

Curriculum Vitae

Dr. Shailendra Pratap Singh (Ph.D.)

Assistant Professor
Department of Botany (Center for Advanced Study)
Institute of Science
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Current and Previous Employments

2015 to Present

Assistant Professor, Department of Botany, Institute of Science, Banaras Hindu University, Varanasi, India

- Senior Scientist at Reliance Industries Ltd., Navi Mumbai, India
- Postdoctoral Research Associate (Visiting research scientist): Plant Research Laboratory, Plant Biology, Michigan State University, USA.

Educational Qualifications

Ph.D. (2009)

Board/University: Department of Biology, Friedrich-Alexander University, Erlangen-Nuremberg, Germany

Topic: Study on mycosporine-like amino acids in cyanobacteria: A biochemical, bioinformatics and molecular biology approach.

M.Sc. (2004)

Board/University: Department of Botany, Banaras Hindu University, Varanasi, India

Subject: Botany

B.Sc. (2002)

Board/University: Chatrapati Sahu Ji Maharaj Kanpur University, Kanpur, India

Subjects: Zoology, Botany, Chemistry

Teaching Experience

2015 to Present

Involved in teaching UG and PG students at Department of Botany, Institute of Science, Banaras Hindu University. Courses: Botany (B.Sc. and M.Sc.), Applied Microbiology (M.Sc.), Industrial microbiology (B.Sc.)

Academic distinctions and others

- Early Career Research Award by DST-SERB 2016.
- UGC Start-Up Research Grant 2016.
- Exchange Visitor Program Scientist at Michigan State University, USA in 2010.
- Young photobiologist fellowship of 13th ESP conference 2009 in Poland.
- Selected in American Society for Microbiology Kadner Institute Program for Graduate Students and Postdoctoral Scientists in preparation for careers in microbiology 2011.
- National Eligibility Test (NET) conducted by CSIR-UGC, New Delhi for teaching in Indian Universities.

Professional services

- Reviewed manuscript for journals such as Gene, Chemosphere, Environmental Science and Pollution Research, Plant, Cell and Environment, Ecotoxicology and Environmental Safety, Photochemistry and Photobiology, Journal of Photochemistry and Photobiology B: Biology, Water Research, Deep-Sea Research Part II, Frontiers in Environmental Toxicology journal.
- Mentored junior scientists and supervised visiting undergraduate students at Michigan state university, East Lansing, MI, USA.
- Review Editor of Frontiers in Environmental Toxicology.

Memberships

- Former member of European Society for Photobiology.
- Former member of American Society of Microbiology.

Publications

47. V. Kumar, S. Mondal, A. Gupta, P. K. Maurya, R. P. Sinha, D.-P. Häder, **S. P. Singh** (2021) Light-dependent impact of salinity on the ecophysiology of *Synechococcus elongatus* PCC 7942: Genetic and comparative protein structure analyses of UV-absorbing

- mycosporine-like amino acids (MAAs) biosynthesis. **Environmental and Experimental Botany** 191, 104620 **IF: 5.545**.
46. P. K. Maurya, S. Mondal, V. Kumar, S. P. Singh (2021) Roadmap to sustainable carbon-neutral energy and environment: can we cross the barrier of biomass productivity? **Environmental Science and Pollution Research** 28, 49327–49342 **IF: 4.306**
 45. S. Mondal, V. Kumar, **S. P. Singh** (2020) Oxidative stress measurement in different morphological forms of wild-type and mutant cyanobacterial strains: Overcoming the limitation of fluorescence microscope-based method. **Ecotoxicology and Environmental Safety** 200, 110730 **IF: 4.966**
 44. S. Mondal, V. Kumar, **S. P. Singh** (2020) Phylogenetic distribution and structural analyses of cyanobacterial glutaredoxins (Grxs). **Computational Biology and Chemistry** 84, 107-141 **IF: 1.850**
 43. J. Pathaka, A. Pandey, P. Kumar, Rajneesh, R. P. Sinha, **S. P. Singh** (2020) Cyanobacterial Secondary Metabolite Scytonemin: A Potential Photoprotective and Pharmaceutical Compound. **Proceedings of the National Academy of Sciences, India Section B: Biological Sciences** 90, 467 - 481 **IF: 0.396**
 42. J. Pathaka, S. Mondal, H. Ahmed, Rajneesh, **S. P. Singh**, R. P. Sinha, (2019) *In silico* study on interaction between human polo-like kinase 1 and cyanobacterial sheath pigment scytonemin by molecular docking approach. **Biointerface Research in Applied Chemistry** 9 (5), 4374 - 4378 **IF: 0.9**
 41. J. Pathaka, H. Ahmed, Rajneesh, S. P. Singh, D.-P. Häder, R. P. Sinha (2019) Genetic regulation of scytonemin and mycosporine-like amino acids (MAAs) biosynthesis in cyanobacteria. **Plant Gene** 17: 100172 **IF: Not released**
 40. Rajneesh, J. Pathak, D. Srivastava, H. Ahmed, V. Singh, **S.P. Singh**, and R.P. Sinha (2018) Role of photosynthetically active radiation and dark conditions on the repair of ultraviolet-B radiation-induced damages in the cyanobacterium *Nostoc* sp. Strain HKAR-2. **Focus on Sciences** 3(4) doi: 10.21859/focsci-03041466 **IF: NA**
 39. J. Pathak, Rajneesh, P.K. Maurya, **S.P. Singh**, D.-P. Häder, and R.P. Sinha (2018) Cyanobacterial farming for environment friendly sustainable agriculture practices: innovations and perspectives. **Frontiers in Environmental Science** 6(7) doi: 10.3389/fenvs.2018.00007 **IF: 2.749**

