

Dr. Avinash Marwal, Ph.D. (MU), Post-Doctoral Fellow (SERB - YSS)
 DAAD, ICPP, Agropolis Awardee, RUSA & UGC Start-Up Grant Recipient
 Assistant Professor, Department of Biotechnology, Vigyan Bhawan - Block B
 New Campus, Mohanlal Sukhadia University, Udaipur - 313001, Rajasthan, India
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A smart and result oriented professional, possessing ability to perform task with perfection and focused towards achieving active accelerated growth of the organization.

QUALIFICATIONS

Level	Division/ College/School	Organization/ University/Board	Year of Passing	Percentage
Post – Doc SERB – DST – Young Scientist	Science and Engineering Research Board	Department of Science and Technology	2018	Excellent Reports
PhD	College of Arts, Science and Humanities	Mody University of Science and Technology	2014	Excellent Reports
M.Sc. Biotech	Mahatma Gandhi Institute of Applied Sciences	University of Rajasthan	2010	75.16
B.Sc. Bio Tech	Mahatma Gandhi Institute of Applied Sciences	University of Rajasthan	2008	77.8
XII	Army School Secunderabad	CBSE	2004	76.4
X	Army School Shillong	CBSE	2002	77.4

EXPERIENCE

1. Working as an Assistant Professor in the Department of Biotechnology at **Mohanlal Sukhadia University**, Udaipur from 31st May 2018 to present.
2. SERB – DST – Young Scientist (Principal Investigator) in **Mody University of Science and Technology**, Lakshmargarh, Sikar from 6th Nov 2015 to 29th May 2018.
3. Assistant Professor in **Jayoti Vidyapeeth Women’s University**, Jaipur from 1st Aug 2015 – 5th Nov 2015 for UG and PG courses in Biotechnology, Food Biotechnology and Nutrition.
4. Assistant Professor in **Shekhawati Group of Institutions**, Sikar from 14th July 2014 – 30th July 2015 for UG and PG courses in Biotechnology, Biochemistry and Agriculture.

5. Research Fellow from 12th July 2013 – 12th July 2014 in a Research Project entitled “Design and Synthesis of Nanoparticle-Liposomal Smart hybrids for targeted and controlled release of drugs” funded by **Department of Atomic Energy - Board of Research in Nuclear Sciences, Govt of India.**
6. Research Fellow from 4th Oct 2010 – 12th July 2013 in a Research Project entitled “RNAi mediated resistance against begomovirus” funded by **Department of Biotechnology, Govt of India.**
7. Done a Research Project on “In-vitro study of antidermatophytic activity of Brittle gum (*Eucalyptus mannifera*), Mint (*Mentha piperita*) and Onion (*Allium cepa*) against *Trichophyton rubrum* and *Microsporum canis*”, funded by **DST, Govt of Rajasthan.**

RESEARCH PROJECTS

1. Principal Investigator from Jan 2020 to present in “Green synthesis of nanoparticles as an antiviral compound against Geminivirus infected crops” funded by University Grant Commission under the **UGC Start - Up Grant. [10 Lakh]**
2. Principal Investigator from Nov 2015 to May 2018 in “Molecular Expression of Maize Streak Mastrevirus (MSV) Proteins and Their Role In The Infection Process” funded by Science and Engineering Research Board (SERB), Department of Science and Technology (DST), under the **Young Scientist Scheme (YSS). [34 Lakh]**
3. Co- Principal Investigator from Aug 2020 to present in “Screening and Use of Calcite Solubilizing Bacteria for Restoration of Marble Slurry Contaminated Soil” under the **RUSA Grant. [30 Lakh]**
4. Co- Principal Investigator from Aug 2020 to present in “Evaluation of neuroprotective effect and its underlying molecular mechanism by *Costus speciosus*, a traditional medicinal plant of Udaipur district, Rajasthan.” under the **RUSA Grant. [30 Lakh]**

AWARDS / FELLOWSHIP / SCHOLARSHIPS / SPONSORSHIPS

1. Teaching and Research Excellence National Award 2021 by IRDP Group of Journals.
2. Best Researcher Award in Biotechnology in 2nd Universal Inovator Leadership Awards (UILA 2021) in association with International Conference On Innovative Computing And Communication (ICICC 2021) held on 20th February 2021 virtually, organized at Shaheed Sukhdev College of Business Studies, New Delhi, India in association with National Institute of Technology Patna and University of Valladolid, Spain on 20th Feb 2021 by Universal Inovators.
3. 100 Eminent Academicians of 2021, by **International Institute of organized Research (I2OR), India**
4. Outstanding Scientist Award by **VDGOOD Professional Association, at International Scientist Awards on Engineering, Science and Medicine**, held on 26 & 27-Feb-2021, Hyderabad, India, Organized by VDGOOD Professional Association.
5. InSc Research Excellence Award by **Institute of Scholars, India**
6. InSc Young Researcher Award by **Institute of Scholars, India**

7. International Academic Excellence Award 2020-21 by **International Institute of organized Research (I2OR), India**
8. International Teacher Award 2020-21 by **International Institute of organized Research (I2OR) , India**
9. International Young Scientist Award 2020-21 by **International Institute of organized Research (I2OR) , India**
10. Young Scientist Award by **Microbiologist Society, India**
11. Best Young Scientist Award by **Novel Research Academy, India**
12. Adarsh Vidya Saraswati Rashtriya Puraskar (National Award Of Excellence) by **Global Management Council, India**
13. The BEST Teacher Award by **Global Management Council, India**
14. FELLOW of the **Glacier Journal Research Foundation, India**
15. FELLOW of the **Scholars Academic and Scientific Society (SAS Society), India**
16. FELLOW of the **Institute of Scholars, India**
17. FELLOW of International Scientific Research Organization for Science, Engineering and Technology (ISROSET , India)
18. ICPP Bursary Award for attending international congress in **Boston, USA**
19. Agropolis Foundation Award for attending international symposium in **Avignon, France**
20. DST Scholarship for attending international symposium in **Avignon, France**
21. DAAD Scholarship for attending summer school in **Hanover, Germany**
22. DST Scholarship for attending international symposium in **Arusha, Tanzania**
23. SERB – DST – Young Scientist (Principal Investigator) Fellowship **India**
24. CeNSE Sponsorship for attending INUP hands on training at **IISc Bengaluru**
25. CeNSE Sponsorship for attending INUP workshop in Nanotech at **IISc Bengaluru**
26. UGC Sponsorship for attending summer school at **MKU, Madurai**
27. ICAR Sponsorship for attending training at **NBAIM, UP**
28. Science Academies Sponsorship for attending training at **VICAS, Tiruchengode**
29. DBT Fellowship as JRF and SRF while working in a **DBT** funded project
30. DAE Fellowship as JRF while working in a **BRNS** funded project

PhD Awarded

1. **Ms. Khushboo Jain**, Etiology, Pathogenesis and Management Strategies of Telya Disease of Pomegranate.

M.Sc. DISSERTATIONS Guided

1. **Shilpa Nagda**: In-Silico DNA Sequence Analysis of A Geminivirus: Chilli Leaf Curl Virus
2. **Divya Garasiya**: In-Silico DNA Sequence Analysis of A Geminivirus: Maize Streak Virus
3. **Devilal Dhakad**: In Vitro Multiplication of Medicinal Plants through Micropropagation based Tissue Culture Techniques
4. **Pur Singh**: In-Silico DNA Sequence Analysis of A Geminivirus: Maize Streak Virus

5. **Minakshi Sharma:** In-Silico DNA Sequence Analysis of A Geminivirus: Tomato Leaf Curl Virus
6. **Harshit Paliwal:** Water Sample Analysis Chemical Parameters
7. **Mayank Suthar:** QMS According To ISO 17025: Food Microbiology Testing
8. **Nikita Poonia:** Isolation, Identification and Antimicrobial Properties of Different Microorganisms Isolated from Faecal Matter of Neurodegenerated Mice
9. **Pooja Bunkar:** Microbiological and Biochemical Adulteration of Milk
10. **Shalini Chaudhary:** Optimum Parameters and Strategies for Enhancing Bio-Methanation of Rice Straw

GENBANK ACCESSION NUMBERS (NCBI)

Nucleotide database: 119 sequences

MH355641- MH355644, MF737343 – MF737349, HQ631429 – HQ631431, JN000700 – JN000703, NC_015631, JF968443, JF968444, JN009664 – JN009667, HQ876467, JN600442 – JN600449, JN998441 – JN998453, JQ407224, JQ693136 – JQ693151, JX678285, KC206075 - KC206083, KC589699, KC589700, NC_020889, KC854404, KC854405, KC623949, KC684927, NC_021345, KF218188, KF584008 – KF5840013, KF660223, KF425298, NC_023023, KF704391, KF704392, KU522121, MT385289 – MT385312.

