

## PROFILE OF DR. RAJARSHI KUMAR GAUR

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**Date of Birth** 31-10-1976

### Education:

| Subject                            | Institution  | Year |
|------------------------------------|--|------|
| <b>Ph.D. (Life Sciences)</b>       | CSJM University Kanpur, Uttar Pradesh<br>(Ph.D. Thesis submitted in April 2003)                | 2005 |
| <b>M.Sc. (Biochemistry)</b>        | GB Pant University of Agri. & Tech., Pantnagar, Uttarakhand                                    | 2000 |
| <b>B.Sc. (Bio group)</b>           | M.G. Post Graduate College, Gorakhpur (Affiliated to DDU University, Gorakhpur, Uttar Pradesh) | 1997 |
| <b>12<sup>th</sup> (Bio group)</b> | M.G. Intermediate College, Gorakhpur   | 1993 |
| <b>10<sup>th</sup></b>             | Saraswati Shishu Mandir Higher Secondary School, Gorakhpur                                     | 1991 |

### Career Profile:

|                     |   |
|---------------------|---|
| July 2019-till date | Professor, Dept. of Biotechnology, D.D.U. Gorakhpur University, Gorakhpur, UP, India  |
| July 2016-June 2019 | Professor, Dept. of Biosciences, Mody University of Science & Tech., India            |
| Jan 2012-June 2016  | Associate Professor, Dept. of Science, Mody University of Science & Technology, India |
| Oct 2008-Dec 2011   | Assistant Professor, Dept. of Science, Mody Institute of Tech. & Science, India.      |
| Feb 2008-Sep 2008   | Post Doc., ICGEB Biosafety Outstation, Ca' Tron, Treviso, Italy (on deputation)       |
| Aug 2007-Jan 2008   | Visiting Scientist, UPSC, Umeå University, Umeå, Sweden (on deputation)               |
| July 2006- Sep2008  | Lecturer, Mody Institute of Tech. & Science, India.                                   |
| May 2004-June2006   | Post Doc. The Volcani Centre, Israel.   |

### Research Interest/Specialization

Plant Virology, Plant Molecular Biology

### Science Popularization:

1. **Course-Coordinator**, Short Term Training programme (2010, 2012), supported by Department of Biotechnology, New Delhi, India.
2. **Organized Popular** Lecture series on 25<sup>th</sup> March 2017 supported by Department of Biotechnology.
3. **Organized** three National and two International conference funded by various Gov. funded agencies.

### Group Achievements:

1. Reported **Twenty Eight (28)** plant viruses first time in India.
2. Developed **RNAi methodology** for resistance against *begomovirus*
3. **Dr. Anurag** received First prize in poster presentation on "*In-silico* characterization of Tomato leaf curl Joydebpur virus (ToLCJV) DNA-A Protein" in National Symposium on "Advances in Biotechnological Research in Agri-Horticultural Crops for Sustaining Productivity, Quality Improvement and Food Security", Sep-2011, SVBPUA Meerut.
4. **Dr. Anurag** received DBT- Travel Grant Award 2012 for attending ICAPS International Conference in Chiang Mai, Thailand.

5. **Dr. Anurag** received Best poster presentation award in International Conference on Advance Plant Science (ICAPS) 2012 Chiang Mai, Thailand.
6. **Dr. Avinash Marwal** received National Postdoctoral Fellowship from SERB, New Delhi (2015)
7. **Dr. Poornima Saraswat** received BIRAC-SRISTI Appreciation Awardee for research project titled 'Synbiotic formulation of pearl millet and camel milk using potent combinations of LAB(s)'.
8. **Dr. Poornima Saraswat** received 'IKUSTARS', Oral presentation at Kasetsart University, Bangkok, Thailand from 28-29 May, 2019.
9. **Dr. Poornima Saraswat** received TWAS Fellowship for attending workshop on „Synthetic Biology for New and Improved Food Products: A Solution for Food Security“, Kasetsart University, Bangkok, Thailand from 17-23 Dec, 2016.

### Editors & Reviewer

- Editor (Virology), Indian Phytopathology, Springer (2023-25)
- Associate Editor, Frontiers of Microbiology (Microbe and Virus Interactions with Plants **(IF 6.064)**)
- Guest Editor (Topic Editor), Frontiers of Microbiology (Virology) **(IF 6.064)**
- Editorial Board Members-BMC Plant Biology **(IF 5.26) (2021-till date)**
- Academic Editor-Plos One **(IF 3.72) (2020-till date)**
- Associate Editorial Board Members-The Open Bioinformatics Journal **(IF 1.500) (2020-till date)**
- Reviewer of Frontiers in Microbiology, Frontiers in Plant Sciences, Plos One, Scientific Reports, 3Biotech, J. of Plant Growth Regulators, Molecular Biology Report, Plant Disease, Current Genomic, Scientific African, Indian Phytopathology, VirusDisease etc,
- Reviewer of International Project like: International Foundation for Science (IFS), Israel-USA project, SERB-NPDF project

