

# CURRICULUM VITAE



**Name** : **Dr Dharmendra Kumar**  
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**Address** : Department of CPB & PHT,  
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**Google scholar** : <https://scholar.google.com/citations?user=kuiTS8IAAAAJ&hl=en>

## ACADEMIC DISTINCTIONS

Degree	Grade/ Percentage	University/Board	Year
10 <sup>th</sup>	First/76.67%	Rajasthan Board of Secondary Education	2003
12 <sup>th</sup>	First/76.91%	Rajasthan Board of Secondary Education	2005
B.Sc. Ag. (Hons)	First/86.77%	Sardar Vallabhbhai Patel University of Agriculture & Technology, Modipuram, Meerut, UP	2011
M.Sc. (Microbiology)	First/75.80%	ICAR-Indian Agricultural Research Institute, New Delhi	2013
Ph.D. (Microbiology)	First/78.00%	ICAR-Indian Agricultural Research Institute, New Delhi	2019

## POSITIONS HELD

S.N.	INSTITUTE PLACE	POSITION	FROM	TO
1.	ICAR-Central Potato Research Institute, Shimla	Scientist	October 09, 2018	Present date
2.	ICAR-National Academy of Agricultural Research Management, Hyderabad	Scientist trainee	July 2, 2018	October 9, 2018

## AREA OF RESEARCH

Post-harvest management, fermentation technology for bioethanol production, enhancing nutritional value and preservation of food, plant microbes interaction study

## PARTICULARS OF PRIZES, MEDALS AND SCHOLARSHIPS

- Awarded “Chancellor Gold medal” for overall outstanding performance in Bachelor of Science (Ag.) Hons. the degree programme at the 4th Convocation of Sardar Vallabhbhai Patel University of Agriculture & Technology, Modipuram, Meerut, UP on January 18, 2012.
- Awarded “Vice-Chancellor Gold medal” for outstanding academic performance in Bachelor of Science (Ag.) Hons degree programme at the 4th Convocation of Sardar Vallabhbhai Patel University of Agriculture & Technology, Modipuram, Meerut, UP on January 18, 2012.
- Awarded the National Talent Scholarship (NTS) during B.Sc. (Ag.) Hons from the period 2008 to 2011.
- Awarded the ICAR-JRF during M.Sc. (Microbiology) from the period 2011 to 2013.
- Awarded the ICAR NET for lectureship in 2014.
- Awarded the CSIR JRF for fellowship and NET in Ph.D, conducted on behalf of the University Grants Commission, New Delhi on 2014.
- Awarded ICAR-SRF with fellowship (Ph.D.) in Agril. Microbiology in 2014.

- Secured First rank (OBC) in the Agricultural Research Service examination in the discipline of Agricultural Microbiology conducted by the ICAR-Agricultural Scientists Recruitment Board in 2016.
- Elected as the Councillor of Indian Potato Association (IPA) during 2021-23.
- Awarded 1<sup>st</sup> prize for the Indian Potato Association (IPA) poster presentation during International Conference Global Potato Conclave 2020 on “Potato as a bioenergy crop for fuel ethanol production: Perspectives and challenges” at Mahatma Mandir, Gandhinagar, Gujarat, India on 28-31 January 2020.
- Awarded 1st prize for the poster presentation by Indian Potato Association (IPA) during the International Conference Global Potato Conclave 2020 on “Application of high throughput plant phenomics techniques for potato” at Mahatma Mandir, Gandhinagar, Gujarat, India on 28-31 January 2020.
- Dr Mukhtar Singh Memorial Best Oral Presentation Award by Indian Potato Association (IPA) during International Conference Global Potato Conclave 2020 on “Genome-wide the landscape of carotenoids biosynthesis pathway genes in potato” at Mahatma Mandir, Gandhinagar, Gujarat, India on 28-31 January 2020.
- Awarded 1st prize for the poster presentation on the topic entitled “Interactive Effect of Potato Apical Leaf Curl disease on Resistant starch and Glycemic index of Potato (*Solanum tuberosum* L.)” during International Potato e-Conference at ICAR-CPRI, Shimla, Nov. 23-26, 2021.
- Awarded 1st prize for the Oral presentation on the topic entitled “Vacuum Impregnation: A novel tool for the development of ascorbic acid fortified potato and its products” Sushil S Changan, Vandana Parmar, Asha Thakur, Dharmendra Kumar, Milan Kumar Lal, Arvind Jaiswal, Pinky Raigond, Som Dutt, and Brajesh Singh during International Potato e-Conference at ICAR-CPRI, Shimla, Nov. 23-26, 2021.
- Awarded 1st prize for the Oral presentation on the topic entitled “Phosphorus economy and yield enhancement in potato through co-inoculation of AM-fungi and PSB in a Himalayan acid Alfisol” by “Anil K Choudhary, J Sharma, VK Dua, Dharmendra Kumar, Name Singh and Sushil Kumar” during International Potato e-Conference at ICAR-CPRI, Shimla, Nov. 23-26, 2021.
- Review article on “Functional fermented probiotics, prebiotics and synbiotics from non-dairy products: A perspective from nutraceutical.” published in

Molecular Nutrition & Food Research (IF 6.575) figure has been recognized as the Front Cover Page of the Journal. Volume 66, Issue 14, July 2022.

