Dr. Arti Mishra

Postdoc (Carl Trygger Postdoctoral fellowship),

Umeå Plant Science Center (UPSC), Department of Plant Physiology,

Umeå University, Umeå, Sweden.

Email: arti.mishra@umu.se

Assistant Professor,

Department of Botany, Hansraj College, University of Delhi

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Academic experience

Jan 2024- till date Postdoc (Carl Trygger Postdoctoral fellowship),

Umeå Plant Science Center (UPSC), Department of Plant Physiology, Umeå University, Umeå, Sweden.

Oct 2022- till date Assistant Professor,

Department of Botany, Hansraj College,

University of Delhi

2020-2022 Assistant Professor,

Amity Institute of Microbial Technology (AIMT),

Amity University Uttar Pradesh, Noida, India

2017 – 2020 UGC-Dr. D. S. Kothari Postdoctoral fellow,

Jawaharlal Nehru University, New Delhi, India

2007 – 2009 Research Assistant,

Ruhr University, Bochum, Germany

Education

2011 – 2016 Ph.D. (Botany)

A.P.S. University, Rewa, India

2006 MS (Biology)

Linköping University, Sweden

2003 M.Sc. (Botany)

VBS, Purvanchal University, Jaunpur

2001 B.Sc. (Botany, Zoology, Chemistry)

VBS, Purvanchal University, Jaunpur

Research area

Phycology, Environmental Microbiology, Bioremediation, Plant-Microbe Interaction

Publication summary

Research Publications: 38

Book Chapter: 27 Edited Book: 2 h-index: 23 i10 index: 31

Total citations: 1453

Research guidance

• 05 M.Sc. (completed)

Achievements

- Carl Trygger Postdoctoral fellowship to work in Umeå Plant Science Centre, Umeå Sweden (2022)
- Dr. D S Kothari Postdoctoral Fellowship by University Grant Commission in 2016.
- Editorial Board Member **Frontiers in Plant Science** (Plant symbiotic interactions)
- Editorial Board Member **Frontiers in Microbiology** (Microbial Physiology and Metabolism)
- DST-SERB International Travel Award to travel South Korea (2019)
- EMBO travel grant to attend EMBO Workshop on the Cell and Molecular Biology of Chlamydomonas and The 13th International Chlamydomonas conference. May 27-June 1, 2008, Hyères-les-Palmiers, France.

Publications

- 1. Thuswaldner S, Lagerstedt JO, Rojas-Stütz M, Bouhidel K, Der C, Leborgne- Castel N, **Mishra A**, Marty F, Schoefs B, Adamska I, Persson BL, Spetea C. Identification, expression, and functional analyses of a thylakoid ATP/ADP carrier from *Arabidopsis*. *Journal of Biological Chemistry* (2007).282:8848-59. (Impact Factor: 5.48)
- 2. Pavón LR, Lundh F, Lundin B, **Mishra A**, Persson BL, Spetea C. Arabidopsis ANTR1 is a thylakoid Na+-dependent phosphate transporter: functional characterization in *Escherichia coli*. *Journal of Biological Chemistry* (2008). 283:13520-7. (**Impact Factor: 5.48**)
- 3. Glanz S, Jacobs J, Kock V, **Mishra A**, Kück U. Raa4 is a trans-splicing factor that specifically binds chloroplast tscA intron RNA. *Plant Journal* (2012). 69: 421-431. (**Impact Factor: 7.09**)
- 4. **Mishra A***, Tandon R, Kesarwani S, Singh R, Tiwari G L. Emerging applications of cyanobacterial ultraviolet protecting compound scytonemin. *Journal of Applied Phycology* (2014). 27: 1045-1051. (Impact Factor: 3.2)
- 5. **Mishra A***, Singh R, Tandon R, Kesarwani S, Tiwari GL. Pigment and protein analysis of certain representatives of cyanobacteria. *National Journal of Life Science* (2014) 11: 11-13
- 6. Tandon R, Kesarwani S, **Mishra A**, Dixit A, Tiwari GL. Genus Microsystiskuetzing ex Lemmermann (Chroococcales, Cyanoprokaryota) from India. *Phykos* (2016). 46: (2) 4-13.
- 7. **Mishra A**, Jha Gopaljee, Thakur I S. Draft Genome Sequence of *Zhihengliuella* sp. Strain ISTPL4, a Psychrotolerant and Halotolerant Bacterium Isolated from Pangong Lake, India. *Genome Announcements*, 2018, 6(5): e01533-17. (**Impact Factor: 0.877**)

