

Kawaljeet Kaur

Assistant Professor
Modern College of arts, science and commerce (Pune university),
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Education

- 2020 M.Sc. Biotechnology, University of Pune, India. (Distinction – 83 %)
Dissertation: Genome-wide identification of characterization and transcriptional profiling of NHX-type (Na^+/H^+) antiporters under salinity stress in soybean, under Dr. Vinay Kumar.
- 2018 Virology, Bioethics and Photography, University of Oxford.
Betty and Donald Keating scholarship Award.
- 2018 B.Sc. Biotechnology, University of Pune, India. (Distinction – 75.7 %)

Experience

- 2020-till date **Assistant Professor (Department of Biotechnology)**
Modern College of arts, science and commerce (Pune University),
Ganeshkhind, Pune
- 2019-20 **Graduate student researcher**
Modern College of arts, science and commerce (Pune university),
Ganeshkhind, Pune.
Projects completed under Dr. Vinay Kumar: -
'Genome-wide in silico identification and characterization of sodium-proton (Na^+/H^+) antiporters in Indica rice'.
'Genome-wide identification, characterization and transcriptional profiling of NHX-type (Na^+/H^+) antiporters under salinity stress in soybean'.
- 2016-18 **Bachelor student researcher**
Modern College of arts, science and commerce (Pune University),
Shivajinagar, Pune.
Projects completed under Dr. Rebecca Thombre: -
'Rapid Milk Quality Detection Test Kit'.
'Inhibitions of Biofilms formed by Multidrug resistance Gram-Negative Bacteria using Biogenic Silver Nanoparticles'.
'Inhibitory Potentials of biologically synthesized Silver Nanoparticles against multidrug resistant bacteria from *Lantana camara*'.

Internships

- 2019 MGM College of Biomedical Sciences, Kamothe, Mumbai.
Molecular Biology, Hydroponics and Developmental Studies of Zebra Fish.
- 2017 Serum Institute of India Pvt Ltd. Training at Bacterial vaccine production and Quality control department.
- 2016 Workshop on MICROSCOPY under DBT- Star College Scheme, New Delhi

Paper Publications

- Reddy S, **Kaur K**, Barathe P, Shriram V, Govarthanam M, Vinay V, (2022) Antimicrobial resistance in urban river ecosystems. *Microbiological Research* 127135. <https://doi.org/10.1016/j.micres.2022.127135>
- **Kaur K**, Reddy S, Barathe P, Oak U, Shriram V, Kharat SS, Govarthanam M, Kumar V. (2022) Microplastic-associated pathogens and antimicrobial resistance in environment. *Chemosphere* 291(2):133005. <https://doi.org/10.1016/j.chemosphere.2021.133005>
- Tan, P., Du, X., Shang, Y., Zhu, K., Joshi, S., **Kaur, K.**, Khare, T., Kumar V. (2022) Ion transporters and their exploration for conferring abiotic stress tolerance in plants. *Plant Growth Regul* 96, 1–23. <https://doi.org/10.1007/s10725-021-00762-0>
- **Kaur K**, Reddy S, Barathe P, Shriram V, Anand U, Proćków J, Kumar V. (2021) Combating Drug-Resistant Bacteria Using Photothermally Active Nanomaterials: A Perspective Review. *Front Microbiol* 12:747019. <https://doi.org/10.3389/fmicb.2021.747019>
- Malik S, **Kaur K**, Prasad S, Jha NK, Kumar V. (2021) A perspective review on medicinal plant resources for their antimutagenic potentials. *Environ Sci Pollut Res* <https://doi.org/10.1007/s11356-021-16057-w>
- Khare T, Joshi S, **Kaur K**, Srivastav A, Shriram V, Srivastava AK, Suprasanna P, Kumar V. (2021) Genome-wide in silico identification and characterization of sodium-proton (Na⁺/H⁺) antiporters in Indica rice. *Plant Gene* 26:100280. <https://doi.org/10.1016/j.plgene.2021.100280>
- Joshi S, **Kaur K**, Khare T, Srivastava AK, Suprasanna P, Kumar V. (2021) Genome-wide identification, characterization and transcriptional profiling of NHX-type (Na⁺/H⁺) antiporters under salinity stress in soybean. *3 Biotech* 11(1):16. <https://doi.org/10.1007/s13205-020-02555-0>
- Thombre, R. S., Gomez, F., Parkhe, R., **Kaur, K.**, Vaishampayan, P., Shivakarthishik, E., Bhalamurugan, S., Perumal, R., Mason, N. (2020) Effect of impact shock on extremophilic bacterium *Halomonas gomseomensis* EP-3 isolated from hypersaline Martian analogue site Laguna de Pena Hueca, Spain. *Planetary and space science* 192:105041. <https://doi.org/10.1016/j.pss.2020.105041>

Chapter Publications

- Thombre R.S, **Kaur K.**, Jagtap S.S., Dixit J., Vaishampayan P.V., (2022) Microbial Life in Space. *New Frontiers in Astrobiology*, Elsevier. <https://ntrs.nasa.gov/citations/20210025473>
- Reddy S., Barathe P., **Kaur K.**, Anand U., Shriram V., Kumar V. (2022) Antimicrobial resistance and medicinal plant products as potential alternatives to antibiotics in animal husbandry. In: Kumar V., Shriram V., Paul A., Thakur M. (eds) *Antimicrobial Resistance*. Springer, Singapore. https://doi.org/10.1007/978-981-16-3120-7_13

- **Kaur K**, Thombre R (2021) Nanotechnology: methods, applications and future prospects. In *Nanobiotechnology*. Elsevier 1-20. <https://doi.org/10.1016/B978-0-12-822878-4.00001-8>

Poster presentation

- 2022 Barathe P., **Kaur K.**, Sheiram V., Kumar V., “Diosgenin: A promising phytomolecule for combating *Enterobacter* sps.” Avishkar University Level Research Competition.
- 2020 **Kaur, K.**, Khare, T., Joshi, S., Kumar, V., “Genome-wide identification of Novel Sodium-Proton Exchangers in *Soybean*”, ANUBHUTI Science Exhibition.
- 2018 **Kaur, K.**, Lad, A., “Rapid Milk Quality Detection Kit”, Avishkar University Level Research Competition.
- 2017 **Kaur, K.**, Badodekar, N., Thombre, R. S., “Inhibition of biofilms and efflux pumps of Multidrug resistant gram-negative bacteria using biogenic silver nanoparticles”, The Sajjan Gupta-Konark Memorial Award, V.E.S College, Chembur, Mumbai.

Awards and Fellowships

- 2022 Zonal level research project competition “Avishkar”, University of Pune
- 2021 University 6th Rank in MSc Biotechnology, SPPU
- 2020 GATE, MHRD.
- 2019 Merit Award – MSc academic performance.
- 2018 Betty and Donald Keating Scholarships award to study at St. Catherine’s College, University of Oxford as registered Visiting Student for trinity term.
- 2018 University level research project competition “Avishkar”, University of Pune.
- 2018 Excellent Academic Achievement Award.

Additional Courses

- 2022 Science popularisation program ‘Science Adda’
- 2021 Faculty development program on ‘IPR and Patenting’
- 2020 Astrobiology, Amity centre of Excellence in Astrobiology ACoEA, Amity University, Mumbai.
- 2020 Good Clinical Practice (GCP), NIDA
- 2018 Astrobiology, Modern College of Arts, Science and Commerce, Shivajinagar, Pune and Blue marble space institute of science, Seattle, USA.