Dr. Harisingh Gour Vishwavidyalaya
(A Central University)

Title	Dr.	First/ Middle Name	Archita	Last Name	Singh	Photograph

Designation	**Assistant Professor**
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EDUCATIONAL PROFILE

Degree	Institution	Year	Remarks
B. Sc.	**Banaras Hindu University, Varanasi**	2004	Ist Division
M. Sc.	**Banaras Hindu University, Varanasi**	2006	Ist Division
Ph. D.	**Jawaharlal Nehru University, New Delhi**	2017	8.0 CGPA

CAREER PROFILE

Organization / Institution	Designation	Duration	Role
School of Life Sciences, Jawaharlal Nehru University, New Delhi	Research Associate	March 2024-Nov 2024	Research
School of Life Sciences, Jawaharlal Nehru University, New Delhi	CSIR-SRA (Scientist`s Pool)	Jan 2021-Jan 2024	Research

National Institute for Plant Biotechnology, New Delhi	National Post Doctoral Fellow (N-PDF)	Jul 2018-Jan 2021	Research
National Institute for Plant Biotechnology, New Delhi	DBT-RA	Jul 2017- June 2018	Research
National Institute for Plant Genome Research, New Delhi	Research Associate	May 2017- June 2017	Research

Areas of Interest / Specialization

Plant Molecular Biology, Plant Biotechnology, Small RNAs and their role in Plant Development and Stress Biology, Cyanobacterial Biotechnology, Transgenic Plants, Omics study

Publications

1. Mishra V, **Singh A*** , Gandhi N, Das SS, Yadav S, Kumar A and Sarkar AK. 2022. A unique miR775-GALT9 module regulates leaf senescence in Arabidopsis during post- submergence recovery by modulating ethylene and the abscisic acid pathway. ***Development*** **(*Equally Contributed**) 149(4), doi: 10.1242/dev.199974, PMID: 35029672, **IF=5.0**. Q2.

2. Gautam V, **Singh A**, Yadav S, Singh S, Kumar P, Sarkar Das S, Sarkar AK. 2021. Conserved LBL1-ta-siRNA and miR165/166-RLD1/2 modules regulate root development in maize. ***Development***. 148(1), doi: 10.1242/dev.190033, PMID: 33168582. **IF=5.0**. Q2.

3. **Singh A**, Singh S, Panigrahi KC, Reski R and Sarkar AK. 2014. Balanced activity of microRNA166/165 and its target transcripts from the class III homeodomain leucine- zipper family regulates root growth in *Arabidopsis thaliana*. ***Plant Cell Reports.*** Jun;33(6):945-53. doi: 10.1007/s00299-014-1573-z, PMID: 24504657. **IF=5.3**. Q1.

4. Singh S, Singh A, **Singh A***, Mahima, Yadav S, Bajaj I, Kumar S, Jain A, and Sarkar AK. 2019. Role of chromatin modifiers in stem cell regulation and meristem maintenance in Arabidopsis. ***J Exp Bot***. (***Equally Contributed**). 14:7:42450. doi: 10.1038/srep42450, PMID: 31793642. **IF=5.9**. Q1.

5. Singh S, Yadav S, Singh A, Mahima, **Singh A**, Gautam V, Sarkar AK. 2019. Auxin signaling modulates LATERAL ROOT PRIMORDIUM1 (LRP1) expression during lateral root development in Arabidopsis. ***The Plant Journal***. 101(1):87-100, doi: 10.1111/tpj.14520, PMID: 31483536. **IF=6.1.** Q1.

6. Yadav S, Yugandhar P, Alavilli H, Raliya R, **Singh A**, Sahi SV, Sarkar AK, Jain A. 2022. Potassium Chloroaurate-Mediated In Vitro Synthesis of Gold Nanoparticles Improved Root Growth by Crosstalk with Sucrose and Nutrient-Dependent Auxin Homeostasis in Arabidopsis thaliana. ***Nanomaterials***. Jun 18;12(12):2099. doi: 10.3390/nano12122099. PMID: 35745438 **IF=5.3.** Q1.

7. **Singh A**, Roy S, Singh S, Das SS, GautamV, Kumar A, Yadav S, Singh A, Samantha S, Sarkar AK. 2017. A hormonal crosstalk regulates root growth in Arabidopsis by modulating expression of miR166/5s, target *Class III HD-ZIPs* and *KANADI* genes. ***Scientific Reports*** 2017, **IF=4.2**. Q1.

