

Maris Stella College (Autonomous), Vijayawada

Department of Biotechnology

Profile of Dr. Anila Rani. P



Name: Dr. Anila Rani. P

Educational Qualifications: B-Tech,Mtech,Phd

Designation: Dean R & D Sciences, HOD, Associate professor in biotechnology

Date of joining Maris Stella: 24.11.2023

Years of experience in Maris Stella: 2 Months

Mail ID :

Collage Email ID : dranilaranipbiotech@marisstella.ac.in

Area of Intrest : Bioprocess, Biotechnology,Nanotechnology, Bioinformatics

Contact Number : 9391392550

EXPERIENCE IN OTHER INSTITUTIONS

- Organization: Mallareddy Engineering College, Hyderabad, Andhra Pradesh, INDIA. Role: Assistant Professor in Biotechnology, Chemical Engineering August 2005 to November 2008.
- Organization: NNR Food Industry, Bangalore, Karnataka, INDIA. Role: Biochemical Analyst January 2009 to July 2009.
- Organization: RV College of Engineering, Bangalore, Karnataka, INDIA. Role: Assistant Professor in Biotechnology Engineering. August 2009 to November 2015.
- Organization: Wake Forest Baptist Medical Center, Winston Salem, NC, USA. Role: Research Associate (Surgery-Plastic & Reconstructive Department) June 2016 to October 2018.
- Organization: Acharya Nagarjuna University, Guntur, Andhra Pradesh, INDIA. Role: Assistant Professor in Biotechnology Department (Guest Faculty) October 2020 to January 2023.

ACADEMIC CONTRIBUTION

As an Asst Professor in Engineering College:

- Managed all aspects of curriculum development and implementation.
- Determine student capabilities and utilize effective teaching methods to educate students. Developed course materials, Research protocols for research and academic engineering programs.
- Established and managed various Research protocols, Engineering course laboratories. Contribution to Departmental/ Institutional Activities - Organized Workshops, Symposiums and Training programs at Inter University level.
- Acquired Funding Grants for 3 of my Research proposals submitted.

- Evaluate student performance levels and recommend augmentations in study habits to improve academic performance levels.
- Papers presentations in National and International conferences.

As a Senior Research Associate:

- Published three Research papers in National & International Journals.
- Executed several Clinical Research Projects in the area of Tissue Engineering, Regenerative medicine and Drug delivery systems using Nano Technology.
- Maintain and operate complex laboratory Equipment and systems like Dendrimers, HPLC, Lyophilization system & Lithography systems to carry out experiments.
- Experience in Regulatory affairs management.
- Prepare and demonstrate project experimental protocols to Scientists and Project teams.
- Plan, Set up and Conducting experiments and trials on clinical research projects.
- Recording, analysing and interpreting experimental results and prepare procedures, reports, reviews, summaries and demonstrate to Scientists.

As a Biochemical Analyst:

- Used variety of techniques to break down, create and investigate biological compounds.
- Evaluate, Record detailed notes of research process, methods & findings.
- Present bio-analytical data to Senior researchers for further clinical research.
- Raw Materials management – Plan & Procure basic raw materials required for analysis.

WORKSHOPS / FDPs / TRAINING PROGRAMMES ATTENDED

- Attended the Training program in “Tissue Culture and Genetic Transformation of Sorghum” conducted by National Research Centre for Sorghum, Hyderabad.
- Undergone intensive course in “Animal Tissue Culture, Stem cells and their applications” at Sri Raghavendhra Biotechnologies Pvt. Ltd, Bangalore, India.
- Hands on training session on “Upstream and Downstream Technology” held in Department of Biotechnology, RV College of Engineering, Bangalore.
- Completed Training program on “Animal Cell Culture” conducted by OCT THERAPIES Bangalore.
- Proficiency Course on “Industrial Process Automation Technologies” organized by Department of Instrumentation Technology R.V. College, Bangalore.
- Undertook Training Program on GENE CLONING held in R.V. College of Engg.
- Undergone training on Animal Biosafety Risk Assessment from American Association for Laboratory Animal Science.
- Undergone training on Aseptic Techniques for Rodent Survival Surgery from American Association for Laboratory Animal Science.
- Undergone training on AVMA Guidelines for the Euthanasia of Animals from American Association for Laboratory Animal Science.
- Undergone training on Concepts and Practices of Animal Biosafety: ABSL-2 and ABSL-3 from American Association for Laboratory Animal Science.