Protein database: 121 sequences

AER26542, ADV56673, AEH04540 – AEH04543, ADW83735, AEX25777 – AEX25784, AEY68274 – AEY68282, AFW90048 – AFW90051, AGL39754, AGL39755, AGM34013, AGM20442, YP_008060797, AGQ54647 – AGQ54651, YP_008888538 – YP_008888543, AHB52743 – AHB52748, AHB60210 – AHB60220, AGZ80146, YP_007684352, AGH88632 – AGH88638, AIL92569 – AIL92578, ANU06090 – ANU06095.

Gene Database: 2 sequences

NC_020889, NC_021345.

BRIEF DESCRIPTION OF Ph.D., POST-DOC AND CURRENT RESEARCH WORK

Areas of expertise are **Plant Molecular Virology, Host Virus Interactions, Bioinformatics and Nano-Biotechnology**. Our research group have identified and reported many plant viruses infecting ornamentals plants, crops, weeds, and other economically important plants with the aid of Molecular Techniques, Phylogenetic Analysis, Sequence Analysis, GC Profile Analysis, Functional Genomics, Homology Modeling, Structure Prediction, Ligand Finding, Docking, Proteomics and *In Silico* Recombinational Characterization. Our research group has extensively worked in depositing a total of around 125 viruses' sequence in NCBI which contains some novel viruses. We have successfully completed two research projects (**SERB and UGC**) and two are undergoing, funded by **RUSA**. Our research group have published more than **150 research articles**, books, conference proceeding,

chapters etc. The current research works has been published and are communicated in reputed journals of Frontiers, Bentham Science, Wiley, Elsevier, Springer, Francis & Taylor, Hindawi, Omics, Science Alert, CIR, Photon which are cited in Web of Science, Scopus, PubMed, UGC CARE, NAAS list etc. with cumulative **Impact Factor** of around **80**. (**h-index 20**, **i10-index 42**, **Citations 1364**, **RG Interest Score 1340**).

WEB OF SCIENCE INDEXED PUBLICATIONS [IF: 75.4]

1. Khushboo Jain, **Avinash Marwal**, Kanika Sharma, Neetin Desai (2023) Identification of Etiological Agent of Telya Disease of Pomegranate, its Pathogenesis and Control using Integrated Management Approach. *Research Journal of Biotechnology*. 18 (1):51-66. DOI: 10.25303/1801rjbt51066. ISSN: 2278-4535 (Online), ISSN: 0973-6263 (Print).
2. Mukesh Meena, Garima Yadav, Priyankaraj Sonigra, Adhishree Nagda, Tushar Mehta, Prashant Swapnil, Harish, **Avinash Marwal**, Sumit Kumar (2023) Multifarious Responses of Forest Soil Microbial Community Toward Climate Change. *Microbial Ecology*. 86: 49–74. DOI: 10.1007/s00248-022-02051-3. ISSN: 1432-184X (Online), ISSN: 0095-3628 (Print). **[IF: 3.6]**
3. Mukesh Meena, Garima Yadav, Priyankaraj Sonigra, Adhishree Nagda, Tushar Mehta, Prashant Swapnil, Harish, **Avinash Marwal** (2022) Role of elicitors to initiate the induction of systemic resistance in plants to biotic stress. *Plant Stress*. 100103. DOI: 10.1016/j.stress.2022.100103. ISSN: 2667-064X (Online). **[IF: 5.0]**
4. Sukumar Ranjith, Aswathy Sathyan, Senbagam Duraisamy, Ansu Susan Peter, **Avinash Marwal**, Khushboo Jain, Prahalathan Chidambaram (2022) Exploring a Computational Method for Evaluating the Epinecidin-1 and Its Variants Binding Efficacy with Breast Cancer Receptor (HER-2). *International Journal of Peptide Research and Therapeutics*. 28: 118. DOI: 10.1007/s10989-022-10424-y. ISSN: 1573-3904 (Online), 1573-3149 (Print). **[IF: 2.5]**
5. Aarshi Srivastava, Vineeta Pandey, Rakesh Kumar Verma, **Avinash Marwal**, Ritesh Mishra, Rob W. Briddon, Akhtar Ali, RK Gaur (2022) First complete genome sequence of Tomato leaf curl virus (ToLCV) from *Salvia splendens* in India. *Journal of Phytopathology*. 170 (7-8): 479-491. DOI: 10.1111/jph.13099. Wiley-VCH GmbH. ISSN: 1439-0434 (Online) **[IF: 1.5]**
6. **Avinash Marwal**, Chitra Nehra, Rakesh Verma, Megha Mishra, Deepika Srivasatava, Priyanka Choudhary, RK Gaur (2021). First report of papaya leaf curl virus and its associated papaya leaf curl betasatellite infecting *Catharanthus roseus* plants in India. *Journal of Horticultural Science & Biotechnology*. DOI: 10.1080/14620316.2021.1912646. ISSN: 2380-4084 (Online), ISSN: 1462-0316 (Print). Taylor & Francis. **[IF: 1.9]**
7. **Avinash Marwal**, RK Gaur (2021). Plant Virus Identification and Management. *Research Journal of Biotechnology*. 16 (6):190-193. ISSN: 2278-4535 (Online), ISSN: 0973-6263 (Print). World Researchers Associations.
8. Mukesh Meena, Andleeb Zehra, Prashant Swapnil, Harish, **Avinash Marwal** (2021). Endophytic Nanotechnology: An Approach to Study Scope and Potential Applications. *Frontiers in Chemistry. Section: Nanoscience*. DOI: 10.3389/fchem.2021.613343. Vol:9. ISSN: 2296-2646 (Online). Frontiers. **[IF: 5.5]**

