

DR. VANDANA GURUNG

CURRENT POSITION

Postdoctoral Researcher

Department of Ecology & Evolutionary Biology

University of Kansas

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EDUCATION

Ph.D.	Ecology and Evolutionary Biology, University of Connecticut	2023
M.Sc.	Botany, University of Delhi, Delhi, India	2015
B.Sc. (Hons.)	Botany, University of Delhi, Delhi, India	2013

PROFESSIONAL APPOINTMENTS

Postdoctoral Fellow	Auburn & Clemson University	2023 – 26
Graduate Teaching Assistant	University of Connecticut	2016 – 23

RESEARCH INTERESTS

Plant Developmental Genetics & Genomics, Morphology, Evolution, and Computational Morphodynamics.

PUBLICATIONS

Haghani, M., Chau, T.N., Alajoleen, R., Chen, C-Y., S.A, Dip., **Gurung, V.**, Hsu, C-W., Kittivorawong, C., Kundu, S., Li, X., Luo, J., Salehin, M., Simenc, M., Yun, J., Bargmann, B., Li, S. Cross-species plant single-cell analysis: community challenges and shared solutions, *Journal of Experimental Botany*, 2026; erag218. <https://doi.org/10.1093/jxb/erag218>

Gurung, V., Muñoz-Gómez, S., & Jones, D. S. (2024). Putting heads together: Developmental genetics of the Asteraceae capitulum. *Current Opinion in Plant Biology*, 81, 102589. <https://doi.org/10.1016/j.pbi.2024.102589>

LaFountain, A. M., Lin, Q., McMahon, H. E., Min, Y., Ding, B., **Gurung, V.**, Seemann, J. R., & Yuan, Y.-W. (2024). A distinct foliar pigmentation pattern formed by activator-repressor gradients upstream of an anthocyanin-activating R2R3-MYB. *Cell Reports*, 43(7). <https://doi.org/10.1016/j.celrep.2024.114444>

Gurung, V., Yuan, Y., & Diggle, P.K. 2021. Comparative analysis of corolla tube development across three closely related Mimulus species with different pollination syndromes. *Evolution & Development*. <https://doi.org/10.1111/ede.12368>

Ding, B.*, Li*, J., **Gurung, V.**, Lin, Q., Sun, X., & Yuan, Y.-W. 2021. The leaf polarity factors SGS3 and YABBYs regulate style elongation through auxin signaling in *Mimulus lewisii*. *New Phytologist*. 232: 2191–2206. <https://doi.org/10.1111/nph.17702>

Ding, B., Xia, R., Lin, Q., **Gurung, V.**, Sagawa, J. M., Stanley, L. E., Strobel, M., Diggle, P. K., Meyers, B. C., & Yuan, Y.-W. 2020. Developmental genetics of corolla tube formation: role of the tasiRNA-ARF pathway and a conceptual model. *The Plant Cell*, 32, 3452-3468. <https://doi.org/10.1105/tpc.18.00471>

In prep or close to publication in 2026

Gurung, V.*, Y. Min. *, Yuan, Y., & Diggle, P.K. To fuse or not to fuse: role of CUC1-miR164 module in corolla tube formation in *Mimulus*. Manuscript in preparation to be submitted to COPB. (* co-first authors).

Jones, D.S., Selby, R., Willoughby, A., Yaklich, E., Sandoval, P., Gurung, V., DiBattista, A., Baczynski, J., Crook, A., Roman, A.-O., Wang, F., Zhang, T., Moore-Pollard, E., Schuld, R., Mandel, J., Elomaa, P., Burke, J., Sanitago, J., Nimchuk, Z. Floral innovation through modifications in stem cell peptide signaling. Submitted to Science, in review.

RESEARCH FUNDING

2017, 2020, & 2022 Ronald Bamford fund endowment for Ecology and Evolutionary Biology from the University of Connecticut (\$4500)

PROFESSIONAL EXPERIENCES

Teaching experience, Department of Ecology and Evolutionary Biology (EEB), University of Connecticut
Teaching assistant

- EEB3220/5220 (Evolution of Green Plants – upper-level course) with Dr. Bernard Goffinet and Dr. Louise Lewis (Spring 2022)
Lab instructor for a class of ~38 students. Led laboratory sessions facilitating conceptual learning of plant evolution and diversity (from algae to angiosperms) using the materials collected from teaching and research greenhouses.
- EEB- 4276 (Plant Structural Diversity; Anatomy– upper-level course) with Dr. Cynthia Jones (Fall 2021)
Lab instructor. Helping curate plants and teaching materials from the UConn Biodiversity Collections. Taught dissections and anatomical sectioning to study anatomical structures. Student evaluations, especially grading final presentations.
- EEB- 3203 (Developmental Plant Morphology – upper-level course) with Dr. Cynthia Jones (Fall 2018 & Fall 2020).
Laboratory instructor for a lab-lecture hybrid course comprised of 24 students. Responsibilities involved were- preparing materials for labs, finding relevant plants at UConn Biodiversity collections to bring diversity to the lab, leading tours to greenhouses and campus, helping students with experiments, and assessing their presentations. Delivered a lecture on “flower morphology and development”.
- BIO-1108 (Principles of Biology II-majors – introductory level) with Dr. Susan Herrick (Spring 2018 & Spring 2020)
Independent laboratory instructor for two sections, each section with 20 students. Duties involved were delivering an introductory lecture for each week’s lab content, preparing and grading weekly assessments and lab finals.
- BIO-1102 (Introduction to Biology for non-majors – introductory level) with Dr. Adam Fry (Fall 2016, Spring & Fall 2017, Spring 2019)

Laboratory instructor for four sections, each section comprising 24 students. Taught lab sections and helped students with experiments on genetics, molecular biology, etc. Graded their weekly quizzes and lab finals.

