

## Rahul Kumar, Ph.D

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**Date of Birth:** 19/04/1982

### Professional Experience and Training

Publications (Numbers only): 42

Book chapters: 5

**Publication Impact:** [https://scholar.google.com/citations?user=zXV\\_U1wAAAAJ&hl=en](https://scholar.google.com/citations?user=zXV_U1wAAAAJ&hl=en)

- Citations received (Google scholar) : 4523
- h-index : 20
- i-10 index :25

Lab website: <https://rahulpmb.wixsite.com/ptrl>;  
[http://sls.uohyd.ac.in/new/fac\\_details.php?fac\\_id=116](http://sls.uohyd.ac.in/new/fac_details.php?fac_id=116)

### Education

2005-2011 Ph.D. in Plant Molecular Biology at the Department of Plant Molecular Biology, University of Delhi South Campus, Benito Juarez Road, New Delhi, 110021, India

- **Thesis Title:** Analysis of DNA sequence of part of chromosome 5, ripening-related transcriptome and delay of fruit ripening by silencing of *LeMADS-RIN* gene in tomato

2003- 2005 M.Sc. Botany with special paper Plant Molecular Biology

- Department of Botany, North campus, Delhi University, Delhi, India
- First division with an aggregate of 74.10%

2000- 2003 B.Sc. (Hons.) Botany

- Zakir Hussain Delhi College, University of Delhi, Delhi, India
- First division with an aggregate of 79.88% and 2<sup>nd</sup> rank in Delhi University

1996-1998 Class XII

- R.K. Inter College Shamli, Shamli, UP
- First division with an aggregate of 69.40%

1994-1996 Class X

- Inter College Kurmali, Shamli, UP
- First division with an aggregate of 72.50%

### Teaching responsibilities

1. Plant Biotechnology: M.Sc.
2. Plant Physiology: I.M.Sc
3. Cell Biology: M.Sc.
4. Plant Systematics: M.Sc.
5. Environmental Biotechnology
6. Research Methodology: Ph.D. Course work

### Other Responsibilities

2023-2024: Co-Incharge SLS greenhouse facility

2023-2024 Member, Admission Committee, Department of Plant Sciences

2023: Treasurer and Organizing committee member, International conference on Current Trends and Future Prospects of Plant Biology, Feb 23-25 2023, SLS. UoH

2022 : (July) onwards: Member, Department Grievance Committee, Department of Plant Sciences

2021 (October): Coordinator and convener for conducting an 8-day SERB-Abhyaas-funded workshop on Genome-editing using CRISPR-Cas in plants.

2021 (September): Member, Empowered Committee for the University Cryogenic Facility.

2021 (July) onwards: Member, School Grievance Committee, SLS

2021 (June)-Member, SLS Thinker statue purchase committee

2021-2022: Member, Admission Committee, Department of Plant Sciences

2021: Member SLS Equipment Audit Committee

2020- Wardens, LH10 and MH-K UoH

2020-(28-08-2020) onwards: Nodal office, School of Life Sciences, Institute of Eminence, UoH

2020-2023: Member secretary, IBSC-UoH.

2020: Convener and member, SLS greenhouse renovation committee under DBT-BUILDER.

2020-2021: SLS eBook purchase committee member.

2019-20: SLS garden committee member.

2020: Organizer, National Conference on Frontiers in Plant Biology, held at the University of Hyderabad.

2020: Convener of the Plant Colloquium, the annual scientific program of Dept. of Plant Sciences.

2016-19: Faculty observer in the University of Hyderabad Students Union elections.

2017-2019: Ph.D. Coursework coordinator, Dept. of Plant Sciences, UoH.

2017: Organizing committee member of BioQuest 2017, SLS, UoH.

2017: Co-convener of the Plant Colloquium, annual scientific program of Dept. of Plant Sciences.

2017-2018: Dept. committee member for end-of-semester marks compilation.

2017: Dept. committee member for the physical verification of lab assets of the retiring professors.

2018: Dept. committee member for selecting the Ph.D. Gold Medal.

2019: UoH External examination coordinator in SVC, Delhi (May 24-June 1, 2019).

2019: SLS Landscaping committee member.

2019: Committee member on assessing the relevance of introducing DUAL course (Botany) in Dept. of Plant Sciences.

### Teaching and Research experience

Position held	Year and Institution	Specialization/Nature of job
RA III (DBT funded project)	2011-2013, DPMB, DU	Research
DST-INSPIRE Faculty	2013-2016, DoPS, SLS, UoH	Teaching and Research
BELSPO Postdoctoral researcher	2014-2016, PSB-VIB, UGent, Belgium	Research
Assistant Professor (Academic level pay scale 10)	Dec 19, 2016 - September 05, 2017, DoPS, SLS, UoH	Teaching and Research
Assistant Professor (Academic level pay scale 11)	September 06, 2017 - September 05, 2022, DoPS, SLS, UoH	Teaching and Research
Assistant Professor (Academic level pay scale 12)	September 06, 2022 - To date, DoPS, SLS, UoH	Teaching and Research
<b>Post-Ph.D. Teaching/Research Experience: 11 years 9 months; Next promotion to Associate Professor under CAS due on September 6, 2025</b>		

### Project undertaken/Grant received

S. No	Title	Funding body	Duration	Status	Sanctioned amount (lakhs)
11	Deciphering the roles of two novel phosphorus starvation inducible Phloem Protein 2-B genes in sugar remobilization and phosphate homeostasis in tomato (File Number: CRG/2022/003972)	SERB	2023-2026	PI	42.29
10	Development and pilot-scale production of a novel nano-fertilizer (n-DAP) and a nano-biopesticide (harpin-loaded chitosan)	DST	2023-2026	Co-PI	350
9	An Automated System for tracking Physical Characteristic Changes in Tomatoes	IoE-MHRD	2021	Co-PI	10
8	Hands-On Training on CRISPR/Cas9 mediated gene-editing in plants (File Number: AV/KAR/2020/0226)	SCIENCE & ENGINEERING RESEARCH BOARD (SERB)	2021	Scheduled for May 2021	3
7	Deciphering genetic mechanisms controlling internal Phosphorus-use-efficiency and plant fitness under phosphorus deprivation in tomato (File No. RC1-20-018)	IoE-MHRD	2020-2023	Ongoing	61.7
6	Understanding genetic diversity of root system architecture and underlying regulatory mechanisms in response to low phosphate in tomato (CRG/2018/001033)	DST-SERB	2019-2022	Completed	35.82
5	Engineering of auxin metabolism pathway genes for improving ripening traits in tomato (File No. BT/PR31630/AGIII/103/1119/2019)	DBT	2019-2022	Completed	40.83

