Muhammed Jamsheer K

Assistant Professor & DST-INSPIRE Faculty

Specialization: Nutrient Sensing and Signaling, Growth Control, Gene Regulation, Genetic Engineering, Molecular Evolution

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Dr. Jamsheer K. obtained his Ph.D. from the National Institute of Plant Genome Research, New Delhi in the area of cell signaling and development in plants in 2017. He received post-doctoral training from Institut de Biologie Moléculaire des Plantes, Strasbourg, France as EMBO Short Term Fellow and National Institute of Plant Genome Research, New Delhi as Research Associate. He worked on the mechanisms of nutrient and stress sensing and signaling pathways in plants. In 2018, Dr. Jamsheer received the prestigious DST-INSPIRE Faculty Fellowship from Govt. of India and joined Amity University Uttar Pradesh. He is a recipient of several important national and international awards, fellowships, and travel grants such as INSA Young Scientist Medal 2020, EMBO Short-Term Fellowship, EMBO Travel Grant, NIPGR-Best Paper Award, etc. The main research focus of Dr. Jamsheer is to understand the fundamental cell signaling mechanisms involved in nutrient and stress pathways in eukaryotes. This information will be utilized to engineer unicellular eukaryotes and higher plants for desirable traits using genome editing and conventional genetic engineering tools.

Current Research Projects:

Study of the interaction between TOR-SnRK1 and nutrient dynamics in plants and its utilization in rice improvement (DST-INSPIRE Faculty Project, Amount: 11 million INR).

Selected Recent Publications:

1. **Jamsheer K, M.,** Kumar, M. (**2021**) Transcription factors as zinc sensors in plants. **Trends in Plant Science** doi: 10.1016/j.tplants.2021.04.008 (**IF: 14.4**)

2. **Jamsheer K, M.,** Kumar, M., Srivastava, V. (**2021**) SNF1-Related Protein Kinase 1: the many-faced signaling hub regulating developmental plasticity in plants. **Journal of Experimental Botany** doi: 10.1093/jxb/erab079 (**IF: 5.9**)

3. Mancera-Martínez, E., Dong, Y., Makarian, J. Srour, O., Thiébeauld, O., **Jamsheer K, M.,** Chicher, J., Hamman, P., Schepetilnikov, M., Ryabova, L. (**2021**) Phosphorylation of a reinitiation supporting protein, RISP, determines its function in translation reinitiation. **Nucleic Acid Research** *In press* (**IF: 11.5**)

4. **Jamsheer K, M.,** Jindal, S., Laxmi, A. (**2019**) Evolution of TOR-SnRK dynamics in green plants and their integration with phytohormone signaling networks. **Journal of Experimental Botany** doi: 10.1093/jxb/erz107 (**IF: 5.9**)

5. **Jamsheer K, M.,** Shukla, B.N., Jindal, S., Gopan, N., Mannully, C.T., Laxmi, A. (**2018**) The FCS-like zinc finger scaffold of the kinase SnRK1 is formed by the coordinated actions of the FLZ domain and intrinsically disordered regions. **Journal of Biological Chemistry** doi: 10.1074/jbc.RA118.002073 (**IF: 4.2**)

6. **Jamsheer K, M.,** Sharma, M., Singh D., Mannully, C.T., Jindal, S., Shukla, B.N., Laxmi, A. (**2018**) FCS-Like Zinc Finger 6 and 10 repress SnRK1 signalling in Arabidopsis. **The Plant Journal** doi: 10.1111/tpj.13854 (**IF: 6.1)**