



# ANANYA RAVI

BIOTECHNOLOGY RESEARCH SPECIALIST

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## Highlights

- Pursued Masters Degree with DBT- funded ABC Scholarship.
- Secured second prize for the presentation of M.Sc. Research Work in the Sixth International Conference on Fermented Foods, Health status and Well-being 2013 in the poster session.
- Qualified Agricultural Scientist Recruitment Board (ASRB) - National Eligibility Test (NET) 2019.
- Presented a Research Paper in the oral session at TEQIP-II sponsored International Conference on Modern Progress in Biotechnology 2014.

## Proficiency Forte

### Technical Skills:

- Well versed with Microsoft Windows and Microsoft Office Applications.
- Adept at basic Internet Operations.
- Worked on Bioinformatics Tools - BIOEDIT, MEGA, PRINSEQ, PRIMER3, MG-RAST, MEGAN and SPSS, NCBI and RDP databases.

### Functional Skills:

- Manipulating and utilizing the hidden potentialities of microbes for human use
- Studying the genetic, chemical and physical attributes of cells, tissues and organisms as well as identifying practical uses of this knowledge.
- Analyzing large amounts of statistical and biological data.
- Performing the essential functions needed in the research and bioinformatics industries.
- Collecting, studying and testing samples such as food, cells, tissues, blood samples, bacteria cultures & living organisms.
- Interacting with computers, databases, software systems, and other common technological devices in a laboratory setting.
- Summarizing research findings, analyzing/evaluating data and results and perceiving patterns/structures.
- Using a variety of tools to accomplish the research work.

## Academic Credentials & Certifications

- M.Sc. (Agri) from University of Agricultural Sciences, Dharwad Agricultural College, Dharwad in 2012, secured 87.8%.
- B.Sc. - Hons. (Agriculture) from Kerala Agricultural, College of Agriculture, Vellayani in 2010, secured 83.8%.
- Class 12th (CBSE) from Indian High School, Ras Al Kjaimah, UAE in 2009, secured 80.6%.
- Class 10th (CBSE) from Indian High School, Ras Al Kjaimah, UAE in 2007, secured 89.6%.

## Executive Summary

Detail-oriented Biotechnology Research specialist with over 3 years of experience in Molecular Biology and Biotechnology. Currently working with Department of Immunology, National Institute for Research in Tuberculosis, Chennai as Junior Research. Adept at collecting accurate information comparing several types of research data and engaging in safe research activities. Specializes in medical research and corporate compliance work. Highly capable and motivated biotechnology professional with superior analytical and problem-solving skills. Possesses extensive knowledge of computational biology methods, database design, and medical informatics. Fully committed to performing groundbreaking research in an environment that fosters ingenuity and creativity. Understanding of universal laboratory safety procedures and data storage protocols.

Well versed on the intricacies of various plants and animal life forms at the molecular level. Abilities to interpret difficult scientific and mathematical issues from an abstract and creative perspective. Qualified Agricultural Scientist Recruitment Board (ASRB) - National Eligibility Test (NET) 2014. Exceptional computer skills especially with innovative research equipment. Worked with bioinformatics tools namely BIOEDIT, MEGA, PRINSEQ, PRIMER3, MG-RAST, MEGAN and SPSS, NCBI and RDP databases. Excellent interpersonal, communication and organisational skills.

## Personal Dossier

Date of Birth: 9th August 1990  
 Address: C/o. Ravi Baskar, L-01, 12th Street, Annanagar East, Chennai - 600102  
 Languages: English, Malayalam, Hindi, Tamil and Punjabi

## Work Experience

Since Sep'17

Department of Immunology, National Institute for Research in Tuberculosis, Chennai  
Junior Research

**Working on Project** - Studies on epigenome wide alterations in Alveolar Macrophages during Mycobacterium tuberculosis infections in guinea pig pulmonary Tuberculosis Model.