4	Creation of a genetic resource of auxin mutants in tomato using CRISPR/Cas9 toolkit and characterization of the knockout lines for fruit ripening and phosphate starvation response ( <b>No. 38/1482/19/EMR-II</b> )	CSIR	2019-2022	Completed	20
3	Exploring the natural diversity in tomato germplasm for phosphate starvation responses ( <b>INT/BLG/P-06/2019</b> )	DST	2019-2021	Completed	11.82
2	Genetic manipulation of ripening-associated ERFs for the regulation of ripening in tomato ( <b>LSPA-15</b> )	DST	2013-2018	Completed	35
1	Investigations on the carotenoids level in tomato genotypes with altered ethylene signalling	UGC-Universities with Potential of Excellence Phase-II	2017	Completed	3.5

## Reviewer

- Reviewer for Scientific journals like Horticulture Research, BMC Genomics, Frontiers in Plant Science, Plant Molecular Biology, BMC Plant Biology, Plant Science, Scientific reports, PMB Reporter, Plant and Cell Physiology, Physiologia Plantarum, Acta Physiologia Plantarum, PlosOne, Physiology and Molecular Biology of Plants, Journal of Biotechnology Advances, Journal of Plant Biochemistry and Biotechnology, Postharvest Biology and Technology, Journal of Agricultural and Food Chemistry
- DST-ECR, SERB-CRG, DBT-Agribiotech, ISF

## Academic visits

- Visited Prof. Sacco de Vries laboratory, Wageningen University, Wageningen, The Netherlands, from 01/12/2014-15/12/2014 for learning the *in planta* protein-protein interaction using IP/MS technique.

## Awards/ Scholarships/ Recognitions

- NASI-SCOPUS Young Scientist Award (2022) in Agriculture, Plant Sciences and Rural Development category.
- SERB-ITS Financial Assistance to Dr. Rahul Kumar for participating in the "XVII SOLANACEAE2022 International Conference on the Plant Family of Solanaceae and Cost Action , Greece (01 November, 2022 to 05 November, 2022).
- Listed in the 2% of Scientists in the World under ‘Overall citations since first publication’ for the year 2022.

- Guest Associate Editor in *Frontiers in Plant Science* (2022) for the research topic “Phosphorus signaling in plants”
- Prof. Y.S. Murty Medal 2021 by Indian Botanical Society.
- Review Editor for *Frontiers in Plant Science* (Plant Membrane Traffic and Transport, Plant Physiology) (March 8, 2021)
- Elected Associate Fellow, Telangana Academy of Sciences-2019
- SPBB (Society for Plant Biochemistry and Biotechnology)–Springer Young Investigator Award for excellence in Plant Biology (2019) (presented at National Conference on Integrative Plant Biochemistry and Biotechnology' to be held at ICAR-IIRR, Hyderabad during 08-09 November 2019)
- CCSTDS-India travel award (2019)-Not availed
- The National Academy of Sciences, India (NASI)-2015 Young Scientist Platinum Jubilee Award in the field of Plant Sciences.
  - Shortlisted for the INSA YS medal final presentation in INSA in 2014 and 2015.
- Fonds Wetenschappelijk Onderzoek (FWO) Belgium “Travel Grant”-2015 for presenting a poster in an international conference “ENPER-2015” held at Leeds, UK on 17-20 Aug, 2015.
- CSIR-Travel grant (August 2013; TG/8137/HRD) for presenting a research paper in an international conference “SOL2013” held at Beijing, China on Oct 13-17, 2013.
- BELSPO-postdoctoral research fellowship-2013.
- DST-INSPIRE Young Faculty Award-2012.
- Awarded ENEA International Fellowship (2012), Italy (not availed).
- Research Associate in DBT-funded project, from December 2011 to April 2013.
- DST-ITS grant for presenting a research paper in an international conference “Plant Genome Evolution” held at Amsterdam, the Netherlands on Sept 4-6, 2011.
- Senior Research Fellowship by DBT, Govt. of India, from September 2010 to November 2011.
- Senior Research Fellowship by CSIR, Govt. of India, from August 2007 to August 2010.
- Junior Research Fellowship by CSIR, Govt. of India, from August 2005 to August 2007.
- Delhi University Merit Scholarship for three consecutive years 2001-2003 during graduation.
- Zakir Husain Delhi College topper in graduation for three consecutive years (2001-2003).
- Dr. Harjinder Grover Memorial Zakir Husain Delhi College Merit Scholarship in year 2003.

## Publications

1. Gambhir P, Sharma AK, Kumar R\* (2023) The two faces of DJ-1D proteins. **Trends in Plant Science**. <https://doi.org/10.1016/j.tplants.2023.06.005>. (IF: 22)

2. Roychowdhury A, Srivastava R, Akash, Shukla G, Zehirov G, Mishev K, Kumar R\* (2023). Metabolic footprints in phosphate-starved plants. **Physiology and Molecular Biology of Plants** 29(5):755–767. <https://doi.org/10.1007/s12298-023-01319-3> (IF: 3.5)
3. Das PP, Kalyani P, \*Khandelwal M, **Kumar R** (2023) Cellulose-based natural nanofibers for fresh produce packaging: current status, sustainability and future outlook. **RSC-Sustainable Food Technology**. 1-17 DOI: 10.1039/d3fb00066d
4. **Kumar R\***, Ngangkham U, and Abdullah SNA (2023). Editorial: Phosphorus Starvation in Plants. **Frontiers in Plant Science** (DOI: 10.3389/fpls.2023.1211439). (IF: 6.5)
5. Singh NRR#, Roychowdhury A#, Srivastava R#, Akash, Gayathri AG, Parida AP, **Kumar R\*** (2023) Silencing of SISPX1 and SISPX2 promote growth and root mycorrhization in tomato (*Solanum lycopersicum* L.) seedlings. **Plant Science** 333: 111723. ISSN 0168-9452 <https://doi.org/10.1016/j.plantsci.2023.111723> (IF: 5.3)
6. Gambhir P, Raghuvanshi U, Parida AP, Kujur S, Sopory SK, **Kumar R\***, Sharma AK\* (2023). Methylglyoxal controls tomato fruit ripening by regulating ethylene biosynthesis. **Plant Physiology** DOI: <https://doi.org/10.1093/plphys/kiad142> \*Corresponding authors ISSN 0032-0889 (IF: 8)
7. Wang P, Siao S, Zhao X, Arora D, Wang R, Eeckhout D, Leene JV, **Kumar R**, Houbaert A, Winne N, Mylle E, Vandorpe M, Testerink RAK, Gevaert K, Vanneste S, De Jaeger G, Van Damme D, Russinova E. (2023) Mapping the adaptor protein complex interaction network in Arabidopsis identifies P34 as a common stability regulator. **Nature Plants** 9, 355–371. doi: <https://doi.org/10.1101/2022.08.31.505729> ISSN 2055-0278 (17.3)
8. Gambhir P, Singh V; Raghuvanshi U. Parida, AP, Pareek, A, Roychowdhury A, Sopory SK, **Kumar R\***, and Sharma AK\* (2023). A glutathione-independent DJ-1/PfpI domain-containing tomato glyoxalaseIII2, SIGLYIII2, confers enhanced tolerance under salt and osmotic stresses. **Plant Cell Environ.** 46:518–548. <https://doi.org/10.1111/pce.14493>. \*Corresponding authors ISSN 0140-7791 ( IF:7.9)
9. Gambhir P, Parida AP, Singh V, Raghuvanshi U, **Kumar R\***, and Sharma AK\* (2022) A ripening-associated ethylene response factor ERF.D7 activates ARF2 orthologs to regulate tomato fruit ripening. **Plant Physiology**, 28;190(4):2775-2796. doi: 10.1093/plphys/kiac441 (IF: 8) \*Corresponding authors
10. Srivastava R, Roychowdhury A and **Kumar R\*** (2022) Host SPX-PHR regulatory circuit: the molecular dynamo steering mycorrhization in plants. **Plant Cell Reports** 41, 1329–1332 <https://doi.org/10.1007/s00299-022-02845-2> ( IF: 5)
11. Srivastava R, Basu S, Roychodhur and **Kumar R\*** (2021) Phosphorus starvation response dynamics and management in plants for sustainable agriculture. **Journal of Plant Biochemistry and Biotechnology** 30, 829–847 (DOI : 10.1007/s13562-021-00715-8) ISSN 0974-1275 (IF: 1.5)

