

MNR FOUNDATION FOR RESEARCH AND INNOVATION

MNR Medical College & Hospital, Sangareddy, Telangana

FACULTY PROFILE

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30

SCI Publications

4

Granted Patents

4

Filed Patents

2

Funded Projects

CONTACT INFORMATION

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RESEARCH INTERESTS & EXPERTISE

- Genomic surveillance of antimicrobial resistance (AMR) in pathogenic bacteria
- Clinical metagenomics and metagenome-assembled genomes (MAGs) in infectious disease diagnostics
- Microbial fermentation and process development
- Co-culture systems for the production of secondary metabolites
- Microbial diversity, taxonomy, and systematics
- Phototrophic bacteria and carotenoid biotechnology
- Next-generation probiotics and gut microbiome therapeutics
- Peptide-based biosensor development and microfluidic diagnostics

FUNDED RESEARCH PROJECTS

Nano-Material Microfluidic Device & MAGs for Neonatal Sepsis

Funder: ICMR | Budget: ₹79 Lakhs | Duration: 2025–2029 | Role: Principal Investigator

This project proposes a microfluidic device that isolates bacterial strains directly from patient blood and performs rapid identification and AMR profiling using metagenome-assembled genomes (MAGs), enabling timely, pathogen-directed therapy for neonatal sepsis — a life-threatening systemic infection with disproportionate impact on premature infants.

Synbiotic Strips Based on Akkermansia muciniphila

Funder: NCBS | **Budget:** ₹10 Lakhs | **Duration:** 2026–2028 | **Role:** Principal Investigator

This project develops novel synbiotic oral strip formulations combining *Akkermansia muciniphila* — a next-generation probiotic — with a curated prebiotic substrate, optimizing conditions for bacterial survival, colonization, and gut activity for outcomes in obesity, type 2 diabetes, inflammatory bowel diseases, and immune function.

PATENTS

Granted Patents (4)

#	Title	Patent No.	Year
1	Production and extraction of neurosporene from <i>Rhodobacter viridis</i> JA737 (phototrophic bacterium)	306342	2020
2	Isolation and purification of Lycopene from <i>Rhodospirillum sulfurexigens</i> JA143 and <i>R. oryzae</i> JA318	302668	2019
3	Production of neurosporene from marine bacterium <i>Rhodovulum</i> sp. JA756 using marine water	306335	2020
4	Chitosan-based multifunctional liquid biofertilizers and methods of preparation thereof	408304	2023

Filed Patents (3)

#	Title	Patent No.	Year
1	Development of Nano Material- Based Microfluidic Device and Metagenome Assembled Genomes Mags for Rapid Diagnosis of Neonatal Sepsis.	202641064090	2026
2	Isolated Mtb-Zp-Nt and Mtb-Zp-Ct Peptides and In-Vitro Serological Analytical Methods Using The Same	202641013190	2026
3	Culture medium and methods for production of secondary metabolites by probiotic bacterium <i>Zooshikella marina</i> JC333T	202141037103	2021
4	Phototrophic Purple Bacteria as dietary supplements and medicaments for reducing Total blood cholesterol, Triglycerides, LDL Cholesterol	4276/CHE/2013	2013

AWARDS, FELLOWSHIPS & PROFESSIONAL RECOGNITION

#	Award / Fellowship	Awarding Body	Year
1	CSIR – Senior Research Fellowship	CSIR	2011
2	ASRB NET (Agriculture Microbiology / Microbiology)	ICAR	2015
3	DST-SERB National Post-Doctoral Fellowship	DST-SERB	2017
4	CSIR Pool Scientist	CSIR	2019
5	ICMR Research Associate (RA)	ICMR	2019
6	Yellapragada Subbarao Gold Medal Award – Best Patent with Social Relevance in Life Sciences	BioNest, University of Hyderabad	2020
7	MNR Best Researcher Award 2025	MNR Education Trust	2025

LIST OF PUBLICATIONS (30)

