

Maris Stella College (Autonomous), Vijayawada

Name of the Department : Biotechnology
Members of the Department: 1. Ms.Lasina
2. Ms.Raji
3. Dr.G. Mohana Sheela
Name of the HOD : Dr.G. Mohana Sheela
Name : **DR.G. MOHANA SHEELA**
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Contact number :91-7337227139
Date of Birth : 08/08/1986.
Gender (M/F/T) : FEMALE
Category Gen/SC/ST/OBC : OBC

6. Academic Qualifications (Undergraduate Onwards)

S.No	Degree	Year	Subjects	University/ Institute	% Of Marks
1.	B. Sc Microbiology	2005- 2008	Microbiology Biochemistry Food & Nutrition	Acharya Nagarjuna University, Guntur AP State	75%
2.	M.Sc Biotechnology	2008-2010	Biotechnology	Acharya Nagarjuna University, Guntur AP State	75%
3.	Ph. D Biotechnology	2013-2018	Biotechnology	Vignan University, AP State	70%

Work experience (in chronological order).

S.No	Positions Held	Name Of The Institute	From	To	Pay Scale
1	Senior Research Fellow (SRF) NIAB-DBT	NTR college of Veterinary Sciences, Gannavaram, VIJAYAWADA AP STATE	Aug 2012	March 2015 (2.7 years)	21000+20 % HRA

2	GUEST FACULTY	Department of Biotechnology, KRISHNA UNIVERSITY, MACHILIPATNAM, A.P. STATE	June 2018	December 2020 (2.6 years)	25000/-
3	Assistant Professor	Maris Stella College, Vijayawada.	Jan 2021	Till Date	25000/-

- PhD. Biotechnology (2013-2018). Thesis Title: “Study of pathogenic factors in Staphylococcus aureus from clinical cases in livestock and poultry.” The research work emphasized on the following objectives: 1. Evaluated the incidence of S. aureus infections in poultry and livestock. 2. Characterized pathogenic factors of S. aureus 3. Suggested prophylactic measures to alleviate the situation in allied agriculture.
- Worked as a SENIOR RESEARCH FELLOW (2012 March- 2015 March) in the NIAB-DBT research project entitled “Exploration of antibacterial, immunomodulatory and anti-inflammatory activity of certain polyphenolic compounds and role of NSAIDs on activity of antibiotics in Bubaline Mastitis” at Department of Veterinary Microbiology, NTR-College of Veterinary Sciences, Gannavaram.
- **NIAB-DBT Senior Research Fellow (SRF) Work summary**
 - Bubaline mammary epithelial cell line from the healthy udder of buffalo was developed for experimental studies.
 - The primary mammary epithelial cell lines were characterized by immuno-histochemistry for cytokeratin.
 - The mRNA expression levels of certain selected inflammatory and immune modulatory cytokines (IL-1, IL-8, IL-10, TNF- α IFN- α) in buMEC and invitro infection with different strains of major bacterial pathogens of mastitis viz. Staphylococcus aureus and E.coli by quantitative real time PCR. The mRNA from buMEC infected with S. aureus and E. coli were isolated at defined intervals after infection and cDNA was prepared. The cDNA was used in real time PCR assay to assess the expression levels of selected cytokines.
 - The immunomodulatory and anti inflammatory activities of the selected polyphenolic compounds (Quercetin, Gallic acid, Cinnamic acid) was assessed by comparing the mRNA expression levels of selected cytokines in normal, infected and polyphenoloic compounds treated-infected-mammary epithelial cell lines by Quantitative Real time PCR.

- The antibiotic activity of the selected polyphenolic compounds either singly or in cocktail or in combination of reduced doses of antibiotics in invitro antibiotic sensitivity test against different S. aureus and E.coli strains were assessed.
- M.Sc. dissertation on the thesis entitled “Development of a Bact-ELISA model for SERO monitoring in disease diagnosis”.

Professional Recognition/ Award/ Prize/ Certificate, Fellowship received by the applicant.

