G. Anuhya Reddy

M.Sc. Molecular Biology

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Education

• M. Sc.-Molecular Biology (2021-2023): Department of Molecular biology, JSS Academy of Higher Education and Research., Mysuru, Karnataka.

Chief Guide: Dr. BM Kanthesh, Ph.D.

Associate Professor, Department of Molecular biology, JSS AHER.

Subjects covered: Fundamentals of biochemistry, Fundamentals of molecular Biology, Fundamentals of genetics, principles of statistics, Molecular techniques, Molecular cell signaling and cellular receptors, gene manipulation, Advances in Molecular biology, Immunology and Vaccine development, Tissue engineering and regenerative medicine, IPR bio ethics and biosafety, Cell and tissue culture, Cancer and stem cell biology, medicial genetics and rare diseases, concepts of radiobiology, sequence analysis and pharmacogenomics, Applications of genomics and proteomics, research design and methodology.

Techniques Learned: Conventional PCR, Real-time PCR, Extraction techniques of Viral/Bacterial/Mycobacterial/Fungal genome. Various methods of DNA/RNA Purification. Agarose Gel Electrophoresis, Immunofluorescence techniques and other molecular biology techniques.

Internship: At Pushpagiri Research Centre, Thiruvella, Kerala. "Observation and effect of Wound healing drugs in Laboratory Mice models.

Dissertation: A study on hospital acquired infections in department of nephrology, SVIMS University.

Bachelor of Science: (Medical Laboratory Technology (MLT), Anatomy, physiology, pharmacology, community medicine, transfusion medicine, Medical Microbiology, Medical Biochemistry, Pathology. Sri Venkateswara institute of Medical Sciences Tirupati. AP. India (2017-2020).

Research Experience

- Aug 2020- Nov 2021: Laboratory Technician; Department of Microbiology, SVIMS, Tirupati, A.P., India. Key role: Receiving microbiological samples, Media preparation, Culture processing, Identification Based on culture characteristics, ELISA testing for various agents includes- Dengue NS1, Chikungunya IgM, Leptospira IgM, Scrub typhus IgM etc.
- COVID-19 Duty: TRUENAT Testing, SOP preparation, Reports entry, Data management.

Workshops Attended

- 1. Participated **NATIONAL LEVEL** WORKSHOP "INDIAN SCIENCE CONGRESS ASSOCIATION" conducted from January 3rd to 7th, 2017.
- Participated 4 days On-Site Hands-on Workshop on "Computational Structure-based & Ligand Based Drug Design, and Quantum Mechanics Applications" Held on 17th to 20th May 2022, Conducted by JSS Higher education and research, Mysore, Karnataka.
- 3. 5th hands on training workshop on virus diagnostic methods conducted at VRDL state level virus diagnostic centre -SVIMS Tirupati.

Conference and CME.

- 1. Attended CME on "1st Andhra Pradesh state chapter conference of Indian academy of Tropical parasitology" by department of Microbiology, SVIMS University, on 19 & 20 December 2017. Awarded 4 Credit hours APMC/CME/303/2014.
- 2. Attended 9th international congress of society for ethnopharmacology, INDIA. (SFEC 2022, from 22nd to 24th April 2022).
- 3. Attended CME on "Emerging Trends & Prospects in Biotechnology-Cancer Guidance series-III" Organized by The Oxford Biotechnologists society, Department of Biotechnology, on 22nd July 2022.
- 4. Attended CME on "Translational research in Tissue engineering" conducted by Pushpagiri research Centre on 23rd and 24th September 2022.

Research Projects

- **As Research Technician:** Worked in Revised National tuberculosis Control programme, "Tuberculosis first line drug resistance surveillance using Conventional and Gene Xpert methods". Department of Microbiology, SVIMS, Tirupati.
- **As Technical Expert:** "Genetic diversity of *Mycobacterium tuberculosis* complex isolated from previously treated sputum smear positive patients with pulmonary tuberculosis", Department of Microbiology, SVIMS, Tirupati.
- As Research Technician: In the project "High prevalence and risk of pulmonary tuberculosis in Diabetic patients compared with non-diabetic controls in south Indiaa retrospective study". Department of Microbiology, SVIMS, Tirupati.

Techniques learned.

- **Microbiology:** Microscopy, isolation (in-vitro), identification, characterization of medically important pathogens and anti-microbial susceptibility testing, ELISA, Line immune assay, Immunofluorescence.
- **Mycobacteriology:** Extraction Mycobacterial DNA, Ziehl-Neelsen Stain, Auramine O Rhodamine Stains, Drug susceptibility testing, Gene Xpert. Spoligotyping, Mycobacterial Interspersed repeated Unit-Variable Number Tandem Repeat Typing (MIRU-VNTR).
- **Molecular Biology:** Automated and Conventional Extraction methods, Polymerase chain reactions, Real Time PCR, Quantitative PCR.
- **Virology:** Viral DNA or RNA extraction, Virus isolation, rtPCR, Viral neutralization, Antibody Avidity.
- Sanger Sequencing: Sequencing protocols like: Post PCR cleanup for sequencing, Cycle sequencing, Base calling, Sequence alignment, mapping, variant calling and data analysis.
- Animal Experiments: Animal handling, Animal Drug Inoculation and Animal Sacrifice protocols
- **Techniques known but not practicing**: Cell culture, proteomics through Western blot.
- **Bioinformatic tools:** Primer Designing, Multiple Sequence Alignment, Phylogenetic analysis, Briefly-Homology modeling and docking.
- **Software programs- Microsoft excel, OpenEPI, MEGA**: Learned for Data arrangement, analysis and Classic Statistical programs.

Trainings.

- Trained on Molecular Techniques, animal handling and animal inoculation methods from Pushpagiri Research Centre, Thiruvella, Kerala.
- Trained on Cancer Genomics from BIODEAVOUR Research Centre, Chennai, Tamil nadu.
- Trained on rapid test kit making process, BIODEAVOUR Research Centre, Chennai, Tamilnadu.

References.

Dr. Ram Rapuru. MD, FRCP

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Dr. Kanthesh M Basilingappa, Ph.D.

Associate Professor Division of Molecular Biology School of Life Sciences.

JSS AHER, Mysuru.

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Dr. B.V. Ramana, MD.

Associate Professor & HOD Department of Microbiology SVIMS-SPMC-(W)

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