38. B.A. Rohnke, **S.P. Singh**, B. Pattanaik, and B.L. Montgomery (2018) RcaE-dependent regulation of carboxysome structural proteins has a central role in environmental determination of carboxysome morphology and abundance in *Fremyella diplosiphon*. **mSphere** 3(1): e00617-17 **IF: 4.280**
37. Rajneesh, J. Pathak, A. Chatterjee, **S.P. Singh**, and R.P. Sinha (2017) Detection of reactive oxygen species (ROS) in cyanobacteria using the oxidant-sensing probe 2,7-Dichlorodihydrofluorescein Diacetate (DCFH-DA). **Bio-Protocol** 7(17): e2545
36. Rajneesh, J. Pathak, V.K. Kannaujiya, **S.P. Singh**, and R.P. Sinha (2017) Codon usage analysis of photolyase encoding genes of cyanobacteria inhabiting diverse habitats. **3 Biotech** 7(192): 2-14. **IF: 2.389**
35. A. Pandey, S. Pandey, Rajneesh, J. Pathak, H. Ahmed, V. Singh S.P. Singh and R.P. Sinha (2017) Mycosporine-like amino acids (MAAs) profile of two marine red macroalgae, *Gelidium* sp. and *Ceramium* sp. **International Journal of Applied Science and Biotechnology** 5(1): 12-21.
34. Rajneesh, **S.P. Singh**, J. Pathak and R.P. Sinha (2017) Cyanobacterial factories for the production of green energy and value-added products: An integrated approach for economic viability. **Renewable and Sustainable Energy Reviews** 69: 578-595. **IF: 12.348**
33. **S.P. Singh**, D.-P. Häder and R.P. Sinha (2016) Requirement of calcium for biosynthesis of shinorine, a mycosporine-like amino acid (MAA) in *Anabaena variabilis* PCC7937. **IJSRM** 2(4): 1-16. **IF: 0.923**
32. **S.P. Singh** and B.L. Montgomery (2015) Regulation of BolA abundance mediates morphogenesis in *Fremyella diplosiphon*. **Frontiers in Microbiology** 6: 1215. 10.3389/fmicb.2015.01215. **IF: 4.235**
31. **S.P. Singh** and B.L. Montgomery (2014) Morphogenes *bolA* and *mreB* mediate the photoregulation of cellular morphology during complementary chromatic acclimation in *Fremyella diplosiphon*. **Molecular Microbiology** 93(1): 167-182. **IF: 3.898**
30. **S.P. Singh**, R.P. Rastogi, R.P. Sinha and D.-P. Häder (2014) Temporal dynamics of ROS biogenesis under simulated solar radiation in the cyanobacterium *Anabaena variabilis* PCC 7937. **Protoplasma** 251: 1223-1230. **IF: 2.772**
29. R.P. Rastogi, **S.P. Singh**, A. Incharoensakdi, D.-P. Häder and R.P. Sinha (2014) Ultraviolet radiation-induced generation of reactive oxygen species, DNA damage and induction of