12. Srivastava R, Sirohi S, Chauhan H and Rahul **Kumar R\*** (2021) The enhanced phosphate-use-efficiency in phosphate-deficient and mycorrhiza-inoculated barley seedlings involves activation of different sets of Pht1 transporters in roots. **Planta** 254(2):38. doi: 10.1007/s00425-021-03687-0. ISSN 1432-2048 (IF: 4.6)
13. Singh NRR, Sarma SS, Tata Narsinga Rao T, Pant H, Srikanth VVSS, and **Kumar R\*** (2021) Cryo-milled nano-DAP for enhanced growth of monocot and dicot plants. **Nanoscale Advances**, 3, 4834 – 4842 <https://doi.org/10.1039/D1NA00283J> (IF – 5.5). ISSN 2516-0230
14. Kujur S, Senthil-Kumar M, and **Kumar R\*** (2021) Plant viral vectors: expanding the possibilities of precise gene editing in plant genomes. **Plant Cell Reports** 40, 931–934 DOI 10.1007/s00299-021-02697-2 (IF – 5). ISSN : 0721-7714.
15. Akash, Parida A, Srivastava S, Mathur S, Sharma AK and **Kumar R\*** (2021) Identification, evolutionary profiling, and expression analysis of F-box superfamily genes under phosphate deficiency in tomato. **Plant Physiology and Biochemistry**, 162, 349-362 DOI: **10.1016/j.plaphy.2021.03.002** (IF: 5.5)
16. Salava H, Thula S, Mohan V, **Kumar R**, and Maghuly, F. (2021) Application of Genome Editing in Tomato Breeding: Mechanisms, Advances, and Prospects. **Int. J. Mol. Sci.**, 22(2), 682; <https://doi.org/10.3390/ijms22020682> (IF: 5.6) ISSN 1422-0067
17. Srivastava R, Akash, Parida AP, Chauhan PK, and **Kumar R\*** (2020) Identification, structure analysis, and transcript profiling of purple acid phosphatases under Pi deficiency in tomato (*Solanum lycopersicum* L.) and its wild relatives. **Int. J. Bio. Mac.** 165, Part B: 2253-2266. <https://doi.org/10.1016/j.ijbiomac.2020.10.080> (IF: 8) ISSN 0141-8130
18. Liu D, **Kumar R**, Claus ANC, Johnson AJ, Siao W, Vanhoutte I, Wang P, Bender KW, Yperman K, Martins S, Zhao X, Vert G, Van Damme D, Friml J, Russinova J\* (2020). Endocytosis of BRASSINOSTEROID INSENSITIVE1 is Partly Driven by a Canonical Tyrosine-based Motif. **The Plant Cell** 32(11):3598-3612. doi: 10.1105/tpc.20.00384 1532-298X (IF: 12.0) ISSN 1532298X
19. Mishra SK, Poonia AK, Chaudhary R, Baranwal VK, Arora D, **Kumar R**, Chauhan H (2020) Genome-wide identification, phylogeny and expression analysis of HSF gene family in barley during abiotic stress response and reproductive development. **Plant Gene**, 23, 100231 (10.1016/j.plgene.2020.100231) (IF: 2.5) ISSN 2352-4073
20. Chaudhary J, Khatri P, Singla P, Kumawat S, Kumari A, Vinay kumar R, Vikram A, Jindal SK, Kardile H, Kumar R, Sonah H, Deshmukh R (2019) Advances in Omics Approaches for Abiotic Stress Tolerance in Tomato. **Biology**, 8, 90; ISSN 2079-7737 doi:10.3390/biology8040090 (IF : 4.2)
21. Gupta BB, Selter LL, Baranwal VK, Arora D, Mishra SK, Sirohi P, Poonia AK, Chaudhary R, **Kumar R**, Krattinger SG, Chauhan H (2019) Updated inventory, evolutionary and expression analyses of *G* (PDR) type *ABC* transporter genes of rice. **Plant Physiology and Biochemistry** 142, 429–439. ISSN: 0981-9428 DOI: 10.1016/j.plaphy.2019.08.004 (IF: 5.5)



