



HARSHITA SAXENA

Graduate Research Assistant (Ph.D.)

Institute of Plant Breeding, Genetics, and Genomics, University of Georgia, Griffin Campus

EDUCATION

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| 2021- present | Ph.D. in Plant Breeding, Genetics, and Genomics , University of Georgia |
| 2018- 2020 | M.S. in Plant Biotechnology , TERI School of Advanced Studies, India |
| 2015-2018 | B.S. in Life Sciences , Deshbandhu College, University of Delhi, India |

APPOINTMENTS

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| 08/2021 – present | Graduate Research Assistant (Ph.D.) , Institute of Plant Breeding, Genetics, and Genomics, University of Georgia, Griffin Campus, GA, USA |
| 06/2022 – 12/2022 | On-the-Job Trainee (OJT) , International Rice Research Institute (IRRI), Los Banos, Philippines |
| 01/2020 – 05/2020 | Trainee , National Institute of Plant Genome Research (NIPGR), New Delhi, India |
| 05/2019 – 07/2019 | Summer Research Fellow (SRF) , CSIR-National Botanical Research Institute (NBRI), Lucknow, UP, India |
| 05/2017 – 07/2017 | Summer Intern , University of Delhi, New Delhi, India |

PEER-REVIEWED PUBLICATIONS

- Saxena, H.**, Negi, H., Keshan, R., Chitkara, P., Kumar, S., Chakraborty, A., Roy, A., Singh, I.K., Singh, A., 2023. A comprehensive investigation of lipid-transfer proteins from *Cicer arietinum* disentangles their role in plant defense against *Helicoverpa armigera*-infestation. *Front. Genet.* 14, 1195554. <https://doi.org/10.3389/fgene.2023.1195554>
- Saxena, H.**, Negi, H., Sharma, B., 2023b. Role of F-box E3-ubiquitin ligases in plant development and stress responses. *Plant Cell Rep* 42, 1133–1146. <https://doi.org/10.1007/s00299-023-03023-8>
- Negi, H., **Saxena, H.**, Singh, I.K., Singh, A., 2023. Herbivory-inducible lipid-transfer proteins (LTPs) of *Cicer arietinum* as potential human allergens. *Journal of Biomolecular Structure and Dynamics* 1–17. <https://doi.org/10.1080/07391102.2023.2169353>
- Bahri, B.A., Parvathaneni, R.K., Spratling, W.T., **Saxena, H.**, Sapkota, S., Raymer, P.L., Martinez-Espinoza, A.D., 2023. Whole genome sequencing of *Clarireedia aff. paspali* reveals potential pathogenesis factors in *Clarireedia* species, causal agents of dollar spot in turfgrass. *Front. Genet.* 13, 1033437. <https://doi.org/10.3389/fgene.2022.1033437>
- Sharma, B., **Saxena, H.**, Negi, H., 2021. Genome-wide analysis of HECT E3 ubiquitin ligase gene family in *Solanum lycopersicum*. *Sci Rep* 11, 15891. <https://doi.org/10.1038/s41598-021-95436-2>

AWARDS/ SCHOLARSHIPS

- 2023 *UGA Summer Research Grant*, Agency: UGA Graduate School; Award: 1,500
- 2023 *Bill Rose Foundation Travel Scholarship* to attend PureSeed Field Day 2023, Agency: Bill Rose Foundation; Award: \$1,500
- 2022 *Central Georgia Community Foundation Board Scholarship*, Agency: University of Georgia, Griffin campus; Award: \$1,000
- 2022 *Central Georgia Community Foundation Board Scholarship*, Agency: University of Georgia, Griffin campus; Award: \$2,500
- 2020 *Academic distinction for standing first in order of merit*, Agency: TERI School of Advanced Studies, New Delhi, India
- 2019 *Summer Research Fellowship (SRF)*, Agency: Indian Academy of Sciences (IAS, Bengaluru), National Academy of Sciences (NAS, Prayagraj) and Indian National Science Academy (INSA, New Delhi); Award: \$300; Award Period: 05/2019-07/2019
- 2019 *First Position in third year (2017-18) of graduation (B.Sc. Life Science)*, Agency: Deshbandhu College, University of Delhi, Delhi, India

SERVICE

Teaching and Mentoring

- 2023 **Teaching Assistant (TA)**; Instructor: *Alfredo D. Martinez-Espinoza*
Course: *PATH6280/6280L Plant Disease Diagnosis and Management (Fall 2023)*
Roles and Responsibilities: *Assisting faculty with setting up laboratory experiments as a part of the course; laboratory instruction and guidance to the student; provide support to the student for conducting experiments in the lab; helping the student develop the required skills for the course.*
- 2023 **Mentor**; Instructor: *Dr. Alfredo D. Martinez-Espinoza*
Program: *Young Scholars Program (Summer 2023)*
Roles and Responsibilities: *Served as a positive role model to the student, worked with the student to assist with the scientific project, trained the student with basic laboratory techniques, provided general support and leadership.*
Young Scholar's poster topic: *Effect of Nutrition, Host Tissue and Light on the Growth and Sporulation of Magnaporthe oryzae*
- 2023 **Teaching Assistant (TA)**; Instructor: *Dr. Bochra A. Bahri*
Course: *CRSS(ENTO)(PATH)3500 Turfgrass Pest Management (Spring 2023)*
Roles and Responsibilities: *Assisting faculty with classroom instruction, records, and assignments; delivering lectures or guest lectures; grading quizzes and exams; recording and calculating grades; proctoring examinations.*
Guest lecture topic: *Foliar diseases on turfgrasses: Anthracnose, Pythium blight, and gray leaf spot*
- 2022 **Mentor**; Instructor: *Dr. Bochra A. Bahri*
Program: *STEM Program (Spring 2022)*
Roles and Responsibilities: *Served as a positive role model to the student, worked with the student to assist with the scientific project, trained the student with basic laboratory techniques, provided general support and leadership*
- 2021 **Mentor**; Instructor: *Dr. Bochra A. Bahri*
Program: *STEM Program (Fall 2021)*
Roles and Responsibilities: *Served as a positive role model to the student, worked with the student to assist with the scientific project, trained the student with basic laboratory techniques, provided general support and leadership*

Synergistic Activities

2023 – present

Executive Administrator to the UGA Griffin Ambassador organization

Location: *University of Georgia, Griffin campus*

Roles and Responsibilities: *Led the organization from the end of spring semester until new officers are elected in the fall semester of the subsequent academic year; served the roles of the officers (President, Vice-president, Secretary, and Assignment Coordinator) single-handedly until the elections of the new office took place; lead the ambassador's business meetings; prepared meeting agenda and meeting minutes; coordinated with the advisors and other ambassadors for smooth functioning of the organization.*

2022 – 2023

UGA Griffin Ambassador; Location: *University of Georgia, Griffin campus*

Roles and Responsibilities: *Enhance the interest in and the image of the University of Georgia; assist at Campus- or University-sponsored events; speak before groups or assemblies at fund-raising events, civic organizations, New Student Orientation, and recruiting events; assist the Office of Academic and Student Affairs Office of Academic Affairs, and the Assistant Provost and Griffin Campus Director; represent the student body at UGA Griffin Campus-sponsored events; recruit prospective students; develop relationships with the Griffin community.*

POSTER PRESENTATIONS

- 2023 **Poster presentation:** 'Identification of novel QTLs governing resistance to rice blast (*Magnaporthe oryzae*) disease by GWAS approach using SNP markers' at APS Plant Health 2023, Denver CO.
- 2023 **Poster presentation:** 'Variability in Potential Pathogenesis Factors within *Claviceps* Species, Causal Agents of Dollar Spot in Turfgrass' at APS Plant Health 2023, Denver CO.
- 2023 **Poster presentation:** 'Molecular genetics of resistance to *Magnaporthe oryzae* (syn. *Pyricularia oryzae*) and understanding its host specificity across Poaceae family' at PureSeed Field Day 2023, Portland, OR, organized by PureSeed.
- 2023 **Poster presentation:** 'Identification and validation of novel QTLs for rice blast (*Magnaporthe oryzae*) resistance using genome-wide association study approach' at the PBGG Retreat 2023, Columbus, GA, organized by Institute of Plant Breeding, Genetics, and Genomics, UGA.
- 2022 **ePoster presentation:** 'Emergence of two new fungal diseases on tall fescue in Georgia' at the Plant Health 2022, organized by The American Phytopathological Society.
- 2021 **Poster presentation:** 'In silico structural and functional characterization of six potential virulence genes identified in *Claviceps* spp.' at the Plant Center Retreat 2021, organized by University of Georgia, GA, USA
- 2021 **Poster presentation:** 'In silico characterization and allergenicity prediction of *Helicoverpa armigera*-inducible lipid-transfer proteins (LTPs) from *Cicer arietinum*', at the Two Days International (Online) Conference on "Insect and Plant Biology :2021", organized by Mahatma Hansraj Faculty Development Centre, Hansraj College, University of Delhi, India
- 2020 **Poster presentation:** 'Prediction of nucleoredoxin protein in *Cicer arietinum* using in silico techniques' at the 107th Indian Science Congress, organized by University of Agricultural Sciences, Bangalore, India
- 2017 **Poster presentation:** 'Trends in Nanobiotechnology- Biotikos 2017' at TERI School of Advanced Studies, New Delhi, India
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