- UV-absorbing compounds in the cyanobacterium *Rivularia* sp. HKAR-4. **South African Journal of Botany** 90: 163-169. **IF: 2.061**
28. **S.P. Singh**, S. Ha, R.P. Sinha and D.-P. Häder (2014) Photoheterotrophic growth unprecedentedly increases the biosynthesis of mycosporine-like amino acid shinorine in the cyanobacterium *Anabaena* sp., isolated from hot springs of Rajgir (India). **Acta Physiologiae Plantarum** 36: 389-397. **IF: 2.078**
27. **S.P. Singh**, H. Miller and B.L. Montgomery (2013) Temporal dynamics of changes in reactive oxygen species (ROS) levels and cellular morphology are coordinated during complementary chromatic acclimation in *Fremyella diplosiphon*. **Photosynthesis Research** 118: 95-104. **IF: 3.630**
26. K. Walters, M. Whitaker, **S.P. Singh**, B.L. Montgomery (2013) Light intensity and reactive oxygen species are centrally involved in photoregulatory responses during complementary chromatic adaptation in *Fremyella diplosiphon*. **Communicative and Integrative Biology** 6(5): e25005; <http://dx.doi.org>. **IF: 2.310**
25. **S.P. Singh** and B.L. Montgomery (2013) Distinct salt-dependent effects impair *Fremyella diplosiphon* pigmentation and cellular shape. **Plant Signaling and Behavior** 8(7): eLocation ID: e24713. **IF: 1.1**
24. **S.P. Singh** and B.L. Montgomery (2013) Salinity impacts photosynthetic pigmentation and cellular morphology changes by distinct mechanisms in *Fremyella diplosiphon* SF33. **Biochemical and Biophysical Research Communications** 433: 84-89. **IF: 2.985**
23. **S.P. Singh**, R.P. Rastogi, R.P. Sinha and D.-P. Häder (2013) Photosynthetic performance of *Anabaena variabilis* PCC 7937 under simulated solar radiation. **Photosynthetica** 51(2): 259-266. **IF: 2.365**
22. **S.P. Singh** and B.L. Montgomery (2012) Reactive oxygen species are involved in the morphology-determining mechanism of *Fremyella diplosiphon* cells during complementary chromatic adaptation. **Microbiology-SGM** 158: 2235-2245. **IF: 1.922**
21. **S.P. Singh**, D.-P. Häder and R.P. Sinha (2012) Bioinformatics evidence for the transfer of mycosporine-like amino acid core (4-deoxygadusol) synthesizing gene from cyanobacteria to dinoflagellates and an attempt to mutate the same gene (YP_324358) in *Anabaena variabilis* PCC 7937. **Gene** 500: 155-163. **IF: 2.984**

20. **S.P. Singh** and B.L. Montgomery (2011) Temporal study of pigment adaptation to red and green light during complementary chromatic adaptation in a wild-type pigmentation strain and an RcaE-deficient strain of *Fremyella diplosiphon*. **Communicative and Integrative Biology** 4: 503-510. **IF: 2.310**
19. R.P. Rastogi, **S.P. Singh**, D.-P. Häder and R.P. Sinha (2011) Ultraviolet-B-induced DNA damage and photorepair in the cyanobacterium *Anabaena variabilis* PCC 7937. **Environmental and Experimental Botany** 74: 280-288. **IF: 4.744**
18. **S.P. Singh** and B.L. Montgomery (2011) Determining cell shape: adaptive regulation of cyanobacterial cellular differentiation and morphology. **Trends in Microbiology-Cell** 19: 278-285. **IF: 13.546**
17. **S.P. Singh**, R.P. Rastogi, D.-P. Häder and R.P. Sinha (2011) An improved method for genomic DNA extraction from cyanobacteria. **World Journal of Microbiology and Biotechnology** 27: 1225-1230. **IF: 2.518**
16. R.P. Rastogi, **S.P. Singh**, D.-P. Häder and R.P. Sinha (2010) Detection of reactive oxygen species (ROS) by the oxidant-sensing probe 2',7'-dichlorodihydrofluorescein diacetate in the cyanobacterium *Anabaena variabilis* PCC 7937. **Biochemical and Biophysical Research Communications** 397: 603-607. **IF: 2.985**
15. R.P. Rastogi, Richa, **S.P. Singh**, D.-P. Häder and R.P. Sinha (2010) Mycosporine-like amino acids (MAAs) profile and their activity under PAR and UVR in a hot spring cyanobacterium *Scytonema* sp. HKAR-3. **Australian Journal of Botany** 58: 286-293. **IF: 1.39**
14. R.P. Rastogi, Richa, R.P. Sinha, **S.P. Singh** and D.-P. Häder (2010) Photoprotective compounds from marine organisms. **Journal of Industrial Microbiology and Biotechnology** 37: 537-558. **IF: 3.069**
13. **S.P. Singh**, M. Klisch, R.P. Sinha and D.-P. Häder (2010) Sulfur deficiency changes mycosporine-like amino acids (MAAs) composition of *Anabaena variabilis* PCC 7937: A possible role of sulfur in MAAs bioconversion. **Photochemistry and Photobiology** 86: 862-870. **IF: 2.721**
12. **S.P. Singh**, S. Kumari, R.P. Rastogi, K.L. Singh, Richa and R.P. Sinha (2010) Photoprotective and biotechnological potentials of cyanobacterial sheath pigment, scytonemin. **African Journal of Biotechnology** 9(5): 580-588.