### Present/Past Responsibilities

1. Head, Dept. of Biotechnology, D.D.U. Gorakhpur University, Gorakhpur, UP, India (August 2022-till date)
2. Coordinator (Criteria II, Research Programme and Policy Development), Research and Development Cell , D.D.U. Gorakhpur University, Gorakhpur, UP, India (October 2022-till date)
3. Coordinator/In-charge- Information Technology and Communication Cell (ITC Cell), D.D.U. Gorakhpur University, Gorakhpur, UP, India (April 2022-Nov 2022)
4. Coordinator, M.Sc Bioinformatics, D.D.U. Gorakhpur University, Gorakhpur (Oct 2021-Nov. 2022)
5. Head, Department of Biosciences, Mody University of Science and Technology, Sikar, Rajasthan (July 2016-July 2019)
6. Coordinator, NAAC and NIRF Ranking, Mody University of Science and Technology, Sikar, Rajasthan (July 2016-July 2019)
7. In-Charge, Research and Development, Mody University of Science and Technology, Sikar, Rajasthan (October 2018-July 2019)

### Honours & Awards

#### Fellows

- Fellow of Indian Virological Society (FIVS, 2021)
- Fellow of Society of Plant Research (FSRP, 2016)
- Fellow of Royal Society of Biology (FRSB, 2015), London, UK
- Fellow of Linnean Society (UK) (FLS)
- Fellow of Society of Applied Biology (FSAB)
- Fellow of International Society of Biotechnology (FISBT), Indore
- Fellow of Madhawi Shyam Educational Trust (FMSET), Ranchi
- Fellow of International Consortium of Contemporary Biologists (FICCB), Ranchi

## Awards

- Member of National Academy of Sciences, India (NASI)
- Best Professor, Pearl Foundation
- Prof. B.M. Johri memorial Award, Society of Plant Research (SPR)
- Excellent Teaching Award by Astha Foundation, Meerut
- INSA Summer Research Fellowship 2015
- UGC-Research Teacher Award (2014-16)
- INSA International Bilateral Exchange programme for the year 2014 to visit Israel
- Young Scientist Award-2012 in Biotechnology by Society of Plant Research (SPR), Meerut
- Scientific & Applied Research Centre Gold Medal Award-2011 for outstanding contribution in the field of Biotechnology.
- Young Scientist Award-2010 from Madhawi Shyam Educational Trust and International Consortium of Contemporary Biologists, Ranchi
- Indian National of Science Academy (INSA), India Visiting fellowship-2010
- DBT-Rapid Grant for Young Investigator Award (2009)
- SERC-DST-Fast Track Young Scientist(2009)
- Travel Assistantship for attending the various International conferences by DST, DBT, CSIR and INSA, GOI, New Delhi
- Post Doc. Fellowship-2008 from International Centre for Genetic Engg. & Biotechnology (ICGEB), Italy (Feb 2008-August 2008)
- Swedish Institute (SI) Advanced research Fellowship, Sweden, 2007-2008 (August 2007-Jan. 2008)
- Best paper in M.J. Narasimhan Award Contest-2006 (IPS M. E. Zone) organized by Indian Phytopathological Society, New Delhi
- Six months MASHAV Fellowship-2004 from Ministry of Agriculture & Foreign Affairs, Israel.
- BSPP Travel award for attending the BSPP Presidential Meeting 2003 at Nottingham, UK.
- Bursary assistantship for attending the ICPP-2003, Christchurch, New Zealand.
- Outstanding poster presentation award in the 'First International conference on Tropical and Sub tropical Plant Diseases' held at Chiang Mai, Thailand.

## Publication Profile

### Special Issue

1. **Research Topic:** Plant Viruses I: Detection Methods, Genetic Diversity and Evolution (2021). **Journal:** Frontiers in Microbiology. **Editors-**Akhtar Ali, Bright Agindotan, Xifeng Wang, **Rajarshi Kumar Gaur**, Xiaofei Cheng & Kristiina Mäkinen (**IF: 6.064**)
2. **Research Topic:** Plant Viruses II: Molecular Plant Virus Epidemiology and its Management (2021). **Journal:** Frontiers in Microbiology. **Editors- Rajarshi Kumar Gaur**, Akhtar Ali, Xiaofei Cheng, Kristiina Mäkinen, Bright Agindotan & Xifeng Wang (**IF: 6.064**)
3. **Research Topic:** Omics driven research for the improvement of industrial crops. **Rajarshi Kumar Gaur**, Dinesh Yadav and Benedicte Riber Albrechtsen (**IF 6.627**)

### Research Articles

1. NS Yadav, I Sakshi and **RK Gaur** (2024). Biochemical characterization of bacteria isolated from Rhizosphere soils of sugarcane grown in Uttar Pradesh. *Research Journal of Biotechnology.*, Vol. 19 (3): 70-75
2. Ritesh Mishra, Rakesh Kumar Verma, Smriti Mall and **R.K.Gaur** (2023). : Complete genome sequence of eggplant mild leaf mottle virus (EMLMV) infecting eggplant in India. *Journal: Indian Phytopathology.*, doi : 10.1007/s42360-023-00672-3.