8. **Singh A**, Gautam V, Singh S, Das SS, Yadav S, Mishra V, Sarkar AK. 2018. Plant small RNAs: Advancement in the understanding of biogenesis and role in plant development. ***Planta*** 2018. **IF= 3.0.**

9. **Singh A**, Gandhi N, Mishra V, Yadav S, Rai V, and Sarkar AK*. Role of abiotic stress responsive miRNAs in Arabidopsis root development. ***J. Plant Biochem. Biotechnol.*** 2020 Sep 10. **IF=1.2.**

10. Gautam V, **Singh A**, Singh S, Verma S and Sarkar AK. Improved method of RNA isolation from laser capture microdissection (LCM) derived- plant tissues. ***Methods in Molecular Biology*, Springer.**

11. Singh S, **Singh A**, Yadav S, Gautam V, Singh A, Sarkar AK. 2017. Sirtinol, a Sir2 protein inhibitor, affects stem cell maintenance and root development in Arabidopsis thaliana by modulating auxin-cytokinin signaling components. ***Scientific Reports*** 7, 42450, doi: 10.1038/srep42450, **IF=4.2**. Q1.

12. Gautam V, **Singh A***, Verma S, Kumar A, Kumar P, Mahima M, Singh S, Mishra V, and Sarkar AK. Role of miRNAs in root development of model plant Arabidopsis thaliana. ***Indian J Plant Physiol.*** DOI :10.1007/s40502-017-0334-8.(*Equally contributed).

13. Sarkar Das S, Yadav S, **Singh A**, Gautam V, Sarkar AK, Nandi AK, Karmakar P, Majee M and Sanan-Mishra N (2018) Expression dynamics of miRNAs and their targets in seed germination conditions reveals miRNA-ta-siRNA crosstalk as regulator of seed germination. ***Scientific Reports*** 8: 1233. **IF=4.2**. Q1

14. Gautam V, **Singh A**, Singh S, Sarkar AK. 2016. An Ef cient LCM-Based Method for Tissue Speci c Expression Analysis of Genes and miRNAs. ***Scientific Reports*** 6, 21577, doi: 10.1038/srep21577, **IF=4.2.** Q1.

15. Barik S, Kumar A, Sarkar Das S, Yadav S, Gautam V, **Singh A**, Singh S, Sarkar AK. 2015. Coevolution Pattern and Functional Conservation or Divergence of miR167s and their targets across Diverse Plant Species. ***Scientific Reports*** 5, 14611, doi: 10.1038/srep14611, **IF=4.2.** Q1.

16. Barik S, SarkarDas S, **Singh A**, Gautam V, Kumar P, Majee M, Sarkar AK. 2014. Phylogenetic analysis reveals conservation and diversi cation of microRNA166 genes among diverse plant species. ***Genomics*** 103, 114-121, doi: 10.1016/j.ygeno.2013.11.004, **IF=3.3.** Q2.

17. Singh S, **Singh A***, Roy S and Sarkar AK. SWP1 negatively regulates lateral root initiation and elongation in Arabidopsis. ***Plant Signal Behav.*** 2012 Dec;7(12):1522-5. doi: 10.4161/psb.2209 (***Equally Contributed**). **IF=2.8.** Q2.

18. Gautam V, **Singh A**, Verma S, Singh S, Chatterjee S, Sarkar AK. 2019. Whole mount in situ localization of miRNAs and target mRNA transcripts in plants. ***3 Biotech*** 9:193. doi.org/10.1007/s13205-019-1704-x. **IF=2.6.** Q2.

Research Projects (Major Grants/Research Collaboration)

Completed a project as N-PDF fellow.
Funding Agency: Scientific Engineering and Research Board
Project Duration: 30 Months

Awards

- CSIR-NET JRF (2009)
- GATE (2008)
- ICMR-JRF (2007)
- DBT-RA
- N-PDF Fellowship (Funded by SERB) (2018)
- CSIR-SRA (Scientist`s Pool) (2021)
- Awarded for Best poster award under **young scientist category** in ICPDB-2017 held at NISER, Bhubneswer.

Conferences/Workshops

- Oral presentation in the Arabidopsis conference (2016) at IISER-Mohali, India.
- "Participation in the International Biological Engineering Meeting" 2017 held at New Delhi, India.
- "Participation in the 11th International Symposium of Rice Functional Genomics Meeting" 22-23 November 2013 held at New Delhi, India.
- Workshop on Hands on training in Microarray Data Analysis, BCS-In Silico Biology at Lucknow.
- Poster presentation under young scientist category in ICPDB-2017 held at NISER, Bhubneswer.
- Poster Presentation in "Vistas in Life Sciences 2024, An International Conference Celebrating the Golden Jubilee of the School of Life Sciences", JNU, India, 21-24 Jan, 2024.