Research Technician in Dr. Pamela Diggle's lab (Summer 2017, 2018, & 2019)

Worked on an NSF (National Science Foundation) funded project on abnormal phenologies aimed to study the effect of climate change on flowering pattern and timings.

Summer Graduate Assistant, Biodiversity Research Collections, University of Connecticut (Summer 2020)

A part of the initiative to [digitize herbaria](#). Record keeping using R.

MENTORING

Jenna Zirbel - Undergraduate student	CU 2025 – present
Sakiyah Jenkins - Undergraduate student	AU 2024 – 2025
Shelby Crowell – Undergraduate student	AU 2025
Taylor Van Kralingen - Undergraduate student	AU 2024
Shane Connolly - Undergraduate student	UConn 2021

RESEARCH SKILLS

Experimental:

Molecular cloning- Gateway and Gibson assembly, Plant transformation- Asteraceae and Lamiids, CRISPR-Cas9, PCR, Tissue culture and regeneration, Nuclei isolation, DNA/RNA extractions.

Microscopy – SEM, Confocal.

Bioinformatics: Genome assembly- haplotype resolved, Transcriptomic analysis, Linux commands, basic statistics in R.

AWARDS AND HONORS

2025	BSA Student/Postdoc Travel Award, Botanical Society of America
2022	Development and Structural section student travel award, Botanical Society of America
2022	Doctoral dissertation fellowship from the Graduate School, University of Connecticut
2021	Nominated for the University Outstanding Graduate Teaching Award by CETL (Centre for excellence in teaching and learning), University of Connecticut
2019	Commendation Letter for Excellence in Teaching from the Office of the Provost, University of Connecticut
2019	Demi fellowship, Ecology and Evolutionary Biology, University of Connecticut
2014	Dr. Shanti Prasad Jain Prize for academic excellence, University of Delhi, India
2013 & 2014	Dr. Anita Sharma Memorial Prize for academic excellence, University of Delhi, India
2013 & 2014	Systopic scholarship prize for academic excellence, University of Delhi, India

PRESENTATIONS, POSTERS, & WORKSHOPS

- 2026 “Single cell workshop”, Clemson University, August 5th-7th, Virtual
- 2026 “Convergent evolution of Capitulum-type inflorescences”, PAG 2026, annual plant and animal genome meeting at San Diego, California, USA
- 2025 “Capitulum in the making; developmental basis of inflorescence architecture in the Asteraceae, Botany 2025, annual meeting organized by the Botanical Society of America in Palm Springs, California, USA
- 2025 “Single cell analysis workshop”, Organized by Dr. Song Li, School of Plant and Environmental Sciences, Virginia Tech, Virginia, USA
- 2024 “Capitulum in the making; developmental basis of inflorescence architecture in the Asteraceae”, poster at annual 27th ICSPP (International Congress on Sexual Plant Reproduction) 2024, Brown University, Providence, Rhode Island, USA
- 2022 “The Curious Case of CUC in Corolla tube formation in Mimulus”, oral presentation, Botany 2022, annual meeting organized by the Botanical Society of America at Anchorage, Alaska, USA
- 2022 “The Curious Case of CUC in Corolla tube formation in Mimulus”, oral presentation, NESDB 2022, Northeast regional meeting organized by the Society of Developmental Biology, Marine Biological Laboratory, Woods Hole, Massachusetts, USA
- 2021 “A Comparative study of Corolla tube development”, oral presentation (virtual), Botany 2021, annual meeting organized by the Botanical Society of America
- 2021 “A Comparative study of Corolla tube development”, oral presentation (virtual), EEB symposium, Department of Ecology and Evolutionary Biology, University of Connecticut
- 2019 “Evolution and development of the corolla tube in Mimulus”, poster at the annual meeting of the Society for the Study of Evolution, Providence, Rhode Island, USA

OTHER ACTIVITIES & SERVICES

- 2024 Mentor, Summer REU (Research Experience for Undergraduates) at Auburn University, Auburn, Alabama
- 2024-2025 Social Chair-elect for Postdoctoral Association at Auburn University
- 2024 Volunteer for Auburn University Museum of Natural History (AUMNH) at Azalea Festival, Auburn
- 2018-2019 Outreach head of TARANG, a South Asian community for Graduate students at the University of Connecticut
- 2018 Volunteer at Junior Science Salon at the University of Connecticut
- 2012 Group leader (student) in the INSPIRE Internship Program, Hans Raj College, University of Delhi, India, in collaboration with the Department of Science & Technology,

Government of India. The goal of this internship program was to galvanize students to study science and develop critical analysis prowess to expand research and development grounds in India

2024 Reviewer for New Phytologist

2025 Reviewer for BMC genomics