- Research article on “Impact of Starch Storage Condition on Glycemic Index and Resistant Starch of Cooked Potato (*Solanum tuberosum*) Tubers has been recognized as a “Top Cited Article 2020-21” in the journal Starch/Stark

## RESEARCH ARTICLES

S.N.	RESEARCH PAPER	IMPACT FACTOR (2022)	CITATIONS
1.	<p><b>Kumar, D.</b>, Lal, M. K., Dutt, S., Raigond, P., Changan, S. S., Tiwari, R. K., Chourasia, K. N., Mangal, V., &amp; Singh, B. (2022). Functional fermented probiotics, prebiotics and synbiotics from non-dairy products: A perspective from nutraceutical. <i>Molecular Nutrition &amp; Food Research</i>, 2101059.</p> <p><a href="https://doi.org/10.1002/MNFR.202101059">https://doi.org/10.1002/MNFR.202101059</a></p>	<b>6.575</b>	<b>15</b>
2.	<p>Lal, M. K., Tiwari, R. K., Kumar, R., Naga, K. C., Kumar, A., Singh, B., Raigond, P., Dutt, S., Chourasia, K. N., <b>Kumar, D.</b>, Parmar, V., &amp; Changan, S. S. (2021). Effect of potato apical leaf curl disease on glycemic index and resistant starch of potato (<i>Solanum tuberosum</i> L.) tubers. <i>Food Chemistry</i>, 359, 129939.</p> <p><a href="https://doi.org/10.1016/j.foodchem.2021.129939">https://doi.org/10.1016/j.foodchem.2021.129939</a></p>	<b>9.231</b>	<b>30</b>
3.	<p>Tiwari, R. K., Lal, M. K., Kumar, R., Chourasia, K. N., Naga, K. C., <b>Kumar, D.</b>, Das, S. K., &amp; Zinta, G. (2020). Mechanistic insights on melatonin-mediated drought stress mitigation in plants. <i>Physiologia Plantarum</i>, 172(2), 1212–1226.</p> <p><a href="https://doi.org/10.1111/ppl.13307">https://doi.org/10.1111/ppl.13307</a></p>	<b>5.081</b>	<b>95</b>
4.	<p>Singh, A., Raigond, P., Lal, M. K., Singh, B., Thakur,</p>		

	N., Changan, S. S., <b>Kumar, D.</b> , & Dutt, S. (2020). Effect of cooking methods on the glycemic index and in vitro bioaccessibility of potato ( <i>Solanum tuberosum</i> L.) carbohydrates. LWT, 127. <a href="https://doi.org/10.1016/j.lwt.2020.109363">https://doi.org/10.1016/j.lwt.2020.109363</a>	<b>6.056</b>	<b>27</b>
<b>5</b>	Mangal, V., Lal, M. K., Tiwari, R. K., Altaf, M. A., Sood, S., <b>Kumar, D.</b> , Bharadwaj, V., Singh, B., Singh, R. K., & Aftab, T. (2022). Molecular Insights into the Role of Reactive Oxygen, Nitrogen and Sulphur Species in Conferring Salinity Stress Tolerance in Plants. Journal of Plant Growth Regulation 2022, 1–21. <a href="https://doi.org/10.1007/S00344-022-10591-8">https://doi.org/10.1007/S00344-022-10591-8</a>	<b>4.640</b>	<b>12</b>
<b>6</b>	Singh, D., Thapa, S., Mahawar, H., <b>Kumar, D.</b> , Geat, N., Singh, S.K., 2022. Prospecting potential of endophytes for modulation of biosynthesis of therapeutic bioactive secondary metabolites and plant growth promotion of medicinal and aromatic plants. Antonie Van Leeuwenhoek 115, 699–730. <a href="https://doi.org/10.1007/S10482-022-01736-6/FIGURES/3">https://doi.org/10.1007/S10482-022-01736-6/FIGURES/3</a>	<b>2.158</b>	<b>5</b>
<b>7</b>	Raigond, P., Parmar, V., Thakur, A., Lal, M. K., Changan, S. S., <b>Kumar, D.</b> , Dutt, S., & Singh, B. (2021). Composition of Different Carbohydrate Fractions in Potatoes: Effect of Cooking and Cooling. Starch-Stärke, 2100015. <a href="https://doi.org/10.1002/star.202100015">https://doi.org/10.1002/star.202100015</a>	<b>2.688</b>	<b>8</b>
<b>8</b>	Lal, M. K., Kumar, A., Raigond, P., Dutt, S., Changan, S. S., Chourasia, K. N., Tiwari, R. K., <b>Kumar, D.</b> , Sharma, S., Chakrabarti, S. K., & Singh, B. (2021). Impact of Starch Storage Condition on Glycemic Index and Resistant Starch of Cooked Potato ( <i>Solanum</i>	<b>2.688</b>	<b>20</b>

