Dr. Shreenivas Kumar Singh (DOB 19-02-1990)

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Professional Summary

Hardworking researcher with a keen observation and passionate about teaching to bridge the gap between academic and research filed. Ability to design and execute long term molecular biology research in laboratory. Experienced in scientific writing with excellence in presentation.

Education

YEAR	QUALIFICATION	UNIVERSITY/INSTITUTION	PERCENTAGE
2014-13th April 2021	PhD (Plant Microbe Interaction)	National Institute of Plant Genome Research (https://nipgr.ac.in)	
2010-2012	M.Sc. Biotechnology	Vellore Institute of Technology (https://vit.ac.in/)	77
2007-2010	B.Sc. Biotech	Lovely Professional University (https://www.lpu.in/)	72.9
2007	Intermediate (+2)	Sradhanand Bal Mandir Ranchi, Jharkhand	53
2005	Matriculation (10th)	Sidho Kanhu High School Ranchi, Jharkhand	71

Scholastic achievement

S.No	Name of Fellowship	Year	Registration/Roll No.	Ranking
1	CSIR JRF-NET	Dec. 2013	330513	46
2	DBT JRF	2014	105140	Group A
3	ASRB NET	2014	1200100250	

Gold Medal for best presentation in annual student interaction symposium ‘SciEfflux’ at National Institute of Plant Genome Research

Publication

- Manisha Sinha, Ankita Shree, Kunal Singh, Kamal Kumar, **Shreenivas Kumar Singh**, Vimlesh Kumar, Praveen Kumar Verma (2021). Modulation of fungal virulence through CRZ1 regulated F-BAR-dependent actin remodeling and endocytosis in chickpea infecting phytopathogen *Ascochyta rabiei.* Plos Genetics. https://doi.org/10.1371/journal.pgen.1009137
- Maurya, R., Singh, Y., Sinha, M., Singh, K., Mishra, P., **Singh, S.K**., Verma, S., Prabha, K., Kumar, K., and Verma, P.K. (2020). Transcript profiling reveals potential regulators for oxidative stress response of a necrotrophic chickpea pathogen *Ascochyta rabiei*. 3 Biotech. https://doi.org/10.1007/s13205-020-2107-8
- **Shreenivas Kumar Singh**, Sandhya Verma, Kunal Singh, Ankita Shree, Ritu Singh, Vikas Srivastava, Kamal Kumar, Ashutosh Pandey, Praveen Verma (2021). The nuclear effector ArPEC25 from the necrotrophic fungus Ascochyta rabiei targets the chickpea transcription factor CaβLIM1a and negatively modulates lignin biosynthesis for host susceptibility. https://doi.org/10.1101/2021.09.02.458738
- **S.K. Singh,** S. Verma, P.K. Verma (2017). Genetically engineered crops against bacterial and fungal diseases: a war of attrition. Elsevier (Book chapter).

Research Expertise

Pathogen related- Handling of pathogenic fungal strain *Ascochyta rabie*, *Bipolaris sorokiniana* and *Piriformospora indica.* PEG mediated genome editing, Agrobacterium tumefaciens mediated transformation (ATMT) of *A. rabiei* for gene overexpression and localization and RNAi based gene silencing.

Genomics related- PCR technique, gene cloning (restriction digestion, blunt end cloning, Gateway based cloning), DNA and RNA purification from plant and fungal tissues.

Yeast strain- Expertise in handling yeast strains and molecular work like Yeast-2-Hybrid, Yeast-3-Hybrid, Yeast-1-Hybrid.

Proteomics work- Protein expression and purification, western blot, Size exclusion chromatography, Pull-Down assay, Electrophoretic mobility shift assay.

Gene localization work- Agrobacterium transformation, transient expression in *Nicotiana benthamiana*, Bimolecular fluorescence complementation (Bi-FC) Dual-Luciferase assay, FRET (for in vivo protein-protein interaction) and Confocal laser scanning microscopy.

References

Prof. Praveen Verma (PhD Supervisor)

Director, Research and Development, JNU
Professor of Cell and Molecular Biology, School of Life Sciences
Concurrent Faculty, School of Sanskrit & Indic Studies (Ayurveda Biology)
Jawaharlal Nehru University, New Delhi-110067, India,

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Dr. Ashutosh Pandey

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Dr. Vikas Srivastava

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