3. Nisha Choudhary, Naveen Dhingra, Gacem Amel, Virendra Kumar Yadav, Rakesh Kumar Verma, Mahima Choudhary, Uma Bhardwaj, Dr. Rajendra Singh Chundawat, Mohammed S Alqahtani, **Rajarshi Kumar Gaur**, Lienda B Eltayeb, Waleed Abdulmonem and Byong-Hun Jeon (2023). Towards Further Understanding the Applications of Endophytes: Enriched Source of Bioactive Compounds and Bio factories for Nanoparticles. *Front. Plant Sci.* (14) | doi: 10.3389/fpls.2023.1193573 (IF:6.627)
4. N. Choudhary, D Tandi, R.K. Verma, V.K. Yadav, N. Dhingra, T. Ghosh, M. Choudhary, **R.K. Gaur**, M.H. Abdellatif, A. Gacem, L.B. Eltayeb, M.S. Alqahtani, K.K. Yadav and B-H. Jeon (2023) A comprehensive appraisal of mechanism of anti-CRISPR proteins: an advanced genome editor to amend the CRISPR gene editing. *Front. Plant Sci.* 14:1164461. doi: 10.3389/fpls.2023.1164461 (IF:6.627)
5. Sonia, Sunita, Verma, R.K., Ghosh, T. and **Gaur, R.K.** (2023). Agricultural Land Suitability Categorization and Evaluation Using GIS Assisted AHP in the Arid Western Plain Zone of Rajasthan, India. *Indian Journal of Agricultural Research*. doi:10.18805/IJArE.A-6085.
6. S. Chaudhary and R.K. Gaur (2023). Exploration of defensive protein Amylase Trypsin Inhibitors from wheat: A novel approach for crop protection. *Journal of Cereal Research* 15 (1): 1-13. <http://doi.org/10.25174/2582-2675/2023/130726>
7. Vineeta Pandey, Aarshi Srivastava, Niayesh Shahmohammad, Chitra Nehra, **Rajarshi Kumar Gaur**, Alireza Golnaraghi (2023). Begomovirus: Exploiting the Host Machinery for Their Survival. *J Mod Agric Biotechnol* 2023; 2(2):10
8. Aarshi Srivastava, Vineeta Pandey, Abdullah M Al-Sadi, Muhammad S. Shahid and **R.K. Gaur** (2023), An Insight into Emerging Begomoviruses and their Satellite Complex Causing Papaya Leaf Curl Disease, *Current Genomics* . <https://dx.doi.org/10.2174/1389202924666230207111530> (IF:2.63)
9. **RK Gaur**, D Yadav and BR Albrechtsen (2023) Editorial: Omics driven research for the improvement of industrial crops. *Front. Plant Sci.* 14:1143571. doi: 10.3389/fpls.2023.1143571 (IF 6.627)
10. Nikolay Petrov, Mariya Stoyanova and **R.K. Gaur** (2023). siRNAs based gene silencing of potato virus Y by simultaneous blocking of HC-Pro and NIa. *Biotechnology & Biotechnological Equipment* 37 (1), 1-6. (IF: 1.632)
11. **R.K.Gaur**, de Abreu, I.N. & Albrechtsen, B.R. Compensatory phenolic induction dynamics in aspen after aphid infestation. *Sci Rep* 12, 9582 (2022). <https://doi.org/10.1038/s41598-022-13225-x> (IF: 4.996)
12. Nikolay Petrov, Mariya Stoyanova and **R.K. Gaur** (2022). Induction of gene silencing of NIb gene region of Potato virus Y by dsRNAs and siRNAs and reduction of infection in potato plants cultivar Djeli. *Biotechnology & Biotechnological Equipment*. <https://doi.org/10.1080/2022.2058889> (IF:1.632)
13. Aarshi Srivastava, Vineeta Pandey, Avinash Marwal, Rakesh Kumar Verma, Akhtar Ali, Rob Briddon and **R.K.Gaur** (2022). First complete genome sequence of Tomato leaf curl virus (ToLCV) from *Salvia splendens* in India. *Journal of Phytopathology*. Doi:10.1111/jph.13099 (IF:1.789)
14. Smriti Mall, **R.K. Gaur** and R. Maurya (2022). *Benincasa hispida* (Thunb.) Cogn.: a new host of phytoplasma showing virescence and witches-broom symptoms in India. *Indian Phytopathology*. <https://doi.org/10.1007/s42360-022-00485-w>
15. Neetu Singh Yadav, Sakshi Issar, Nikolay Manchev Petrov, Mariya Ivanova Stoyanova, Smriti Mall and **Rajarshi Kumar Gaur** (2022). Plant-Microbe Interactions and Sustainable Agriculture Development. *Acta Microbiol. Bulg.* (vol. 38, issue 2, June Accepted)
16. Vineeta Pandey, Aarshi Srivastava, Megha Mishra and **R.K. Gaur** (2022). Chilli Leaf Curl Disease populations in India are highly recombinant, and rapidly segregated. *3 Biotech* (10.1007/s13205-022-03139-w) (IF 2.406)
17. Shalini Tailor, Khushboo Jain, Avinash Marwal, Mukesh Meena, K Anbarasu and **R K Gaur** (2022) Outlook of Nanotechnology in Organic Farming Management. *Def. Life SCI. J.* 7(1):52-60 DOI: 10.14429/dlsj.7.16763