	<i>tuberosum</i> ) Tubers. Starch/Starke, 73(1–2). <a href="https://doi.org/10.1002/star.201900281">https://doi.org/10.1002/star.201900281</a>		
<b>9</b>	Chourasia, K. N., More, S. J., Kumar, A., <b>Kumar, D.</b> , Singh, B., Bhardwaj, V., Kumar, A., Das, S. K., Singh, R. K., Zinta, G., Tiwari, R. K., & Lal, M. K. (2022). Salinity responses and tolerance mechanisms in underground vegetable crops: an integrative review. <i>Planta</i> 2022 255:3, 255(3),1–25. <a href="https://doi.org/10.1007/S00425-022-03845-Y">https://doi.org/10.1007/S00425-022-03845-Y</a>	<b>4.540</b>	<b>20</b>
<b>10</b>	Chourasia, K. N., Lal, M. K., Tiwari, R. K., Dev, D., Kardile, H. B., Patil, V. U., Kumar, A., Vanishree, G., <b>Kumar, D.</b> , Bhardwaj, V., Meena, J. K., Mangal, V., Shelake, R. M., Kim, J.-Y., & Pramanik, D. (2021). Salinity Stress in Potato: Understanding Physiological, Biochemical and Molecular Responses. <i>Life</i> , 11(6), 545. <a href="https://doi.org/10.3390/LIFE11060545">https://doi.org/10.3390/LIFE11060545</a>	<b>3.251</b>	<b>34</b>
<b>11</b>	Tiwari, R. K., Kumar, R., Sharma, S., Sagar, V., Aggarwal, R., Naga, K. C., Lal, M. K., Chourasia, K. N., <b>Kumar, D.</b> , & Kumar, M. (2020). Potato dry rot disease: current status, pathogenomics and management. In <i>3 Biotech</i> (Vol. 10, Issue 11, pp. 1–18). Springer Science and Business Media Deutschland GmbH. <a href="https://doi.org/10.1007/s13205-020-02496-8">https://doi.org/10.1007/s13205-020-02496-8</a>	<b>2.893</b>	<b>22</b>
<b>12</b>	Tiwari, R. K., Lal, M. K., Naga, K. C., Kumar, R., Chourasia, K. N., S, S., <b>Kumar, D.</b> , & Sharma, S. (2020). Emerging roles of melatonin in mitigating abiotic and biotic stresses of horticultural crops. <i>Scientia Horticulturae</i> , 272, 109592. <a href="https://doi.org/10.1016/j.scienta.2020.109592">https://doi.org/10.1016/j.scienta.2020.109592</a>	<b>4.342</b>	<b>55</b>
<b>13</b>	Raigond, P., Rawal, S., Vandana Parmar, ·, Thakur, A., Bandana, ·, Mishra, T., Dutt, S., Jaiswal, A., Milan, ·, Lal, K., Sushil, ·, Changan, S., <b>Kumar, D;</b> & Singh, B.	<b>2.561</b>	<b>1</b>

	(2022). Nutritional, Processing and Sensorial Attributes of Organic and Inorganic Indian Potatoes. Potato Research 2022, 1–23. <a href="https://doi.org/10.1007/S11540-022-09564-X">https://doi.org/10.1007/S11540-022-09564-X</a>		
14	<b>Kumar, D.</b> , Shukla, L., Singh, S. B., Nain, L., & Singh, S. (2021). Bacterial consortium for efficient degradation of di-ethyl phthalate in soil microcosm. Environmental Sustainability 2021,1–8. <a href="https://doi.org/10.1007/S42398-021-00199-1">https://doi.org/10.1007/S42398-021-00199-1</a>	-	1
15	<b>Kumar D</b> , Kaushik R, Singh S (2016) Molecular and biochemical profiling of pentachlorophenol utilizing bacteria from pulp and paper mill effluent irrigated soil in Northern India. J Pure Appl Microbiol 10:2045–2055		2
16	<b>Kumar D</b> , Kaushik R, Lata, Saxena AK (2015) Biotransformation of Pentachlorophenol to intermediary metabolites by bacteria isolated from pulp and paper mill effluent irrigated cultivable land. J Pure Appl Microbiol 9:201–208		2
17	<b>Kumar D</b> , Bal M, Kumar D, Shukla L, Singh S, Bala Singh S, Kumar Jha S, Prakash G (2018) Assessment of diverse phthalate esters (PAEs) from irrigated agriculture soil under protected cultivation in IARI, New Delhi. Int J Chem Stud 6:3432–3435		3
18	Singh R, Kumar S, Kumar H, Kumar M, Kumar A, <b>Kumar D</b> (2017) Effect of irrigation and integrated nutrient management on growth and yield of chickpea ( <i>Cicer arietinum</i> L.). Plant Arch 17:1319–1323		9
19	Singh R, Kumar S, Kumar H, Kumar M, Kumar AJ, <b>Kumar D</b> (2017) Effect of irrigation and integrated nutrient management on water use efficiency and nutrient uptake of Chickpea ( <i>Cicer arietinum</i> L.)		2
20	<b>Kumar, D.</b> , Som Dutt, SS Changan, MK Lal, AK Jaiswal, RK Tiwari, Vikas Mangal, Pinky Raigond, and		2