9. Prashant Swapnil, Mukesh Meena, Sandeep Kumar Singh, Umesh Praveen Dhuldhaj, Harish, **Avinash Marwal** (2021). Vital roles of carotenoids in plants and humans to deteriorate stress with its structure, biosynthesis, metabolic engineering and functional aspects. *Current Plant Biology*. 26 (1):100203. DOI: 10.1016/j.cpb.2021.100203. ISSN: 2214-6628. Elsevier BV. **[IF: 5.4]**
10. Khushboo Jain, Neetin Desai, Kanika Sharma, **Avinash Marwal** (2021). Development and Screening of Byproduct for Its Secondary Metabolites, Antioxidant and Anti-Diabetic Potential From Anthracnose Infected Fruits of Pomegranate: A Sustainable Approach. *3 Biotech*. 11. 74. DOI 10.1007/s13205-020-02629-z. ISSN: 2190-5738 (Online). Springer Nature. **[IF: 2.8]**
11. Megha Mishra, Rakesh Kumar Verma, **Avinash Marwal**, Pradeep Sharma, RK Gaur (2020). Biology and interaction of the natural occurrence of distinct monopartite begomoviruses associated with satellites in Capsicum annum from India. *Frontiers in Microbiology. Section: Microbe and Virus Interactions with Plants*. DOI: 10.3389/fmicb.2020.512957. ISSN: 1664-302X (Online). Vol:11. Frontiers **[IF: 5.2]**
12. Mukesh Meena, Prashant Swapnil, Kumari Divyanshu, Sunil Kumar, Harish, Yashoda Nandan Tripathi, Andleeb Zehra, **Avinash Marwal**, Ram Sanmukh Upadhyay (2020). PGPR-mediated induction of systemic resistance and physiochemical alterations in plants against the pathogens: Current perspectives. *Journal of Basic Microbiology*. DOI: 10.1002/jobm.202000370. ISSN:1521-4028 (Online). Wiley-VCH GmbH, Weinheim. **[IF: 3.1]**
13. **Avinash Marwal**, RK Gaur (2020). Host Plant Strategies to Combat Against Viruses Effector Proteins. *Current Genomics*. 21 (6): 401 – 410. DOI: 10.2174/1389202921999200712135131. ISSN: 1875-5488 (Online), ISSN: 1389-2029 (Print). Bentham Science. **[IF: 2.6]**
14. Rakesh Kumar Verma, Megha Mishra, **Avinash Marwal**, RK Gaur (2020). Identification, genetic diversity and recombination analysis of *Watermelon Mosaic Virus* isolates. *3 Biotech*. 10 (6): 257. DOI: 10.1007/s13205-020-02248-8. ISSN: 2190-5738 (Online). Springer Nature. **[IF: 2.8]**
15. **Avinash Marwal**, RK Gaur (2019). Phylogenetic and Recombination Analyses of *Sugarcane yellow leaf virus* isolates. *Sugar Tech*. 22 (3): 540–545. DOI: 10.1007/s12355-019-00783-0. ISSN: 0974-0740 (Online), ISSN: 0972-1525 (Print). Springer Nature. **[IF: 1.9]**
16. Rajesh Kumar, Prateek Bhanti, **Avinash Marwal**, RK Gaur (2020). Gene Expression-Based Supervised Classification Models for Discriminating Early- and Late-Stage Prostate Cancer. *Proceedings of the National Academy of Sciences, India Section B: Biological Sciences*. 90 (3): 541–565. DOI:10.1007/s40011-019-01127-4. ISSN: 2250-1746 (Online), ISSN: 0369-8211 (Print). Springer Nature.
17. Chitra Nehra, **Avinash Marwal**, Rakesh Kumar Verma, RK Gaur (2019). 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*. 89 (3): 903–910. DOI: 10.1007/s40011-018-1006-9. ISSN: 2250-1746 (Online), ISSN: 0369-8211 (Print). Springer Nature.
18. Chitra Nehra, **Avinash Marwal**, Rakesh Kumar Verma, Megha Mishra, Pradeep Sharma and RK

- Gaur (2019). *Papaya yellow leaf curl virus*: A newly identified begomovirus infecting *Carica papaya* L. from the Indian Subcontinent. *Journal of Horticultural Science & Biotechnology*. 94 (4): 475-480. DOI: 10.1080/14620316.2019.1570827. ISSN: 2380-4084 (Online), ISSN: 1462-0316 (Print). Taylor & Francis. **[IF: 1.9]**
19. Karthikeyan Muthupandi, **Avinash Marwal**, Jebasingh Tennyson. (2019). Genome of a known but distinct begomovirus associated with a novel satellite molecule infecting a new host bitter gourd (*Momordica charantia*). *3 Biotech*. 9 (6): 247. DOI: 10.1007/s13205-019-1775-8. ISSN: 2190-5738 (Online). Springer Nature. **[IF: 2.8]**
 20. **Avinash Marwal**, Rajesh Kumar, SM Paul Khurana, RK Gaur (2019). Complete nucleotide sequence of a new geminivirus isolated from *Vitis vinifera* in India: a symptomless host of Grapevine red blotch virus. *VirusDisease*. 30 (1): 106–111. DOI: 10.1007/s13337-018-0477-x. ISSN: 2347-3517 (Online), ISSN: 2347-3584 (Print). Springer Nature.
 21. Amlan Kumar Das, **Avinash Marwal**, Vikram Pareek, Yagya Joshi, Apoorva (2016). Surface Engineering of Magnetite Nanoparticles by Plant Protein: Investigation into Magnetic Properties. *Nano Hybrids and Composites*. 11: 38-44. DOI: 10.4028/www.scientific.net/NHC.11.38. ISSN: 2297-3400 (Online), ISSN: 2297-3370 (Print). Trans Tech Publication, Switzerland.
 22. Amlan Kumar Das, **Avinash Marwal**, DivyaSain, Vikram Pareek (2015). One-step green synthesis and characterization of plant protein-coated mercuric oxide (HgO) nanoparticles: antimicrobial studies. *International Nano Letters*. 5 (3): 125-132. DOI: 10.1007/s40089-015-0144-9. Springer Nature. ISSN: 2228-5326 (Online). Springer Nature. **[IF: 3.7]**
 23. Anurag Kumar Sahu, Chitra Nehra, **Avinash Marwal**, RK Gaur (2015). First report of a *begomovirus* associated with betasatellites infecting spinach (*Spinacia oleracea*) in India. *Journal of General Plant Pathology*. 81 (2): 146-150. DOI: 10.1007/s10327-014-0576-5. ISSN: 1610-739X (Online), ISSN: 1345-2630 (Print). Springer Nature. **[IF: 1.2]**
 24. Anurag Kumar Sahu, **Avinash Marwal**, Chitra Nehra, M.S. Shahid, RK Gaur (2014). First report of a begomovirus and associated betasatellite in *Rosa indica* and in India. *Australasian Plant Disease Notes*. 9 (1): 147. DOI: 10.1007/s13314-014-0147-9. ISSN: 1833-928X (Online). Springer Nature. **[IF: 0.9]**
 25. Anurag Kumar Sahu, **Avinash Marwal**, Chitra Nehra, Devendra Kumar Choudhary, Pradeep Sharma, RK Gaur (2014). RNAi mediated gene silencing against betasatellite associated with *Croton yellow vein mosaic* begomovirus. *Molecular Biology Reports*. 41 (11): 7631 – 7638. DOI: 10.1007/s11033-014-3653-0. ISSN: 1573-4978 (Online), ISSN: 0301-4851 (Print). Springer Nature. **[IF: 2.8]**
 26. **Avinash Marwal**, Anurag Kumar Sahu, RK Gaur (2014). First report of airborne begomovirus infection in *Melia azedarach* (Pride of India), an ornamental tree in India. *Aerobiologia*. 30 (2): 211 – 215. DOI: 10.1007/s10453-013-9319-x. ISSN: 1573-3025 (Online), ISSN: 0393-5965 (Print). Springer Nature. **[IF: 2.0]**
 27. Rajneesh Prajapat, **Avinash Marwal**, RK Gaur (2014). Begomovirus associated with alternative host weeds: a critical appraisal. *Archives of Phytopathology and Plant Protection*. 47 (2): 157-170. DOI: 10.1080/03235408.2013.805497. ISSN: 1477-2906 (Online), ISSN: 0323-5408