11. **S.P. Singh**, M. Klisch, R.P. Sinha and D.-P. Häder (2010) Genome mining of mycosporine-like amino acid (MAA) synthesizing and non-synthesizing cyanobacteria: A bioinformatics study. **Genomics** 95: 120-128. **IF: 6.205**
10. **S.P. Singh**, D.-P. Häder and R.P. Sinha (2010) Cyanobacteria and ultraviolet radiation (UVR) stress: mitigation strategies. **Ageing Research Reviews** 9: 79-90. **IF: 10.616**
9. **S.P. Singh**, R.P. Sinha, V. Daiker and D.-P. Häder (2010) Quantitative and qualitative extraction of RNA from a filamentous cyanobacterium *Anabaena variabilis* PCC 7937. **Journal of Applied Phycology** 22: 113-116. **IF: 3.217**
8. R.P. Sinha, **S.P. Singh** and D.-P. Häder (2008) Effects of UV-B radiation on phytoplankton and macroalgae: Adaptation strategies. **Proceedings of the National Academy of Sciences, India Section B**. 78: 105-116. **IF: 0.396**
7. **S.P. Singh**, R.P. Sinha, M. Klisch and D.-P. Häder (2008) Mycosporine-like amino acids (MAAs) profile of a rice-field cyanobacterium *Anabaena doliolum* as influenced by PAR and UVR. **Planta** 229: 225-233. **IF: 3.687**
6. **S.P. Singh**, M. Klisch, R.P. Sinha and D.-P. Häder (2008) Effects of abiotic stressors on synthesis of the mycosporine-like amino acid shinorine in the cyanobacterium *Anabaena variabilis* PCC 7937. **Photochemistry and Photobiology** 84: 1500-1505. **IF: 2.721**
5. **S.P. Singh**, M. Klisch, D.-P. Häder and R.P. Sinha (2008) Role of various growth media on shinorine (mycosporine-like amino acid) concentration and photosynthetic yield in *Anabaena variabilis* PCC 7937. **World Journal of Microbiology and Biotechnology** 24: 3111-3115. **IF: 2.518**
4. **S.P. Singh**, S. Kumari, R.P. Rastogi, K.L. Singh and R.P. Sinha (2008) Mycosporine-like amino acids (MAAs): Chemical structure, biosynthesis and significance as UV-absorbing/screening compounds. **Indian Journal of Experimental Biology** 46: 7-17. **IF: 0.783**
3. S. Kumari, R.P. Rastogi, K.L. Singh, **S.P. Singh** and R.P. Sinha (2008) DNA damage: detection strategies. **EXCLI J.** 7: 44-62. **IF: 2.010**
2. R.P. Sinha, **S.P. Singh** and D.-P. Häder (2007) Database on mycosporines and mycosporine-like amino acids (MAAs) in fungi, cyanobacteria, macroalgae, phytoplankton and animals. **Journal of Photochemistry and Photobiology B: Biology** 89: 29-35. **IF: 4.383**

1. R.P. Sinha, G. Keshari, S. Kumari, **S.P. Singh**, R.P. Rastogi and K.L. Singh (2006) Screening of mycosporine-like amino acids (MAAs) in cyanobacteria. **Modern Journal of Life Sciences** 5: 1-6.