	Singh B. (2021). Utilization of potato waste for production of bioethanol : A novel technology. <i>Potato J</i> , 48, 124–133.		
21	M K Lal, R K Tiwari, Arvind Jaiswal, S. S. C., <b>Kumar D.</b> , Awadhesh Kumar, Vinod Kumar, Jagdev Sharma, P. R., & Singh, S. D. and B. (2021). An emerging concept of phosphorus nutrition in potato under elevated carbon dioxide (CO <sub>2</sub> ) conditions. <i>Potato Journal</i> , 48(1), 81–88.		2
22	Rahul Kumar Tiwari, Sanjeev Sharma, Ravinder Kumar, Milan Kumar Lal, Kailash Chandra Naga, <b>Kumar D.</b> , V. S. (2021). Morpho-molecular identification of potato silver scurf caused by <i>Helminthosporium Solani</i> and standardization of spore inundation technique. <i>Potato Journal</i> , 48(1), 59–66.		3
	<b>TOTAL</b>		<b>600</b>

## BOOK CHAPTERS

1. **Kumar, D.**, Dutt, S., Raigond, P., Changan, S. S., Lal, M. K., Sharma, D., & Singh, B. (2020). Potato Probiotics for Human Health. In *Potato* 271–287. Springer Singapore. [https://doi.org/10.1007/978-981-15-7662-1\\_15](https://doi.org/10.1007/978-981-15-7662-1_15)
2. **Kumar, D.**, Dutt, S., Raigond, P., Changan, S. S., Lal, M. K., Tiwari, R. K., Chourasia, K. N., & Singh, B. (2021). Different Biofertilizers and Their Application for Sustainable Development. *Microbial Technology for Sustainable Environment*, 31–48. Springer, Singapore. [https://doi.org/10.1007/978-981-16-3840-4\\_3](https://doi.org/10.1007/978-981-16-3840-4_3)
3. **Kumar, D.**, Dutt, S., Raigond, P., Changan, S. S., Kumar Lal, M., Tiwari, R. K., Chourasia, K. N., & Singh, B. (2021). Beneficial Microorganisms in Crop Growth, Soil Health, and Sustainable Environmental Management : Current Status and Future Perspectives. *Plant-Microbial Interactions and Smart Agricultural Biotechnology*, 11–32. CRC Press. <https://doi.org/10.1201/9781003213864-2>



4. Sharma, D., Gahtyari, N. C., Chhabra, R., & **Kumar, D.** (2020). Role of Microbes in Improving Plant Growth and Soil Health for Sustainable Agriculture. 207–256. Springer Nature, Singapore. [https://doi.org/10.1007/978-981-15-3208-5\\_9](https://doi.org/10.1007/978-981-15-3208-5_9)
5. Changan, S. S., Taylor, M. A., Raigond, P., Dutt, S., **Kumar, D.**, Lal, M. K., Kumar, M., Tomar, M., & Singh, B. (2020). Potato Carotenoids. In Potato (pp. 151–171). Springer Singapore. [https://doi.org/10.1007/978-981-15-7662-1\\_9](https://doi.org/10.1007/978-981-15-7662-1_9)
6. Lal, M. K., Kumar, A., Kardile, H. B., Raigond, P., Changan, S. S., Thakur, N., Dutt, S., Tiwari, R. K., Chourasia, K. N., **Kumar, D.**, & Singh, B. (2020). Biofortification of Vegetables. In Advances in Agri-Food Biotechnology (pp. 105–129). Springer Singapore. [https://doi.org/10.1007/978-981-15-2874-3\\_5](https://doi.org/10.1007/978-981-15-2874-3_5)
7. Lal, M. K., Kumar, A., Kumar, A., Jena, R., Raigond, P., **Kumar, D.**, Thakur, N., & Singh, B. (2020). Minerals in Potato. In Potato (pp. 87–112). Springer Singapore. [https://doi.org/10.1007/978-981-15-7662-1\\_6](https://doi.org/10.1007/978-981-15-7662-1_6)
8. Singh, B., Raigond, P., Jaiswal, A; & **Kumar, D.** (2020). Potato Post-Harvest Management strategies. (pp.343-361). (NIPA, New Delhi).
9. Arvind Jaiswal, Pinky Raigond, S. S. Changan., & Milan Kumar Lal, **Kumar D.**, and B. Singh. (2021). Value Addition in Potatoes. In C. S. K. Vinay Bhardwaj (Ed.), Potato in Sub-tropics: A Saga of Success. International Books & Periodical Supply Service.
10. Milan Kumar Lal, Arvind Kumar Jaiswal, Pinky Raigond, B., Singh, Nitasha Thakur, Som Dutt, S. S. Changan., **Kumar D.**, R. K. T. K. N. C., & Naga, K. C. (2021). Post-Harvest Management, Value Addition and Processing of Potato. In *Recent Advances in Root and Tuber Crops*. Brillion Publishing
11. Rahul Kumar Tiwari, Ravinder Kumar, Kailash Chandra Naga, VinaySagar, **Kumar D.**, Milan Kumar Lal, Kumar Nishant Chourasia, S. S. (2021). Recent Advancements in Integrated Management of Potato Diseases. In *Brillion Publishing, New Delhi*
12. Singh P, Kumar S, Srivastava S, Nagargade M, **Kumar D.**, Sinha PK (2022) Endophytes for Sustainable Sugar Beet Production. Sugar Beet Cultiv Manag Process 777–792 . [https://doi.org/10.1007/978-981-19-2730-0\\_38](https://doi.org/10.1007/978-981-19-2730-0_38)