- (Print). Taylor & Francis. **[IF: 1.0]**
28. Amlan Kumar Das, **Avinash Marwal**, Ruchi Verma (2014). Bio-Reductive Synthesis and Characterization of Plant Protein Coated Magnetite Nanoparticles. *Nano Hybrids and Composites*. 7: 69-86.DOI: 10.4028/www.scientific.net/NH.7.69. ISSN: 2297-3400 (Online), ISSN: 2297-3370 (Print).Trans Tech Publication, Switzerland.
 29. **Avinash Marwal**, Anurag Kumar Sahu, RK Gaur (2014). Association of begomovirus and an alphasatellite with the leaf curl disease of ornamental plant *Vinca alba* in Punjab, India. *Journal of Agricultural Research - Lahore*. 52 (3): 339 – 356.
 30. **Avinash Marwal**, Anurag Kumar Sahu, RK Gaur (2013). First report of molecular characterization of begomovirus infecting an ornamental plant *Tecoma stans* and a medicinal plant *Justicia adhatoda*. *Science International - Lahore*. 25(4): 837-839.ISSN: 1013-5316.
 31. **Avinash Marwal**, Anurag Kumar Sahu, RK Gaur (2013). First report on the association of a begomovirus with chrysanthemum indicum exhibiting yellowing of leaf vein disease characterized by molecular studies. *Journal of Horticultural Research*. 21 (2): 17 – 21.DOI: 10.2478/johr-2013-0017. ISSN: 2353-3978 (Online), ISSN: 2300-5009 (Print).Sciendo, De Gruyter Poland.
 32. **Avinash Marwal**, Anurag Kumar Sahu, Devendra Kumar Choudhary, RK Gaur (2013). Complete nucleotide sequence of a begomovirus associated with satellites molecules infecting a new host *Tagetes patula* in India. *Virus Genes*. 47 (1): 194 – 198. DOI: 10.1007/s11262-013-0914-2. ISSN: 1572-994X (Online), ISSN: 0920-8569 (Print). Springer Nature. **[IF: 1.6]**
 33. **Avinash Marwal**, Anurag Sahu, Pradeep Sharma, RK Gaur (2013). Molecular characterizations of two begomoviruses infecting *Vinca rosea* and *Raphanus sativus* in India. *Virologica Sinica*. 28 (1): 053 – 056. DOI: 10.1007/s12250-013-3275-z.ISSN: 1995-820X (Online), ISSN: 1674-0769(Print).Springer Nature. **[IF: 5.5]**
 34. Rajneesh Prajapat, **Avinash Marwal**, Zuber Shaikh, RK Gaur (2012). *Geminivirus* Database (GVDB): First database of family Geminiviridae and its genera Begomovirus. *Pakistan Journal of Biological Sciences*. 15 (14): 702 – 706.DOI: 10.3923/pjbs.2012.702.706. ISSN: 1812-5735 (Online), ISSN: 1028-8880 (Print).Asian Network for Scientific Information. Science Alert.
 35. Rajneesh Prajapat, **Avinash Marwal**, Anurag Kumar Sahu, RK Gaur (2012). Molecular *in silico* structure and recombination analysis of betasatellite in *Calotropis procera* associated with begomovirus. *Archives of Phytopathology and Plant Protection*. 45 (16): 1980 - 1990.DOI: 10.1080/03235408.2012.720460.ISSN: 1477-2906 (Online), ISSN: 0323-5408 (Print). Taylor & Francis. **[IF: 1.0]**
 36. **Avinash Marwal**, Anurag Sahu, Rajneesh Prajapat, Devendra Kumar Choudhary, RK Gaur (2012). First Report of Association of a Begomovirus with the Leaf Curl Disease of a Common Weed, *Datura Innoxia*. *VirusDisease (Former Indian Journal of Virology)*. 23 (1): 83-84.DOI: 10.1007/s13337-012-0064-5. ISSN: 2347-3517 (Online), ISSN: 2347-3584 (Print). Springer Nature.
 37. RK Gaur, Rajneesh Prajapat, **Avinash Marwal**, Anurag Sahu, Mangal Singh Rathore (2011). First Report of a *Begomovirus* Infecting *Mimosa pudica* in India. *Journal of Plant Pathology*. 93

(Suppl.4): S4.80.DOI: 10.4454/jpp.v93i4.2394. ISSN: 2239-7264 (Online), ISSN: 1125-4653 (Print).Springer Nature. **[IF: 2.2]**

SCOPUS INDEXED PUBLICATIONS

1. Khushboo Jain, **Avinash Marwal**, Kanika Sharma, Neetin Desai (2022) Analysis of Physicochemical Properties, Available Nutrients of Soil and their Correlation with Incidence of Telya Disease of Pomegranate at Northern Nasik, Maharashtra. *Defence Life Science Journal*. 7 (3):232-244. DOI: 10.14429/dlsj.7.17675. ISSN: 2456-0537 (Online), ISSN: 2456-379X (Print).
2. Shalini Tailor, Khushboo Jain, **Avinash Marwal**, Mukesh Meena, K Anbarasu, R K Gaur (2022). Outlooks of Nanotech in Organic Farming Management. *Defence Life Science Journal*. 7 (1): 52-60. DOI: 10.14429/dlsj.7.16763. ISSN: 2456-0537 (Online), ISSN: 2456-379X (Print).
3. **Avinash Marwal**, Mukesh Meena, RK Gaur (2021). Molecular Docking Studies of Coronavirus Proteins with Medicinal Plant-Based Phytochemicals. *Defence Life Science Journal*. 6 (1):57-63. ISSN: 2456-0537 (Online), ISSN: 2456-379X (Print). DOI: <https://doi.org/10.14429/dlsj.6.15704>.
4. **Avinash Marwal**, Rajneesh Prajapat, RK Gaur (2016). First Report of Recombination Analysis of Betasatellite and Alpha-satellite Sequence Isolated from an Ornamental Plant Marigold in India: An *in silico* Approach. *International Journal of Virology*. 12 (1): 10-17.DOI: 10.3923/ijv.2016.10.17.ISSN: 1816-4900 (Print). Academic Journals Inc., USA. Science Alert.
5. SM Paul Khurana, **Avinash Marwal** (2016). Recent developments towards detection & diagnosis for management of plant viruses. *Indian Phytopathology*. 69 (4s):30-34.ISSN: 2248-9800 (Online), ISSN: 0367-973X (Print).Springer Nature.
6. **Avinash Marwal**, Rajneesh Prajapat, RK Gaur (2016). Prediction of Binding Site in Eight Protein Molecules of Begomovirus and its Satellite Components i.e. Betasatellite and Alpha-satellite Isolated from Infected Ornamental Plant. *Plant Pathology Journal*. 15 (1): 1-4.DOI: 10.3923/ppj.2016.1.4. ISSN: 1812-5425 (Online), ISSN: 1812-5387 (Print).Asian Network for Scientific Information. Science Alert.
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26. **Avinash Marwal**, Anurag Sahu, RK Gaur (2014). Molecular Markers: Tools for Genetic Analysis. In: ***Animal Biotechnology: Models in Discovery and Translation***. Editors: Ashish S. Verma and Anchal Singh. Chapter 16. Page 289 – 305. DOI: 10.1016/B978-0-12-416002-6.00016-X. ISBN: 978-0-12-416002-6. Academic Press, Elsevier, Inc.
27. **Avinash Marwal**, Anurag Sahu, RK Gaur (2014). New Insights in the Functional Genomics of Plants Responding to Abiotic Stress. In: ***Molecular Approaches in Plant Abiotic Stress***. Editors: Rajarshi Kumar Gaur and Pradeep Sharma. Chapter 10. Page 158 – 180. DOI: 10.1201/b15538. ISBN: 13: 978-1-4665-8894-3. CRC Press, Science Publishers, Taylor & Francis Group.
28. Amlan Kumar Das, **Avinash Marwal**, DivyaSain (2014). One-Step Green Synthesis and Characterization of Flower Extract-Mediated Mercuric Oxide (HgO) Nanoparticles from *Callistemon viminalis*. In: ***Nanotechnology: Novel perspectives and prospects. Tata-McGraw Hill, New Delhi, India***. Editors: Prof Bhupinder Singh Bhoop, Prof Anupama Sharma, Prof S K Mehta, Prof S K Tripathi. Page 466 – 472. ISBN: 9789339221096
29. Amlan Kumar Das, **Avinash Marwal**, Ruchi Verma (2014). Plant Protein-Mediated Green Synthesis and Characterization of Magnetite (Fe₃O₄) Bionano Hybrid. In: ***Nanotechnology: Novel perspectives and prospects. Tata-McGraw Hill, New Delhi, India***. Editors: Prof Bhupinder Singh Bhoop, Prof Anupama Sharma, Prof S K Mehta, Prof S K Tripathi. Page 136 – 143. ISBN: 9789339221096
30. Rajneesh Prajapat, RK Gaur, **Avinash Marwal**, Vivek Bajpai (2010). Homology Modeling (An approach of structural proteomics). In: ***Recent Trends in Microbial Biotechnology: Techniques in Microbiology. LAPLAMBERT Academic Publishing***. Editors: Vivek Bajpai, Pallavi Sharma, Vijai Kumar Gupta. Chapter 5. Page 1-13. ISBN: 978-3-8433-9002-6.