18. A. Ali, **R.K. Gaur**, X. Wang, X. Cheng and K. Mäkinen (2021) Editorial: Plant Viruses, Volume I: Detection Methods, Genetic Diversity, and Evolution. *Front. Microbiol.* 12:793071. doi: 10.3389/fmicb.2021.793071 (IF: 6.064)
19. R.K. Gaur, A. Ali, X. Cheng, K. Mäkinen, B. Agindotan and X. Wang (2021) Editorial: Plant Viruses, Volume II: Molecular Plant Virus Epidemiology and Its Management. *Front. Microbiol.* 12:756807. doi: 10.3389/fmicb.2021.756807 (IF: 6.064)
20. Sakshi Issar, Neetu Yadav and **R.K.Gaur** (2021). Role of volatile organic compounds in plant growth, communication and defense. *Agrica* 10(2):111-119, <http://dx.doi.org/10.5958/2394-448X.2021.00017.1>
21. Md. Mahtab Rashid, Anukool Vaishnav, Rakesh Kumar Verma, Pradeep Sharma, P. Suprasanna and R.K. Gaur(2021). Epigenetic regulation of salinity stress responses in cereals. *Molecular Biology Reports*. doi.10.1007/s11033-021-06922-9. (IF: 2.316)
22. Richa Raizada, **R.K. Gaur** and Benedicte Albrechtsen (2021). Recursive partitioning to priorities morphometric traits that separate Aspen specialist *Chaitophorus* aphid species and stages. *International Journal of Tropical Insect Science* (DOI: 10.1007/s42690-021-00620-6). (IF: 0.774)
23. Avinash Marwal, Chitra Nehra, Rakesh Verma, Megha Mishra, Deepika Srivasatava, Priyanka Choudhary and **Rajarshi Kumar Gaur** (2021) First report of papaya leaf curl virus and its associated papaya leaf curl betasatellite infecting *Catharanthus roseus* plants in India. *The Journal of Horticultural Science and Biotechnology* (DOI:10.1080/14620316.2021.1912646) (IF 1.160)
24. Avinash Marwal, Mukesh Meena and **R.K.Gaur** (2021) Molecular Docking Studies of Coronavirus Proteins with Medicinal Plant-Based Phytochemicals. *Def. Life Sci. J.*, Vol. 6, No. 1, January 2021, DOI : 10.14429/dlsj.6.(IF 0.703)
25. Vineeta Pandey, Aarshi Srivastava and **R. K. Gaur** (2021). Begomovirus: a curse for the agricultural crops. *Archives of Phytopath. and Plant Protection*. doi.org/10.1080/03235408. (IF 0.506).
26. Avinash Marwal Akhilesh Kumar Srivastava and **R.K. Gaur** (2020). Improved plant tolerance to biotic stress for agronomic. Management. *Agrica*. Vol. 9, Dec 2020 Page No. 84-100.
27. Megha Mishra, Rakesh Kumar Verma, Avinash Marwal, Pradeep Sharma and **R.K. Gaur** (2020). Biology and interaction of the natural occurrence of distinct monopartite begomoviruses associated with satellites in *Capsicum annum* from India. *Frontiers in Microbiology*. doi: 10.3389/fmicb.2020.512957 (IF 6.064)
28. Poornima Saraswat, **R.K.Gaur** and K.P. Sharma (2020). Effect of *Prosopis cineraria* (L) Druce Pods and Camel Milk for Nutritional Enrichment in Traditionally Fermented Minor Millet's Drink. *International J. of Gastronomy & Food Sci.* (<https://doi.org/10.1016/j.ijgfs.2020.100251>) ( IF 2.537)
29. Avinash Marwal and **R.K.Gaur** (2020). Host Plant Strategies to Combat Against Viruses Effector Proteins. *Current Genomics* 21(6). Doi. 10.2174/1389202921999200712135131 (IF 2.236)
30. R.K. Verma, Megha Mishra, Avinash Marwal and **R.K. Gaur** (2020) Identification, Genetic Diversity and Recombination analysis of Watermelon Mosaic Virus isolates. *3 Biotech* (DOI: 10.1007/s13205-020-02248-8) (IF 2.406)
31. Poornima Saraswat, Paras Yadav, **R.K. Gaur** and K.P.Sharma (2020). Nutritional characteristics of biscuits prepared from flour of minor millets and pods of *Prosopis cineraria* (L.) Druce. *Annals of Agri Bio Research*, 25(2), pp. 284-289
32. Poornima Saraswat, Paras Yadav, R.K. Gaur and K.P.Sharma (2020). Quality Evaluation of Syrup Food Models Derived from *Prosopis cineraria* (L.) Druce Ripened Pods. *Annals of Arid Zone* 59(1&2): 21-27, 2020
33. Megha Mishra, R.K. Verma, and **R.K. Gaur** (2020) Identification of *Chilli leaf curl virus* and associated betasatellite infecting *Osteospermum fruticosum* in Rajasthan, India. *3 Biotech* 10, 169 (2020) (IF 2.406)
34. Megha Mishra, Rajesh Kumar, **Rajarshi Kumar Gaur** and Rakesh Kumar Verma (2020) In silico analysis of chili encoded miRNAs targeting Chili leaf curl begomovirus and its associated satellite. *Journal of Applied Biology & Biotechnology* online 8(1), pp. 1-5.