## POSTER/ORAL/ABSTRACT IN CONFERENCES/SYMPOSIA

1. **Poster presentation** on the topic entitled “Assessment of diverse phthalate esters from IARI farm under protected cultivation”. By **Dharmendra Kumar**, Shukla L,

Singh S and Singh SB. 3<sup>rd</sup> International IUPAC Conference on APCHNE: New Chemistries for Phytomedicines and Crop Protection Chemicals, New Delhi, India 2016.

2. **Poster presentation** on the topic entitled “Potato as a bioenergy crop for fuel ethanol production: Perspectives and challenges” by **Dharmendra Kumar**, Som Dutt, Pinky Raigond, Sushil Sudhakar Changan, Milan Kumar Lal, Kumar Nishant Chourasia, Rahul Kumar Tiwari, Preeti Singh, Subhash S and Brajesh Singh, published at International Conference Global Potato Conclave 2020, Mahatma Mandir, Gandhinagar, Gujarat, India on 28-31 January 2020.
3. **Poster presentation** on the topic entitled “Interactive Effect of Potato Apical Leaf Curl disease on Resistant starch and Glycemic index of Potato (*Solanum tuberosum* L.)” Milan Kumar Lal, Rahul Kumar Tiwari, Ravinder Kumar, Arvind Jaiswal, Awadhesh Kumar, **Dharmendra Kumar**, Sushil Sudhakar Changan, Asha Thakur, Vandana Parmar, Vinod Kumar, Som Dutt, Vijay Paul, Sudhir Kumar, Madan Pal Singh, Brajesh Singh during International Potato e-Conference at ICAR-CPRI, Shimla, Nov. 23-26, 2021.
4. **Poster presentation** on the topic entitled “Application of high-throughput plant phenomics technique for potato” Sushil S. Changan, Jagadish Rane, Mahesh Kumar, Brajesh Singh, Som Dutt, Pinky Raigond, **Dharmendra kumar** and Milan Kumar Lal at International Plant Physiology Virtual Conference-2020, Prospects of Plant Physiology for Climate Proofing Agriculture December, 6-7, 2020, New Delhi.
5. **Poster presentation** on the topic entitled “Application of high throughput plant phenomics techniques for potato” by Sushil S. Changan, Brajesh Singh, Som Dutt, Pinky Raigond, **Dharmendra Kumar** and Milan Kumar Lal, published at International Conference Global Potato Conclave 2020, Mahatma Mandir, Gandhinagar, Gujarat, India on 28-31 January 2020.
6. **Poster presentation** on the topic entitled “High throughput method development for Glycemic Index and Resistant Starch content of Potato (*Solanum tuberosum*) tubers” by Milan Kumar Lal, Pinky Raigond, Awadhesh Kumar, Som Dutt, Sushil Sudhakar Changan, **Dharmendra Kumar**, Nitasha Thakur, Swarup Kumar Chakrabarti and Brajesh Singh, published at International Conference Global Potato Conclave 2020, Mahatma Mandir, Gandhinagar, Gujarat, India on 28-31 January 2020.
7. **Poster presentation** on the topic entitled “Development of throughput protocol for in vitro estimation of Glycemic Index in potato (*Solanum tuberosum*) tubers” by Milan

Kumar Lal, Awadhesh Kumar, Pinky Raigond, Som Dutt, Sushil Sudhakar Changan, **Dharmendra Kumar**, Kumar Nishant Chourasiaat, Swarup Kumar Chakrabarti and Brajesh Singh, published at 2<sup>nd</sup> International Conference Recent advances in agricultural, environmental & applied sciences for global development, DR Yashwant Singh Parmar University of Horticulture and forestry, Solan, HP, India on 27-29 september 2019.