INTERNATIONAL CONFERENCE PUBLICATIONS

1. Khushboo Jain, **Avinash Marwal** (2022). NIPiCON-IPS 2022, 6thNirma Institute of Pharmacy International Conference, NIRMA University, Ahmedabad, Gujarat, India. Jointly Organized with Indian Pharmacological Society, February 17-19, 2022, "Emerging Opportunities and Challenges in Pharmacology and Pharmaceutical Sciences for Drug Discovery and Healthcare Innovation". Molecular docking of anti-depressant compounds of Indian herbs with hormone regulatory proteins: In silico control approach for postpartum depression. Pg 143.
2. RK Gaur, **Avinash Marwal** (2020). Nanotechnology in diagnosis, detection and management of plant viral diseases. "4th International Conference on Nanobiotechnology for Agriculture NANOFORAGRI 2020", "Application of Nanotechnology for Sustainable, Productive and Safer Agriculture and Food System"5th-6thNovember, 2020. Organized by the TERI-Deakin Nanobiotechnology Research Centre New Delhi, Pg 33.
3. **Avinash Marwal**. Paper presentation on "Development of In-Silico Based Antiviral compounds against Novel Coronavirus Proteins". 29th May 2020. "International E-Conference on "Covid 19 Pandemic: Issues, Challenges and Opportunities for International Trade, E-Commerce and Employment". Organized by Department of Economics and Commerce, Shri Asaramji Bhandwadar Arts, Commerce and Science College, Aurangabad, MP.
4. **Avinash Marwal**. Paper presentation on "Development of Antiviral compounds against Coronavirus" in "3rd International Webinar on "Covid 19: Paradigm Shift in Teaching-Learning & Learner's Physical and mental Well Being", 31st may 2020. Organized by Govt. Raza P.G. College, Rampur, U.P.
5. Megha Mishra, Rakesh Kumar Verma, **Avinash Marwal**, R. K. Gaur (2020). Diversity of chilli leaf curl disease in India. "VIROCON 2020: International Conference on "Evolution of Viruses and Viral Diseases", 18th Feb – 20th Feb, 2020. Organized by Indian Virological Society at Indian National Science Academy, New Delhi, India, pg 222.
6. **Avinash Marwal**, Filza Siddiqui, Aarshi Srivastava, Vinita Pandey, R.K. Gaur (2020). Diversity Analysis of DNA-A and DNA-B of Begomoviruses In Uttar Pradesh, India. "National Conference on "Omics for Food, Health and Environment" (OFHE-2020), 14th Feb – 15thFeb, 2020. Organized by Department of Biotechnology, DeenDayal Upadhyaya Gorakhpur University, Gorakhpur, Uttar Pradesh, India, pg 68.
7. **Avinash Marwal**, Shalini Tailor, RK Gaur (2020). Application of Nanotechnology In Plant Virology: Nanoparticles Having Antiviral Properties. "National Conference on "Omics for Food, Health and Environment" (OFHE-2020), 14th Feb – 15th Feb, 2020. Organized by Department of Biotechnology, Deen Dayal Upadhyaya Gorakhpur University, Gorakhpur, Uttar Pradesh, India, pg 81.
8. RK Gaur, **Avinash Marwal** (2019). Plant Virus Identification and Management. "International Conference On Plant Biofactories Strategies And Challenges", 19th Dec – 21st Dec 2019. Organized by the S. P. Mandali's Ramnarain Ruia Autonomous College, MUMBAI, in Association with Society For Plant Research (VEGETOS), pg 18.
9. S.M. Paul Khurana, Sunny Dhir, **Avinash Marwal**, R.K. Gaur (2019). Innovations in

Management of Viral Diseases of Horticulture Crops. "11th Swadesh Prem Jagriti Sangosthi - 2019, International Conference on Innovative Horticulture and Value Chain Management – Shaping Future Horticulture, 28-31 May, 2019 GBPUA&T, Pantnagar, Uttarakhand, India" ***Shodh Chintan***. 11: 354-361.

10. **Avinash Marwal**, RK Gaur, S. M. Paul Khurana (2018). State-of-the-Art Methods for the Detection of Plant Viruses in Crops."10th Swadesh Prem Jagriti Sangosthi - 2018, National Conference on Intensification and Diversification in Agriculture for Livelihood and Rural Development, 28-31 May, 2018 DRPCA U Pusa (Samastipur) Bihar, India" ***Shodh Chintan***. 10: 272-279.
11. **Avinash Marwal**, Rajesh Kumar, Rakesh Kumar Verma, Megha Mishra, RK Gaur (2018). Complete nucleotide sequence of a DNA virus isolated from *Vitis vinifera* in India: A symptomless host of Grapevine red blotch virus. "International Congress of Plant Pathology (ICPP) 2018: Plant Health in A Global Economy", 29th July – 3rd Aug 2018. Sponsored by ISPP and organized by the American Phytopathological Society (APS), Boston, US. ***Phytopathology***. 108 (S1):117.
12. **Avinash Marwal**, Rakesh Kumar Verma, Megha Mishra, Rajesh Kumar, Poornima Saraswat, RK Gaur (2018). Comparative study of AC1 protein of *Ageratum enation virus* (AEV: KC589699) and *Rose leaf curl virus* (RoLCV: KF584008): A computational approach for understanding 3D structure. "International conference on microbial, plant and animal genome", 29th – 31st March 2018. Organized by Mody University of Science and Technology, Lakshmanagarh, Sikar, Rajasthan, India. ***International Journal of Life Science and Pharma Research (IJLPR)*** pg 53.
13. **Avinash Marwal**, Rajesh Kumar, Megha Mishra, Rakesh Kumar Verma, Poornima Saraswat, RK Gaur (2018). Highlighting the current status of Mastrevirus research in India. "International conference on microbial, plant and animal genome", 29th – 31st March 2018. Organized by Mody University of Science and Technology, Lakshmanagarh, Sikar, Rajasthan, India. ***International Journal of Life Science and Pharma Research (IJLPR)*** pg 54.
14. Amlan Kumar Das, NK Joshi, Apoorva, **Avinash Marwal** (2018). Plant protein mediated magnetite nanoparticles. "International conference on microbial, plant and animal genome", 29th– 31st March 2018. Organized by Mody University of Science and Technology, Lakshmanagarh, Sikar, Rajasthan, India. ***International Journal of Life Science and Pharma Research (IJLPR)*** pg 41.
15. Rakesh Kumar Verma, **Avinash Marwal**, Chitra Nehra, Megha Mishra, Rajesh Kumar, RK Gaur (2018). Molecular genetic analysis of Cucumber mosaic virus coat protein (CP) gene suggests distinctive patterns of evolution in India. "International conference on microbial, plant and animal genome", 29th – 31st March 2018. Organized by Mody University of Science and Technology, Lakshmanagarh, Sikar, Rajasthan, India. ***International Journal of Life Science and Pharma Research (IJLPR)*** pg 52.
16. Rajesh Kumar, **Avinash Marwal**, Rakesh Kumar Verma, Megha Mishra, Poornima Saraswat, Prateek Bhanti, RK Gaur (2018). In-silico identification of tomato (*Solanum lycopersicum*) encoded microRNA targets against *Tomato leaf Gujarat virus*. "International conference on