Book chapters

14. **S.P. Singh** and R.P. Sinha (2020) Marine Photosynthetic Microorganisms: Valuable Compound Production and Bioenergy Applications. In: Encyclopedia of Marine Biotechnology (Ed. Se-Kwon Kim). John Wiley & Sons, Inc., 111 River Street, Hoboken, NJ 07030, USA. pp. 2229-2245. ISBN: 9781119143772
13. J. Pathak, Rajneesh, H. Ahmed, D. K. Singh, P. R. Singh, D. Kumar, V. K. Kannaujiya, **S. P. Singh** and R. P. Sinha (2019) Oxidative stress and antioxidant defense in plants exposed to ultraviolet radiation. In: Reactive oxygen, nitrogen and sulfur species in plants (Eds. M. Hasanuzzaman, V. Fotopoulos, K. Nahar, and M. Fujita). John Wiley & Sons, Inc., 111 River Street, Hoboken, NJ 07030, USA. pp. 371-420. ISBN: 978-1-11-946864-6
12. V. Kumar, P. K. Maurya, S. Mondal, R. P. Sinha and **S. P. Singh** (2019) Photomorphogenesis in the cyanobacterium *Fremyella diplosiphon* improves photosynthetic efficiency. In: Cyanobacteria: From basic science to applications (Eds. A. K. Mishra, D. N. Tiwari and A. N. Rai). Academic Press, Elsevier Inc. San Diego, CA, 92101 USA. pp. 131-143. ISBN: 978-0-12-814667-5
11. J. Pathak, H. Ahmed, P. R. Singh, **S.P. Singh**, D.-P. Häder and R.P. Sinha (2019) Mechanisms of photoprotection in cyanobacteria. In: Cyanobacteria: From basic science to applications (Eds. A. K. Mishra, D. N. Tiwari and A. N. Rai). Academic Press, Elsevier Inc. San Diego, CA, 92101 USA. pp. 145-171. ISBN: 978-0-12-814667-5
- 10.. J. Pathak, Rajneesh, H. Ahmed, D.K. Singh, A. pandey, **S.P. Singh** and R.P. Sinha (2019) Recent developments in green synthesis of metal nanoparticles utilizing cyanobacterial cell factories. In: Nanomaterials in Plants Algae and Micro-Organisms: Concepts and Controversies: Vol. 2 (Eds. D.K. Tripathi, P. Ahmad, S. Sharma, D.K. Chauhan, N.K. Dubey). Elsevier Inc. San Diego, CA 92101L4495, USA. pp. 237-265. ISBN: 978-0-12-811488-9
9. J. Pathak, H. Ahmed, Rajneesh, **S.P. Singh**, D.P. Häder and R.P. Sinha (2018) Effects of global climate change on cyanobacteria. In: Aquatic ecosystems in a changing climate

(Eds. D.-P. Häder and K. Gao) CRC Press, Taylor and Francis Group. pp. 45-61 ISBN: 1138350052, 9781138350052