8. **Poster presentation** on the topic entitled “Genome-wide identification and expression analysis of ABA receptor (StPYL) family genes in potato (*Solanum tuberosum* L.) under cold stress” by Kumar Nishant Chourasia, H.B. Kardile, Vinay Bhardwaj, V.U. Patil, Salej Sood, Sundaresha S., M.K. Lal, R.K. Tiwari, **Dharmendra Kumar**, Subhash S., G.Vanishree, Preeti Singh, Brajesh Singh and S.K. Chakrabarti published at International Conference Global Potato Conclave 2020, Mahatma Mandir, Gandhinagar, Gujarat, India on 28-31 January 2020.
9. **Poster presentation** on the topic entitled “Isolation and characterization of endophytic bacteria from potato tuber and roots” by Preeti Singh, Hemant B. Kardile, Sanjay Rawal, Nirmal Kant Sharma, V.K. Dua, Jagdev Sharma, **Dharmendra Kumar** and Kumar Nishant Chourasia at International Conference Global Potato Conclave 2020, Mahatma Mandir, Gandhinagar, Gujarat, India on 28-31 January 2020.
10. **Oral presentation** on the topic entitled “Fermentation technology for waste utilization and value addition to potatoes” **Dharmendra Kumar**, Som Dutt, Sushil Sudhakar Changan, Milan Kumar Lal, Rahul Kumar Tiwari, Vikas Mangal and Brajesh Singh during International Potato e-Conference at ICAR-CPRI, Shimla, Nov. 23-26, 2021
11. **Oral presentation** on the topic entitled “Saccharification and Fermentation of cull potatoes for the production of sugars and bioethanol technology” **Dharmendra Kumar**, Som Dutt, Sushil Sudhakar Changan, Milan Kumar Lal, and Brajesh Singh during in the 62<sup>nd</sup> Annual International Conference of the Association of Microbiologists of India (AMI) “Microbiology and Society: Current Trends and Future Prospects” (MSCTFP-2022) at Mysore, Karnataka from 21-23 September 2022.
12. **Oral presentation** on the topic entitled “Vacuum Impregnation: A novel tool for the development of ascorbic acid fortified potato and its products” Sushil S Changan, Vandana Parmar, Asha Thakur, **Dharmendra Kumar**, Milan Kumar Lal, Arvind Jaiswal, Pinky Raigond, Som Dutt, and Brajesh Singh during International Potato e-

Conference at ICAR-CPRI, Shimla, Nov. 23-26, 2021

- 13. Oral presentation** on the topic entitled “Extrinsic and Intrinsic factor regulating the glycemic response of potato” Milan Kumar Lal, Arvind Jaiswal, Awadhesh Kumar, Rahul Kumar Tiwari, Ravinder Kumar, **Dharmendra Kumar**, Sushil Sudhakar Changan, Asha Thakur, Vandana Parmar, Vinod Kumar, Som Dutt, Vijay Paul, Sudhir Kumar, Madan Pal Singh, and Brajesh Singh during International Potato e-Conference at ICAR-CPRI, Shimla, Nov. 23-26, 2021
- 14. Oral presentation** on the topic entitled “Phosphorus economy and yield enhancement in potato through co-inoculation of AM-fungi and PSB in a Himalayan acid Alfisol” by “Anil K Choudhary, J Sharma, VK Dua, **Dharmendra Kumar**, Name Singh and Sushil Kumar” during International Potato e-Conference at ICAR-CPRI, Shimla, Nov. 23-26, 2021
- 15. Oral presentation** on “Genome-wide landscape of carotenoids biosynthesis pathway genes in potato” by Som Dutt, Anshul Sharma Manjul, Pinky Raigond, Kalpana, Shivangi Varshney, Sarika Sahu, AR Rao, Anil Rai, Sushil Sudhakar Changan, **Dharmendra Kumar**, Milan Kumar Lal, Brajesh Singh, Swarup Kumar Chakrabarti at International Conference Global Potato Conclave 2020, Mahatma Mandir, Gandhinagar, Gujarat, India on 28-31 January 2020.
- 16. Oral presentation** on the topic entitled “Development Of dsRNA Based Potato Sprout Suppressant” Sushil S. Changan, Sundaresha, Som Dutt, Pinky Raigond, **Dharmendra Kumar**, Milan Kumar Lal, Brajesh Singh during the International Conference on “New Paradigms for Agriculture, Food and Sustainability Concerns (NPAFSC-2021)” 26-28 February 2021.
- 17. Oral presentation** on “Insulin-like antigens in potatoes: A new hope for developing insulin-rich potatoes for diabetics” by Pinky Raigond, Pooja Bhardwaj, Baswraj Raigond, Brajesh Singh, Som Dutt, Sushil S Changan, Milan Kumar Lal, **Dharmendra Kumar** at International Conference Global Potato Conclave 2020, Mahatma Mandir, Gandhinagar, Gujarat, India on 28-31 January 2020.
- 18. Oral presentation** on “Modified protocol on hydrolysis index could be decisive determining the glycemic index in Potato” by Milan Kumar Lal, Awadhesh Kumar, Pinky Raigond, Som Dutt, Sushil S Changan, **Dharmendra Kumar**, Nitasha Thakur, Swarup Kumar Chakrabarti and Brajesh Singh at the National conference of plant physiology-2019, Kerala Agriculture University, Thrissur, Kerala, India on 19-21 December 2019.

