Dr. Naresh Kumar

Assistant Professor, Botany

Coordinator of Equal Opportunity Cell

Cluster University of Srinagar, Gogji-Bagh Srinagar-190008

Phone: +91-9149938789

Email: nksaloch@gmail.com

drnaresh.kumar@cusrinagar.edu.in

EDUCATION

Degree/Class	University/Board	Year of Completion
Ph.D. (Botany)	Banaras Hindu University (BHU)	2024
M.Sc. (Botany)	HNB Garhwal University	2017
B.Sc.	University of Jammu	2015
Senior Secondary	JKBOSE	2012
Secondary	JKBOSE	2010

NATIONAL LEVEL EXAMS QUALIFIED

Exam	Exam Body	Subject	Year of Qualifying
DBT-JRF	BCIL	BET	2019
GATE	IIT Madras	Life Sciences (XL)	2019
Joint CSIR-UGC NET/JRF	NET Bureau	Life Sciences	2018 (June)
ICAR-NET	ICAR	Plant Physiology	2018 (December)

FELLOSHIPS

Fellowship	Granting Body	Duration
JRF/SRF	UGC	2019-2024

RESEARCH INTERESTS

My research interests lie in the morphology, phylogenetic relationships, and taxonomic classification of cyanobacteria, with a particular emphasis on the diverse and ecologically pivotal strains inhabiting the Northern Indian region.

KEY STRENGTHS

In-depth knowledge of:

- Taxonomy of heterocytous cyanobacteria
- Sampling, culturing and purification of heterocytous cyanobacteria
- Microscopy and morphology of heterocytous cyanobacteria
- DNA extraction followed by amplification of the 16S rRNA gene, and the associated 16S-23S ITS region
- P-distance and BI, ML, NJ phylogenetic analysis based on the 16S rRNA gene
- P-distance and secondary structures analysis based on the 16S-23S ITS region
- Adobe Illustrator, MEGA, IQ-TREE, iTOL, and UNAFold

RESEARCH PUBLICATIONS

1. **Naresh Kumar,** Aniket Saraf, Sagarika Pal & Prashant Singh **(2024).** Expanding the cyanobacterial flora of India: multiple novel species of *Nostoc* and *Desmonostoc* from Jammu and Kashmir, India using a polyphasic approach. **Journal of Phycology,** 00, 1-20.
2. **Naresh Kumar,** Aniket Saraf, Sagarika Pal & Prashant Singh **(2023).** Description of *Cylindrospermum solincola* sp. nov. from Jammu and Kashmir, India and Further Insights into the Ecological Distribution and Morphological Attributes of *Cylindrospermum badium*. **Diversity,** 15(5), 592.
3. **Naresh Kumar,** Aniket Saraf, Sagarika Pal, Deeksha Mishra & Prashant Singh **(2022).** Insights into the phylogenetic inconsistencies of the genus *Amazonocrinis* and description of epilithic *Amazonocrinis malviyae* sp. nov. (Cyanobacteria, Nostocales) from Jammu and Kashmir, India. **International Journal of Systematic and Evolutionary Microbiology**, 72(12), 005658.
4. **Naresh Kumar,** Aniket Saraf, Sagarika Pal, Deeksha Mishra, Prashant Singh & Jeffrey R. Johansen **(2022).** Circumscription of *Fulbrightiella* gen. nov. and *Sherwoodiella* gen. nov., Two Novel Genera in the Calotrichaceae (Nostocales, Cyanobacteria). **Journal of Phycology,** 59(1), 204-220.
5. Sagarika Pal, Harsh Pant, **Naresh Kumar**, Priya, Shubham Singh, Nainshi Gupta, & Prashant Singh **(2025).** Life on the rocks: polyphasic evaluation of three epilithic cyanobacterial strains isolated from a single rock, with the

description of *Nostoc sikkimense* sp. nov., from the Northeastern region of India. **FEMS Microbiology Letters,** 372, fnaf037.

