

Dr. RASHMI. D

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CURRENT POSITION

August 2022 - Present

Assistant Professor (Research) DBT-BUILDER project

JSS Academy of Higher Education & Research

Mysore

Presently working on identification of biomarkers related to immune responses using Flow cytometer. Metabolomics, Lipidomics & Proteomics studies for the analysis of blood biomarkers using LC-HRMS. Developing a sustainable & reliable method for metabolite profile for identifying the targeted molecule produced during the normal and altered metabolic pathways. Processing and profiling of Serum & Plasma for the quantification of the biomarker.

PREVIOUS POSITION

Assistant Professor

June 2018 – August 2022

Padmashree Institute of Management and Sciences

Bangalore

Content Analyst

2011 - 2012

Griha Software Technologies Private Limited,

Bangalore

Microbiologist Quality Control Department

2010

Microlabs Limited

Bangalore

EDUCATION

PhD, Microbiology

2012 - 2017

Department of Microbiology & Biotechnology,

Bangalore

Jnana Bharathi campus, Bangalore University

MSc, Microbiology

2007 - 2009

Department of Studies in Microbiology, University of Mysore

Mysore

RESEARCH EXPERIENCE

Department of Microbiology & Biotechnology, Bangalore University

PhD; Advisor: Dr. T Sharmila,

2012 - 2017

Title of the project: Isolation and Characterisation of Bacteriocin from Food Borne Bacteria.

Isolated the bacteriocin N-tetradecanoyl-L-homoserine lactone (N-AHL) from a probiotic strain *Acinetobacter variabilis* screened from donkey milk. The work concentrated on analysis of protein with

direct cell interaction by Surface Plasma Resonance (SPR) BIAcore technique. The work had an approach on establishing the stable conjugates of gold nanoparticles with the bacteriocin which had a resistant against the change in pH that can survive in the biological systems.

University of Mysore

2009, Mysore

MSc dissertation; Advisor: Dr. N.M. Sachindra, Scientist,

MFPT, CFTRI –Central Food Technological Research Institute

Title of the project: Isolation and Characterization of Proteolytic Bacteria from Poultry Intestine.

TRAINING ATTENDED

1. Attended 26th Indo-US Flow cytometry workshops-2025 on “Flow cytometry and its applications in Biological sciences and Clinical Diagnostics” in Clinical Advance training jointly organized by Trust for Education and Training in Cytometry at Sree Chitra Tirunal Institute for Medical Science and Technology, Thiruvananthapuram, Kerala on 11th – 13th February 2025.

RESOURCE PERSON

1. Resource person for the workshop “Anticancer agents: Screening to Signaling Mechanisms” supported by DST-PURSE, Government of India at Department of Biochemistry, JSS Medical College, JSS AHER, Mysore on 20th- 24th November 2023.

TEACHING EXPERIENCE

Subjects teaching: Food Microbiology, Molecular biology, Microbial genetics & biotechnology, Environmental Microbiology, Medical Microbiology & Immunology.

Guided M.Sc students for the project during the curriculum; **Bangalore 2022**

Project 1: Devika HR, Harsha KM, Kalpana R, Kavyashri G Shet

Title of the study: Production of non-alcoholic beverage

Project 2: Boyapati Renuka, Bharath Kumar L, Chandhana DC, Chethan Gowda HN

Title of the study: Study on the effect of stress parameters on the production of L-Asparaginase enzyme

Guided M.Sc students for the project during the curriculum; Bangalore 2021

Project 1: Akhila Kurian, Deepika Singh and Vidhisha

Title of the study: A survey on the theoretical and practical approach of using Biofertilizers and Biopesticides.

Project 2: Kolichala Janhavi, Loitongbam Umakanta Singh, Nandini C

Title of the study: Antimicrobial activity of florets of *Musa acuminata* on *Escherichia coli*, *Pseudomonas* and *Bacillus*.

Guided M.Sc students for the project during the curriculum; Bangalore 2020

Kavyashree. RS, Kareem Pasha, Metali Jana and Pratibha Chauhan

Title of the study: Study on antimicrobial assay of solvent and water extractions of *Bacopa monnieri* and *Moringa oleifera*.

Guided M.Sc students for the project during the curriculum; Bangalore 2019

Project 1: Athira.K, Lahari Basavaraju and Sejal Kumar

Title of the study: Studies on proteolytic enzyme activity from probiotic non lactic acid bacteria.

Project 2: Anooj O, Roopika K and Sabitha Rani

Title of the study: Studies on screening of paint degrading microorganisms isolated from wall scrapings.