22. Chaudhary R, Baranwal VK, **Kumar R**, Sircar D, and Chauhan H (2019) Genome-wide identification and expression analysis of Hsp70, Hsp90, and Hsp100 heat shock protein genes in barley under stress conditions and reproductive development. **Functional & Integrative Genomics**, 19, 1007–1022 DOI: 10.1007/s10142-019-00695-y (**IF : 3.7**)
23. Srivastava R and **Kumar R\*** (2019) The expanding roles of APETALA2/Ethylene Responsive Factors and their potential application in crop improvement. **Briefings in Functional Genomics** 18(4): 240-254; ISSN: 2041-2649 DOI <https://doi.org/10.1093/bfpg/elz001> ISSN 2041-2657 (**IF : 4**)
24. ThulaKumar S, Akash, Naik NK and **Kumar R\*** (2018). A ripening-induced SlGH3-2 gene regulates fruit ripening via adjusting auxin-ethylene levels in tomato (*Solanum lycopersicum* L.)". **Plant Molecular Biology** 98: 455–469 (DOI: 10.1007/s11103-018-0790-1) ISSN: 0167-4412 \*Corresponding author (**Impact Factor: 4.3**)
25. Parida AP, Raghuvanshi U, Pareek A, Singh V, **Kumar R**, and Sharma AK (2018). Genome-wide analysis of genes encoding MBD domain-containing proteins from tomato suggests their role in fruit development and abiotic stress responses. **Molecular Biology Reports** 45:2653–2669 ISSN: 0301-4851 DOI: 10.1007/s11033-018-4435-x (**Impact Factor: 2.7**)
26. Zhou J, Liu D, Wang P, Ma X, Lin W, Chen S, Mishev J, Lu D, **Kumar R**, Vanhoutte I, Meng X, He P, Russinova E, Shan L\* (2018). Regulation of Arabidopsis brassinosteroid receptor BRI1 endocytosis and degradation by plant U-box PUB12/PUB13-mediated ubiquitination. **Proc. Natl. Acad. Sci. USA** 115(8): E1906-E1915 <https://doi.org/10.1073/pnas.1712251115> (**IF: 12.8**)
27. Pareek A, Khurana A, Sharma AK and **Kumar R\*** (2017). An overview of signaling regulons during cold stress tolerance in plants. **Current Genomics**, 18(6): 498–511 DOI: 10.2174/1389202918666170228141345 ISSN: 1389-2029 \*Corresponding author (**IF: 2.6**)
28. Agarwal P, **Kumar R**, Pareek A and Sharma AK (2016). Fruit preferential activity of a tomato *RPP1* gene promoter in transgenic tomato and *Arabidopsis*. **Mol. Genet. Genomics** 292(1):145-156 doi:10.1007/s00438-016-1262-4. (**IF: 3.2**)
29. Ortiz-Morea FA, Savatin DV, Dejonghe W, **Kumar R**, Luo Y, Adamowski M, Van den Begin Jos, Dressano K, Pereira de Oliveira G, Zhao X, Lu Q, Maddar A, Friml J, Moura D, Russinova E (2016) Danger-associated peptide signaling in Arabidopsis requires clathrin. **Proc. Natl. Acad. Sci. USA**, 113(39):11028-33 ISSN: 1091-6490. (**IF: 12.8**)
30. **Kumar R** (2016) Evolutionary Trails of Plant Group II Pyridoxal Phosphate-Dependent Decarboxylase Genes. **Front. Plant Sci.** 7:1268. doi: 10.3389/fpls.2016.01268 ISSN: 1664-462X (**IF: 6.5**)
31. **Kumar R\***, Kumar P and Khurana A (2016). Identification and expression profiling of DNA methyltransferases during development and stress conditions in Solanaceae. **Functional & Integrative Genomics** 16(5):513-28, DOI 10.1007/s10142-016-0502-3, ISSN:1438-7948 \*Corresponding author (**IF: 3.7**)

32. **Kumar R\***, Jiwani G, Amit Pareek, Thulakumar S, Khurana A and Sharma AK (2015). Evolutionary profiling of group II PLP-dependent decarboxylase gene family suggests expansion and functional diversification of histidine decarboxylases in tomato. **Plant Genome** 9(1): 1-15. doi: 10.3835/plantgenome2015.07.0057 \*Corresponding author \*Corresponding author (**IF: 4.2**)
33. **Kumar R**, Agarwal P, Pareek A, Tyagi AK and Sharma AK (2015). Genomic survey, gene expression and interaction analysis suggest diverse roles of ARF and Aux/IAA proteins in Solanaceae. **PMB Reporter**; 33: 1552-1572, ISSN: 1572-9818 (**IF: 1.8**)
34. **Kumar R\*** and Khurana A (2014). Functional genomics of tomato: Opportunities and challenges in post-genome NGS era. **J. Biosci**; 39(5):917-929; ISSN: 0973-7138,\*Corresponding author (**IF: 2.7**)
35. **Kumar R**, Khurana A and Sharma AK (2014). Role of plant hormones and their interplay in fruit development and ripening. **J. Exp. Bot.**;65(16):4561-4575; 277, ISSN: 1460-2431 (**IF : 7.3**)
36. Khurana A, **Kumar R** and Babbar SB (2014). Nitric oxide is involved in salicylic acid-induced flowering of *Lemna aequinoctialis* Welw. **Acta Physiol. Plant**; 36: 2827-33; ISSN: 0137-5881(**IF: 2.7**)
37. **Kumar R**, Khurana A and Sharma AK (2013). Molecular regulators of fruit ripening. **Stewart Postharvest Review**, 4:4 (doi: 10.2212/spr.2013.4.4). ISSN: 1895-1066.
38. Tomato Genome Consortium (2012).The tomato genome sequence provides insights into fleshy fruit evolution. **Nature** 485: 635-641. ISSN : 0028-0836 (**IF: 69.5**)
39. **Kumar R**, Sharma S, Kapoor S, Tyagi AK and Sharma AK (2012). Transcriptome analysis of *rin* mutant fruit and *in silico* analysis of promoter sequences of differentially regulated genes provides insight into LeMADS-RIN-regulated ethylene-dependent as well as ethylene-independent aspects of ripening in tomato. **Mol. Genet. Genomics** 287:189-203.ISSN: 1617-4623 (**IF: 3.2**)
40. **Kumar R**, Agarwal P, Tyagi AK and Sharma AK (2012). Genome-wide analysis of the auxin-responsive *GH3* gene family in tomato (*Solanum lycopersicum*). **Mol. Genet. Genomics** 287: 221-35. ISSN: 1617-4623 (**IF: 3.2**)
41. **Kumar R**,Tyagi AK, Sharma AK (2011) Genome-wide analysis of Auxin Response Factor (ARF) gene family from tomato and analysis of their role in flower and fruit development. **Mol. Genet. Genomics** 285: 245-260.ISSN: 1617-4623 (**IF: 3.2**)
42. Sharma MK, **Kumar R**,Solanke AU, Sharma R, Tyagi AK, Sharma AK (2010) Identification, phylogeny, and transcript profiling of ERF family genes during development and abiotic stress treatments in tomato. **Mol. Genet. Genomics** 284: 455-475.ISSN: 1617-4623 (**IF: 3.2**)

43. Gupta V, Mathur S, Solanke AU, Sharma MK, **Kumar R**, Vyas S, Khurana P, Khurana JP, Tyagi AK and Sharma AK (2009). Genome analysis and genetic enhancement of tomato. **Crit. Rev Biotechnol.** 29, 152-181. ISSN: 1549-7801 (**IF: 8.1**)
44. Mueller LA, ..., **Kumar R**, ..... Knapp S, Zamir D and Stiekema W (2009). A snapshot of the emerging tomato genome sequence. **Plant Genome** 2, 78-92. ISSN. 1940-3372 (**IF: 4.2**)
45. Sharma AK, **Kumar R**, Sharma MK (2011) Transcriptional changes during ripening of tomato fruits. In, B Biswal, J Panigrahi, eds, Proceedings of International Conference on Plant Science in Post Genomic Era, Sambalpur, India: 93-103. (Feb 17-19, 2011).