- microbial, plant and animal genome”, 29th – 31st March 2018. Organized by Mody University of Science and Technology, Lakshmangarh, Sikar, Rajasthan, India. *International Journal of Life Science and Pharma Research (IJLPR)* pg 54.
17. Chitra Nehra, Rakesh Kumar Verma, **Avinash Marwal**, Megha Mishra, Rajesh Kumar, RK Gaur (2018). Assessing genetic diversity of begomovirus population infecting papaya and tomato from Northern India. “International conference on microbial, plant and animal genome”, 29th – 31st March 2018. Organized by Mody University of Science and Technology, Lakshmangarh, Sikar, Rajasthan, India. *International Journal of Life Science and Pharma Research (IJLPR)* pg 55.
 18. Monika Kumawat, **Avinash Marwal**, RK Gaur (2018). Identification of Simple Sequence Repeats (SSRs) in Ebola virus Mayinga, Zaire: 1976, complete genome using WebSat for marker development. “International conference on microbial, plant and animal genome”, 29th – 31st March 2018. Organized by Mody University of Science and Technology, Lakshmangarh, Sikar, Rajasthan, India. *International Journal of Life Science and Pharma Research (IJLPR)* pg 60.
 19. Rakesh Kumar Verma, **Avinash Marwal**, Megha Mishra, Chitra Nehra, Rajesh Kumar and RK Gaur (2017). RNA interference (RNAi) as a potential tool for control of viral infection in plants. “International conference on global research initiatives for sustainable agriculture and allied sciences (GRISAAS-2017)”, 2nd – 4th Dec 2017. Pg 300. Organized by Maharana Pratap University of Agriculture and Technology, Udaipur, Rajasthan.
 20. Chitra Nehra, **Avinash Marwal**, RK Gaur (2016). Identification and molecular characterization of the yellow mosaic disease associated with ornamental plant *Catharanthus roseus*. “8th international geminivirus symposium and the 6th international ssDNA comparative virology workshop”, 7–10th November 2016, New Delhi. Organized by *Indian Virological Society*. DOI 10.1007/s13337-016-0351-7. *VirusDisease*.27 (4): 405-459. <https://doi.org/10.1007/s13337-016-0351-7>
 21. Rajneesh Prajapat, **Avinash Marwal**, RK Gaur (2016). Homology modeling and structural validation of coat protein (aey68281) of Croton Sparsiflorus Yellow Vein Lakshmangarh Virus. “8th international geminivirus symposium and the 6th international ssDNA comparative virology workshop”, 7–10th November 2016, New Delhi. Organized by *Indian Virological Society*. DOI 10.1007/s13337-016-0351-7. *VirusDisease*.27 (4): 405-459. <https://doi.org/10.1007/s13337-016-0351-7>
 22. Amandeep Kaur, Rajesh Kumar, **Avinash Marwal**, RK Gaur (2016). Bioinformatics Protein–Protein Interaction Studies for Various Human and Plant Mastrevirus Proteins. “8th international geminivirus symposium and the 6th international ssDNA comparative virology workshop”, 7–10th November 2016, New Delhi. Organized by *Indian Virological Society*. DOI 10.1007/s13337-016-0351-7. *VirusDisease*. 27 (4): 405-459. <https://doi.org/10.1007/s13337-016-0351-7>
 23. **Avinash Marwal**, Chitra Nehra, RK Gaur (2016). Begomovirus disease complex: Emerging threat to ornamental production systems of India. “13th International Plant Virus Epidemiology (IPVE) Symposium, **Avignon, France**, 6th June – 10th June 2016, pg 110. Organized by

International Society for Plant Pathology and INRA France.

24. Chitra Nehra, **Avinash Marwal**, RK Gaur (2016) Diversity and Phylogeny of Begomovirus Populations and Their Managements. Fourth National Congress of Virology, May 18th – 20th, 2016 Sofia, Bulgaria, pg 15. Organized by ***Bulgarian Society for Microbiology Union of Scientists in Bulgaria. Acta Microbiologica Bulgarica.*** 32 (2): 108-113.
25. Amlan Kumar Das, **Avinash Marwal**, Vikram Pareek (2015). Nanoparticles-Protein Hybrid Based Magnetic Liposome. “ICNST 2015: International Conference on Nano Science and Technology, Kuala Lumpur, Malaysia, February 12-13, 2015” ***World Academy of Science, Engineering and Technology, International Journal of Chemical and Molecular Engineering.*** 9 (2): 230-233.
26. Amlan Kumar Das, **Avinash Marwal**, DivyaSain (2014). Bio-Reductive synthesis of Mercuric Oxide (HgO) nanoparticles mediated by flower extract of a medicinally important ornamental plant *Callistemon Viminalis*. “International Conference on Nano Science and Technology”. Chandigarh, **India**. March 2nd – 5th, 2014. Organized by ***Institute of Nano Science And Technology Mohali.***
27. Amlan Kumar Das, **Avinash Marwal**, Ruchi Verma (2014). *Datura inoxia* leaf extract mediated one step green synthesis and characterization of magnetite (Fe₃O₄) nanoparticles. “Aligarh Nano IV International 2014” Aligarh, **India**. March 8th – 11th 2014. Organized by ***Aligarh Muslim University.***
28. Amlan Kumar Das, **Avinash Marwal**, Ruchi Verma, DivyaSain (2014). A simple method for preparation of plant protein mediated magnetite based magnet driven liposome. 2nd International Conference on Frontiers in Nano Science, Technology and Applications. Pg 89 December 20-22, 2014. Organised by ***Sri Sathya Sai Institute of Higher Learning, Prasanthinilayam, A. P. India.***
29. **Avinash Marwal**, Anurag Sahu, RK Gaur (2013). RNA Silencing Suppressor Encoded by Betasatellite DNA Associated with *Calendula officinalis yellow vein Lakshmanagarh virus*. “12th International Plant Virus Epidemiology (IPVE) Symposium, themed Evolution, Ecology and Control of Plant Viruses”, Arusha, **Tanzania** on January 27th - February 1st, 2013, pg 135. Organized by ***International Society for Plant Pathology and IITA.***
30. Anurag Kumar Sahu, **Avinash Marwal**, Rajneesh Prajapat, RK Gaur, “Begomovirus: From weeds to economically important crops” 10th International Congress of Plant Pathology (ICPP-2013), Beijing, **China** 25-30 Aug 2013. ***Acta Phytopathologica Sinica.*** Organized by ***The Chinese Society for Plant Pathology and International Society for Plant Pathology.***43 (Supplement): 471
31. **Won first prize in poster presentation** on Assessment of Genetic Diversity within CP gene of *Tomato leaf curl virus* (ToLCV) infecting tomato plant across world. Anurag Kumar Sahu, **Avinash Marwal**, Pooja Sharma, RK Gaur. “International Conference on Advances in Plant Science (ICAPS – 2012). Chian Mai, **Thailand**” November 14-18. Pg 47. Organized by ***V S Research Foundation and Century Foundation, Bangalore.***

32. **Avinash Marwal**, Anurag Sahu, Rajneesh Prajapat, RK Gaur (2012). Distribution and genetic diversity of *Begomoviruses* associated with ornamentals plants in India. "International Conference on Microbial, Plant & Animal Research" on March 29th -31st.pg 159 Organized by **MITS University, India**
33. Rajneesh Prajapat, **Avinash Marwal**, Anurag Sahu, Zuber Shaikh, RK Gaur (2012). *Geminivirus* Database (GVDB): Foremost approach of its kind. "International Conference on Microbial, Plant & Animal Research" on March 29th -31st.pg 80 Organized by **MITS University, India**
34. Pooja Sharma, Anurag Sahu, **Avinash Marwal**, RK Gaur (2012). Identification of potyvirus infection using RT-PCR with degenerate primers in Papaya plant of Sikar region, Rajasthan. "International Conference on Microbial, Plant & Animal Research" on March 29th -31st.pg 185 Organized by **MITS University, India**
35. Somyaparna Das, **Avinash Marwal**, Devendra Kumar Choudhary, Vijay Kumar Gupta, RK Gaur (2011). Mechanism of RNA interference (RNAi): Current concept. International Conference on Food Engineering and Biotechnology. 9: 240-245. **International Proceedings of Chemical, Biological and Environmental Engineering**. Singapore. ISSN: 2010-4618.