30. Vadankula, Govinda Raju, Arshad Rizvi, Haider Ali, Rakhi Khunjamayum, **Ramprasad E.V.V.**, Vijay Nema, Debananda Singh Ningthoujam, Katragadda Suresh Babu, Prakasham Reddy Shetty, Shekhar C. Mande, and et al. 2025. "Secondary Metabolites from a New Antibiotic-Producing Endophytic Streptomyces Isolate Inhibited Pathogenic and Multidrug-Resistant Mycobacterium tuberculosis Strains" Tropical Medicine and Infectious Disease 10, no. 5: 117. <https://doi.org/10.3390/tropicalmed10050117>.
29. Anna C Simpson , **Ramprasad E.V.V.**, Nitin Kumar Singh, Namita Damle, Ceth W Parker, Fathi Karouia, Christopher E Mason and Kasthuri Venkateswaran (2023) Comparative genomic analysis of Cohnella hashimotonis sp. nov., isolated from the International Space Station. Frontiers in Microbiology, 14, 1166013.
28. Bijlani S, Singh NK, **Ramaprasad, E.V.V.**, Podile R, Mason CE, Wang CCC, Venkateswaran K. (2021) *Methylobacterium ajmalii* sp. nov., Isolated From the International Space Station. Frontiers in Microbiology. 12, 639396.
27. Iniyar,M.,Vincent, P., **Ramaprasad, E.V.V.**, Joachim W and Sproer, c (2021) Streptomyces marianii sp. nov., a novel marine actinomycete from southern coast of India. Journal of Antibiotics. 74, 59-69.
26. **Ramaprasad EVV**, Mahidhara G,Sasikala C, Ramana CV.(2018) *Rhodococcus electrodiphilus* sp. nov., a marine electro active actinobacterium isolated from coral reef. Int. J. Syst. Evol. Microbiol, 68, 2644-2649.
25. Subhash Y, Radha V, Srinivas S, **Ramaprasad E.V.V.**, Shivani Y, Ojha R, Tushar L, Ramana, Ch.V and Sasikala Ch (2018) Planctopirus hydrille sp. nov., an antibiotic producing Planctomycete isolated from the aquatic plant Hydrilla and its whole genome shotgun sequence analysis. Journal of Antibiotics, 71, 575-583.
24. **Ramaprasad, E.V.V.**, Rizvi,A., Banerjee, S ., Sasikala, Ch. and Ramana, Ch.V.(2016) Mycobacterium oryzae sp. nov., a scotochromogenic, rapidly growing mycobacterial strain, cause infection in human macrophages cell line Int. J. Syst. Evol. Microbiol, 66, 4530-4536.
23. **Ramaprasad, E.V.V.**, Bharti Dave., Sasikala,Ch and Ramana, Ch.V.(2016) Rhodovulum algae sp. nov., isolated from an algal mat. Int. J. Syst. Evol. Microbiol, 66, 3367-3371.
22. **Ramaprasad, E.V.V.**, Bharti Dave., Sasikala, Ch and Ramana, Ch.V.(2015) Zooshikella marina sp. nov. a cycloprodigiosin and prodigiosin producing marine bacterium isolated from beach sand Int. J. Syst. Evol. Microbiol, 65, 4669-4673.
21. **Ramaprasad, E.V.V.**, Sasikala, Ch and Ramana, Ch.V.(2015) Ornithinimicrobium algicola sp. nov., a marine actinobacterium isolated from the green alga Ulva sp. Int. J. Syst. Evol. Microbiol, 65, 4627-4631.
20. **Ramaprasad, E.V.V.**, Sasikala, Ch and Ramana, Ch.V.(2015) Flectobacillus rhizosphaerae sp. nov. isolated from the rhizosphere soil of the plant Oryza sativa (L.) and emended description of the genus Flectobacillus. Int. J. Syst. Evol. Microbiol, 65, 3451-3456.
19. **Ramaprasad, E.V.V.**, Sasikala, Ch and Ramana,Ch.V (2015) Roseomonas oryzae sp. nov., isolated from paddy rhizosphere soil. Int. J. Syst. Evol. Microbiol, 65, 3535-3540.
18. Jyothsna, T.S.S., Rahul, K., **Ramaprasad, E.V.V.**, Sasikala, Ch and Ramana,Ch.V.(2013) Arcobacter anaerophilus sp. nov., isolated from an estuarine sediment and emended description of the genus Arcobacter. Int. J. Syst. Evol. Microbiol. 63, 4619-4625.
17. **Ramaprasad, E.V.V.**, Sasikala, Ch and Ramana,Ch.V.(2013)Neurosporene is the major carotenoid accumulated by Rhodobacter viridis JA737. Biotechnol letters, 35, 1093-1097.
16. Lakshmi, K.V., Divyasree, B., **Ramaprasad, E.V.V.**, Sasikala, Ch and Ramana, Ch.V.(2014) Reclassification of Rhodospirillum photometricum Molisch 1907, Rhodospirillum sulfurexigens Anil Kumar et al. 2008 and Rhodospirillum oryzae Lakshmi et al. 2013 in a new genus, Pararhodospirillum gen. nov., as Pararhodospirillum photometricum comb. nov., Pararhodospirillum sulfurexigens comb. nov. and Pararhodospirillum oryzae comb. nov., respectively, and emended description of the genus Rhodospirillum Int. J. Syst. Evol. Microbiol.64, 1154-1159.
15. Lakshmi, K.V.N.S.,**Ramaprasad, E.V.V.**, Sasikala, Ch and Ramana,Ch.V.(2013) Rhodospirillum oryzae sp. nov., a phototrophic bacterium isolated from rhizosphere soil of paddy. Int. J. Syst. Evol. Microbiol. 63, 3050-3055.
14. Shalem Raj, P., **Ramaprasad, E.V.V.**, Sasikala, Ch and Ramana, Ch.V.(2013) Chryseomicrobium amylolyticum sp. nov., isolated from a semi-arid tropical soil and emended descriptions of the genus Chryseomicrobium and Chryseomicrobium imtechense. Int. J. Syst. Evol. Microbiol. 63, 2612-2617.
13. Venkata Ramana, V., Kalyan Chakravarthy, S.,**Ramaprasad,E.V.V.**, Thiel, V.,Imhoff, J.F.,Sasikala, Ch and Ramana, Ch, V (2013) Emended description of the genus Rhodothalassium Imhoff et al, 1998 and proposal of Rhodothalassiaceae fam. nov. and Rhodothalassiales ord. nov. Systematic and Applied Microbiology, 36, 28-32.
12. Vinay Kumar, B., **Ramaprasad,.E.V.V.**, Sasikala,Ch and Ramana.Ch.V.(2013) Rhodopseudomonas pentothentaxi gens sp. nov. and Rhodopseudomonas thermotolerans sp. nov., isolated from paddy soils. Int. J. Syst. Evol. Microbiol. 63, 200-207.

11. Shalem Raj, P., **Ramaprasad, E.V.V.**, Vaseef, S., Sasikala, Ch and Ramana, Ch.V. (2013) *Rhodobacter viridis* sp. nov., a phototrophic bacterium isolated from Western Ghats of India. *Int. J. Syst. Evol. Microbiol.* 63, 181 – 186.
10. Kalyana Chakravarthy, S., **Ramaprasad, E.V.V.**, Shobha,E., Sasikala,Ch and Ramana, Ch.V.(2012) *Rhodoplanes piscinae* sp. nov. isolated from pond waters. *Int. J. Syst. Evol. Microbiol.* 62, 2828-2834.
9. Lakshmi, K.V.N.S.,Sasikala, Ch., Venkata Ramana, V., **Ramaprasad,E.V.V** and Ramana, Ch.V.(2012) *Rhodovulum phaeolacus* sp. nov. a phototrophic alphaproteobacterium isolated from a brown pond.*J.Gen. App Microbiol.*57, 145-151.
8. Venkata Ramana, V., Kalyan Chakravarthy, S., Vinay Kumar, B., Shalem Raj, P., Shoba, E., **Ramaprasad,.E.,V.V.**,Sasikala, Ch and Ramana,Ch, V (2012) Description of *Rhodopseudomonas parapalustris* sp. nov., *Rhodopseudomonas harwoodiae* sp. nov., *Rhodopseudomonas pseudopalustris* sp. nov. and emended description of *Rhodopseudomonas palustris*. *Int. J. Syst. Evol. Microbiol.* 62, 1790-1798.
7. Srinivas, A., Rahul, K., Sasikala, Ch., Subash. Y., **Ramaprasad,E.V.V** and Ramana, Ch.V.(2012) *Rhodovulum bhavnagarens* sp. nov., a phototrophic alphaproteobacterium isolated from a pink pond *Int. J. Syst. Evol. Microbiol.* 62, 2528–2532.
6. Srinivas, A., Rahul, K., Sasikala, Ch., Subash. Y., **Ramaprasad,E.V.V** and Ramana, Ch.V.(2012) *Georgenia satyanarayanai* sp. nov., an alkaliphilic and thermotolerant amylase producing actinobacterium isolated from a soda lake. *Int. J. Syst. Evol. Microbiol.* 62, 2405–2409.
5. Shivali,K., Venkata Ramana,V., **Ramaprasad, E.V.V.**, Sasikala, Ch and Ramana,Ch.V.(2011) *Marichromatium litoris* sp. nov. and *Marichromatium chrysaorae* sp. nov. isolated from beach sand and from a jelly fish (*Chrysaora colorata*). *Systematic and Applied Microbiology*, 34,600– 605.
4. Mohammed,M., Arvind, I., Prasuna,P. M., **Ramaprasad,E. V.V.**, Sasikala,Ch and Ramana, Ch.V.(2011) Genome sequence of a phototrophic beta proteobacterium, *Rubrivivax benzoatilyticus* strain JA2. *Journal of Bacteriology*, 193, 2898–2899.
3. Shalem Raj, P., Kalyan Chakravarthy, S.,**Ramaprasad, E.V.V.**, Sasikala, Ch and Ramana, Ch.V.(2012) *Phaeospirillum tilakii* sp. nov., a phototrophic alphaproteobacterium isolated from aquatic sediments.*Int. J. Syst. Evol. Microbiol.*62, 1069-1074.
2. Venkata Ramana, V., Shivali, K., Shobha,E., **Ramaprasad,E.V.V.**, Sasikala, Ch and Ramana,Ch.V.(2011) *Blastochloris gulmargensis* sp. nov., isolated from an epilithic phototrophic biofilm. *Int. J. Syst. Evol. Microbiol.*61, 1811-1816.
1. Venkata Ramana, V., Sasikala, Ch., **Ramaprasad,.E.V.V** and Ramana, Ch.V.(2010) Description of *Ectothiorhodospira salini* sp. nov. *J.Gen. App Microbiol.*56, 313-319.