### Book Chapter

46. Akash, Rajat Srivastava and Rahul Kumar\* (2022). VIGS-based gene silencing for assessing mineral nutrient acquisition in a book entitled ‘Plant Gene Silencing II’ part of ” Kirankumar Mysore and Muthappa Senthil-Kumar (eds.), Plant Gene Silencing: Methods and Protocols, **Methods in Molecular Biology**, vol. 2408, [https://doi.org/10.1007/978-1-0716-1875-2\\_11](https://doi.org/10.1007/978-1-0716-1875-2_11). ISBN 978-1-0716-1875-2
47. Agarwal P, Jiwani J, Khurana A, Gupta P and Kumar R\* (2017). Ethylene and stress mediated signaling in plants: a molecular perspective in a book entitled, “Mechanism of Plant Hormone Signaling under Stress”, ed Giridhar Pandey, ISBN: 978-1-118-88892-6 Wiley-Blackwell. \*Corresponding author
48. Khurana A and Kumar R(2014). Biosafety Concerns in Biotechnology. Virtual Learning Environment, Institute of Lifelong Learning, University of Delhi; ISSN:2349-154X
49. Khurana A and Kumar R(2014).Laboratory requirements and general techniques including tissue culture media. Virtual Learning Environment, Institute of Lifelong Learning, University of Delhi, ISSN:2349-154X
50. Kumar R and Sharma AK. Ethylene perception and signaling in ripening fruit. 2014. Fruit Ripening: Physiology, Signalling and Genomics; 193-201; Edited by P Nath, National Botanical Research Institute, India, M Bouzayen, INRA, France, A Mattoo, USDA, J C Pech, ENSA, France. Publisher: © CAB International; ISSN: 1749-8848 978-1-78639-537-5

### Students Papers/

51. Khurana A#, Akash#, and Roychowdhury A (2021) Identification of phosphorus starvation inducible SnRK genes in tomato (*Solanum lycopersicum* L.). Accepted in Journal of Plant Biochemistry and Biotechnology. 30, 987–998 <https://doi.org/10.1007/s13562-021-00701-0> #equal author

### Research Guidance:

#### Ph.D Thesis (Awarded/Submitted)

Sr. No	Student Name	Thesis Title	Supervision Supervisor Co-supervisor ▼	Registration Date	Submission/Viva-Voce Date	Degree Awarded Date

1	Akash 17LPPH1 0	Functional characterization of SIRbohH and SIFBX2L1 genes for their roles in phosphorus starvation response in tomato	Supervisor	August 4, 2017	December 14, 2022/ January 31, 2021	February 15, 2023
2	Rajat Srivastava 17LPPH1 3	Screening of tomato germplasm and functional characterization of candidate purple acid phosphatase genes under phosphate deficiency	Supervisor	August 4, 2017	June 28, 2023/ August 10, 2023	August 29, 2023

#### M.Sc. Thesis (Awarded/Submitted)

Sr. No.	Student Name	Dissertation Name	Degree Awarded Date
1	V Nandkiran Naik	Functional characterization of NADPH Oxidases in tomato ( <i>Solanum lycopersicum</i> L.)	July 2018
2	Bathini amulya 17LPMS15	Characterization of a tomato ( <i>Solanum lycopersicum</i> L.) F-box gene, SIFBX2, by gene-editing and VIGS approaches	July 2019
3	Suvajit basu 17LPMS14	Understanding Lipid Remodeling Associated Mechanisms Under Phosphate Stress In Tomato Plants	July 2019
4	Joby Joseph 18LPMS08	Morpho-Physio and Biochemical screening of tomato varieties under low phosphate	July 2020
5	Sourya Banerjee 18LPMS12	Study of fruit ripening traits in Auxin-signaling knock-out (KO) mutants of Tomato ( <i>Solanum lycopersicum</i> L.)	July 2020
6	Labor Synrop Nongkhlaw 19LPMS06	Functional Characterization of a novel putative universal stress-response protein encoding gene in <i>Solanum lycopersicum</i>	July 2021

7	Pranav Raj T K19LPMS08	Identification, molecular cloning and structure analysis of selected GSK genes in tomato	July 2021
8	Gyanesh Shukla 20LPMS11	Investigating the relationship between low phosphate-induced root growth and lignification in tomato	July 2022
9	Gayathri A G 20LPMS09	Understanding mycorrhizal colonization under P deprivation in tomato	July 2022
10	Dolly Kaushik 21LPMS01	Understanding the role of SIMIPS2 gene in Pi deficiency	July 2023
11	Raunit Lohani 21LPMS06	Functional characterization of LACCASE2 gene (SILAC2) using VIGS in tomato.	July 2023
12	Vemula Mahesh 21LPMS25	Characterization of GH3.2 knockout lines for fruit ripening traits.	July 2023
13	Losari Vaishnavi (18ILMB04)	Generation and Characterization of SIPAP15 overexpression and KO lines	July 2023
14	Ms Shibani Pradhan (SLS, CUK)	Testing the efficiency of nano-DAP on tomato growth and yield under greenhouse conditions.	August 2023
15	Ms. Venu Madhuri, Department Of Biotechnology A.V. College Of Arts, Science & Commerce, OU (1056-21-516-012)	Analysis of nanofertilizers on <i>Solanum lycopersicum</i>	August 2023

### Invited lectures/talks/resource person

1. Invited valedictory lecture entitled “Practical considerations of plant genome editing” on 30<sup>th</sup> September 2023 in a workshop on CRISPR-Cas, held at AgriBiotech Foundation, Hyderabad.
2. Invited lecture entitled “Methylglyoxal homeostasis during tomato fruit ripening” on 28<sup>th</sup> September 2023 at IPPG, Sofia Bulgaria.
3. Selected lecture entitled “Gene-editing of tomato F-box gene SIFBX2L1 reveals its role in phosphate starvation response and fruit ripening” on 27<sup>th</sup> September 2023 in International Conference of Plant System Biology and Biotechnology, held at Plovdiv, Bulgaria.
4. Invited lecture entitled “Metabolic Adaptations of phosphorus starved plants” on 9<sup>th</sup> August, 2023 as a Resource Person in the Refresher Course on Life Sciences (July 31-August 12 2023), UGC-HRDC, University of Hyderabad.
5. Invited lecture on “Genome editing in plant specific steps and reagents used in plant genome editing” on 28<sup>th</sup> July 2023 at The UoH CRISPR Workshop 2023 held at School of Life Sciences, University of Hyderabad.
6. Invited lecture entitled “CRISPR/Cas9 based gene-editing of a tomato F-box gene identifies its role in phosphate starvation response and fruit ripening” in International Conference On Plant Biotechnology and Genome Editing on June 29, 2023, held at Kakatiya University, Warangal, Telangana, India.