- 8. **Mishra A**, Medhi K, Maheshwari N, Shrivastva S, Thakur, I S. Biofuel production and phycoremediation by *Chlorella* sp. ISTLA1 isolated from landfill site. *Bioresource Technology*, 2018, **253**, 121-129. (**Impact Factor: 11.88**)
- 9. Kumar M, **Mishra A**, Singh S. S, Srivastava S, Thakur I S. Expression and characterization of novel laccase gene from *Pandoraea* sp. ISTKB and its application. *International Journal of Biological Macromolecules*, 2018, 115,308-316. (**Impact Factor: 8.02**)
- 10. Medhi K, **Mishra A**, Thakur, I S. Genome Sequence of a Heterotrophic Nitrifier and Aerobic Denitrifier, *Paracoccus denitrificans* Strain ISTOD1, Isolated from Wastewater. *Genome Announcements*, 2018, 6, no. 15 (2018): e00210-18. (**Impact Factor: 0.877**)
- 11. **Mishra A*,** Rathour R, Singh R, Kumari T, Thakur I S. Degradation and detoxification of phenanthrene by actinobacterium *Zhihengliuella* sp. ISTPL4. *Environmental Science Pollution Research*, 2019. (Impact Factor: 5.19)
- 12. **Mishra, A.**, Medhi, K., Malaviya, P. and Thakur, I.S., 2019. Omics approaches for microalgal applications: Prospects and challenges. *Bioresource Technology*, p.121890. (**Impact Factor: 11.88**)
- 13. Rathour, R., Gupta, J., **Mishra, A.,** Rajeev, A.C., Dupont, C.L. and Thakur, I.S., 2020. A comparative metagenomic study reveals microbial diversity and their role in the biogeochemical cycling of Pangong lake. *Science of The Total Environment*, p.139074. (**Impact Factor: 10.75**)
- 14. **Mishra, A.**, Gupta, B., Kumar, N., Singh, R., Varma, A. and Thakur, I.S., 2020. Synthesis of calcite-based bio-composite biochar for enhanced biosorption and detoxification of chromium Cr (VI) by *Zhihengliuella* sp. ISTPL4. *Bioresource Technology*, p.123262. (**Impact Factor: 11.88**)
- 15. Sharma, S., **Mishra, A.**, Shukla, K., Shukla, S., 2020. Food Contamination: It's stages and associated illness. *International Journal of pharmaceutical, chemical and biological science*. Volume 10, Issue 4. October December, 2020.
- Shukla S., Sharma M., Yadav S., Raghupathy A., Shukla K., Varma A, Mishra A. * 2021 Synthesis and applications of nanoparticles: State of the Art and Future Perspective. Nanoscience & Nanotechnology-Asia Doi: 10.2174/2210681211666210224154613
- 17. Bisht, A., Chatterjee, R., Dimri, A.G., Singh, D., **Mishra, A.**, Chauhan, A. and Jindal, T., Risk assessment of opportunistic bacterial pathogens in household drinking water. *Science Archives* (2020) Vol. 1 (1), 42-49
- 18. Gupta B., **Mishra**, A., Singh, R., Varma, A., Thakur, I.S. 2020. Fabrication of calcite based biocomposites for catalytic removal of heavy metals from electroplating industrial effluent. *Environmental Technology & Innovation* Volume 21, February 2021, 101278. (**Impact Factor: 7.75**)
- 19. **Mishra A.**, Gupta J., Kumari T., Pal R., Thakur I. S., 2021. Unravelling the attributes of novel cyanobacteria Jacksonvillea sp. ISTCYN1 by draft genome sequencing, *Bioresource Technology*, Volume 337, 125473, doi.org/10.1016/j.biortech.2021.125473. (**Impact Factor: 11.88**)
- 20. Gupta, J., Kumari, M., Mishra, A., Akram, M. and Thakur, I.S., 2022. Agro-forestry waste management-A review. *Chemosphere*, 287, p.132321. (Impact Factor: 8.94)