35. Megha Mishra, **Rajarshi Kumar Gaur** and Rakesh Kumar Verma Characterization of Defective Genome of Begomovirus Infecting Cape Daisy (2020). *Annals of Biology* 36(1):34-37.
36. Avinash Marwal and **R.K.Gaur** (2019) Phylogenetic and Recombination Analyses of Sugarcane yellow leaf virus. *Sugar Tech*. DOI: 10.1007/s12355-019-00783-0. (IF 1.591)
37. Rajesh Kumar, Prateek Bhanti, Avinash Marwal and R. K. Gaur (2019). Gene Expression-Based Supervised Classification Models for Discriminating Early- and Late-Stage Prostate Cancer. *Proc. Natl. Acad. Sci., India, Sect. B Biol. Sci.* <https://doi.org/10.1007/s40011-019-01127-4> (IF 0.396)
38. Chitra Nehra, Avinash Marwal, Rakesh Kumar Verma, Megha Mishra, Pradeep Sharma and **R. K. Gaur** (2019) Papaya yellow leaf curl virus: A newly identified begomovirus infecting *Carica papaya* L. from the Indian Subcontinent, *The Journal of Horticultural Science and Biotechnology*, 94:4, 475-480 (IF 1.160)
39. Madhu Sharma, **R.K.Gaur** and B.K.Sharma (2019). Radiation Effect on MHD Blood Flow through a Tapered Porous Stenosed Artery with Thermal and Mass Diffusion. *Int. J. of Applied Mechanics and Engineering*. 24(2): 411-423. (IF 0.420)
40. Madhu Sharma; Bhupendra K Sharma, **R.K. Gaur** and Bhavya Tripathi (2019). Soret and Dufour Effects in Biomagnetic Fluid of Blood Flow through a Tapered Porous Stenosed Artery. *Journal of Nanofluids*, 8(2): 327-336. (IF 1.790)
41. Avinash Marwal, Rajesh Kumar, S. M. Paul Khurana and **R. K. Gaur** (2019). Complete nucleotide sequence of a new geminivirus isolated from *Vitis vinifera* in India: a symptomless host of Grapevine red blotch virus. *Virus Dis.* 30(1): 106-111. (IF: 0.990)
42. S. M. Paul Khurana, Sunny Dhir, Avinash Marwal and **R.K. Gaur** (2018). Innovations in Management of Viral Diseases of Horticulture Crops . *Shodh Chintan*. 11: 354-361.
43. Chitra Nehra, Avinash Marwal, Rakesh Kumar Verma and **R.K.Gaur** (2018). Molecular Characterization of Begomoviruses DNA-A and Associated Beta Satellites with New Host *Ocimum sanctum* in India. *Proceedings of the National Academy of Sciences, India Section B: Biological Sciences*. DOI 10.1007/s40011-018-1006-9 (IF: 0.396)
44. Anurag Sahu, Rakesh Kumar Verma, **R.K.Gaur** and Neeti Sanan-Mishra (2018) Complexity and recombination analysis of novel begomovirus associated with Spinach yellow vein disease in India. *Plant Gene*. 13: 42-49 (IF 1.670)
45. S. M. Paul Khurana, Avinash Marwal and **R.K. Gaur** (2018). State-of-the-Art Methods for the Detection of Plant Viruses. *Shodh Chintan*. 10: 272-279.
46. Rajneesh Prajapat, Avinash Marwal and **R K Gaur** (2017) Recognition of Errors in Three-Dimensional Structures of Rep Proteins of Geminivirus Strains by Using ProSA-Web. *SciFed Virology Research Journal*. 1:1.
47. Anurag Kumar Sahu, Chitra Nehra, Ritesh Mishra, Rakesh Verma, and **R.K.Gaur** (2016). Molecular evidence of Chili vein mottle virus and Chilli leaf curl virus simultaneously from naturally infected chilli (*Capsicum annuum*). *Indian Journal of Biotechnology* 15: 266-268 (IF 0.376)
48. Muhammad Shafiq Shahid, Mehmoona Ilyasb, Abdul Waheed and **Rajarshi Kumar Gaur** (2016) Role of Alphasatellite in Begomoviral Disease Complex. *Pak. J. Sci. Ind. Res. Ser. B: biol. Sci.* 59(1) 52-58 (IF 0.260)
49. Chitra Nehra, Avinash Marwal and **R.K.Gaur** (2016). Diversity and Phylogeny of Begomovirus Populations and their Management. *Acta Microbiologica Bulgarica*, 32 (2):108-113.
50. Rakesh Kumar Verma, Ritesh Mishra and **R.K.Gaur** (2016) Genetic Variability of the Replicase (Nib) Gene of Papaya Ringspot Virus in Northern India Indicates Common Ancestry with Isolates from China and Taiwan. *Journal of Plant Pathology*, 98(1) 105-110 (IF 1.152)
51. P. Sharma and **R.K. Gaur** (2015) First Report of Zucchini Yellow Mosaic Virus on Muskmelon in India. *Journal of Plant Pathology* 97 (3), 541-551 (IF 1.152)
52. Avinash Marwal, Pajneesh Prajapat and **R.K.Gaur** (2015) Prediction of Binding Site in Eight Protein Molecules of Begomovirus and its Satellite Components i.e. Betasatellite and Alphasatellite Isolated from Infected Ornamental Plant. *Plant Pathology Journal* 15: 1-4. (IF 1.294)
53. Nikolay Petrov and **Rajarshi Gaur** (2015) Characterization of Bulgarian Potato Virus Y Isolates In