7. Invited lecture on 'Plant viral vector applications in functional genomics and gene-editing' in an ICAR sponsored winter school on "Development, Evaluation, and Biosafety Assessment of Genome Edited Crops: Hands-on Training" from 20 January to 9 February 2023 at DRR, Hyderabad.
8. Invited lecture on "Ethylene response factor SlERF.D7 controls tomato fruit ripening by activating SlARF2 paralogs" in an International Conference "Innovations in Biology and Medicine-2023 (IBM-2023)" held from 21st to 23rd of February, 2023 at University College, Telangana University, Nizamabad, India.
9. Invited lecture on "Viral vectors and their applications in plant functional genomics" in the International Conference on Virus Evolution, Infection and Disease Control on December 14, 2022, at the School of Life Sciences, University of Hyderabad.
10. Lecture on "A ripening-associated ethylene response factor ERF.D7 positively regulates fruit ripening via controlling the transcription of ARF2 orthologs in tomato" in the XVII International Conference on the Plant Family of Solanaceae held at Thessaloniki, Greece from November 1-5, 2022.
11. Invited talk on "Synthesis & Characterization of Nano-particles in specific to Nano DAP" in One day Workshop on "Effective use of Nano fertilizers in Agriculture" Jointly organized by ICAR-IIRR, Hyderabad and Coromandel International Ltd, Hyderabad held on Sept 1, 2022 at Radisson Blu Plaza Hotel, Banjara Hills, Hyderabad
12. Lecture on 'Basics workflow of plant functional genomics and genes characterization' in the SERB-funded Online workshop on plant functional genomics techniques" on May 9-10, 2022 at Dept. of Plant Sciences, UoH under the Social scientific responsibility scheme of a SERB funded project.
13. Lecture on 'The basics of gene editing in plants' in the SERB-funded Online workshop on plant functional genomics techniques" on May 9-10, 2022 at Dept. of Plant Sciences, UoH under the Social scientific responsibility scheme of a SERB funded project.
14. Lecture on "CRISPR/Cas based genome manipulation strategies for improving agricultural traits" in a Short term certificate course on "Climate Change and Food Security: Issues, Challenges, and Strategies" organized by Phytomics: The Botanical Society, Department of Botany, Bhaskaracharya College, University of Delhi, held online on January 5, 2022.
15. Lecture on 'The expanding roles of CRISPR-Cas systems' in the SERB funded Hands-on training on CRISPR/Cas9 mediated Gene-editing in plants workshop organized at Dept. of Plant Sciences, University of Hyderabad, on October 6, 2021.
16. Lecture on '*Agrobacterium* and stable plant transformation' in the SERB funded Hands-on training on CRISPR/Cas9 mediated Gene-editing in plants workshop organized at Dept. of Plant Sciences, University of Hyderabad, on October 6, 2021.
17. Lecture on 'The basics of gene-editing in plants' in the SERB funded Hands-on training on CRISPR/Cas9 mediated Gene-editing in plants workshop organized at Dept. of Plant Sciences, University of Hyderabad, on October 4, 2021.
18. Hands-on training on "Sequence Retrieval from Databases" in a National Workshop on Resources, Tools, and its Applications (for undergraduate students) organized by Department of Botany, Zakir Husain Delhi College on 22<sup>nd</sup> July 2021.
19. Lecture on "Genomics and its applications in Plant Research" in Webinar on "Genomics and its Applications" organized by the Department of Biochemistry and Plant Physiology in Collaboration with Center for Genetics and Genomics, Centurion University of Technology and Management on July 7th 2021.

20. Lecture on “Phosphorus management and food security: taking cues from plants” in the Refresher Course in ‘Life Sciences’ organized by UoH HRDC, Hyderabad (Nov 16-28, 2020) on November 24, 2020.
21. Lecture of “Cell signalling amid phosphate crisis” in the Refresher Course in ‘Life Sciences’ organized by MANUU, Hyderabad (Sept 17-30, 2020) on September 18, 2020.
22. Lecture on “Genome editing technologies and applications” in a training course “Techniques in Molecular Biology” organized workshop organized by Agri Biotech Foundation, Hyderabad on March 18, 2020.
23. SPBB Young Scientist Investigator Award presentation entitled “Identification and functional elucidation of ripening-associated genes in tomato” in National conference on Integrative Plant Biochemistry and Biotechnology held at IIRR, Hyderabad on November 8, 2019.
24. Lecture on “Web and reagent resources for initiation of gene editing research” in a workshop on “Gene Editing for Enhancing Plant Productivity and Stress Tolerance” held at IIRR, Hyderabad on November 11, 2019.
25. **Co-chaired** a session entitled SOIL HEALTH in 4th International Conference on Advances in Agriculture & Animal Sciences towards Global Food Security Agriculture & Animal Husbandry held at SLS, University of Hyderabad on Aug 28-30, 2019
26. Lecture entitled “Understanding and improving phosphate-use-efficiency in crops for sustainable agriculture and food security” in 4th International Conference on Advances in Agriculture & Animal Sciences towards Global Food Security Agriculture & Animal Husbandry held at SLS, University of Hyderabad on Aug 28-30, 2019.
27. Invited lecture entitled “Applications of plant tissue culture in plant biotechnology and agronomic trait improvement” in a Workshop on 'Tissue Culture Techniques' on March 9, 2019 at ZHDC, University of Delhi.
28. Invited lecture to showcase ongoing research at PTRL in ‘Young Investigators’ talks on 33rd Foundation Day of Department of Biotechnology on 26th February, 2019 at National Institute of Immunology (NII), New Delhi.
29. Invited lecture entitled “Science, Technology and Sustainable food” at UGC-HRDC, University of Hyderabad as a resource person on July 3, 2018.
30. Rahul Kumar: Genome engineering of tomato for improved agronomic traits. Lecture in the BioQuest-2017 at School of Life Sciences, University of Hyderabad, Hyderabad on October 13, 2017.
31. Rahul Kumar. Structural and Functional genomics of tomato fruit development and ripening. Invited lecture at Department of Genetics and Plant Breeding, University of Agricultural Sciences, Dharwad on 27th June, 2016.
32. Rahul Kumar. Genetically edited fruit crops: A way forward. Invited lecture in the National Symposium on Biotechnology in Crop Improvement: Prospects & Challenges, organized by Zakir Husain Delhi College, University of Delhi on April 1, 2016.
33. Rahul Kumar<sup>1</sup>, Priyanka Agarwal, Manoj K. Sharma<sup>1</sup>, Sanjay Kapoor, Akhilesh K. Tyagi and Arun K. Sharma. Transcriptome analysis of wild type and *rin* mutant fruits for identification of the regulators of ethylene-dependent as well as ethylene-independent aspects of fruit ripening in tomato. Invited lecture at the 1<sup>st</sup> National Science Day Symposium 2012, held at University of Delhi South Campus, on Feb. 27-28, 2012.

