphere soil and its effect in seed germination. *European Journal of Biotechnology and Bioscience*, 2016 4(12), 27-28
- Sithara NV, **Komathi S, Rajalakshmi G**, Queen J, Bharathi D. Phytochemical analysis of *Andrographis Paniculata* using different solvents. *European Journal of Biotechnology and Bioscience*, 2016; 4(8); 28-30.
- Bharathi D, **Rajalakshmi G, Komathi S**, Mythili S, Queen J and Sithara N. Isolation, Characterization and Production of Lipase Producing Bacterial Strains from Petrol Spilled Soil. *International Journal of Current Research*, 2016; 8(08); 36723-36726.
- Queen J, **Rajalakshmi G**, Komathi S. Screening of amylase producing microbes from rhizosphere soil and its potential application in baking bread. *European Journal of Biotechnology and Bioscience* 2017 5(5); 63-72
- Bharathi D, **G. Rajalakshmi**, S. Komathi. Optimization and production of lipase enzyme from bacterial strains isolated from petrol spilled soil. *Journal of King Saud University – Science*. 2019 Volume 31(4) 898-901
- Komathi S, Linet P Moses, **Rajalakshmi G**. Preliminary Phytochemical Analysis and antimicrobial properties of *Carica papaya* and *Zingiber officinale*. *International Research Journal of Engineering and Technology*, March 2020, Vol 7, issue 3, Pg – 290-297
- Seerangaraj Vasantharaj, Selvam Sathiyavimal, Palanisamy Senthilkumar, VN Kalpana, **Govindaraju Rajalakshmi**, Mishal Alsehli, Ashraf Elfakhany, Arivalagan Pugazhendhi. Enhanced photocatalytic degradation of water pollutants using bio-green synthesis of zinc oxide nanoparticles (ZnO NPs). *Journal of Environmental Chemical Engineering*. 2021 9(4); 105772
- Selvam Sathiyavimal, Seerangaraj Vasantharaj, Veerasamy Veeramani, Mythili Saravanan, **Govindaraju Rajalakshmi**, Thamaraiselvi Kaliannan, Fahad A. Al-Misned, Arivalagan Pugazhendhi. Green chemistry route of biosynthesized copper oxide nanoparticles using *Psidium guajava* leaf extract and their antibacterial activity and effective removal of industrial dyes, *Journal of Environmental Chemical Engineering*, 2021 9 (2), 105033
- Saundharya P, Jerine Joseph, G. Rajalakshmi, Mary Shamy. Formulation of Wound Healing Transdermal Patch from Tubers Extract of *Momordica cymbalarua* and its *In vitro* Evaluation. *Haya Saudi J. Life Sci*, 7(7):224-233
- Ashok Kumar S, Karthiga P, Rajalakshmi G, Gopikrishnan V, Radhakrishnan M., Abirami B. Manigandan K, Soyong K.. Exploitation of earthwormcast associated actinobacteria for plant growth promoting bacteria. *International Journal of Agricultural Technology* 2023 Vol. 19 (1): 1 – 8.

SEQUENCES SUBMITTED

10 Sequences submitted to NCBI – 16s rRNA gene, partial sequence

- GenBank: JX254657 – *Staphylococcus cohnii* HICAS01
- GenBank: JX254658 – *Bacillus pumilus* strain HICAS52
- GenBank: JX254659 – *Bacillus amyloliquefaciens* HICAS54
- GenBank: JX254660 – *Bacillus altitudinis* HICAS60
- GenBank: JX254661 – *Staphylococcus nepalensis* HICAS 63
- GenBank MH712493 - *Enterobacter hormaechei* strain BGSL2

- GenBank MH712494 - *Serratia marcescens* strain BPPR1
- GenBank MH712495 - *Enterobacter bugandensis* strain BGSL1
- GenBank MH712496 - *Serratia marcescens* strain BGSR1P
- GenBank MH712497 - *Enterobacter bugandensis* strain BGSR1W

REFRESHER COURSE ATTENDED

Attended 21 days staff refresher course on “**Recent Trends in Biology**” conducted by Madurai Kamaraj University from 6th November 2008 to 26th November 2008 and was awarded “A” Grade.

BOARD MEMBER / EXAMINERSHIP

- Serving as a Member in PG Board of Studies, Bharathiar University, Coimbatore from 2020 – 2023
- Served as a Member in Board of Studies in Biotechnology, Sri Ramakrishna College of Arts and Science, Coimbatore
- Served as a Member in UG Board of Studies - Biotechnology, Bharathiar University, Coimbatore from 2006 – 2009.
- Appointed as a Chairman for UG and PG Board of studies – Biotechnology, Hindusthan College of arts and Science, Coimbatore (June 2016 onwards).
- Examiner in Practical and Theory Examinations for both UG and PG in Bharathiar University, G.R.D. College of Arts and Science (Autonomous), R.V.S. College of Arts and Science (Autonomous), Kongunadu College of Arts and Science (Autonomous), Karpagam College of Arts and Science (Autonomous), K.S.R. College of Arts and Science (Autonomous), Sri Krishna College of Arts and Science (Autonomous)
- Question Paper Setter in Bharathidasan University, Tiruchirapalli, Thiruvalluvar University, Vellore, Vellachami Nadar College (Autonomous), Madurai, Kongu Nadu College of Arts and Science (Autonomous), R.V.S. College of Arts and Science (Autonomous), Sri Krishna College of Arts and Science (Autonomous), Coimbatore.