



Dr. M.S. SUJITH KUMAR
Scientist (Plant Biochemistry)
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1. Date of birth : 19-07-1983
2. Education Qualification : Ph D (Plant Biochemistry)
3. Joining Date in ICAR : 1-1-2014
4. Joining Date in DRMR : 9-4-2014
5. Discipline/Specialization : Plant Biochemistry
6. Research Experience : 10 yrs
7. Training/advance exposure in the area of work :
 - 3 months professional attachment training on “A study of Mustard-Orobanche Interaction and Familiarization with some Molecular Techniques for Crop Improvement” at ICAR-NRCPB, New Delhi.
 - ICAR-sponsored 21 days CAFT training programme on “Recent techniques and tools for nutritional quality assessment and enhancement of food crops” organized in the Division of Biochemistry, ICAR-IARI, New Delhi.
 - 5 days “Advanced training on lipidomics using high resolution mass spectrometry” at AB SCIEX, Gurgaon.

9. Contribution to the scientific advancement

- Developed a simple spectrophotometric method for total glucosinolate content in defatted seed meal.
- Complete lipidomic profiling of different species of oilseed Brassica was done by high resolution mass spectrometry.
- Standardized protocols for estimation of total glucosinolates, total antioxidant activity, radical scavenging activity, phytic acid, crude fiber, total phenols, total flavonoids, and ascorbic acid in seed meals of different species of oilseed Brassica.
- Standardized protocols for estimation of total antioxidant activity, radical scavenging activity, total phenol and total soluble sugar in leaves of *B. juncea*.

10. Current research Projects and Future planning of research

Sl. No.	Title of Project	Externally funded/Institute	status
1	Screening of oilseed Brassica germplasm for value addition (PI)	Institute	ongoing

2	Extra-mural Project on pre-breeding for genetic enhancement of Ethiopian Mustard gene pool (Co-PI)	Externally funded	ongoing
3	Proteomic studies in oilseed Brassica (Co-PI)	Institute	ongoing
4	Breeding for earliness and high temperature tolerance in Indian mustard (Co-PI)	Institute	ongoing
5	Genetic enhancement for quality traits in Indian mustard (Co-PI)	Institute	ongoing

11. Awards/ recognition

Date Received	Details
2008	<ul style="list-style-type: none"> Junior Research Fellowship, Indian Council of Agricultural Research (ICAR), New Delhi
2010	<ul style="list-style-type: none"> Senior Research Fellowship/National Eligibility Test, Council of Scientific and Industrial (CSIR), New Delhi
2015	<ul style="list-style-type: none"> Best poster presentation on “Stimulation of Orobanchae Seed Germination by Mustard Root Exudates is Genotype-dependent” in National Seminar, ICAR-DRMR
2016	<ul style="list-style-type: none"> Best Scientist, on 23rd Foundation Day of ICAR-DRMR
2017	<ul style="list-style-type: none"> Appreciation Award for organizing International Seminar on Oilseed Brassica (ISOB-2017), 23-27 Feb, 2017, Jaipur

12. Publications (Research papers best 20)

- **Kumar, M. S.**, Ali, K., Dahuja, A., & Tyagi, A. (2015). Role of phytosterols in drought stress tolerance in rice. *Plant Physiology and Biochemistry*, 96, 83-89. (Impact Factor: 2.928)
- Mawlong, I., **Kumar, M. S.**, & Singh, D. (2014). Furan fatty acids: their role in plant systems. *Phytochemistry Reviews*, 1-7. (Impact Factor: 2.686)
- **Kumar, Sujith**, Ibandalin Mawlong, and Dhiraj Singh. "Phytosterol recovery from oilseeds: Recent advances." *Journal of Food Process Engineering* (2016). (Impact Factor: 0.745)
- Singh, B.K., Mishra, D.C., Yadav, S., Ambawat, S., Vaidya, E., Tribhuvan, K.U., Kumar, A., **Kumar, S.**, Kumar, S., Chaturvedi, K.K. and Rani, R., 2016. Identification, characterization, validation and cross-species amplification of genic-SSRs in Indian Mustard (*Brassica juncea*). *Journal of Plant Biochemistry and Biotechnology*, pp.1-11. (Impact Factor: 1.352)
- Mawlong, I., **Sujith Kumar, M. S.**, Gurung, B., Singh, K. H., & Singh, D. (2017). A Simple Spectrophotometric Method for Estimating Total Glucosinolates in Mustard de-oiled Cake. *International Journal of Food Properties*. (Impact factor: 1.586)
- **Kumar, M. S.**, Mawlong, I., Ali, K., & Tyagi, A. (2018). Regulation of phytosterol biosynthetic pathway during drought stress in rice. *Plant Physiology and Biochemistry*, 129, 11-20. (Impact Factor: 2.928)

- Mawlong, I., **M.S. Sujith Kumar**, Kandpal B.K., Premi O.P., Gurung B., Singh D (2017) Meal and Oil Quality Among Genotypes of Indian Mustard (*Brassica juncea*) Varies Under Recommended Dose Of Nitrogen fertilizer *Applied Ecology and Environmental Research* 15:1427-1445 (*Impact Factor: 0.5*)
- **M.S. Sujith Kumar**, Ibandalin Mawlong, J. Nanjundan, J. Arvind and Dhiraj Singh "Seed color as an index for accessing rapeseed meal quality" *The Bioscan* (2017) 12(2):995-999 (NAAS 5.26)
- **Kumar, M. S.**, Dahuja, A., Rai, R. D., Walia, S., & Tyagi, A. (2014). Role of γ -oryzanol in drought-tolerant and susceptible cultivars of rice (*Oryza sativa* L.). *Indian Journal of Biochemistry and Biophysics*, 51: 75-80. (*Impact Factor: 0.958*)
- **Kumar, Sujith**, Ibandalin Mawlong, J. Nanjundan, J. Aravind, and Dhiraj Singh. "Variation in Carotene and other Antioxidants among Different Species of Oilseed Brassica." *Indian Journal of Agricultural Biochemistry* 30, no. 2 (2017): 129-134. (*Impact Factor: 0.125*)