Potatoes. *Science & Technology (Plant Virus)* 6 (V), 17-21

54. Ritesh Mishra, Rakesh Kumar Verma and **R.K.Gaur** (2015) Analysis of genome comparison of two Indian variants of Cowpea aphid-borne mosaic virus from India. *Virus Gene* 51(2):306-9 (**IF 2.332**)
55. Rakesh Kumar Verma, Ritesh Mishra and **R.K.Gaur** (2015) Molecular characterization and recombination analysis of an Indian isolate of Onion yellow dwarf virus. *European Journal of Plant Pathology* 143, Issue 3, pp 437–445 (**IF 1.582**)
56. Ritesh Mishra, Rakesh Kumar Verma and **R.K.Gaur** (2015) Genetic variability of multifunctional HC-Pro gene of Lettuce mosaic virus in north region of India. *Indian Phytopath.*68 (3).
57. Ritesh Mishra, Rakesh Verma and **R.K.Gaur** (2015). Characterization of an Indian isolate of Cowpea aphid-born mosaic virus. *Journal of Plant Pathology* 97 (2), 27-29 (**IF 1.792**)
58. Anurag Kumar Sahu, Chitra Nehra, Avinash Marwal and **R.K.Gaur** (2015). First report of a begomovirus associated with betasatellites infecting new host spinach (*Spinacia oleracea*) in India. *Journal of General Plant Pathology*. Volume 81, Issue 2, pp 146–150. (**IF 1.449**)
59. Chitra Nehra and **R.K.Gaur** (2015). Molecular characterization of Chilli leaf curl viruses infecting new host plant *Petunia hybrida* in India. *Virus Gene* 50 (1): 58-622) (**IF 2.332**)
60. Raizada Richa and **R.K. Gaur** (2015) Morphometric study of the chrysanthemum aphid, *Macrosiphoniella sanborni* of India. *Journal of Insect Science*, 27:2, 284-285
61. Rakesh Verma, Ritesh Mishra and **R.K.Gaur** (2014). First Report of *Colombian datura virus* in India *New Disease Reports* 30, 29. [<http://dx.doi.org/10.5197/j.2044-0588.2014.030.029>].
62. R.K. Verma, R. Mishra, C. Nehra, N. Petrov, M. Stoyanova and **R.K.Gaur** (2014). Molecular Characterization of Potyvirus and Begomovirus in India. *J. of Mountain Agriculture on the Balkans*, 17:6, 1572-1582.
63. Chitra Nehra, Anurag Kumar Sahu, Avinash Marwal and **R.K. Gaur** (2014). Natural occurrence of *Clerodendron yellow mosaic virus* on Bougainvillea in India. *New Disease Reports* 30, 19. <http://dx.doi.org/10.5197/j.2044-0588.2014.030.019>
64. Anurag Kumar Sahu, Avinash Marwal, Chitra Nehra, M.S. Shahid and **R.K.Gaur** (2014). First report of a begomovirus and associated betasatellite infecting *Rosa indica* in India. *Australasian Plant Disease Notes*. 9:147 (**IF 0.450**)
65. P. Sharma, R. K. Verma, R. Mishra, A. K. Sahu, D. K. Choudhary, **R. K. Gaur**. (2014). First report of cucumber green mottle mosaic virus association with the leaf green mosaic disease of a vegetable crop, *Luffa acutangula* L. *Acta Virologica* , doi: 10.4149/av\_2014\_03\_103. (**IF 0.793**)
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#### **Book Published (Edited/Author)**

1. Recent Trends in Biotechnology and Microbiology. (2009) Edited by: **R.K.Gaur**, Pradeep Sharma, K.P.Sharma, R.P. Narayan, Manshi Sharma and Rajiv Diwvedi, Nova Science Publishers, Inc. 400 Oser Avenue, Suite 1600, Hauppauge, NY 11788, pp 1-213 (ISBN 978-1-60876-666-6).
2. Emerging Geminiviral diseases and their management (2010). Edited by: Pradeep Sharma, **R.K.Gaur** and Masato Ikegami, Nova Science Publishers, Inc. 400 Oser Avenue, Suite 1600, Hauppauge, NY 11788 (ISBN 978-1-61668-620-8).
3. Advancement of Biotechnology (2010). Rajarshi Kumar Gaur, Mangal Singh Rathore and Richa Raizada, LAP LAMBERT Academic Publishing, Germany (ISBN 9783843371452)
4. Fungal Biochemistry and Biotechnology (2011). Vijai Kumar Gupta, Maria Tuohy and R.K.Gaur, LAP LAMBERT Academic Publishing, Germany (ISBN 978-3-8433-5800-2)
5. RNAi Technology. **Gaur, R.K.**, Gafni, Y., Sharma, P. and Gupta, V.K. (2011), Science Publishers, New Hampshire, USA (ISBN 9781578087167).
6. Bacterial Biochemistry and Biotechnology (2012). Rajarshi Kumar Gaur, Hemant Kumar Gautam and Vijai Kumar Gupta, LAP LAMBERT Academic Publishing, Germany (ISBN 9783847378679)
7. Advancement in Microbial Bioinformatics (2012). Rajneesh Prajapat, Avinash Marwal and Rajarshi Kumar Gaur, LAP LAMBERT Academic Publishing, Germany (ISBN 9783659153235)
8. Molecular Biology of Bacteria by **R.K.Gaur** and H.K. Gautam (2013), Nova Science Publishers, Inc. 400 Oser Avenue, Suite 1600, Hauppauge, NY 11788 , pp 1-205 (ISBN 978-1-62618-189-2).
9. Microbial, Plant and Animal Research by **R.K. Gaur**, K.P.Sharma and R.S. Chundawat (2013), Nova Science Publishers, Inc. 400 Oser Avenue, Suite 1600, Hauppauge, NY 11788 , pp 1-200 (ISBN 978-1-62618-593-7).
10. Molecular Approaches to Abiotic Stress by **R.K.Gaur** and Pradeep Sharma (2013), Taylor and Francis Group, USA (ISBN 9781466588936)
11. Approaches to Plant Stress and Their Management by **R.K. Gaur** and Pradeep Sharma (2013), Springer (India) Private Limited, India (ISBN 978-81-322-1619-3)
12. Weeds as an Alternate Host of Geminivirus by Rajneesh Prajapat and **Rajarshi Kumar Gaur** (2013), Nova Science Publishers, Inc. 400 Oser Avenue, Suite 1600, Hauppauge, NY 11788, pp 1-200 (ISBN 978-1-62948-419-8)
13. Plant Virus-Host Interaction: Molecular Approaches and Viral Evolution (2014). **R.K.Gaur**, Thomas Hohn and Pradeep Sharma, Elsevier (ISBN: 9780124115842)
14. Plant Virus: Evolution and their management (2016). **R.K.Gaur** et al., Springer (India) Private Limited, India (ISBN 978-981-10-1405-5 )
15. Technological Advancements in Plant Sciences (2016) Raghvendra Pratap Narayan, Durgesh K. Tripathi and **R.K.Gaur**, Nova Science Publishers, Inc. 400 Oser Avenue, Suite 1600, Hauppauge, NY 11788 (ISBN 978-1-53610-004-4).
16. Plant Virus: Diversity, Interaction and Management (2018) **R.K.Gaur**, S.M.Paul Khurana and Yuri Dorokhov, Taylor and Francis Group, USA (ISBN 9781138061514)
17. Plant Biotechnology: Progress in Genomic Era (2019) S.M.Paul Khurana and **R.K.Gaur**. Springer (India) Private Limited, India (ISBN 978-981-13-8499-8)
18. Plant Virus-Host Interaction: Molecular Approaches and Viral Evolution (2021). **R.K. Gaur**, S.M. Paul Khurana, Pradeep Sharma and Thomas Hohn, 2nd Edition. (ISBN: 9780128216293) Imprint: Academic Press (Elsevier).
19. Virus Diseases of Ornamental Plants: Characterization, Identification, Diagnosis and Management (2021). Editors: S.K. Raj, **R.K. Gaur** & Zhimin Yin, Springer (India) Private Limited, India (ISBN: 978-981-16-3919-7)

20. Bioinformatics in Agriculture: Next Generation Sequencing Era (2021). Pradeep Sharma, Dinesh Yadav & **R.K. Gaur**, Imprint: Academic Press (Elsevier), (ISBN: 9780323885997).
21. Geminivirus: Detection, Diagnosis and Management (2022). **R.K. Gaur**, Pradeep Sharma & Henryk Czosnek, Imprint: Academic Press (Elsevier), (ISBN:978-032-3907118)
22. Omics Approaches for Sugarcane Crop Improvement (2023). **R.K.Gaur**(Ed.), Taylor and Francis Group, USA (ISBN 9781032273686)
23. Plant RNA Viruses: Molecular Pathogenesis and Management (2023). **R.K. Gaur**, Basavaprabhu L. Patil and R. Selvarajan, Imprint: Academic Press (Elsevier), (ISBN: 9780323953382 )
24. Approaches towards Plant Disease Management (2022), Deepa Srivastava, A.K.Tiwari and **R.K.Gaur**, Apple Academic Press, USA (In Press)
25. Undetermined Plant Virus Sources: Threatening Food Security (2022). **R.K.Gaur** and Alireza Golnaraghi, Apple Academic Press, USA (In Press) in two volume
26. Pepper Virome: Molecular Biology, Diagnostics and Management (2023). Akhtar Ali and **R.K.Gaur**. Imprint: Academic Press (Elsevier), (In Press )
27. Molecular Dynamics of Plant Stress and its Management (2023). Muhammad Shahid and **R.K.Gaur**. Springer (India) Private Limited (In press)

#### **Project (Completed) (Total amount Rs. 123.282 Lakhs)**

1. **Department of Biotechnology (DBT)**, Government of India, New Delhi project under Rapid Grant for Young Investigator (RGYI) on RNAi mediated transgenic plant against begomovirus (Rs. 15.41 lakhs)-3 Year 10 months (PI) (2010-2013)
2. **Department of Science and Technology**, New Delhi project under the Fast Track Young Scientist scheme on A coordinated approach to creating Transgenic Cotton resistant to begomoviruses, cotton leaf curl viruses: efficacy and durability. (Rs. 12.59 lakhs)-3 Year (PI) (2009-2012)
3. **Department of Biotechnology (DBT)**, Government of India, New Delhi project on Design and application of two novel degenerate primer pairs for the identification & complete characterization of potyviruses (26.582 lakhs)- 3 year (PI). **(2012-2015)**
4. **UGC Teacher Research Award** on Construction of a DNA-based virus induced gene silencing system for functional genomics of soybean seed development. (2 Years) (Rs. 34.49 Lakhs) (2014-2016)
5. Indo-Bulgaria inter government project funded by **Department of Science and Technology** on Development of Non-Transgenic Strategic to Control Potyvirus Diseases. File No. INT/BULGARIA/P-1/12 (6.390 lakhs) (2013-2019)
6. **Department of Science and Technology**, New Delhi project on Resistance to Cucumber mosaic virus infection using Intracellular Antibody Capture Technology (Rs. 27.82 Lakhs) (2016-2019)