RESEARCH

- Synthesis and Characterization of Nano materials (Carbon Nanotubes, Nano plasmonic Structures, PolymerNanomaterial Composites)

- Improved Bacterial Destruction using Laser technique.
- Antibiotic efficacy using Photo thermal effect.
- Production of Penicillin Acylase using mutant Escherichia coli strain by Fermentation.
- Biomedical Instrumentation - Continuous Monitoring System for Stress Management Using Biosensors.
- Renewable, Sustainable green technology for Energy & Bio-fuels production. Regeneration of used Engine Oil into lubricating oil.
- Purification of Water by the removal of harmful metals.

Projects Done

- Design and development of Antibiotic coated Nano materials duped into Silicon using Polymerization process to study the Photo thermal Nano-Composite for Augmenting Antibiotic Efficacy.
- Study on improving Silicon Probe performance through layer by layer Nano material coatings. Calculate the Minimum Inhibitory Concentration of bacteria against Antibiotic of different concentrations.
- Study the Antibacterial Activity of the Photo thermal therapy using Nano Particles of different concentrations against bacteria with Laser.
- Design and develop Electrically Conductive Polymer Nanotubes with Anti-Bacterial Properties. Eradicating group A streptococcus bacteria and biofilms using functionalized multi-wall nanotubes Design and develop Laser induced Precision Heating for Improved Bacterial Destruction with Antibiotics.
- Manufacture of Vinyl chloride (B. Tech Academic Project)
- Study & diagnosis of DOWNS Syndrome using Chromosomal Analysis (M. Tech Academic Project)
- Protein estimation of Sorgam Plant.
- Animal Tissue Culture, Stem Cells and their applications.
- Design and Development of Ultrasonic - hot air combination test rig.

Projects Guided:

- Isolation of Chitinolytic Bacteria from Soil & construction of Genomic library.
- Biochemical, Genetics and Molecular studies in workers employed in petrol filling stations. Manufacture of Biodiesel using Algae.
- Fermentation of Sugars using Molasses.
- Production and scale up of Penicillin Acylase enzyme using Mutant E-coli.
- Molecular Characterization of multi drug resistance in enterobacteria using Amplified

Fragment Length Polymorphism.

- Studies on removal of Arsenic from waste water by using Tamarind Powder as adsorbents.
- Studies on removal of Lead from Drinking water by using Moringa Olifera.

Publications

1. Anila Rani Pullagura, Krishna Satya Alapati, "UV induced mutations for overexpression of penicillin G acylase by Escherichia coli strains" International Journal of Research and Analytical Reviews. Vol: 9, Issue-1 Jan 2022. Pp 346-352. Anila Rani Pullagura, Krishna Satya Alapati, "Isolation, Purification and enzyme kinetics of penicillin G acylase from UV mutated Escherichia coli ATCC 9637 strain" International Journal of Current Trends in Biotechnology and Pharmacy. February-2022.
2. Anila Rani P, GV Choudary, Nagashree N Rao, Rajeswari M, "Production of Penicillin Acylase using mutant Escherichia coli strain" International Journal of Bioengineering, Science and Technology, Vol 2, issue-4, pp122-127,2012.
3. Praveen Kumar Gupta, Rajeswari M, Anila Rani P, "Isothermal kinetic and Thermodynamic studies on Basic Dyes Adsorption using Rice Husk" International Journal of Atoms & Molecules, Vol 2, issue-6, pp139-148,2012.
4. Anila Rani P, Rajeswari M, Vidyashree, Vidya V Rao, "Impact of Dissolved Oxygen Concentration on key parameters and Production of Recombinant Proteins using Fermentation process" National Journal on Emerging Trends in Bioprocessing and Simulation, ppTP16,2013.
5. Anila Rani P, GV Choudary, Akshay kumar R, "Isolation, Screening and Comparison of Penicillin Acylase Producing E.Coli and Comparison with Standard Atcc Cultures" International Journal of Pharmacy and Integrated Life Sciences, Nov 2014; 2(12); 1-8
Anila Rani P, GV Choudary, "Characterization of Penicillin Acylase Enzyme Produced by mutant E-coli" International Journal of Fermentation Technology, pp123-124, 2014
6. Rajeswari M, Anila Rani P, Navya, V Sahana, "Regeneration of Used Engine Oil into Lubricating oil" Journal of Applied Biotechnology, pp166-167, 2014.