NATIONAL CONFERENCE PUBLICATIONS

1. Avinash Marwal and R.K. Gaur (2019). Structure Prediction and Validation of Ageratum enation virus Rep Protein. National Conference on "Current scenario in Science and Technology: Facing the Challenges and Creating Opportunities"(VII-Rajasthan Science Congress). Pg 140. October 14-16, 2019 at **University College of Science, Mohanlal Sukhadia University Udaipur, Rajasthan.**
2. Rajesh Kumar, Prateek Bhanti, **Avinash Marwal**, RK Gaur, KP Sharma (2019). Prostate cancer in India: A rising threat. National Conference on "Current scenario in Science and Technology: Facing the Challenges and Creating Opportunities"(VII-Rajasthan Science Congress). Pg 172. October 14-16, 2019 at **University College of Science, Mohanlal Sukhadia University Udaipur, Rajasthan.**
3. Shalini Tailor and **Avinash Marwal** (2019). To Detect the Inter-Varietal Mixing among Maize (*Zea mays*) plants Using RAPD Markers. National Conference on "Current scenario in Science and Technology: Facing the Challenges and Creating Opportunities"(VII-Rajasthan Science Congress). Pg 179. October 14-16, 2019 at **University College of Science, Mohanlal Sukhadia University Udaipur, Rajasthan.**
4. **Avinash Marwal**, Rajneesh Prajapat, RK Gaur (2015). Estimation of Binding Activity of Influenza Virus Hemagglutinin to Antiviral Ligand. National Conference on Plant & Animal Molecular Biology (NCPAMB) from September 25-26, 2015 at **Mody University, Lakshargarh, Sikar, Rajasthan.**
5. Rajneesh Prajapat, **Avinash Marwal**, RK Gaur (2015). Recombination analysis of Actinobacteria strains JN791322 and NR_044070. National Conference on Plant & Animal Molecular Biology (NCPAMB) from September 25-26, 2015 at **Mody University, Lakshargarh, Sikar, Rajasthan.**

6. Participated in **100th Indian Science Congress** at **Calcutta University, Kolkata** from 3rd – 7th Jan 2013.
7. **Avinash Marwal**, Anurag Sahu, Rajneesh Prajapat, RK Gaur. Attended and presented a poster on “First report of Begomovirus infecting two ornamental plants: *Jasminum sambac* and *Millingtonia hortensis*” at “**XX National Conference of Indian Virological Society (IVS) on “Managing Emerging and Re-emerging Plant, Animal, Human and Aquatic Viral Diseases: One Health Perspective”** pg 109 at **National Research Centre on Equines, Hisar** from 29th – 31st Dec 2011.
8. Rajneesh Prajapat, **Avinash Marwal**, Vivek Bajpai, Rajarshi Kumar Gaur. Attended and presented a poster on “Structural Modeling and Validation of Rep Proteins of *Begomovirus* Strains (TLCBV and TYLCTHV)” at **National Conference on Recent Advances in Integrated Disease Management for Enhancing Food Production** from 27-28 October, 2010. Organized By Department of Plant Pathology, College of Agriculture, SK Rajasthan Agricultural University, Bikaner, and **Indian Phytopathological Society (Central Zone)**
9. Attended “**XX All India Forensic Science Conference**” from 15th – 17th Nov 2009 organized by **Directorate of Forensic Science, MHA, Govt of India, New Delhi and Rajasthan Police** at State Forensic Science Laboratory, Jaipur, Rajasthan.

ACKNOWLEDGMENTS

1. Acknowledged in “First Preliminary Report on Isolation and Characterization of Novel *Acinetobacter* spp. in Casing Soil Used for Cultivation of Button Mushroom, *Agaricus bisporus* (Lange) Imbach”. *Int J Microbiol.* 2011; DOI: 10.1155/2011/790285 for making of homology tree based on multiple sequence alignment using MEGA 4.0.

NATIONAL SYMPOSIUMS

1. **Avinash Marwal**, Shalini Tailor (2020). Nanoparticles/Nanoformulations against virus diseases. “**National Symposium on Multilateral Initiatives against Arboviral Diseases NSAD 2020**” from January 4th – 6th 2020. Page 77 – 78. Organized by Laboratory of Public Health Entomology, Department of Zoology, University College of Science, **Mohanlal Sukhadia University Udaipur, Rajasthan.**
2. **Won first prize in poster presentation** on “In Silico Characterization of *Tomato leaf curl Joydebpur virus* (ToLCJV) DNA-A Proteins” in **National Symposium on “Advances in Biotechnological Research in Agri-Horticultural Crops for Sustaining Productivity, Quality Improvement and Food Security”**, from September 14-16, 2011 at **Sardar Vallabh Bhai Patel University of Agriculture & Technology, Meerut (UP).**

NATIONAL SEMINARS

1. Attended seminar on “**Present Scenario of Higher Education in India and Future Prospectives**” from April 6th - 7th 2019. Organized by Sukhadia University Teachers Association (SUTA), Rajasthan University & College Teachers Association (RUCTA) and All India Federation

of University and College Teachers Organizations (AIFUCTO) at **Mohanlal Sukhadia University Udaipur, Rajasthan.**

2. **Avinash Marwal**, Rakesh Verma, Megha Mishra, Chitra Nehra, Rajesh Kumar and RK Gaur (2017). RNAi technology for the management of plant virus. "National seminar on innovative approaches in biosciences", Dec 15th - 16th 2017. Pg 2. Organized by Department of Biotechnology, Botany and Zoology, Kanoria PG Mahila Mahavidyalaya, University of Rajasthan. In collaboration with ISCA and NABARD.
3. **Won third prize in poster presentation** on "In-vitro study of antidermatophytic activity of Brittle gum (*Eucalyptus mannifera*), Mint (*Mentha piperita*) and Onion (*Allium cepa*) against *Trichophyton rubrum* and *Microsporiumcanis*" at "**National Seminar On Role Of Toxicants In Environmental Pollution: Causes, Effects and Control**" from 3rd – 4th Feb 2010 at Department of Zoology, Vedic Kanya PG College, Jaipur with collaboration of **University Grant Commission** and **Department of Science & Technology, Govt of Rajasthan.**
4. Presented Seminar on Single Cell Protein in National Seminar on "**Biotechnology in sustainable Agriculture and Environmental Management**" from 7th – 8th Nov 2008 at Department of Botany, University of Rajasthan with collaboration of **Indian Science Congress Association (ISCA), Regional Chapter Jaipur.**

INTERNATIONAL SUMMER SCHOOL

- ✓ Attended and presented a poster on Algae as a single cell protein at **DAAD SUMMER SCHOOL 2009** on teaching and research for sustainability from June 21st to July 04th at the centre of Applied Plant Biotechnology **Leibniz University Hanover, Germany.**

NATIONAL SUMMER SCHOOL

- ✓ Attended **UGC SUMMER SCHOOL 2011** on "Comparative Genomics and Proteomics in Drug Discovery" from May 30th to June 13th at **UGC-NRCBS, Madurai Kamaraj University.**

TRAINING

1. Successfully completed SWAYAM ARPIT ONLINE COURSE for Career Advancement Scheme (CAS) promotion in the subject "Biotechnology" with a "A" Grade in the proctored examination held on 30.03.2019 offered by **Mohanlal Sukhadia University, Udaipur, Rajasthan.**
2. Attended 110th Orientation Programme from 3rd – 29th June 2019 at **UGC – Human Resource Development Centre (HRDC), University of Rajasthan, Jaipur, Rajasthan.**
3. Attended Science Academies Refresher Course on "**Innovations in Genetics and Plant Breeding with special reference to Biotic and Abiotic Stress**" from 6th to 18th November 2017 at **Vivekananda College of Arts and Sciences for Women (Autonomous), Elayampalayam, Tiruchengode, Tamil Nadu.**
4. Attended Training Programme on **Phenotyping for Drought Adaptive Traits and their Introgression for Crop Improvement** from 17th – 24th October 2016 at Department of Crop Physiology, **University of Agricultural Sciences, Bengaluru.**

5. Attended Indian Nanoelectronics User Program (INUP) – Hand on Training Workshop on “Nanofabrication Technologies” with specialization in **Photovoltaics and Micro and Nano Characterization Techniques** at Centre for Nano Science and Engineering (CeNSE), **Indian Institute of Science (IISc), Bangalore** from 24th June – 3rd July 2014.
6. Attended hands on training on **Virtual Nano Lab Software** from 3rd & 4th Oct, 2013 at Faculty of Engineering & Technology, **Mody Institute of Technology & Science, Rajasthan**.
7. National training on “**Bioinformatics: Methods, Tasks and Applications in Microbial Research**” from 4th Dec – 15th Dec 2012, sponsored by **Indian Council of Agricultural Research (ICAR), National Agricultural Bioinformatics Grid (NABG) and National Agricultural Innovation Project (NAIP)** at National Bureau of Agriculturally Important Microorganisms (NBAIM), Mau Nath, Bhanjan, U.P. India.
8. **DBT Sponsored Short Term Teaching Training** course on “**Molecular Biology and Organic synthesis**” for mid career scientist involved in undergraduate teaching in Life Sciences and Chemical Science from 5th – 20th July 2012 at Department of Science, Faculty of Arts, Science and Commerce, MITS University, India
9. Done training on Alcohol Production with specialization in **Fermentation, Distillation, Quality Control, Quality Assurance, DM Plant, Effluent Treatment Plant and Bottling** from 20th May – 20th June 2010 at **Pernod Ricard India**.