#### **Plant Virus Diseases Reported First time in India**

1. First complete genome sequence of Tomato leaf curl virus (ToLCV) from *Salvia splendens* in India
2. First report of papaya leaf curl virus and its associated papaya leaf curl betasatellite infecting *Catharanthus roseus* plants in India
3. Identification of *Chilli leaf curl virus* and associated betasatellite infecting *Osteospermum fruticosum* in Rajasthan, India.
4. Papaya yellow leaf curl virus: A newly identified begomovirus infecting *Carica papaya* L. from the Indian Subcontinent
5. Complete nucleotide sequence of a new geminivirus isolated from *Vitis vinifera* in India
6. Molecular Characterization of Begomoviruses DNA-A and Associated Beta Satellites with New Host *Ocimum sanctum* in India.
7. First Report of *Zucchini Yellow Mosaic Virus* on Muskmelon in India.
8. Molecular characterization and recombination of an Indian isolate of Onion yellow dwarf virus.
9. First report of a begomovirus associated with betasatellites infecting new host spinach (*Spinacia*

- oleracea*) in India.
10. Molecular characterization of *Chilli leaf curl viruses* infecting *Petunia hybrida* in India.
  11. First Report of *Colombian datura virus* in India
  12. Natural occurrence of *Clerodendron yellow mosaic virus* on *Bougainvillea* in India.
  13. First report of a begomovirus and associated betasatellite infecting *Rosa indica* in India.
  14. First report of cucumber green mottle mosaic virus association with the leaf green mosaic disease of a vegetable crop, *Luffa acutangula* L.
  15. First report on the association of a begomovirus With *Chrysanthemum indicum* exhibiting yellowing of leaf Vein disease characterized by molecular studies.
  16. Molecular characterization of begomoviruses and DNA satellites associated with a new host Spanish Flag (*Lantana camara*) in India.
  17. First report of Turnip yellow virus (TuYV) in *Brassica juncea* (Indian mustard) in India.
  18. Complete nucleotide sequence of a begomovirus associated with satellites molecules infecting a new host *Tagetes patula* in India.
  19. Molecular Characterizations of Begomoviruses Infecting *Vinca rosea* and *Raphanus sativus* in India.
  20. First report of Begomovirus infecting ornamental plants: *Jasminum sambac* and *Millingtonia hortensis*.
  21. Molecular *in silico* structure and recombination analysis of betasatellite in *Calotropis procera* associated with begomovirus.
  22. First reports of association of begomovirus with the leaf curl disease of a common weed, *Datura innoxia*.
  23. First report of a begomovirus infecting *Mimosa pudica* in India.
  24. Sugarcane yellow leaf phytoplasma associated for the first time with sugarcane yellow leaf syndrome in India.
  25. Distribution of *Sugarcane Bacilliform Badna virus* in India.
  26. Molecular characterization of a begomovirus infecting a new host Golden Duranta (*Duranta erecta*) in India.
  27. Occurrence of red leaf mottle disease of sugarcane in India.
  28. Occurrence of Sugarcane Yellow leaf virus in India.

## Research Guidance

### Supervisor

1. **Sakshi Issar**: Molecular Characterization of *Pseudomonas* spp. Isolated from Nodules of Leguminous Plants of Shekhawati Region, India (**awarded** December 2011).
2. **Rajneesh Prajapat**: Molecular and *In silico* Characterization of begomovirus components infecting weeds of North India (**awarded** July 2013).
3. **Avinsh Marwal**: Molecular Characterization of begomovirus infecting ornamental plants in Northern India (**awarded** December 2014)-DBT JRF.
4. **Anurag Sahu**: Molecular characterization of begomoviruses and its resistance through RNAi silencing in *Nicotiana benthamiana* DST JRF, ICAR-NET (**awarded** March 2015).
5. **Pooja Sharma**: Development of degenerated primer for the quick identification of potyviruses (**awarded** December 2015)-UGC-JRF.
6. **Ritesh Kumar Mishra**: Molecular characterization and *in silico* studies of *cowpea aphid borne mosaic virus* and *papaya ringspot virus* (registration July 2012)-DBT JRF (**awarded December 2016**)
7. **Rakesh Kumar Verma**: Molecular Resolution of Genetic Variability in Different Potyviruses of India-DBT JRF, ICAR-NET (**awarded February 2017**)
8. **Chitra Nehra**: Diversity and Interactions of Begomoviruses and Their Associated DNA-Satellites CSIR-JRF (**awarded 13 May 2017**)
9. **Madhu Sharma**: Modeling Of Blood Flow And Vessel Mechanics In The Cardiovascular System (**awarded December 2018**)

### Co-Supervisor

1. **Saroj Sharma**: In vitro Plant Growth Promotion activities and molecular characterization of

- endophytic root nodule bacteria isolated from cultivated legumes of semi-arid and arid regions of Rajasthan (awarded December 2011)
2. **Megha Mishra**: Characterization of Begomoviruses Causing Mixed Infection in Chilli and Cape Daisy Plants (awarded October 2020)
  3. **Poornima Saraswat**: Characterization of Functional Food Properties of *Prosopis cineraria* (L) Druce, Pearl Millet and Camel Milk: A Synbiotic Approach in Traditional Food Model Systems. (awarded June 2021)