International and National Conference Participated/Presented:

1. Presented Paper in the International conference on "Photo thermal Nano-Composite for Augmenting Antibiotic Efficacy" held at Cancun, Mexico, on April 2017. Presented Paper in the International conference on "Laser Induced Precision Heating for Improved Bacterial Destruction with Gentamicin" held at Cancun, Mexico, on April 2017.
2. Presented Paper in National conference on "The Use of Fluorescent and Heat Generating Polymer Nano Particles as a Novel Treatment for S.aureus Skin Lesions" held at Wake Forest University, Winston Salem, NC, USA.
3. Participated in the Indo-Australian conference on "Biotechnology in Medicine" held at the J.N Tata Auditorium, Indian institute of science campus ,Bangalore 560012,from Feb 9-11,2004.
4. Participated in the National conference on "Regulatory Affairs, Clinical trials and Intellectual Property Rights" held on 20-21 June 2007 in Mallareddy Engineering College, Hyderabad,

India.

5. Presented the paper in “National conference on Go Green” held on 14th November 2009 at Department of Biotechnology, R.V. College of Engineering.
6. Participated in the All India seminar on “Sensors and Sensor Networks for Air, Water and Food Pollution Monitoring and Management “organized by the Institution of Engineers and Karnataka Environment Research Foundation on 28- 29 May 2010. Participated in National Symposium on "E-Waste Management and Recycling” organized by Karnataka State Pollution Control Board, held on 20th May 2010. Presented a paper on “Production of Penicillin Acylase using mutant E.Coli Strain” in the National conference on Emerging trends in Biotechnology and Annual Meeting of Society for Biotechnologists, India, September 24-26, 2011.
7. Presented Paper on “Rotacell Extraction of Pongamia Oil and its Conversion to Biodiesel” at ICER-2011, Surat.
8. Presented Paper on “Efficient Invitro Production of Multiple Plantlets in Bacopa monneri (L) Pennell” ICER-2011, Surat.
9. Participated in the seminar on “Exploring Information Source for Research & Development” held on 12th Oct 2012 by Visvesvaraya Technological University, India.
10. Presented a paper in National Conference on “Integrative Plant Biology and Agribiotechnology” held at Karnataka state higher education council, Bengaluru on 29th Feb 2012.
11. Participated in National Symposium on “Sustainability in Food and Agriculture Technology” on 27 April 2012 organized by R.V. College of Engineering.
12. Participated and Co-chaired a session in 7th International Congress of Environmental Research organized by R.V. College of engineering in collaboration with Journal of Environmental Research and Development, India from 26-28, Dec 2014.

Memberships:

Life Member

- Indian Society for Technical Education.
- Indian Society for Biotechnology.

Awards and Achievements:

- Established “Biomedical and Bioanalytical Instrumentation” Laboratory for Dept. of Biotechnology, RV College of Engg.
- Lead the RV College of Engg. Biotech Research Team in Submitting Presenting and Winning the funding Grants from University Grants Commission, Government of India for the Project “Continuous Monitoring System for Stress Management using Biosensors” Academic Excellence Award – University First in Material Technology in Annual Examinations 2001-02 from RVR & JC College of Engineering, India.
- Awarded “Young Environmentalist” in Paper Presentation for the paper titled “Biodegradable Plastics” during 7th International Congress of Environmental Research, ICER-14
- Awarded the best Poster Presentation for topic titled “Biochemical, Genetics & Molecular studies of workers in petrol filling stations” in the conference on “Emerging trends in Biotechnology”
- Best Faculty award from RVCE – 100% Pass percentage in ‘Bioprocess control’ Course work for 3 consecutive years.