8. A. Pandey, H. Ahmed, D.K. Singh, V. Singh, D. Kumar, Rajneesh, J. Pathak, **S.P. Singh** and R.P. Sinha (2018) The impact of UV-B radiation on the enzymes of nitrogen metabolism in cyanobacteria. In: Trends in Life Science Research (Eds. R.P. Sinha and U.P. Shrivastava). Nova Science Publishers, Inc., New York, USA, pp. 243-287. ISBN: 978-1-53613-241-0
7. Rajneesh, A. Chatterjee, J. Pathak, H. Ahmed, V. Singh, D.K. Singh, A. Pandey, **S.P. Singh**, Richa, D.-P. Häder and R.P. Sinha (2018) Ultraviolet radiation-induced DNA damage and mechanisms of repair in cyanobacteria: An overview. In: Trends in Life Science Research (Eds. R.P. Sinha and U.P. Shrivastava). Nova Science Publishers, Inc., New York, USA, pp. 169-218. ISBN: 978-1-53613-241-0
6. J. Pathak, Rajneesh, V. Singh, D. Kumar, H. Ahmed, D.K. Singh, V.K. Kannaujiya, Richa, **S.P. Singh** and R.P. Sinha (2018) Enzymatic and non-enzymatic protection strategies of cyanobacteria against ultraviolet radiation. In: Trends in Life Science Research (Eds. R.P. Sinha and U.P. Shrivastava). Nova Science Publishers, Inc., New York, USA, pp. 1-28. ISBN: 978-1-53613-241-0
5. Rajneesh, J. Pathak, V. Singh, D. Kumar, **S.P. Singh** and R.P. Sinha (2018) DNA in Nanotechnology: Approaches and Developments. In: Nanomaterials in Plants Algae and Micro-Organisms: Concepts and Controversies: Vol. 1 (Eds. D.K. Tripathi, P. Ahmad, S. Sharma, D.K. Chauhan, N.K. Dubey). Elsevier Inc. San Diego, CA 92101L4495, USA, pp. 79-102. ISBN: 978-0-12-811487-2
4. J. Pathak, Rajneesh, A. Pandey, **S.P. Singh** and R.P. Sinha (2016) World agriculture and impact of biotechnology. In: Current developments and biotechnology and bioengineering: crop modification, nutrition and food production (Eds. S.K. Dubey, A. Pandey and R.S. Sangwan). Elsevier, pp. 1-22. ISBN: 978-0-444-63661-4
3. J. Faddoul, **S.P. Singh**, A. Azizullah, A. Nasir, R. Richter, P.R. Richter, D.-P. Häder and M. Lebert (2015) Long-term stability of mycosporine-like amino acid-producing cyanobacteria isolated in Syria. In: **Biological Sciences Innovations and Dynamics** (Eds. R.P. Sinha, Richa and R.P. Rastogi). New India Publishing Agency, New Delhi, India, pp. 35-46. ISBN 9789383305872

2. **S.P. Singh**, D.-P. Häder and R.P. Sinha (2011) Methods for DNA transfer in filamentous cyanobacteria and strategy to overcome restriction by host-encoded endonucleases. In: **Advances in Life Sciences** (Eds. R.P. Sinha, N.K. Sharma and A.K. Rai). I.K. International Publishing House Pvt. Ltd., New Delhi, India, pp. 265-274.
1. S. Kumari, R.P. Rastogi, K.L. Singh, Richa, **S.P. Singh**, D.-P. Häder and R.P. Sinha (2010) UV-screening/absorbing mycosporine-like amino acids (MAAs) profile in cyanobacteria from diverse habitats. In: **Treatise on Photophysiology** (Eds. C. Haldar and P. Basu). Imagination: Editors and Printors, Varanasi, India, pp. 207-220.

Abstracts communications (Poster/Oral presentation)

- 1- S. Mondal, V. Kumar, P.K. Maury and **S.P. Singh** (2019) Morphogenesis in cyanobacteria: Mechanistic insight of maximizing the fitness. In: 60th Annual Conference of Association of Microbiologists of India and International Symposium on Microbial Technologies in Sustainable Development of Energy, Environment, Agriculture and Health held on 15th – 18th November 2019, Central University of Haryana, Mahendergarh pp. 363 – 364. **(Oral presentation)**
- 2- **S.P. Singh** (2018) Mechanistic insight of photomorphogenesis in the cyanobacterium *Fremyella diplosiphon*. In: Plant Responses to Light and Stress: emerging issues in climate change held on 10th – 12th October 2018, ICGEB, New Delhi pp. 25. **(Oral Presentation)**
- 3- S. Monal and **S.P. Singh** (2018) Distributional and structural study of cyanobacterial glutaredoxins and expression pattern of their coding genes under different abiotic factors. In: Plant Responses to Light and Stress: emerging issues in climate change held on 10th – 12th October 2018, ICGEB, New Delhi pp. 78.
- 4- Rajneesh, S. Mondal, **S.P. Singh** and R.P. Sinha (2018) In silico structural study of different types of Photolyase in Cyanobacteria. In: 3rd IABS 2018: An interdisciplinary approach to Biological sciences held on 1st – 3rd February 2018, Indian Association for the Cultivation of Science, Kolkata pp. 99.
- 5- S. Mondal, V. Kumar and **S.P. Singh** (2018) Sequence and Structural Analysis of Redox-Controlling CGFS-type Monothiol Glutaredoxins. In: National Symposium on Advance in