## POPULAR ARTICLES

1. **Dharmendra Kumar**, Som Dutt, Pinky Raigond, Sushil Sudhakar Changan, Milan Kumar Lal, Brajesh Singh and S K Chakrabarti (2020) on “Bio-ethanol production from waste potatoes” Newsletter number 78, ICAR-CPRI, Shimla.
2. **Dharmendra Kumar**, AK Choudhary, Jagdev Sharma, VK Dua, Name Singh, Som Dutt, Pinky Raigond, Sushil S Changan, M K Lal, RK Tiwari and Brajesh Singh (2021). A novel protocol for infecting potato with mycorrhiza. Newsletter number 84, ICAR-CPRI, Shimla.
3. **Dharmendra Kumar**, Som Dutt, Pinky Raigond, Sushil S Changan, MK Lal, RK Tiwari and Brajesh Singh (2021). Role of Microbes in Potato and Potato-Based Products Ecofarming e-Magazine for Agriculture and Allied Sciences.
4. Raigond, P; Singh, B; Dutt, S; Changan, S. S; Lal, M. K. & **Dharmendra Kumar** (2019). Potatoes for food and nutritional security, ICAR-CPRI, Shimla.
5. Sushil S. Changan, Pinky Raigond, **Dharmendra Kumar**, Milan Kumar Lal, Som Dutt and Brajesh Singh (2021). High-throughput phenotyping: An emerging crop breeding frontier, Agriculture Letters.
6. Raigond, P; Singh, B; Dutt, S; Changan, S. S; Lal, M. K. & **Dharmendra Kumar** (2019). Nutritional profiling of Indian Potato cultivars. Indian Horticulture, 64 (November-December), 26–31.
7. Raigond, P; Parmar V; Thakur A; Dutt, S; Changan, S. S; Lal, M. K. **Dharmendra Kumar**; Raigond B; Jaiswal A.K; Singh, B (2021). Starch: A promising bioplastic. Agriculture Letters, Vol. II, Issue 03-04.
8. Kumar Nishant Chourasia, Hemant B Kardile, VU Patil, Vinay Bhardwaj, Milan K Lal, Rahul K Tiwari, **Dharmendra Kumar**, and Subhash S (2019) on “Exploring StPYL gene family for the development of multiple abiotic stress-tolerant potatoes”, Newsletter number 77, ICAR-CPRI, Shimla.
9. Preeti Singh, Hemant B. Kardile, Sanjay Rawal, Nirmal Kant Sharma, VK Dua, Jagdev Sharma, Kumar Nishant Chourasia, **Dharmendra Kumar**, Rahul Kumar Tiwari (2019) on “Endophytes for Sustainable Potato Production” Newsletter number 77, ICAR-CPRI, Shimla.
10. Milan K Lal, Awadhesh Kumar, Pinky Raigond, Som Dutt, Sushil S Changan, Kumar N Chourasia, Rahul K Tiwari, Subhash S, **Dharmendra Kumar**, SK Chakrabarti & Brajesh Singh (2019) on “Development of high throughput protocol for in vitro

estimation of glycemic index in Potatoes” Newsletter number 77, ICAR-CPRI, Shimla.

11. Sushil S Changan, Som Dutt, Pinky Raigond, **Dharmendra Kumar**, Milan K Lal & Brajesh Singh (2020) on “Modified LC-MS method for Abscisic acid (ABA) quantification in potato” Newsletter number 80, ICAR-CPRI, Shimla.
12. Sushil S. Changan, Brajesh Singh, Som Dutt, Pinky Raigond, Arvind Jaiswal, **Dharmendra Kumar**, Milan Kumar Lal, Asha Thakur, Vandana Thakur (2021) Modified technique for production of granular coldwater soluble potato starch (CWSPS). Newsletter number 84, ICAR-CPRI, Shimla.
13. Nitasha Thakur, Pinky Raigond, M K Lal, V Parmar, S S Changan, **Dharmendra Kumar**, Som Dutt, Arvind Jaiswal & Brajesh Singh (2020) Blending of guar gum with cooked potatoes help to decrease glycemic index. Newsletter number 82, ICAR-CPRI, Shimla.
14. Kumar Nishant Chourasia, R K Tiwari, M K Lal, **Dharmendra Kumar** & Vinay Bhardwaj (2020) Method development for in-vitro screening of salinity tolerance in Potato. Newsletter number 82, ICAR-CPRI, Shimla.
15. Sushil S Changan, **Dharmendra Kumar**, P Raigond, Som Dutt, Milan Kumar Lal, Asha Thakur & B.Singh (2020). Production of industrially used glucose syrup from potato starch. Newsletter number 81, ICAR-CPRI, Shimla.

## TRAININGS, WORKSHOPS AND WEBINARS ATTENDED

S.NO.	EVENT NAME	ORGANISED BY	DURATION
1.	FOCARS 108 (Foundation Course for Agricultural Research Services)	ICAR-NAARM, Hyderabad	July 2 -September 30, 2018
2.	Field Experience Training	Krishi Vigyan Kendra, Kota (Rajasthan)	August 21 - September 10, 2018
3.	International webinar on Nanotechnology in Agriculture and Biotechnology	Dr Rajendra Prasad Central Agricultural University, Pusa Samastipur (848125)	October 19-21, 2020
4.	Webinar on Genomics Strategies for Improvement of Abiotic Stress Tolerance in Crop Plants	ICAR-National Institute of Abiotic Stress Management Baramati, Pune, Maharashtra 413115,	November 27, 2020.

