

SHEFALI SINGH

Designation - Assistant Professor, Botany,

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Areas of Interest/Field of Specialization

- Plant Cytogenetics, Cell Biology and Chromosomal studies and Application of Induced Mutagenesis *via* utilization of physical and chemical mutagens, Stress biology
- Induced auto-polyloidization and its utilization in agriculture interests.

Educational Qualifications	Institute/Board	Year.
X and XII	CBSE Board	2007 & 2009 resp.
UG	University of Allahabad	2012
PG	University of Allahabad	2014
CSIR/NET	Life Sciences	2016
CSIR-UGC JRF	Life Sciences	2017
PhD	University of Allahabad	2020
Title of Thesis- Induced Mutagenesis in <i>Cyamopsis tetragonoloba</i> L. with special reference to Environmental stresses		

Research Publications

1. G. Kumar and **Shefali Singh**. 2016. Ameliorating responses of bio fertilizers over fertilizers in root meristems of barley (*Hordeum vulgare* L.) Vol. 11(2): 37-4. (Published in Chromosome Botany).
2. Girjesh Kumar and **Shefali Singh**. 2017. Genotoxic effects of Food Dyes on mitotic chromosomal entity in root meristems of Cluster bean (*Cyamopsis tetragonoloba* (L.) Taub.) Vol. 12(13). (Published in International Journal of ChemTech Research).
3. Girjesh Kumar and **Shefali Singh**. 2018. Nuclear polymorphism induced genomic instability in Cluster bean [*Cyamopsis tetragonoloba* (L.) Taub.] (Fabaceae). Vol. 83(2): 137-141. (Published in Cytologia).
4. Girjesh Kumar and **Shefali Singh**. 2018. Enigmatic phenomenon of secondary association among bivalents in Cluster bean (*Cyamopsis tetragonoloba* (L.) Taub.) Vol. 52(6): 478-483. (Published in Cytology and Genetics).
5. Girjesh Kumar and **Shefali Singh**. 2019. Effect of temperature constraints on

morphological and cytogenetical attributes in Cluster bean [*Cyamopsis tetragonoloba* (L.) Taub. Vol. 12(2):229-235. (Published in Jordan Journal of Biological Sciences).

6. Girjesh Kumar, **Shefali Singh** and Radha Mishra. 2020. Impact of gamma irradiation on morphology and mitosis in cluster bean [*Cyamopsis tetragonoloba* (L.) Taub.]. Vol. 22(2)123-130 (Published in Applied Biological research).
7. Girjesh Kumar and Shefali Singh. 2020. Induced cytotoxic crosstalk behaviour among micro-meioocytes of cluster bean [*Cyamopsis tetragonoloba* (L.) Taub.]: Reasons and repercussions. Vol. 73(2), 111-119. (Published in Caryologia).

Book chapters published

1. Harshita Dwivedi, **Shefali Singh** and Girjesh Kumar. Utilization of Induced Mutagenesis in Inciting Tolerance to Abiotic Stresses.
2. Harshita Dwivedi, **Shefali Singh** and Girjesh Kumar. 2020. An Effective reclamation strategy of Fly ash via its utilization in arable lands. ISBN 078-81-923535-7-9. *Three major dimensions of life: Environment, Agriculture and Health*, 285-291.
3. Girjesh Kumar, **Shefali Singh**, Rajani Singh and Radha Mishra. 2021. Role of Physical Agents in Inducing Genotoxicity and Oxidative Stress in Plants. *In book: Induced Genotoxicity and Oxidative Stress in Plant*, 65-102, **Published by Springer**. DOI: 10.1007/978-981-16-2074-4_3.

Seminars and Conferences/ Workshops attended

1. Poster presentation at 85th Annual Session of National Academy of Sciences, KIIT University, Bhubaneswar, 6th-8th December, 2015.
2. One-Week National Workshop organized by Society of Biological Sciences and Rural Development, Allahabad (U.P.) 13th-20th, December, 2015.
3. Oral presentation was presented at XXXIX All India Conference of Indian Botanical Society, from 21-23 October, 2016, organized at Ranchi University on “Impact of Temperature Stress on Cyto-Morphological and Physico-chemical Aspects in Guar”.
4. Oral presentation was presented at National Symposium on Natural Resource Management for Sustainable Agriculture and Rural Development, from 5 & 6 November 2016 Organised by Society of Biological Sciences & Rural Development on paper entitled “Hormetic responses of Fly Ash in meiotic lines of Guar (*Cyamopsis tetragonoloba* (L.) Taub.)”.
5. One week Self Financed Short Term Course on “Research methodologies, Data analysis and Stress tolerance in Plants” was attended between 21st -27th January, 2017 at MNNIT, Allahabad.
6. Oral presentation on the topic “Cytogenetical impact of Gamma irradiation on root meristems in Guar” was presented at International Conference on Biological Sciences

and Bio-Statistics (Current Scenario and Prospects) that was held from 9-10 March, 2017 at Rajarshi Tandon Open University.

7. Two week International workshop on ‘Genomics, Personalized Medicine and Ethics’ was attended at MNNIT, Allahabad from 31st July to 11th August 2017, organized by Global Initiative for Academic Network (GIAN).
8. Research work entitled ‘Effects of heavy metals on somatic cells in Cluster bean [*Cyamopsis tetragonoloba* (L.) Taub.]’ was presented *via* poster presentation at “National Symposium on Nutritional Security, Environmental protection: Present Scenario and Future Prospects” organized by Society of Biological Sciences for Rural Development from 10-11 November, 2017.
9. Research work entitled ‘Assessment of Gamma ray irradiation on Cytomorphological aspects in Cluster bean [*Cyamopsis tetragonoloba* (L.) Taub.]’ was presented at Allahabad chapter of Indian Science Congress, on the topic “Reaching the unreached through Science and Technology” from 24-25 February 2018.
10. Research work entitled ‘Gamma rays induced cytotoxic behaviour among pollen mother cells in *Cyamopsis tetragonoloba* (L.) Taub.’ was presented at Biosangam-2018, which was organized by MNNIT Allahabad from 9-11 March 2018.
11. Research work entitled ‘Impact of Gibberillic acid for Cytogenetical and morphological attributes in Cluster bean’ was presented at 106th Indian Science Congress *via* poster presentation from 3-7 January, 2019.
12. Research work entitled ‘Effect of EMS on microsporogenic cell system and biochemical characteristics in *Cyamopsis tetragonoloba* (L.) Taub’ was presented at Global Conference on Our Biodiversity, Our Food and our Health *via* oral presentation from 20-22 May, 2019.

Achievements/ Awards conferred

1. Secured third position in **order of merit** in MSc. Botany (2012-2014) at University of Allahabad.
2. **Nasi-Springer Best Poster Presentation** award was conferred at the annual National Academic Sciences India (NASI) conference in 2015.
3. Got the **Certificate Of Merit** award at 39th Indian Botanical Society (IBS) meet .
4. **Best Poster Presentation** award was conferred at the conference organized by Society Of Biological Sciences And Rural Development and Vigyan Parishad in 2017.
5. I was upgraded to **CSIR-SRF** from JRF in the year 2020 based on my highly satisfactory research performance.