Jan' 15 - Aug'17

Marine Biotechnology division, National Institute of Ocean Technology, Chennai  
Junior Research Fellow

**Project Title** : Ocean Science and Technology for Islands  
**Description** : Worked under the supervision of Dr.Ganesh Kumar (Group Head) and Dr. A. Ravi Kumar (Team Leader- Deep Sea Microbiology) for a collaborative work 'Development of potential drugs from Oceans' wherein learned to process sediment samples and water samples collected during cruise in research vessels from varying ocean depths. Isolation of different microbes viz. bacteria, actinomycetes and fungi was done. Universal and species specific 16S, 18S and ITS (primers): Molecular identification of deep sea microbes.

- Optimised procedures for isolation of DNA from halotolerant bacterial and fungal species Two bacterial strains (Nesiotobacter and Streptomyces) were undertaken for Whole Genome sequencing with Scientists at SRMC, Porur and the data was submitted in the NCBI database (BioProject: PRJNA392861 and PRJNA388752).
- Isolated 23 marine fungi from deep sea sediment samples.
- Well versed in handling, culturing and storage of highly sporulating marine fungus.
- Performed testing of crude extracts obtained from different deep sea fungus against MTCC bacterial and fungal type strains.
- Following nucleotide sequence submissions were made in NCBI database under the accession numbers: KY654751.1, KY654745.1, KY654748.1, KY654752.1, KY654750.1, KY654709.1, KY654749.1, and KY654746.1.
- Assisted in separation and purification of crude extracts through column chromatography. Efficiently performed the purification and characterization of compounds isolated from marine microbes and its utilization in development of potential drugs.
- Was co-author in a book chapter 'Ecology of Deep Sea Microbes and Extremophiles' (In press).

## Academic Projects

### For Masters Degree

**Title** Metagenome analysis of an Indian Fermented food, curd (Project). Molecular techniques and other skills learnt during the period (2011-2013):

- DNA isolation (bacteria, plants, soil and curd).
- Quantification and qualitative estimation of nucleic acids.
- Polymerase Chain Reaction (PCR) – a) normal b)gradient c)colony d)nested.
- Neutral and SDS PAGE (PolyAcrylamide Gel Electrophoresis).
- DGGE (Denaturing Gradient Gel Electrophoresis).
- Cloning and transformation.
- Pyrosequencing using Ion Torrent semiconductor sequencing methodology- library construction and emulsion PCR.
- Basic microbial and biochemical assessment methods.
- Basic bioinformatics analysis

### For Bachelor Degree

- Experiential Training in plant tissue culture – Invitro growth of banana variety (Nendran), sub culturing, rooting & hardening.
- Microbial inoculants production – Preparation of growth media for the various beneficial microorganisms, preparation of commercially formulated Trichoderma and Pseudomonas.

## Other Accolades

- Participated in a two day workshop "Research methodology-au update 2016 conducted by Centre for Medical Genetics, Chennai.
- Organizing member for 'National Conference on Recent Trends in Biotechnology' at National Institute of Ocean Technology Chennai.
- Life member in 'The Society for Biotechnologists (India).
- Have assisted in documentation work related to NABL accreditation for Microbiology laboratory at NIOT, Chennai.

## Knowledge Purview

- **Agronomy:** Irrigation and Water Management / Weed Management / Cropping Patterns and Farming Systems / Sustainable Agriculture and Organic Farming
- **Horticulture:** Plantation Crops / Landscaping and Ornamental Horticulture / Vegetable Crops / Fruit Crops / Species and Medicinal Plants
- **Soil Science and Agricultural Chemistry:** Agricultural Biochemistry / Organic Farming and Soil Health / Fertilizers and Agro Chemicals / Soil Chemistry / Environmental Science
- **Plant Breeding and Genetics:** Morphology and Systematics of crop plants / Principles of Genetics and Cytogenetics / Principles of Plant Breeding / Principles of Seed Technology
- **Plant Pathology:** Principles of crop diseases management / Diseases of Field Crop and their management / Diseases of Horticultural Crops and their management
- **Agricultural Entomology:** Insects Morphology / Insect Ecology and Integrated Pest Management / Pest of crops and stored grains and their management.
- **Agricultural Extension:** Sociology and psychology as applied to agricultural extension / Entrepreneurship Development and Extension Management
- **Agricultural Economics:** Production Economics and Farm Management / Agricultural Management
- Agricultural Statistics
- Agricultural Meteorology
- Animal Husbandry
- Plant Physiology
- Agricultural Engineering
- Biotechnology