		India	
5.	FEMS Microbiology ecology webinar on sustainable agriculture	Federation of European Microbiological Societies	May 20,2021
6.	FEMS Microbiology ecology webinar on aquatic microbial ecology	Federation of European Microbiological Societies	October 15, 2020
7.	International webinar on Omics in Agriculture	Dr Rajendra Prasad Central Agricultural University, Pusa Samastipur (848125)	October 3-5, 2020
8.	National workshop on Interlectual property management in agriculture	ICAR-Indian Institute of Agricultural Biotechnology (IIAB), Ranchi, Jarkhand	November 28, 2020
9.	Webinar on Translating Physiology into Techniques for Abiotic Stress Tolerance	ICAR-National Institute of Abiotic Stress Management, Baramati; Society for Agricultural Research on Abiotic Stress (SARAS) & Indian Society for Plant Physiology (ISPP), New Delhi (India)	October 9, 2020
10.	National Webinar on Geospatial Approaches for Agricultural Water Management	Dr Rajendra Prasad Central Agricultural University, Pusa Samastipur (848125)	October 7-9, 2020
11.	International webinar on MirRORs	Bioingene.com	October 13, 2020

	(miRNA Regulation of response) to salt stress in plants		
12.	International webinar on Harnessing the potential of tropical tuber crops under changing climate	ICAR - Central Tuber Crops Research Institute, Thiruvanthapuram, Kerala, India	October 27, 2020
13.	Workshop on ABC of scientific writing	ICAR-NRRI, Cuttack & KVK Cuttack, Santhapur	18 August to 2 September 2020
14.	Online Training Programme on Applications of Artificial Intelligence and Cloud Computing in Agriculture	ICAR-NAARM, Hyderabad	March 15-20, 2021
15.	Workshop on The use and application of Rajbhasha in agriculture research and The problems and solutions in scientific Hindi writing	ICAR-CPRI, Shimla	September 19, 2019
16.	Training on the development of probiotics beverages and bioethanol from potato by using beneficial microbes	ICAR-NDRI, Karnal, Harayana, India	12 <sup>th</sup> November 2018 -11 <sup>th</sup> February 2019
17.	Diagnosis of Food and Agriculturally Important Pathogen	University of Mysore	19 <sup>th</sup> September, 2022
18.	Fermentation Technology – Downstream & Upstream Process	CSIR-Central Food Technological Research Institute(CFTRI)	20 <sup>th</sup> September, 2022



## LECTURE DELIVERED IN THE TRAINING

- **Kumar, D;** Kardile, H.B; Dutt, S; Raigond, P; Changan, S.S; Lal, M.K. & Singh, B. (2020) “Application of Flow cytometry in microbial detection” at training on “Flow cytogenetics and molecular technique for improvement of horticulture crops” from 10-19 Feb 2020 at ICAR-CPRI, Shimla.
- Lal, M.K. Kardile, H.B; Raigond, Dutt, S; P; Changan, S.S; **Kumar, D;** Tiwari, R.K; Chourasia, N.K, & Singh, B. (2020) “Cytometry for Detection of Cellular Components” at training on “Flow cytogenetics and molecular technique for improvement of horticulture crops” from 10-19 Feb 2020 at ICAR-CPRI, Shimla.
- Changan, S.S; Kardile, H.B; Dutt, S; Raigond, P; **Kumar, D;** Lal, M.K. & Singh, B. (2020) “DNA binding fluorochromes and their applications in plant research” at training on “Flow cytogenetics and molecular technique for improvement of horticulture crops” from 10-19 Feb 2020 at ICAR-CPRI, Shimla.
- Dutt, S; Raigond, P; Singh, B; Changan, S. S; Lal, M. K. & **Kumar, D.** (2019) “Nutritional and associated processing quality of potato: Recent approaches for their improvement”. The model training course on Protected cultivation, post-harvest technology, value addition, and supply chain management in potato at ICAR-CPRI, Shimla on 23-30 September 2019.

## GUIDING AND TRAINING TO STUDENTS

- Nominated for training under DBT- Skill Vigyan Program, HIMCOSTE, Shimla, HP, 27 May 2020.
- Guided for Thesis Dissertation on “Microbial diversity analysis of different cultivation conditions of potato” to M.Sc student Ms Pryanka Mehta of Bahra University, Shimla Hills, Wakanghat, Solan, HP, 24 December 2019.
- Provided one-month training to Mr Unmesh Mehta of Shoolini University, Solan, HP, 31on December 2019.
- Provided one-month training to Ms Simran Gohan student B.tech (Biotechnology) Jaypee University of Information Technology Wakanghat, Solan, HP, 15<sup>th</sup> March 2021

- Provided three-month training to Ms Pooja Verma student of B.tech (Biotechnology) of Shoolini University, Solan, HP, 31 December 2020
- Provided one-month training to Ms Ankita Thakur student of B.tech (Biotechnology) of Shoolini University, Solan, HP, July 2022

## PROJECTS INVOLVED

S.N.	Name of project	Funding agency	P.I./Co-P.I.
1.	Post-harvest management and nutritional enhancement of potatoes	ICAR-CPRI	Co-P.I (2019-2025)
2.	Technology development and refinement for potato and potato-based cropping system	ICAR-CPRI	Co-P.I (2020-2025)
3.	Genetic enhancement of potato through molecular and genomic tools	ICAR-CPRI	Co-P.I (2019-2025)
4.	Nutrient and water management for improved productivity and sustainability of potato	ICAR-CPRI	Co-P.I (2020-2025)
5.	Skill Vigyan Programme	DBT	Co-P.I (2019-2022)

**(Dharmendra Kumar)**

**Dated: 18.09.2023**