S. No	Name Of The Award	Awarding Agency	Year
1	PROF. V. V. RANADE YOUNG SCIENTIST AWARD,	“Indian society of veterinary pharmacology and toxicology and a national symposium on “Combating Antimicrobial Resistance” at Navsari Agricultural University, Hissar, Harayana,INDIA	December, 2017.
2	BEST POSTER AWARD	Indian society of veterinary pharmacology and toxicology and a national symposium on “Animal health and production: Challenges and Opportunities in Veterinary pharmacology and toxicology” at Navsari Agricultural University, Navsari, Gujarat, INDIA.	January, 2017.
3	BEST POSTER AWARD	Indian Society for Veterinary Pharmacology and Toxicology” at National Dairy Research Institute, Karnal, Harayana.	January 2016
4	JUNIOR SCIENTIST AWARD	KL University, Vaddeswaram, Guntur and Dept. of Biotechnology and Pharmacy, Acharya Nagarjuna University, Guntur	December 2015.

Publications (List of papers published in SCI Journals, in year wise descending order).

S. No	AUTHORS	TITLE	NAME OF JOURNAL	VOLUME	PAGE	YEAR
1	Prathyusha, A. M. V. N., Sheela, G. M., & Bramhachari, P. V. (2018).	Chemical characterization and antioxidant properties of exopolysaccharides from mangrove filamentous fungi Fusarium equiseti ANP2.	Biotechnology Reports (Elsevier)	19	00277	2018

2	Mohana Sheela G, Ramani Pushpa R N and Krupanidhi S	Molecular Detection of blaZ and mecA Genes and Study of Antibiotic Resistance Pattern in Clinical Isolates of Staphylococcus aureus from Bovine Mastitis in Coastal Andhra Pradesh.	Current Trends in Biotechnology and Pharmacy.	10 (4)	298-308	2016
3	Mohana Sheela G and Krupanidhi S	Prevalence, biochemical characterization and molecular detection of Staphylococcus aureus in different clinical cases of livestock and poultry in coastal Andhra Pradesh. Research	International Journal of Microbiology	VolumeT, Issue5	698-702	2015

Books/Reports/Chapters/General articles etc.

S. No	Title	Authors Name	Publisher	Year Of Publication
1	Perspectives for Novel Enzyme Discovery from Marine Environments through Genome Mining and Metagenomics. Encyclopedia of Marine Biotechnology, 4, 2423-2442.	Bramhachari, P. V., Sheela, G. M., & Satish, T. (2020).	DOI: Wileys: 10.1002/9781119143802.ch109	2020
2	Challenges and Triumphs in Genomics-based Microbial Agarase Enzyme Innovations and Applications from Marine Ecosystems. Encyclopedia of Marine Biotechnology, 4, 2021-2038.	Bramhachari, P. V., Sheela, G. M., & Prathyusha, A. M. V. N. (2020).	Wileys: https://doi.org/10.1002/9781119143802.ch89	
3	"Big Data Analytics and Radiomics to Discover Diagnostics and Therapeutics for Gastric Cancer." In Recent Advancements in Biomarkers and Early Detection of Gastrointestinal Cancers, pp. 213-219. Springer, Singapore, 2020.	Jagadish, Kummetha, B. Pratap Naidu, G. Mohana Sheela, Nageswara Rao Reddy Neelapu, and Pallaval Veera Bramhachari.2020	Springer Nature Biomedicine DOI: 10.1007/978-981-15-4431-6_12	2020
4	Insights on the Biotechnological applications of Marine Fungal Exopolysaccharides In Environmental Biotechnology Vol. 3 (pp. 221-232). Springer, Cham.	A.M.V.N.Prathyusha, G. Mohana Sheela, G.Triveni and P.V.Bramhachari	Springer Nature 10.1007/978-3-030-48973-1_8	2020