Conferences/Posters/Seminars/Workshops/Scientific meeting (attended)

1. Poster entitled “Probing phosphate starvation responses in tomato germplasm for improving phosphate use efficiency” presentation in National conference on Integrative Plant Biochemistry and Biotechnology held at IIRR, Hyderabad on November 8, 2019.
2. One-day workshop entitled “Journals, Publications & Bibliometrics” Organized by University of Hyderabad, Hyderabad in collaboration with UGC Cell for Journal Analysis, Centre for Publication Ethics, SP Pune University 22nd & 23rd March 2019 Venue: New Conference Hall, School of Management Studies
3. Presented a poster entitled ‘Genome engineering of tomato for crop improvement and sustainable agriculture’ in 4th International Plant Physiology Congress held at CSIR-National Botanical Research Institute, Lucknow, India from 02/12/2018-05/12/2018.
4. Presented a poster entitled “Functional genomics of tomato for improving fruit ripening and phosphate use efficiency traits” in RYIM, held at the University of Hyderabad on August 18-19, 2018.
5. E-Guru Workshop on online courses held at e-Learning Centre at the University of Hyderabad on 18-07-2018.
6. Srivastava R, Akash, Kumar R. Understanding the molecular circuitry underlying low P response in tomato. Poster presented at SLS, UoH, on Oct 12-13, 2017 in Bioquest.
7. Rahul Kumar, Wim Dejonghe, Evelien Mylle<sup>1</sup>, Isabelle Van Houtte, Josephine Horr e and Eugenia Russinova<sup>1</sup>. Probing members of a putative steroid hormone receptors gene family for their role in clathrin-mediated endocytosis and brassinosteroid signaling. Poster presentation in the ENPER-2015 held at University of Leeds, UK on August 17-20, 2015.
8. Sravankumar T, Khurana A, Sharma AK and Kumar R. A GH3 gene, *SIGH3.2*, gene is required in the regulation of various auxin-mediated responses during tomato (*Solanum lycopersicum*) development. Poster presentation at The ISPSB Conference held at University of Delhi, New Delhi on March 7-11, 2014.
9. Kumar R, Agarwal P, Pareek A, Tyagi AK and Sharma AK. The ARF and Aux/IAA complement in Solanaceae: Structure, phylogeny and comprehensive expression profiling and interaction analysis of tomato complement suggests coaction among several members of the two classes of proteins controls fruit development and ripening. Poster presentation at The 10<sup>th</sup> Solanaceae Conference (SOL-2013) held at Beijing, China on Oct. 13-17, 2013.
10. Kumar R, Agarwal P, Tyagi AK and Sharma AK. Genome-wide analysis of the auxin-responsive *GH3* gene family in tomato (*Solanum lycopersicum*). Poster presentation in the Plant Genome Evolution Conference held at Amsterdam, The Netherlands on Sept. 4-6, 2011.
11. Kumar R, S. Kapoor, A.K. Tyagi and A.K. Sharma. Understanding the complexity of fruit ripening by transcriptome analysis of wild type and *rin* mutant fruits. Abstract was accepted for the poster presentation in the Gordon Research Conference in Plant Molecular Biology held at Holderness School, New Hampshire, USA held on July 18-23, 2010.
12. Kumar R, S. Kapoor, A.K. Tyagi and A.K. Sharma. Studies on *LeMADS-RIN* gene for delay of fruit ripening and for better understanding of the ripening process in tomato. Poster presentation at the International Conference on Molecular Biology and Biotechnology held at Dept. of Bioscience and Biotechnology, Banasthali University, INDIA on Oct. 19-21, 2009.
13. Kumar R, S. Kapoor, A.K. Tyagi and A.K. Sharma. Understanding the complexity of fruit ripening by transcriptome analysis of *rin* mutant fruit and *in silico* analysis of promoters of differentially regulated genes. Poster presentation at The 6<sup>th</sup> Solanaceae Genome Workshop held at Delhi, India on Nov. 9-13, 2009.



14. Mathur S, Vyas S, Solanke AU, Kumar R, Gupta V, Sharma AK, Khurana P, Khurana JP, Tyagi AK, Sarita, Chowdhury P, Shridhar S, Chattopadhyay D, Pandit A, Singh PK, Kumar A, Dixit R, Singh A, Praveen S, Dalal V, Yadav M, Ghazi IA, Gaikwad K, Sharma TR, Mohapatra T, Singh NK. Tomato Genome Sequencing: Indian contribution on chromosome 5. Poster presentation at The 6<sup>th</sup> Solanaceae Genome Workshop held at Delhi, India on Nov. 9-13, 2009.
15. Mathur S, Vyas S, Solanke AU, Kumar R, Gupta V, Sharma AK, Khurana P, Khurana JP, Tyagi AK, Sarita, Chowdhury P, Shridhar S, Chattopadhyay D, Pandit A, Singh PK, Kumar A, Dixit R, Singh A, Praveen S, Dalal V, Yadav M, Ghazi IA, Gaikwad K, Sharma TR, Mohapatra T, Singh NK. Tomato Genome Sequencing: Indian contribution on chromosome 5. Poster presentation at The 7<sup>th</sup> Solanaceae Genome Workshop going to held at Dundee, Scotland on Sept. 5-9, 2010.
16. Mathur S, Vyas S, Solanke AU, Kumar R, Gupta V, Sharma AK, Khurana P, Khurana JP, Tyagi AK, Sarita, Chowdhury P, Shridhar S, Chattopadhyay D, Pandit A, Singh PK, Kumar A, Dixit R, Singh A, Praveen S, Dalal V, Yadav M, Ghazi IA, Gaikwad K, Sharma TR, Mohapatra T, Singh NK. Tomato Genome Sequencing: Indian contribution on chromosome 5. Poster presentation at The 5<sup>th</sup> Solanaceae Genome Workshop going to held at Cologne, GERMANY on Oct. 12-16, 2008.
17. Khurana JP, Gupta V, Mathur S, Solanke AU, Kumar R, Vyas S, Sharma AK, Khurana P, Tyagi AK, Dewan S, Chowdhury P, Shridhar S, Chattopadhyay D, Singh A, Pandit A, Chitra G, Ghazi IA, Yadav M, Singh PK, Dixit R, Dalal V, Gaikwad K, Sharma TR, Mohapatra T, Singh NK. Sequencing of the euchromatic region of chromosome 5 of tomato. Poster presentation at The 4<sup>th</sup> Solanaceae Genome Workshop held at Jeju Island, KOREA on Sept. 9-13, 2007.
18. Gupta V, Mathur S, Solanke AU, Kumar R, Vyas S, Sharma AK, Khurana P, Khurana JP, Tyagi AK, Dewan S, Chowdhury P, Chattopadhyay D, Singh A, Pandit A, Chitra G, Yadav M, Singh PK, Dixit R, Dalal V, Gaikwad K, Sharma TR, Mohapatra T and Singh NK. Indian Initiative on Tomato Genome Sequencing. Poster presentation at International Workshop on Tomato Genomics held at Hyderabad, INDIA on Nov. 12-14, 2006.
19. Attended a National Seminar on “Climate change in India and its Impact on Plant Diversity and Productivity” and DUBS paper presentation contest for Prof. B.M. Johri Rolling Shield organized by Delhi University Botanical Society, Department of Botany, University of Delhi, held at Delhi on Dec 22-23, 2003.
20. Attended Indo-Taiwan Workshop on “Genomic approaches for functional food and nutritional improvement of crop plants” organized by DST, Govt. of India, and NSC, Taiwan, held at Delhi on December 13-14, 2011.