- 21. Sharma, R., **Mishra**, A., Pant, D. and Malaviya, P., 2021. Recent advances in microalgae-based remediation of industrial and non-industrial wastewaters with simultaneous recovery of value-added products. **Bioresource Technology**, p.126129. (**Impact Factor: 11.88**)
- 22. **Mishra A.***, Takkar S., Joshi N. C., Shukla S., Shukla K., Singh A., Manikonda, A., Varma A., An integrative approach to study bacterial enzymatic degradation of toxic dyes. *Frontiers in Microbiology* (**Impact Factor: 6.064**), *12*, pp.802544-802544.
- 23. Takkar, S., Tyagi, B., Kumar, N., Kumari, T., Iqbal, K., Varma, A., Thakur, I.S. and **Mishra, A.***, 2022. Biodegradation of methyl red dye by a novel actinobacterium Zhihengliuella sp. ISTPL4: Kinetic studies, isotherm and biodegradation pathway. *Environmental Technology & Innovation*, (**Impact Factor: 7.75**), 26, p.102348.
- 24. Gupta, J., Rathour, R., Dupont, C., **Mishra, A.** and Thakur, I.S., 2022.Biogeochemical profiling and taxonomic characterization of municipal landfill site by metagenomic sequencing. (2022) *Bioresource Technology*, 351, 126936, 0960-8524. (**Impact Factor: 11.88**)
- 25. Tyagi, J., Chaudhary, P., **Mishra, A.**, Khatwani, M., Dey, S. and Varma, A., 2022. Role of Endophytes in Abiotic Stress Tolerance: With Special Emphasis on Serendipita indica. *International Journal of Environmental Research*, 16(4), pp.1-21. (Impact Factor: 3.229)
- 26. **Mishra, A.,** Kumari, M., Kumar, R., Iqbal, K. and Thakur, I.S., 2022. Persistent organic pollutants in the environment: Risk assessment, hazards, and mitigation strategies. *Bioresource Technology Reports*, p.101143.
- 27. Agarwal, H., Kashyap, V.H., **Mishra, A.,** Bordoloi, S., Singh, P.K. and Joshi, N.C., 2022. Biocharbased fertilizers and their applications in plant growth promotion and protection. *3 Biotech*, 12(6), pp.1-19. (**Impact Factor: 2.8**)
- 28. Shoarnaghavi, M.A., **Mishra, A.,** Amirifar, A., Mahapatra, S.S., Nobaharan, K., Hemati, A., Asgari Lajayer, B. and Astatkie, T., 2022. Soil algae enzymes and their biotechnological applications. *Systems Microbiology and Biomanufacturing*, pp.1-18.
- 29. Iqbal K., Saxena A., Pande P., Tiwari A., Joshi N. C., Varma A, **Mishra A.*** 2022. Microalgae-bacterial granular consortium: striding towards sustainable production of biohydrogen coupled with wastewater treatment. (2022) *Bioresource Technology*, 127203. (Impact Factor: 11.88)
- 30. Tyagi, J., **Mishra**, A., Kumari, S., Singh, S., Agarwal, H., Pudake, R.N., Varma, A. and Joshi, N.C., 2022. Deploying a microbial consortium of *Serendipita indica*, *Rhizophagus intraradices*, and *Azotobacter chroococcum* to boost drought tolerance in maize. *Environmental and Experimental Botany*, p.105142. (**Impact Factor: 6.028**)
- 31. Agarwal, H., Bajpai, S., **Mishra, A.**, Kohli, I., Varma, A., Fouillaud, M., Dufossé, L., Joshi, N.C. Bacterial Pigments and Their Multifaceted Roles in Contemporary Biotechnology and Pharmacological Applications. *Microorganisms* 2023, 11, 614. (**Impact Factor: 4.926**)
- 32. Yadav, G., Sharma, N., Goel, A., Varma, A., **Mishra, A.,** Kothari, S.L. and Choudhary, D.K., 2023. Trichoderma Mediated Metal Chelator and Its Role in Solanum melongena Growth Under Heavy Metals. *Journal of Plant Growth Regulation*, pp.1-23. (**Impact Factor: 4.8**)
- 33. Sharma, N., Dabral, S., Tyagi, J., Yadav, G., Aggarwal, H., Joshi, N.C., Varma, A., Koul, M., Choudhary, D.K. and **Mishra**, A.*, 2023. Interaction studies of *Serendipita indica* and *Zhihengliuella*