5	Marine Microbial Biosurfactants: Ecological and Environmental Applications. In Environmental Biotechnology Vol. 3 (pp. 221-232). Springer, Cham.	Deepika, K. V., Sheela, G. M., & Bramhachari, P. V.	Springer Nature 10.1007/978-3-030-48973-1_8	2020
6	Prognostic Molecular Markers for Gastrointestinal Cancer. In Recent Advancements in Biomarkers and Early Detection of Gastrointestinal Cancers (pp. 45-53). Springer, Singapore.	Jagadeesh, A., Sheela, G. M., Naidu, B. P., & Bramhachari, P. V. (2020).	https://link.springer.com/chapter/10.1007/978-981-15-4431-6_4	2020
7	Cell to Communication between Mammalian Host and Microbial Quorum Sensing orchestrates the complex relationships. In Implication of Quorum Sensing and biofilm formation in medicine food industry & agriculture	Prudhvi Lal Bhukya, G.Mohana Sheela, A.M.V.N.Prathyusha & Pallaval Veera Bramhachari	Springer Nature, Singapore Pte Ltd	2019
8	Significance of Quorum sensing and biofilm formation in Medicine and Veterinary sciences In Implication of Quorum Sensing and biofilm formation in medicine food industry & agriculture	Renuka Nawadkar, Prudhvilal Bhukya, G.Mohana Sheela, & Pallaval Veera Bramhachari	Springer Nature, Singapore Pte Ltd	2019
9	Strategies for disruption of biofilm formation ability and Quorum sensing networks in pathogenic aquaculture pathogen Vibrio harveyi In Implication of Quorum Sensing and biofilm formation in medicine food industry & agriculture	Pallaval Veera Bramhachari A.M.V.N. Prathyusha, G.Mohana Sheela & N.M.Yugandhar	Springer Nature, Singapore Pte Ltd	2019
10	Mechanism of Quorum-sensing and biofilm formation by oral pathogenic microbes in the dental plaques and control measures In Implication of Quorum Sensing and biofilm formation in medicine food industry & agriculture	SaqibHassan, G.Mohana Sheela & Pallaval Veera Bramhachari	Springer Nature, Singapore Pte Ltd	2019
11	Advanced immunotechnological methods for detection and diagnosis of viral infections: Current applications and future challenges In “DYNAMICS OF IMMUNE ACTIVATION IN INFECTIOUS VIRAL DISEASES	Pallaval Veera Bramhachari, G.Mohana Sheela, A.M.V.N.Prathyusha, M.Madhavi, K.Satish Kumar, Neelapu Nageswara Rao Reddy & Chanda Parulekar	Springer Nature, Singapore Pte Ltd	2019

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12	T cells in viral infections: The myriad flavours of antiviral immunity In "DYNAMICS OF IMMUNE ACTIVATION IN INFECTIOUS VIRAL DISEASES	Achanta Jagadeesh, AMVN Prathyusha, G.Mohana Sheela & P.Veera Bramha Chari	Springer Nature, Singapore Pte Ltd	2019
13	Significant role of Cellular activation in viral infections In "DYNAMICS OF IMMUNE ACTIVATION IN INFECTIOUS VIRAL DISEASES	Bojjibabu Chidipi1 Samuel Ignatious Bolleddu,Ganugula Mohana Sheela and Alavala Mattareddy	Springer Nature, Singapore Pte Ltd	2019
14	Current Perspectives on the Novel Structures and Antioxidant Properties of Mangrove Endophytic Fungal Exopolysaccharides." In Advances in Endophytic Fungal Research.	Prathyusha, A. M. V. N., Ganugula Mohana Sheela, Chanda V. Berde, and P. V. Bramhachari.	Springer Nature, Switzerland https://doi.org/10.1007/978-3-030-03589-1_11	2019 P No. 233- 242
15	"Secondary Metabolites from Marine Endophytic Fungi: Emphasis on Recent Advances in Natural Product Research." In Advances in Endophytic Fungal Research.	Bramhachari, P. V., S. Anju, Ganugula Mohana Sheela, T. Raja Komaraiah, Devanaboyina Venkataiah, and A. M. V. N. Prathyusha.	Springer Nature, Switzerland https://doi.org/10.1007/978-3-030-03589-1_11	2019 P No. 339- 350
16	Discovery of New Extremophilic Enzymes from Diverse Fungal Communities. In Recent Advancement in White Biotechnology Through Fungi Cham.	Berde, C. P., Berde, V. B., Sheela, G. M., & Veerabramhachari, P.	Springer Nature Switzerland AG 2019 https://doi.org/10.1007/978-3-030-10480-1	2019 P No. 505- 535
17	Understanding the Bacterial Biofilm Resistance to Antibiotics and Immune Evasion. In Implication of Quorum Sensing System in Biofilm Formation and Virulence	Challa, S., Sheela, G. M., & Neelapu, N. R. R.	Springer Nature Singapore Pte Ltd. 2018 https://doi.org/10.1007/978-981-13-2429-1	2018 P No 369- 381
18	"Quorum Sensing Regulated Swarming Motility and Migratory Behavior in Bacteria." In Implication of Quorum Sensing System in Biofilm Formation and Virulence	Bramhachari, Pallaval Veera, N. M. Yugandhar, A. M. V. N. Prathyusha, G. Mohana Sheela, Jalaja Naravula, and Nagam Venkateswarlu.	Springer Nature, Singapore Pte Ltd https://doi.org/10.1007/978-981-13-2429-1	2018 P No 49-66 2018
19				

	"Vibrio fischeri Symbiotically Synchronizes Bioluminescence in Marine Animals via Quorum Sensing Mechanism." In Implication of Quorum Sensing System in Biofilm Formation and Virulence	Bramhachari, Pallaval Veera, and G. Mohana Sheela.	Springer Nature, Singapore Pte Ltd https://doi.org/10.1007/978-981-13-2429-1	207-219 2018
20	"Intra and Inter-Species Communication in Microbes: Living with Complex and Sociable Neighbors." In Implication of Quorum Sensing System in Biofilm Formation and Virulence,	Sheela, G. Mohana, A. M. V. N. Prathyusha, Nageswara Rao Reddy Neelapu, and Pallaval Veera Bramhachari.	Springer Nature, Singapore Pte Ltd https://doi.org/10.1007/978-981-13-2429-1	2018
21	An overview. In Environmental Insights on the applications of Marine Fungal Exopolysaccharides: Biotechnology	A.M.V.N.Prathyusha, G. Mohana Sheela and 2P.V.Bramhachari	Springer publishing http://www.springer.com/series/11480	2018
22	Microbial biosurfactants- A current perspective on environmental application In Environmental Biotechnology	K.V.Deepika, G.Mohana Sheela and P.V.Bramhachari.	Springer publishing http://www.springer.com/series/11480	2018

Technical Skills

Immunology: ELISA, Immuno-Electrophoresis (Immune Assays).

Molecular Biology: Genomic DNA isolation and purification, RNA Isolation, PCR, Chromatography, Protein Estimation Methods, Agarose Gel Electrophoresis, cell lines maintenance, Testing antibacterial activity of antibiotics, plant tissue culture and animal tissue culture.

Microbial Techniques: Microscopy, Sterilization methods, Gram's staining, Media preparations, Inoculation, Streaking and Plating, Microbial culture maintenance, fermentation. Bioinformatics: Designing Primers, Protein Docking.

Conferences participated

1. G. Mohana Sheela, Vamsi Krishna B, K Ravi, Suresh N Nair, Mohammad I and Krupanidhi S.K. (2017) "In Silico and invitro antibiofilm activity of selected phytochemicals on the biofilm producing S. aureus." on the annual conference of "Indian society of veterinary pharmacology and toxicology and a national symposium on "Animal health and production: Challenges and Opportunities in Veterinary pharmacology and toxicology, held at Navsari Agricultural University, Navsari, Gujarat, INDIA. (Best poster award).

2. G. Mohana Sheela, Suresh N Nair and Krupanidhi S.K. (2017) “Effect of chrysene with vancomycin in vancomycin resistant *S. aureus* isolates from clinical cases of poultry” on the annual conference of “Indian society of veterinary pharmacology and toxicology and a national symposium on “Combating antimicrobial resistance” held at Lala Lajpat Rai University of Veterinary Sciences, Hissar, Haryana, INDIA. (Prof V.V. Ranade Young Scientist Award).
3. G. Mohana Sheela, Suresh N Nair and Krupanidhi S.K. (2017) “Pathogenic factors in *Staphylococcus aureus* isolated from broiler chickens with gangrenous dermatitis” on the annual conference of “Indian society of veterinary pharmacology and toxicology and a national symposium on “Combating antimicrobial resistance” held at Lala Lajpat Rai university of Veterinary Sciences, Hissar, Haryana, INDIA.
4. International conference on “15th annual convention of Indian Society for Veterinary Pharmacology and Toxicology” at National Dairy Research Institute, Karnal, Harayana January, 2016.
5. First A.P. Science Congress, 2015 “Science for Smart Technologies” at Sri Venkateshwara University, Tirupati, January, 2016.
6. International Conference on “Emerging trends in synthesis of nano particles in Agri Biotechnology- Research Commercialization” organized at Loyola Academy Degree and P.G. College, Alwal, Secunderabad, February, 2016.
7. International conference on “Recent advances in biosciences and applications of engineering in production of biopharmaceuticals and 9th annual convention of association of biotechnology and pharmacy.” Organized jointly by Dept of Biotechnology, KL University, Vaddeswaram, Guntur and Dept. of Biotechnology and Pharmacy, Acharya Nagarjuna University, Guntur, December 2015.
8. National Symposium on “Challenges and advances in disease diagnosis of Livestock, Poultry and Fish, Redefining the role of veterinary pathologists.” At NTR College of Veterinary Sciences, Gannavaram, December, 2015.
9. Workshop on “Biotech-Industry Awareness Campaign for B. TECH Students.” at Vignan University, Vadlamudi, Guntur dist, October 2014.
10. National Seminar on “Biotech-Forays in to Environment (Biosastra 2K10)”, organized by PG Department of Life Sciences, Andhra Loyola College, Vijayawada, February 2010.
11. National Seminar on “Agricultural Biotechnology” organized by Department of biotechnology, Jagarlamudi Kuppaswamy Choudhary college, Guntur, February 2009.

12. UGC sponsored National Seminar on “Emerging Trends in Biosciences”, organized by Montessori Mahila Kalasala, Vijayawada, February 2009.

13. National Seminar on “Role of Biotechnology in Alleviating Environmental Pollution”, organized by Montessori Mahila Kalasala, Vijayawada, February 2009.

Webinars Attended

S.No	Date		Theme	University	Place
1.	23/01/2021	-	Post Covid-19 economic reformation	Shivaji College	Hingoli
2.	21/01/2021	22/01/2021	Environmental Protection and Global Warming	Govt.College Mehgaon	Distt. - Bhind Madhya Pradesh
3.	07/01/2021	07/01/2021	“Mental Health Issues and Psychological Factors in Athletes”	Govt. Arts and Commerce College, Bhopal	Madhya Pradesh
4.	02/12/2020	02/12/2020	The Art of Assertiveness		
5.	24/07/2020	24/07/2020	Effective ways of writing research article	SRM University	Andhra Pradesh
6.	25/07/2020	25/07/2020	“Advances in Translational Cancer Research and Therapeutics	Krishna University Machilipatnam	Andhra Pradesh
7.	26/08/2020	26/08/2020	Legal framework for protection of plant varieties in India : Challenges and Oppurtunities	ICRISAT and EBTC	Anand
8.	15/02/2020	19/02/2020	National Education Policy 2020–Review & Research	Shree Hanuman Vyayam Prasarak Mandal,	Amravati, Maharashtra.