### Students Papers/Posters/Lectures/Seminars from the lab

21. Naorem Ronald Reagan Singh, Adwaita K. Parida, Akash, Abhishek Roychowdhury and Rahul Kumar. Poster entitled “Characterization of Putative Tomato SPX genes for Their Role in Pi Homeostasis” in National Conference in Frontiers in Plant Biology held at SLS, UoH on January 31-Feb 1, 2020.
22. Akash, Adwaita K. Parida, Arun K. Sharma and Rahul Kumar. Poster entitled “Identification and functional characterization of low Phosphate Inducible F-box genes in tomato” in National Conference in Frontiers in Plant Biology held at SLS, UoH on January 31-Feb 1, 2020.

23. Rajat Srivastava<sup>1</sup>, Akash<sup>2</sup>, Joby Joseph and Rahul Kumar. Oral presentation entitled "Identification and functional elucidation of low phosphate inducible purple acid phosphatase genes in tomato" in National Conference in Frontiers in Plant Biology held at SLS, UoH on January 31-Feb 1, 2020.
24. Stuti Kujur, Akash and Rahul Kumar. Poster entitled "Manipulating fruit ripening traits in tomato by genetic alteration of key auxin homeostasis genes" in National Conference in Frontiers in Plant Biology held at SLS, UoH on January 31-Feb 1, 2020.
25. Poster entitled "Engineering cellular auxin homeostasis pathways for manipulation of fruit ripening in tomato" presented by **Ms. Stuti Kujur** in National conference on Integrative Plant Biochemistry and Biotechnology held at IIRR, Hyderabad on November 8, 2019.
26. Poster entitled "Genome-wide identification of F-box members in tomato and functional characterization of a F-box gene for its role under phosphate starvation" presented by **Mr. Akash** in National conference on Integrative Plant Biochemistry and Biotechnology held at IIRR, Hyderabad on November 8, 2019.
27. Poster entitled "Transcriptomics and functional genomics for improving phosphorous use efficiency in tomato (*Solanum lycopersicum*)" presented by **Mr. Rajat Srivastava** in National conference on Integrative Plant Biochemistry and Biotechnology held at IIRR, Hyderabad on November 8, 2019.

### Conferences/Seminars (Organized)

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2. Organized a lecture entitled "Improving oxidative stress resilience in plants" by Dr. Pavel Kerchev, Assistant Professor, Mendels University of Brno, Czech Republic, on May 12, 2022 at SLS, UoH.
3. Organized a SERB-SSR funded 2-day Workshop entitled "Online workshop on plant functional genomics techniques" on May 9-10, 2022 at Dept. of Plant Sciences, UoH under Social scientific responsibility scheme of a SERB funded project.
4. Organized a SERB funded Workshop entitled "Hands-on training on CRISPR/Cas9 mediated Gene-editing in plants" from October 03-10, 2021 at Dept. of Plant Sciences, UoH under Abhyaas-Karyashala scheme of SERB.
5. Organized a lecture entitled "Novel small-molecule tools in plant endomembrane trafficking research" by Dr. Kiril Mishev, Assistant Professor, Institute of Plant Physiology and Genetics, Sofia, Bulgaria on March 5, 2021, at SLS, UoH.
6. Organized a national conference entitled "National Conference on Frontiers in Plant biology" at Dept. of Plant Sciences, SLS, University of Hyderabad on January 31-February 01, 2020.
7. Convener, Plant Sciences Colloquium, 2020.
8. Organized as a Panel Discussion on 'Current scenario and path forward for GM crops in India' on Aug 21, 2019 at School of Life Sciences, University of Hyderabad.
9. Organized as a member the 59th Annual Conference of Association of Microbiologists of India (AMI-2018) along with an International Symposium on Host-Pathogen Interactions from December 9-12, 2018 at the University of Hyderabad.
10. UoH Distinguished lecture entitled "The GMO Wars: What do we do when scientists and citizens deeply disagree" by Nina Fedoroff on 19th November, 2018 at the University of Hyderabad

11. Department of Plant Sciences annual scientific event, Plant Colloquium-2017, held at School of Life Sciences, University of Hyderabad on February 22, 2017.
12. School of Life Sciences annual scientific event, BioQuest 2017, held at School of Life Sciences, University of Hyderabad on October 12-13, 2017.
13. Organized as a member the International Conference on Biotechnological Aspects of Chitosans and Chitooligosaccharides (ICBACC) and 6<sup>th</sup> India Chitin and Chitosan Society Symposium (ICCSS) – 2017 held at School of Life Sciences, University of Hyderabad on September 22-23, 2017.
14. Organized as a member the International Conference on Photosynthesis Research for Sustainability-2017 held at School of Life Sciences, University of Hyderabad from September 29- November 3, 2017.
15. Organized UGC-SAP lectures entitled “1. Abiotic stress signaling, 2. Manipulation of BIOTIC/Abiotic stress in plants-Current Status” by Dr. Manoj Prasad on March 30, 2017.
16. Organized a special talk entitled “Nutrigenomics implications in rice to translate potential health benefits to rice consumers” by Prof. Nese Sreenivas (IRRI) on August 24, 2018.

### Workshop

- Induction Workshop for New Faculty of the University of Hyderabad: November 3, 2017.

### NCBI submissions

- 54 BAC clone nucleotide sequences submitted from tomato chromosome 5.
- Raw microarray data of fruit ripening stages of wild type and *rin* mutant in tomato submitted at the National center for Biotechnology Information under the series accession numbers (GSE20720).

### Life memberships

- Phytomorphology- published by Department of Botany, University of Delhi, Delhi.
  - Botanica- annual magazine released by Department of Botany, University of Delhi, Delhi.
  - Life member Indian Botanical Society.
  - Life member Society of Plant Biotechnology and Biochemistry
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