- sp. ISTPL4 and their synergistic role in growth promotion in rice. *Frontiers in Plant Science*, 14, p.1155715. (Impact Factor: 5.6)
- 34. Kashyap, V.H., **Mishra, A.**, Bordoloi, S., Varma, A. and Joshi, N.C., 2023. Exploring the intersection of *Aspergillus fumigatus* biofilms, infections, immune response and antifungal resistance. *Mycoses*. (**Impact Factor: 4.9**)
- 35. Sharma N, Koul M, Joshi NC, Dufossé L, Mishra A. Fungal-Bacterial Combinations in Plant Health under Stress: Physiological and Biochemical Characteristics of the Filamentous Fungus *Serendipita indica* and the Actinobacterium *Zhihengliuella* sp. ISTPL4 under In Vitro Arsenic Stress. *Microorganisms*. 2024 Feb 17;12(2):405. (Impact Factor: 4.5)
- 36. Sharma, N., Yadav, G., Tyagi, J., Kumar, A., Koul, M., Joshi, N.C., Hashem, A., Abd_Allah, E.F. and Mishra, A., 2024. Synergistic impact of *Serendipita indica* and *Zhihengliuella* sp. ISTPL4 on the mitigation of arsenic stress in rice. *Frontiers in Microbiology*, 15, p.1374303. (Impact Factor: 4)
- 37. Chaudhary, D., Agarwal, H., Mishra, A. and Joshi, N.C., 2024. Glutathione Homeostasis—A Prerequisite to Maintain Root System Architecture in Plants. *Journal of Soil Science and Plant Nutrition*, pp.1-12. (Impact Factor: 3.4)
- 38. Sharma, N., Yadav, G., Joshi, N.C. and Mishra, A., 2024. Significance of secondary metabolites elicited by *Zhihengliuella* sp. ISTPL4 in plant growth promotion under arsenic stress. *South African Journal of Botany*, 174, pp.383-392. (Impact Factor: 2.7)

* As corresponding author

Book

1. Title: Climate Change and the Microbiome: Sustenance of the Ecosphere (2021)

Editors: Dr. D. K. Choudhary, Dr. Arti Mishra, Prof. Ajit Varma

ISBN: 978-3-030-76863-8

2. Title: Soil Algae: Morphology, Ecology and Biotechnological Applications (2025)

Editors: Dr. Arti Mishra, Prof. Ajit Varma

ISBN: 978-981-97-9873-5

Book chapters

- 1. Navshree, J., Wadhwa, N., Bhatia, M., Sharma, P., Khomdram, L., Mishra, A. and Kaushik Love, S., 2025. Impact of Pesticides on Soil Health of Agroecosystems and Plant Nutrition: Challenges and Sustainable Management. In Soil Health and Nutrition Management (pp. 44-73). GB: CABI.
- 2. Sharma, N., Chaudhary, A., Sharma, N., Shukla, S., Joshi, N.C., Vishwakarma, K., Singh, P.K. and Mishra, A., 2025. Plant Nutrient Requirements and Nutrient Homeostasis in Plants. In Soil Health and Nutrition Management (pp. 1-20). GB: CABI.
- 3. Shukla, S., Upadhyay, D., Mishra, A., Jindal, T. and Shukla, K., 2025. The Impact on Soil Ecology of the Algal Community. In Soil Algae: Morphology, Ecology and Biotechnological Applications (pp. 193-219). Singapore: Springer Nature Singapore.
- 4. Chaudhary, A., Bhardwaj, A., Sharma, N., Kaur, M., Love, S.K. and Mishra, A., 2024. Indoor Contaminants Based on Fungi. Airborne Biocontaminants and Their Impact on Human Health, pp.108-

122.