Guided M.Sc students for the project during the curriculum; Bangalore 2017

Helen.D, Komal and Nazia Imam (Bangalore University)

Title of the study: Combinatorial study of bacteriocin with essential oils on the effect of pH and their antagonistic activity against food borne pathogens.

Managerial Experience

Member - Internal Quality Assurance Cell (IQAC)

April 2019

Padmashree Institute of Management & Sciences

PUBLICATIONS

1. **Rashmi D.**, Anusha A., Vivek Kumar, Pooja Gaikwad, Sindhu and Yamuna G. Analysis Of Electro-Potential In Microbial Fuel Cells And Evaluation Of Sewage Micro-Organisms For The Production Of Alcohol. **Asian Journal of Microbiology Biotechnology Environmental Science**. EM International. Vol. 27, No. (1-2) : 2025 : 111-118. DOI No.: <http://doi.org/10.53550/AJMBES.2025.v27i01-02.017>
2. Subbalakshmi, Devika, H.R., Harsha, K.M., Kalpana, R., Shet, K.G. and **Rashmi, D.** (2024). Development of a Fermented Probiotic Beverage Inoculated with Kefir Grain. **Asian Journal of Dairy and Food Research**. March, 2024. DOI: 10.18805/ajdfr.DR-2155.
3. **Rashmi D et al.** 2021, Antimicrobial Activity of Florets of *Musa acuminata* Against *Escherichia coli*, *Pseudomonas* And *Bacillus*. **International Journal of Recent Scientific Research**. 12(10), pp. 43416-43419. October, 2021. **Impact Factor:** 7.383
DOI: <http://dx.doi.org/10.24327/ijrsr.2021.1210.6279>.
4. **Rashmi. D.**, Athira. K, Lahari Basavaraju, Sejal Kumar, Study on proteolytic enzyme from probiotic non lactic acid bacteria isolated from sheep milk. **International Journal of Public Mental and Neurosciences** Volume 5, Issue 2, 2021. **Impact factor:** 1.629.
5. G., Yamuna and O., Anooj and K., Roopika and Rani, Sabitha and **D, Rashmi**, Studies on Screening of Paint Degrading Microorganisms Isolated from Wall Scrapings. **Asian Journal of Applied Science and Technology (AJAST)** Volume 5, Issue 3, Pages 126-137, July-September 2021, **Impact factor:** 5.134
6. **Rashmi. D.**, Suguna. S R., Tessy Anu Tomas., Helen.D., Komal., Nazia Imam, Sharmila.T. Combinatorial Study of Bacteriocin from *Acinetobacter variabilis* with Essential Oils against Food Borne Pathogens. **Journal of Emerging Technologies and Innovative Research**, Vol 5 (6): 1-9, June- 2018. **Impact factor:** 5.87
7. **Rashmi, D.**, Sharmila, T., Patil, S., Apine, O., Sistla, S., & Jadhav, J. (2018). (D et al., 2018). Isolation Detection and Characterization of Syringolin A produced from the Probiotic Strain *Bacillus cereus* Isolated from Donkey Milk. **Journal of Analytical Chromatography and Spectroscopy**, 1(2). EnPress Publisher. **Impact factor:** 1.665
8. **Rashmi, D.**, Srinivas Sistla, and Sharmila, T. Study of antagonistic properties of bacteria from cow's milk by real-time surface plasma resonance biosensor (BIAcore). **Journal of Pharmaceutical, Chemical and Biological Sciences**, 2018; 5 (4): 365-370. **Impact factor:** 5.923

9. **Rashmi, D.**, Srinivas Sistla, and Sharmila, T. Study of antagonistic properties of bacteria from pulses by real-time surface plasma resonance biosensor (Biacore). **Asian Journal of Pharmaceutical Science and Technology**, 2018; 1; 10-15. **Impact factor:** 2.43
10. **Rashmi, D.** and Sharmila, T. Probiotic non lactic acid bacteria: study of bacteriocin for the antagonistic activity. **International Journal of Advance Research**, 2017; 5 (4): 1427-1433. **Impact factor:** 7.08

CONFERENCE PRESENTATION

1. **Rashmi D**, Prerana Bhat, Durgesh Bidye, Deepashree VS, Yashwanth, Gurubasavaraj V Pujar, Rajesh Kumar T **Qualitative and quantitative analysis of bioactive molecules in postbiotic prepared from Kodo millet fermented by *Lactobacillus casei* using LC-HRMS** presented oral presentation at Research Scholar conference in Health sciences and Life sciences at JSS Academy of Higher Education & Research on 27-28 February, 2025.
2. **Rashmi D**, Sharmila.T, C. Rajendra Singh **Bioassay Of Goldnanoparticles In Combination With Bacteriocin (N-AHL) for the Stability Study at an Elevated pH** presented oral presentation at International Microbiology Conference MICROCOSM 1.0 “Innovating microbial solutions towards a sustainable future” organized by Department of Microbiology, JSS Academy of Higher Education & Research on 15-16 November, 2024.
3. **Rashmi D**, Subbalakshmi, Harsha K M, Kalpana R, Prerana Bhat **A Comparative Study On Analysis Of Biological Active Molecules From Fermented Fruit Extract Through LC-HRMS & GCMS** presented oral presentation at DST-SERB sponsored International Conference on One Health: Biotechnology as a Catalyst for Sustainable Development (HEAL BioTec-2023) organized by Department of Biotechnology & Bioinformatics, JSS Academy of Higher Education & Research on 21-23 September, 2023
4. **Rashmi.D**, Yamuna.G, Anusha.A, Vivek kumar, Pooja Gaikwad, Sindhu **Analysis Of Electro-Potential In Microbial Fuel Cells And Evaluation Of Sewage Micro-Organisms For The Production Of Alcohol** presented at offline poster presentation for 62nd Annual International Conference of the Association of Microbiologists (AMI) organized by Department of studies in Microbiology, Mysore University & JSS Academy of Higher Education & Research on 21-23 September, 2022.
5. **Rashmi. D**, Anooj, Roopika K, Sabitha **Studies On Screening Of Paint Degrading Microorganisms Isolated From Wall Scrapings** presented at two day CSIR sponsored National

Conference on “Recent Advances in Biotechnology” organized by Department of Biotechnology, The Oxford College of Science on 11-12 October, 2019.

6. **Rashmi. D**, Athira K, Lahari Basavaraju, Sejal Kumar **Study On Proteolytic Enzyme From Probiotic Non Lactic Acid Bacteria** presented at two day UGC SAP-II supported National Conference on “Phytochemicals and Microbial Bioactive Compounds – Role in Agriculture and Human Welfare” organized by Department of Microbiology and Biotechnology, JhanaBharathi campus, Bangalore University on 3-4 October, 2019.
7. **Rashmi. D**, Sharmila.T, C. Rajendra Singh **Combitorial Studies Of Goldnanoparticles With Bacteriocin (N-AHL) At An Elevated pH** presented at UGC sponsored two day National Seminar on “Sustainable Environment Through Biological Science and Technology” organized by Department of Microbiology, Davangere University, Davangere on 07-08 February, 2019.
8. **Rashmi. D**, Suguna. S R, Tessy Anu Tomas, Sharmila, T. **Combitorial Study Of Bacteriocin From *Acinetobacter Variabilis* With Essential Oils Against Food Borne Pathogens** presented at International conference on recent trends in Zoology, Biodiversity, Genetics and Environmental sciences organized by Department of Zoology, Bangalore University and IMRF (International Multidisciplinary Research Foundation) on 04-05 December, 2018.
9. Athira K, Lahari Basavaraju, Sejal Kumar and **Rashmi, D**. 2018. **Study of proteolytic enzyme activity from Non-Lactic acid bacteria** poster presented at International conference on recent trends in Zoology, Biodiversity, Genetics and Environmental sciences organized by Department of Zoology, Bangalore University and IMRF (International Multidisciplinary Research Foundation) on 04-05 December, 2018.
10. **Rashmi, D**. and Sharmila, T. 2016. **Study of antagonistic properties of food borne bacteria by real-time surface plasma resonance biosensor (BIAcore)** presented at the “9th National Women’s Science Congress” organized by Swadishi Vignana Andolana Karnataka, Bangalore.
11. **Rashmi, D**. and Sharmila, T. 2015. **Isolation of bacteriocin producing bacteria from food sources** presented at 11th Kannada Vijnana Sammelana Karnataka Science Congress organized by Swadeshi Vijnana Andolona on 13-15th September, 2015.
12. **Rashmi, D**. and Sharmila, T. 2015. **Characterisation of antagonistic property of food borne bacteria** presented at UGC Sponsored National Symposium on “Microbe and Human Welfare” held at JSS college of Arts Commerce and Science, Mysore on 23- 24th March, 2015.
13. **Rashmi, D**. and Sharmila, T. 2014. **Isolation and characterisation of bacteriocins from food borne bacteria** presented at National Conference on Biological Advances and it’s Relevance to the Environment (BARE) at Government Science College, Bangalore.

SEMINAR AND WORKSHOPS

1. Participated in 4-day **“International webinar on Recent Trends and Challenges in NeuroImmunology”** from August 10-13, 2020 organized by Department of Biochemistry, Karnatak University, Dharwad.
2. Participated in the 6-day International **“Faculty Development Programme on Recent Advances in Next-Generation Sequencing (NGS)”** from 27th July - 2nd August 2020.
3. Participated in the 3-day International Online **“Faculty Development Programme on 21st Century Teaching Skills”** from July 27- 29, 2020 organized by Department of Home Science, Unity Women’s College, Kerala.
4. Participated in **“International webinar on Public Health Epidemiology -Strategies for Health and Nutrition Security”** on July 21st 2020 organized by Department of Human Development and Family Studies, CSC&RI, TNAU Madurai.
5. Participated in the 3-day International Online **“Faculty Development Programme on Bioinformatics and Protein Characterisation”** Department of Life Sciences, Padmashree Institute of Management & Sciences, Bangalore on July 6-10, 2020.
6. Participated in the online **“International webinar on Predictive Microbiology and Food Safety”** organized by Department of Basic and Applied Sciences, NIFTEM, Haryana on 27th June, 2020.
7. Participated in **“National webinar on Food Adulteration and Labelling”** organized by BiSEP, Research cell, Department of Food Processing, Department of Food and Nutrition, Padmashree Institute of Management and Sciences, Bangalore and Network of Professionals of Food and Nutrition on 11th June, 2020.
8. Participated in the online **“International Conference on Corona (COVID-19/SARS-COV2) Viral Genomics”** jointly organized by Bengaluru Genomics Centre (BGC) and Sarvasumana Association from June 7th-10th, 2020.
9. Attended **“Faculty Development Programme on Strengthening Quality Research in Higher Education”** organized by Department of Life Sciences and BiSEP, Padmashree Institute of Management & Sciences, Bangalore on July 19-24, 2019.
10. Attended **“Faculty Development Programme on Clinical Research and Data Management”** organized by Department of Biotechnology and BiSEP, PES University, Bangalore on July 01-05, 2019.
11. Resource person for one day workshop on **“Evergreen Options for a Blooming Career”** in

association with Biodhrona organized by Padmashree Institute of Management and Sciences, Bengaluru on 15th June, 2019.

12. Attended 3- day National workshop on “**Skills & strategies for a Successful Research Career**” organized by Padmashree Institute of Management and Sciences, Bengaluru on 15 – 17 November 2018.
13. Attended one-day National seminar on “**Science Vocational Education: Perspectives of Industry and Academia**” organized by Padmashree Institute of Management and Sciences, Bengaluru on 22nd July, 2018.
14. Attended two-day National Seminar on “**Research made easy Tips, Tools and Technologies**” organized by University Library, Bangalore University, Bengaluru on 12th -13th January, 2017.
15. Attended one-day International conference on “**Science and Technology for Management of Emerging Environmental Issues**” at Jnana jyothi auditorium, Central college campus, Bangalore University, Bengaluru on 7th January, 2017.
16. Completed a month “**Refresher course in JIVAS**” [Jain Institution of Vocational and Advanced Studies] Bangalore, on “**Techniques and Instrumentation in Biotechnology**”.
17. Completion of certification course on “**Plant Tissue Culture**”, an UGC sponsored career oriented course (Add-on course) under University of Mysore, Mysore.
18. Participated in the “**National conference on Biotechnology and Clinical research in India**” held and organized by Indian Institute of Science, Bangalore.
19. Participated in the poster presentation competition titled “**DNA fingerprinting**” conducted as a part of “**Biovision-2005**” organized by Department of Microbiology, S.B.R.R.Mahajana first grade college, Mysore.
20. Participated in the seminar “**Trends in DNA technology**” organized by S.B.R.R.Mahajana first grade college, Mysore.
21. Participated in a debate and essay competition “**Microorganisms- pros and cons**” organized by JSS Women’s college, Mysore.

MEMBER FOR PROFESSIONAL SOCIETIES

- **Member for Society of Spectroscopy (SAS)** from 2025 with the membership number: 638.
- **Life Member for Association of Microbiologists of India (AMI)** from 2014 till present with the Life membership number : 3916-2014.

REFERENCES

Dr. Prashant M Vishwanath MBBS, MD., Ph.D Professor and Dean Research, JSS Academy of Higher Education & Research, Mysore-570015 +91-9740400007 prashantv@jssuni.edu.in	Dr.Srinivas Sistla Director of the research infrastructure, University of Arkansas Fayetteville USA ssistla@uark.edu	Dr. S. Satish M.Sc., Ph.D. Professor & Chairman Department of Studies in Microbiology University of Mysore, Manasagangotri Mysore-570 006. +91-9448323129 satish.micro@gmail.com
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