- Biology of Algae and Cyanobacteria held on 8th – 9th February 2018, Department of Botany (CAS), Institute of Science, Banaras Hindu University pp. 64.
- 6- P.K. Maurya, V. Kumar, S. Mondal and **S.P. Singh** (2018) Photosynthetic microorganisms: A promising candidate for biofuel production. In: National Symposium on Advance in Biology of Algae and Cyanobacteria held on 8th – 9th February 2018, Department of Botany (CAS), Institute of Science, Banaras Hindu University pp. 56.
- 7- J. Pathak, Rajneesh, V. Singh, D. Kumar, H. Ahmed, D.K. Singh, A. Pandey, V.K. Kannaujiya, **S.P. Singh** and R.P. Sinha (2018) Induction and biosynthesis of scytonemin and microsporine like amino acids in the cyanobacteria *Scytonema geitleri* HKAR-12 and *Nostoc* sp strain HKAR-2. In: National Symposium on Advance in Biology of Algae and Cyanobacteria held on 8th – 9th February 2018, Department of Botany (CAS), Institute of Science, Banaras Hindu University pp. 57.
- 8- Rajneesh, J. Pathak, V. Singh, D. Kumar, H. Ahmed, D.K. Singh, A. Pandey, **S.P. Singh** and R.P. Sinha (2018) UV-induced damage and recovery processes in cyanobacteria *Nostoc* sp. strain HKAR-2 and *Fischerella* sp. strain HKAR-13 under different light regimes. In: National Symposium on Advance in Biology of Algae and Cyanobacteria held on 8th – 9th February 2018, Department of Botany (CAS), Institute of Science, Banaras Hindu University pp. 59.
- 9- S. Mondal, V. Kumar and **S.P. Singh** (2018) Distribution and structural study of glutaredoxins in cyanobacteria. In: International conference on Trends in Biochemical and Biomedical Research held on 13th – 15th February 2018, Department of Biochemistry, Institute of Science, Banaras Hindu University pp.195.
- 10- J. Pathak, Rajneesh, V. Singh, D. Kumar, H. Ahmed, D.K. Singh, A. Pandey, V.K. Kannaujiya, **S.P. Singh** and R.P. Sinha (2018) Cumulative effects of photosynthetically active radiation, ultraviolet radiation and salt stress on reactive oxygen species generation and antioxidative enzymes activity in cyanobacteria inhabiting diverse habitats. In: International conference on Trends in Biochemical and Biomedical Research held on 13th – 15th February 2018, Department of Biochemistry, Institute of Science, Banaras Hindu University pp.132.
- 11- P.K. Maurya, Rajneesh, S. Mondal, V. Kumar and **S.P. Singh** (2018) Detection of Reactive Oxygen Species (ROS) in cyanobacteria using fluorescence microscopy and fluorescence

- spectroscopy. In: International conference on Trends in Biochemical and Biomedical Research held on 13th – 15th February 2018, Department of Biochemistry, Institute of Science, Banaras Hindu University pp.156.
- 12- Rajneesh, S. Mondal, J. Pathak, H. Ahmed, D.K. Singh, A. Pandey, **S.P. Singh** and R.P. Sinha (2018) In-silico distributional study of photolyases genes in Cyanobacteria. In: International conference on Trends in Biochemical and Biomedical Research held on 13th – 15th February 2018, Department of Biochemistry, Institute of Science, Banaras Hindu University pp.167.
- 13- S. Mondal, V. Kumar, P.K. Maurya and **S.P. Singh** (2018) Study of distribution of different types of Glutaredoxins in Cyanobacteria. In: Biosangam-2018, an international conference on Innovations and Translational Dimensions: Food, Health and Environmental Biotechnology, Department of Biotechnology MNNIT, Allahabad held on 9th – 11th march, pp. 91.
- 14- Rajneesh, S. Mondal, J. Pathak, V. Singh, D. Kumar, **S.P. Singh** and R.P. Sinha (2018) Protein-ligand interaction studies of cyanobacterial photolyase: A computational approach. In: Biosangam-2018, an international conference on Innovations and Translational Dimensions: Food, Health and Environmental Biotechnology, Department of Biotechnology MNNIT, Allahabad held on 9th – 11th march, pp. 92.
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