5. Sharma, N., Yadav, G., Varma, A., Koul, M. and Mishra, A., 2024. Heavy metal remediation from rhizospheric soil by using microbial consortium. In Microbiology-2.0 Update for a Sustainable Future (pp. 57-76). Singapore: Springer Nature Singapore.

- 6. Mazumdar, S., Singhal, S., Tyagi, J., Mishra, A., Joshi, N.C., Pudake, R.N., Farooq, M. and Varma, A., 2023. Understanding of Belowground Biochemical Communication in Millets Through Metabolomics. In Millet Rhizosphere (pp. 259-274). Singapore: Springer Nature Singapore.
- 7. Iqbal, K., Singh, S., Lajayer, B.A., Shukla, S., Shukla, K., Varma, A. and Mishra, A., 2023. Algae as a Biomarker Using the Free Air Carbon Dioxide Enrichment (FACE) System. In Climate Change and Sustainable Development (pp. 181-198). CRC Press.
- 8. Sharma, N., Takkar, S., Bhatia, K., Vardhan, H., Tripathi, M., Iqbal, K., Shukla, S., Shukla, K., Tyagi, J., Varma, A. and Mishra, A., 2023. Recent advances in fungal secondary metabolites and their applications. Fungal resources for sustainable economy: current status and future perspectives, pp.411-432.
- 9. Agrahari, R., Iqbal, K., Tyagi, J., Joshi, N.C., Shukla, S., Shukla, K., Varma, A. and Mishra, A., 2023. Diatoms in biomedicines and nanomedicines. In Insights into the World of Diatoms: From Essentials to Applications (pp. 195-210). Singapore: Springer Nature Singapore.
- 10. Sharma, S., Shukla, K., Mishra, A., Vishwakarma, K. and Shukla, S., 2023. Diatoms: A potential for assessing river health. In Insights into the World of Diatoms: From Essentials to Applications (pp. 121-130). Singapore: Springer Nature Singapore.
- 11. Mishra, A., Singh, A.P., Takkar, S., Sharma, A., Shukla, S., Shukla, K., Giri, B.S., Katiyar, V. and Pandey, A., 2022. Phytoremediation of dye-containing wastewater. In *Current Developments in Biotechnology and Bioengineering* (pp. 197-222). Elsevier.
- 12. Salam, M.D., Porwal, S., Mishra, A. and Varma, A., 2022. Functional Metagenomics in Environmental Bioremediation: Recent Advances, Challenges and Future Outlook. Omics for Environmental Engineering and Microbiology Systems, pp.257-267.
- 13. Sharma, N., Shukla, S., Shukla, K., Varma, A., Kumar, V., Salam, M.D. and Mishra, A., 2022. Recent Advancements in Microbial Degradation of Xenobiotics by Using Proteomics Approaches. In Omics for Environmental Engineering and Microbiology Systems (pp. 181-201). CRC Press.
- 14. Shukla, S., Upadhyay, D., Mishra, A., Jindal, T. and Shukla, K., 2022. Challenges Faced by Farmers in Crops Production Due to Fungal Pathogens and Their Effect on Indian Economy. In *Fungal diversity, ecology and control management* (pp. 495-505). Springer, Singapore.
- 15. Iqbal, K., Sharma, N., Takkar, S., Shukla, S., Shukla, K., Varma, A. and Mishra, A., 2022. Integrated CO2 sequestration, wastewater treatment, and biofuel production by microalgae culturing: needs and limitations. Integrated Environmental Technologies for Wastewater Treatment and Sustainable Development, pp.217-240.
- 16. Iqbal, K., Chaudhary, A., Sharma, S., Varma, A., Thakur, I.S. and Mishra, A., 2022. Algae-based biomaterials for biomedicines. In Biomass, Biofuels, and Biochemicals (pp. 251-276). Elsevier.
- 17. Takkar S., Shandilya C, Agrahari R., Chaurasia A., Vishwakarma K., Mohapatra S., Varma, A., Mishra A*. Green technology: Phytoremediation for pesticide pollution. Phytoremediation Technology for the Removal of Heavy Metals and Other Contaminants from Soil and Water (PP 353-375). Elsevier
- 18. Mishra A*., Vishwakarma K., Malaviya P., Kumar N., Pavón L. R., Shandilya C., Sharma, R. Bisht A., Takkar S., 2022. Influence of greenhouse gases on plant epigenomes for food security. Biomass, Biofuels, Biochemicals (pp421-450). Elsevier
- 19. Pati, S., Mohapatra, S., Vishwakarma, K., Bandekar, D., Mishra, A. and Samantaray, D., 2021. Impact of Climate on Soil Microbes and Plant Health. In *Climate Change and the Microbiome* (pp. 359-368). Springer, Cham.
- 20. Thakur, I.S. and Mishra, A., 2021. Rising Greenhouse Gases in the Atmosphere: The Microbes Can Be a Solution—A Review. *Climate Change and the Microbiome*, pp.623-636.