WORKSHOPS

1. Attended workshop on “Proteomics in Life Science Research” held on 6th March 2019 organized by **Department of Botany, MLSU, Udaipur** in collaboration with GE health care.
2. Attended UGC-SAP Sponsored workshop on “Vermicomposting Biotechnology: An improved technique for institutional waste management” held on 8th September 2018 organized by **Department of Zoology, MLSU, Udaipur**.
3. Attended Science Academies Lecture Workshop on “**Emerging Technologies based on Nanoscience – A popularization workshop**” from 22nd – 23rd April 2016 at **Mody University of Science and Technology, Rajasthan**.
4. Attended Biotech Consortium India Limited Workshop on “**Bio-entrepreneurship and Bio-enterprise creation**” from 2nd – 3rd September 2016 at **Mohali Biotech Park, PSCST, Punjab**
5. Attended Indian Nanoelectronics User Program (INUP) – Familiarization Workshop on “Nanofabrication Technologies” at Centre for Nano Science and Engineering (CeNSE), **Indian Institute of Science (IISc), Bangalore** from 21st May – 23rd May 2014.
6. Attended Workshop on “**Professional Development of Teachers**” on 22nd December 2012 at Faculty of Arts Science & Commerce, **Mody Institute of Technology & Science, Rajasthan**.
7. Attended “Science Academics’ Lecture Workshop on **Nano Science & Technology: A Sustainable Future**” on 5th & 6th August, 2011 at Faculty of Engineering & Technology, **Mody Institute of Technology & Science, Rajasthan**.

8. Attended Workshop on **Research and Data Analysis** 11-12 Feb, 2011, Department of Commerce, Kamala Nehru College, **University of Delhi**, August Kranti Marg, New Delhi – 1100049.
9. Attended workshop on Techniques in Biotechnology on 27th Nov 2009 at **Dr. B Lal Institute of Biotechnology** with collaboration of **Indian Science congress Association (ISCA), Regional Chapter Jaipur, Rajasthan.**

CERTIFICATES

1. Appreciation certificate for acting as a Session Co-Chair of the technical session in International Virtual Conference on “COVID-19: Myths & Facts”, July 14, 2021 at **Department of Biotechnology, MLSU, Udaipur, Rajasthan.**
2. Co-Ordinator in National Webinar on “COVID 19: Key Perspective on Food & Neurosciences” organized by **Department of Biotechnology Microbiology, MLSU, Udaipur, Rajasthan**, under Anandam program on Date: 19th May 2021.
3. Appreciation certificate for acting as a Rapporteur of the technical session in National Conference on “Current scenario in Science and Technology: Facing the Challenges and Creating Opportunities”(VII-Rajasthan Science Congress). October 14-16, 2019 at **University College of Science, Mohanlal Sukhadia University Udaipur, Rajasthan.**
4. Committee Member (Registration, Technical and Poster Session) for organizing Current scenario in Science and Technology: Facing the Challenges and Creating Opportunities” (VII-Rajasthan Science Congress). October 14-16, 2019 at University College of Science, Mohanlal Sukhadia University Udaipur, Rajasthan.
5. Delivered three adjunct lecture to the students of B.Sc. (Hons) Biotechnology Sem-I, M.Sc. Biotechnology Sem-I and M.Sc. Microbiology Sem-I on 4th November 2019 at Faculty of Life Sciences, Mandsaur University, Mandsaur (M.P.).
6. Appointed as a paper setter and evaluator for the exam EST December 2019 for Mandsaur University, Mandsaur (M.P.) in the session July 2019 – Dec 2019.
7. Delivered an invited guest lecture on “Format of Writing Scientific Report” at Faculty of Life Sciences, Mandsaur University, Mandsaur (M.P.) on May 6th, 2019.
8. Conducted the DRC meeting as external DRB member on 06/05/2019 for PhD programme in Department of Life Science, Mandsaur University, Mandsaur (M.P.).
9. Selected as a Member of National Advisory Committee in the 2nd National Conference Cum Workshop on Channeling as Tool & Techniques Agriculture Biotechnology, Microbiology & Molecular Biology (CTTABMMB) in 21st Century from 23rd to 25th November 2019. Organized by Department of Biotechnology & Microbiology KALP Laboratories, Mathura. In association with Koshambi Foundation.
10. Delivered an invited guest lecture on “Essence of Scientific Writing: The Do's and Don'ts” at Department of Microbiology, MLSU on 18th Feb 2022.
11. Certificate of Appreciation for organizing Sciencetoon Competition
12. Certificate of Appreciation for organizing IVC Conference in Biotechnology

13. Certificate of Appreciation for organizing IVC Conference in Microbiology
14. State Coordinator of MSI for Universities in Udaipur, Rajasmand & Dungarpur
15. National Advisory Committee for CTTABMMB 2019 Conference & Workshop

ONLINE ACTIVITIES

Online Staff / Faculty Development Programme (2)

1. Online One Week Faculty Development Programme On Research Methodology. Organized By: Internal Quality Assurance Cell, Padm. Dr. V. B. Kolte College of Engineering, Malkapur. From 26th to 30th May 2020.
2. One Week Online Staff Development Programme on “Linux” organized by Department of Computer Engineering, PCCOE, Nigdi, Pune, from 18th May 2020 to 25th May 2020, in association with Spoken Tutorial Project , IIT Bombay funded by National Mission on Education through ICT, MHRD, Govt of India.

Online International Conferences / Webinars (4)

3. Khushboo Jain, Kanika Sharma, **Avinash Marwal** (2021). “In vitro and in silico study of antifungal activity of Bacillus isolates against Colletotrichum sp., causal organism of Telya disease of Pomegranate”. International Virtual Conference on “Recent Trends and Innovations in Microbiology”. July 15, 2021 organized by **Department of Microbiology, MLSU, Udaipur, Rajasthan**. Pg 27
4. Shalini Tailor, **Avinash Marwal** (2021).“Green Nanotechnology Over Physical &Chemical Approach”. International Virtual Conference on “Recent Trends and Innovations in Microbiology”. July 15, 2021 organized by **Department of Microbiology, MLSU, Udaipur, Rajasthan**. Pg 55
5. **Avinash Marwal**. Paper presentation on “Development of In-Silico Based Antiviral compounds against Novel Coronavirus Proteins”. 29th May 2020. “International E-Conference on “Covid 19 Pandemic: Issues, Challenges and Opportunities for International Trade, E-Commerce and Employment”. Organized by Department of Economics and Commerce, Shri Asaramji Bhandwadar Arts, Commerce and Science College, Aurangabad, MP.
6. **Avinash Marwal**. Oral presentation entitled Green synthesis of Silver Nanoparticles as an Antiviral compound against Plant Viruses in the 7th International E Conference on "Challenges And Opportunities in Medical, Environmental and Biotechnological Research" GenoPro 2020 held on 10th - 11th December, 2020 at Invertis University, Bareilly 243123 U P.
7. **Avinash Marwal**. Paper presentation on “Development of Antiviral compounds against Coronavirus” in “3rd International Webinar on “Covid 19: Paradigm Shift in Teaching-Learning &Learner’s Physical and mental Well Being”, 31st may 2020. Organized by Govt. Raza P.G. College, Rampur, U.P.

8. International Webinar: Career Prospects in Life Sciences: Let's Explore, June 7, 2020 Organized by Department of Biotechnology & Microbiology, Mohanlal Sukhadia University, Udaipur, Rajasthan.
9. International webinar on 'Eco-conscious Agriculture'. Organized by Maris Stella College (AUTONOMOUS), Vijayawada, A.P, INDIA, 4th June 2020.

Online E-Quizzes (2)

10. