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| **NAME** | **Dr. Ajay Kumar** |
| **DESIGNATION** | Assistant Professor-II Scale |
| **EMAIL ID** | akumar59@amity.edu; ajaykumar_bhu@yahoo.com |
| **CONTACT NUMBER** | +91-8960639724 |
| **H-Index/ I-index** | **47** |
| **Citations** | 7044 |
| **RESEARCH INTERESTS** | Plant-microbe interaction; Postharvest management of Fruits; Cyanobacterial Biology |

**EDUCATIONAL QUALIFICATIONS:**

| Name of College / University | Degree | Year |
|---|---|---|
| Banaras Hindu University, Department of Botany | Ph.D. | 2016 |
| C.C.S. University, Meerut | M.Sc. | 2009 |
| | | |

**Title of Ph.D. thesis: PGPR induced modulation in growth and metabolite synthesis *of Curcuma longa* l.**

**EXPERIENCE (in chronological order):**

| Designation | Type of post held (teaching/ research) | Name of the Institute | Year (From – To) |
|---|---|---|---|
| Assistant Professor | Teaching / Research | Amity Institute of Biotechnology; Amity University, Noida-201313, U.P.,India | 10-07-2023 to….. |
| Assistant Professor | Teaching / Research | M.V.College Buxar,Bihar | 08-05-2023-09-07-2023 |
| Visiting Scientist | Research | Agriculture Research Organization, Volcanic entre, Israel | 03-2018 to 04- 2022 |
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|---|---|
| **No. of Ph.D. students supervised** | 1 |
| **No. of Post-Doc** | |
| **No. of M.Tech. Students supervised:** | 1 |
| **No. of B.Tech. Students supervised:** | 4 |
| **PUBLICATIONS** ***(20)*** | 1. Wang, Z., Solanki, M.K., Kumar, A., Solanki, A.C., Pang, F., Ba, Z.X., Niu, J.Q. and Ren, Z.X., 2023. Promoting Plant Resilience against Stress by Engineering Root Microenvironment with Streptomyces Inoculants. *Microbiological Research*, p.127509.**(Impact factor-6.7)**<br>2. Orozco-Mosqueda, M.D.C., Kumar, A., Babalola, O.O. and Santoyo, G., 2023. Rhizobiome Transplantation: A Novel Strategy beyond Single-Strain/Consortium Inoculation for Crop Improvement. *Plants*, *12*(18), p.3226. **(Impact factor-4.5)**<br>3. Singh, R.P., Yadav, P., Kumar, I., Solanki, M.K., Roychowdhury, R., Kumar, A. and Gupta, R.K., 2023. Advancement of Abiotic Stresses for Microalgal Lipid Production and Its Bioprospecting into |

Sustainable Biofuels. *Sustainability*, *15*(18), p.13678. **(Impact factor-3.9)**

4. Singh, R.P., Yadav, P., Kumar, A., Hashem, A., Avila-Quezada, G.D., Abd_Allah, E.F. and Gupta, R.K., 2023. Salinity-Induced Physiochemical Alterations to Enhance Lipid Content in Oleaginous Microalgae Scenedesmus sp. BHU1 via Two-Stage Cultivation for Biodiesel Feedstock. *Microorganisms*, *11*(8), p.2064. **(Impact factor-4.5)**
5. Rohilla, D., Srivastava, A.K., Singh, R.P., Yadav, P., Singh, S.K., Kumar, D., Bhardwaj, N., Kesawat, M.S., Pandey, K.D. and Kumar, A., 2023. Algae Polysaccharides (Carrageenan and Alginate)—A Treasure-Trove of Antiviral Compounds: An In Silico Approach to Identify Potential Candidates for Inhibition of S1-RBD Spike Protein of SARS-CoV2. *Stresses*, *3*(3), pp.555-569.
6. Srivastava, A.K., Singh, D., Yadav, P., Singh, M., Singh, S.K. and Kumar, A., 2023. Paradigm of Well-Orchestrated Pharmacokinetic Properties of Curcuminoids Relative to Conventional Drugs for the Inactivation of SARS-CoV-2 Receptors: An In Silico Approach. *Stresses*, *3*(3), pp.615-628.
7. Kashyap, N., Singh, S.K., Yadav, N., Singh, V.K., Kumari, M., Kumar, D., Shukla, L., Kaushalendra, Bhardwaj, N. and Kumar, A., 2023. Biocontrol Screening of Endophytes: Applications and Limitations. *Plants*, *12*(13), p.2480. **(Impact factor-4.5)**
8. Devi, S., Sharma, S., Tiwari, A., Bhatt, A.K., Singh, N.K., Singh, M. and **Kumar, A.,** 2023. Screening for Multifarious Plant Growth Promoting and Biocontrol Attributes in Bacillus Strains Isolated from Indo Gangetic Soil for Enhancing Growth of Rice Crops. *Microorganisms*, *11*(4), p.1085. **(Impact factor-4.5)**
9. Roychowdhury, R., Das, S.P., Gupta, A., Parihar, P., Chandrasekhar, K., Sarker, U., Kumar, A., Ramrao, D.P. and Sudhakar, C., 2023. Multi-Omics Pipeline and Omics-Integration Approach to Decipher Plant's Abiotic Stress Tolerance Responses. *Genes*, *14*(6), p.1281 **(Impact factor-4.2)**.
10. Kamat, S., Kumari, M., Sajna, K.V., Singh, S.K., **Kumar, A.** and Jayabaskaran, C., 2023. Improved Chrysin Production by a Combination of Fermentation Factors and Elicitation from Chaetomium globosum. *Microorganisms*, *11*(4), p.999. **(Impact factor-4.5)**
11. Anand, U., Pal, T., Yadav, N., Singh, V.K., Tripathi, V., Choudhary, K.K., Shukla, A.K., Sunita, K., Kumar, A., Bontempi, E. and Ma, Y., 2023. Current Scenario and Future Prospects of Endophytic Microbes: Promising Candidates for Abiotic and Biotic Stress Management for Agricultural and Environmental Sustainability. *Microbial Ecology*, pp.1-32. **(Impact factor-4.6)**
12. **Kumar, A.,** Santoyo, G., White, J.F. and Mishra, V.K., 2023. Special Issue "Microbial Endophytes: Functional Biology and Applications". *Microorganisms*, *11*(4), p.918. **(Impact factor-4.5)**
13. Kesawat, M.S.; Satheesh, N.; Kherawat, B.S.; **Kumar, A**.; Kim, H.-U.; Chung, S.-M.; Kumar, M. Regulation of Reactive Oxygen Species during Salt Stress in Plants and Their Crosstalk with Other Signaling Molecules—Current Perspectives and Future Directions. *Plants* **2023**, *12*, 864. https://doi.org/10.3390/plants12040864 . **(Impact factor-4.5)**
14. Orozco-Mosqueda, M.d.C.; **Kumar, A**.; Fadiji, A.E.; Babalola, O.O.; Puopolo, G.; Santoyo, G. Agroecological Management of the Grey Mould Fungus *Botrytis cinerea* by Plant Growth-Promoting Bacteria. *Plants* **2023**, *12*, 637. https://doi.org/10.3390/plants12030637. **(Impact factor-4.5)**
15. Kundu, A.; Kamil, D.; Paul, S.; Venkadasamy, G.; Salim, R.; Singh, S.K.; Kumar, D.; **Kumar, A**. Exploring Potent Fungal Isolates from Sanitary Landfill Soil for In Vitro Degradation of Dibutyl Phthalate. J. Fungi 2023, 9, 125. https://doi.org/10.3390/ jof9010125 **(Impact factor-4.7)**

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| | 16. Kumari, M., Kamat, S., Singh, S.K., **Kumar, A*.** and Jayabaskaran, C., 2023. Inhibition of Autophagy Increases Cell Death in HeLa Cells through Usnic Acid Isolated from Lichens. *Plants*, *12*(3), p.519. **(Impact factor-4.5)**<br>17. Guzmán-Guzmán, P., **Kumar, A.,** de los Santos-Villalobos, S., Parra-Cota, F.I., Orozco-Mosqueda, M.D.C., Fadiji, A.E., Hyder, S., Babalola, O.O. and Santoyo, G., 2023. Trichoderma Species: Our Best Fungal Allies in the Biocontrol of Plant Diseases—A Review. *Plants*, *12*(3), p.432. **(Impact factor-4.5)**<br>18. Singh, P.K., Singh, V.P., Passarini, M.R.Z. and Kumar, A., 2023. Cyanobacterial biology in twenty-first century. *Frontiers in Microbiology*, *14*. **(Impact factor-5.02)**<br>19. Singh VK, Singh AK, Singh PP, **Kumar A***. Interaction of plant growth promoting bacteria with tomato under abiotic stress: A review. Agriculture, Ecosystems & Environment. 2018 Nov 15;267:129-40.((Impact Factor-6.6)<br>20. Singh AK, Singh PP, Tripathi V, Verma H, Singh SK, Srivastava AK, **Kumar A***. Distribution of cyanobacteria and their interactions with pesticides in paddy field: A comprehensive review. Journal of environmental management. 2018 Oct 15;224:361-75.(Impact Factor-8.9) |
| **BOOK/BOOK CHAPTER (7)** | Book- 55/ Chapters-130 |
| **PATENTS** ***(5)***<br>***Granted:2***<br>***Published:2***<br>***Filed: 1*** | |
| **RESEARCH PROJECTS** | |
| **AWARDS & HONOURS/ DISTINCTIONS** | ➢ GATE-2009<br>➢ CSIR-JRF-2009;<br>➢ ARO FELLOWSHIP -2018<br>➢ Outstanding Faculty award -2013 (Carrier 360)<br>➢ Listed in word 2% Scientist (2023, 2024) |
| **MEMBERSHIP** with Professional/ Academic bodies | ➢ International Society for Molecular Plant-Microbe Interactions<br>➢ Asian PGPR Society<br>➢ Association of microbiologists of India |