- 21. Shukla, K., Shukla, S., Upadhyay, D., Singh, V., Mishra, A. and Jindal, T., 2021. Socio-Economic Assessment of Climate Change Impact on Biodiversity and Ecosystem Services. In *Climate Change and the Microbiome* (pp. 661-694). Springer, Cham.
- 22. Sharma, S., **Mishra**, A., Shukla, K., Kumari, P., Jindal, T. and Shukla, S., 2021. The Potential Impact of Climate Change on Soil Health, Soil Biota, and Soil Properties: A Review. *Climate Change and the Microbiome*, pp.31-48.
- 23. **Mishra, A.,** Kumar, M., Medhi, K. and Thakur, I.S., 2020. Biomass energy with carbon capture and storage (BECCS). In *Current Developments in Biotechnology and Bioengineering* (pp. 399-427). Elsevier. 9780444636744
- 24. Maheshwari, N., **Mishra, A.**, Thakur, I.S. and Srivastava, S., 2021. Algal Biofuel: A Sustainable Approach for Fuel of Future Generation. In *Environmental Microbiology and Biotechnology* (pp. 3-29). Springer, Singapore.
- 25. **Mishra, A*.**, Rajput, S., Gupta, P.S., Goyal, V., Singh, S., Sharma, S., Shukla, S., Singh, A., Shukla, K. and Varma, A., 2021. Role of Cyanobacteria in Rhizospheric Nitrogen Fixation. In *Soil Nitrogen Ecology* (pp. 497-519). Springer, Cham.
- 26. Upadhyay, D., Shukla, K., **Mishra, A.**, Jindal, T., Sharma, S. and Shukla, S., 2021. Molecular Aspects and Oxygen Relations of Nitrogen Fixation in Cyanobacteria. In *Soil Nitrogen Ecology* (pp. 521-568). Springer, Cham.
- 27. Parashar, R., Shukla, S., Shukla, K., Varma, A. and **Mishra, A***., 2021. Unravelling Microbial Nitrogen Pathway in Rhizosphere. In *Soil Nitrogen Ecology* (pp. 163-177). Springer, Cham.
- 28. Shukla, S., Shukla, K., **Mishra, A.**, Jindal, T., Sharma, S., Upadhyay, D. and Singh, V., 2021. Ecological Perspectives on Soil Microbial Community Involved in Nitrogen Cycling. In *Soil Nitrogen Ecology* (pp. 51-91). Springer, Cham.
- 29. Lorena Ruiz Pavón, **A. Mishra,** F. Lundh, B. Persson, Cornelia Spetea Wiklund. Localization and functional studies of *Arabidopsis* anion transporter 1 Photosynthesis: Energy from the Sun, 2008, 1063-1066