6. Harsh Pant, **Naresh Kumar**, Sagarika Pal & Prashant Singh **(2024).** Exploring cyanobacteria from diverse habitats of the Konkan region of India, unveiling novel species of the genera *Desikacharya, Pseudoaliinostoc,* and *Chlorogloeopsis* using a polyphasic approach. **Journal of Phycology,** 00,1-24.
7. Sagarika Pal, Aniket Saraf, **Naresh Kumar**, Harsh Pant, Shaikh Soyeb Akhatar Badruddin, Shaikh Maksood Ali Sajibulla, Shaikh Kalamuddin Nijamuddin et al. **(2024)**. Polyphasic characterization of 15 heterocytous cyanobacterial isolates from different habitats of India and description of 9 novel species belonging to the genera *Desikacharya*, *Aliinostoc*, and *Desmonostoc*. **Algal Research**, 103873.
8. Aniket Saraf, Prashant Singh, **Naresh Kumar,** Sagarika Pal & Jeffrey R. Johansen **(2024).** Two new species of *Dulcicalothrix* (Nostocales, Cyanobacteria) from India and erection of *Brunnivagina* gen. nov., with observations on the problem of using multiple ribosomal operons in cyanobacterial taxonomy. **Journal of Phycology,** 00, 1-22.
9. Sagarika Pal, Aniket Saraf, **Naresh Kumar** & Prashant Singh **(2024).** Igniting taxonomic curiosity: The amazing story of *Amazonocrinis* with the description of a new genus *Ahomia* gen. nov. and novel species of *Ahomia, Amazonocrinis,* and *Dendronalium* from the biodiversity-rich northeast region of India. **Journal of Phycology,** 60(2), 387-408.
10. Sagarika Pal, Aniket Saraf, **Naresh Kumar,** Arush Singh, Utkarsh Talukdar, Niraj Kohar & Prashant Singh **(2022).** Digging deeper into the taxonomy of *Cylindrospermum* and description of *Johanseniella tripurensis* gen. et sp. nov. from India. **FEMS Microbiology Letters,** 369(1), fnac074.
11. Sagarika Pal, Aniket Saraf, **Naresh Kumar** & Prashant Singh **(2022).** Phycological exploration of the global biodiversity hotspots of Northeast India: discovery of a new species of soil-dwelling cyanobacteria, *Desikacharya kailashaharensis* sp. nov. **FEMS Microbiology Letters,** 369(1).
12. Deeksha Mishra, Aniket Saraf, **Naresh Kumar,** Sagarika Pal & Prashant Singh **(2021).** Issues in cyanobacterial taxonomy: comprehensive case study of unbranched, false branched and true branched heterocytous cyanobacteria. **FEMS Microbiology Letters,** 368(4), fnab005.
13. Mahesh Chavadar, Aniket Saraf, Archana Suradkar, Deeksha Mishra, **Naresh Kumar** & Prashant Singh (2021). *Constrictifilum karadense* gen. et sp. nov., a new Nostocalean genus from Maharashtra, India. **FEMS Microbiology Letters**, 368(11), fnab057.

BOOK CHAPTERS

1. Sagarika Pal, **Naresh Kumar,** Harsh Pant, Lira A. Gaysina & Prashant Singh **(2024).** Evaluating the Polyphasic Approach in Cyanobacterial Taxonomy. In *Methods in Cyanobacterial Research* (pp. 1-18). CRC Press.

2. Prashant Singh, **Naresh Kumar** & Sagarika Pal **(2021).** Cyanobacteria in the polar regions: diversity, adaptation, and taxonomic problems. In: *Understanding Present and Past Arctic Environments* (pp. 189-212). Elsevier.

CONFERENCES AND SEMINARS ATTENDED

1. *"Fulbrightiella*, the first cyanobacterial genus discovered and described from the Union territory of Jammu & Kashmir, India," Abstract in: National Conference on Natural Sciences and Sustainable Development for Environment: Contestations And Affirmations. Mahila Mahavidyalaya, Banaras Hindu University, Varanasi, India. (Poster Presentation). 20-21 January 2023.

2. "Description of putative novel species of the omnipresent cyanobacterial genus *Nostoc* from North-Western Himalayas," Abstract in: Shodh Sangam 2024. Institute of Science, Banaras Hindu University, Varanasi, India. (secured 2nd position in the oral presentation in Botany session). 21-23 February 2024.

3. "First report of genus *Nostoc* (Nostocales, Cyanobacteria) from North-western Himalayas, India based on polyphasic approach," Abstract in: National seminar on Algal Biodiversity, Biotechnology, and Environmental Sustainability (NSABBES-2024). P.G. Department of Botany, Berhampur University, Odisha, India. (Poster Presentation). 20-21 August 2024.