Funding

Projects	Amount Sanctioned	Duration	Name of the Funding Agency
Organic soil-less farming by using Hydroponics and marketing the harvest as HANS ORGANICS	1,35,000/-	Oct-23-Till date	Hansraj College
2. Isolation, screening and molecular characterization of plant growth promoting rhizobacteria of potato from Umeå	21657 SEK (INR 174 901,93/-)	June 2024- Till date	Umeå University, Sweden
3. Project Proposal for establishing an indoor Algal culture Facility in Hansraj College, and marketing the processed products as HANS HERBALS: SUPER FOOD	1,18,000/-	Oct-23-Till date	Hansraj College

Participation in Conferences and Symposium

- Poster presentation on "Influence of Rhizobacteria on Potato Biotic Stress Responses" at International symposium on Insect-Plant Relationships at Bielefeld University, Germany.
- Poster presentation on "Assessing the Impact of Rhizobacteria on Potato Responses to Biotic Stress" at International Conference, Plant Energy Management and Molecular Mechanisms and Signalling, 2024, 26-30 August in Umeå, Sweden.
- Poster presentation on "Utilization of polyethylene by cyanobacterium *Jacksonvillea* sp.

- ISTCYN1 at International conference, IEEC & BWR 2019, South Korea from 10 December, 2019 to 13 December, 2019
- Poster presentation on Production and characterization of Polyhydroxyalkanoate (PHA) by *Zhihengliuella* sp. ISTPL4 and its application in plant immunity at "International conference NHBT 2019" at Trivandrum, India from November 20–24, 2019.
- Poster presentation on "Degradation of phenanthrene by actinobacterium *Zhihengliuella* sp. ISTPL4" in International Conference on Biotechnological Research and Innovation for Sustainable Development (BioSD-2018) to be held in CSIR-IICT, Hyderabad from November 22–25, 2018.
- Poster presentation on "Phycoremediation and potential of biofuel production from *Chlorella* sp. ISTLA1 isolated from landfill soil" in International Conference on "Emerging Trends in Biotechnology for Waste Conversion (ETBWC 2017)" to be held on 8th -10th October 2017, XIV Annual Convention of Biotech Research Society India at CSIR-NEERI, Nagpur.
- Poster presentation in Chlamy meeting (Genes expression and Proteome Dynamics in *Chlamydomonas reinhardtii*) 12-15 Oct, 2007, Freiburg, Germany. "Biochemical characterization of a putative general organellar splicing factor of *Chlamydomonas reinhardtii*"
- Oral and poster presentation on "Biochemical characterization of a novel putative general organellar splicing factor of *Chlamydomonas reinhardti*" in SFB-480 meeting of Molecular function and Botanic system, 28-29 March 2008, Ruhr University Bochum, Germany.
- Poster presentation in "The 13th International Chlamydomonas Conference", 27May-1June, 2008, Hyères-les-Palmiers, France. "Biochemical characterization of a plastidic chaperonin as a putative organellar splicing factor of *Chlamydomonas reinhardtii*".

Detail of patents

S. No	Patent Title	Name of Applicant(s)	Patent No.	Award Date	Agency/Country	Status
1.	A Method and System for Biocontrol of Plant Pathogens Using <i>Zhihengliuella</i> sp. ISTPL4	Neha Sharma, Naveen Chandra Joshi, Arti Mishra	202411034312	April 29, 2024	Hansraj College, University of Delhi, India	Filed
2.	A Microbial Consortium to Mitigate Arsenic Stress in Rice Plants and Preparation Method Thereof	Neha Sharma, Naveen Chandra Joshi, Arti Mishra	202411016496	March 7, 2024	Hansraj College, University of Delhi, India	Filed
3.	Microalgae as a Viable Candidate for Sustainable Biofuel Production"	Khushboo Iqbal, Smitha M. Sreedharan, Arti Mishra	TEMP/E- 1/91730/2024- DEL	November 9, 2024	Hansraj College, University of Delhi, India	Filed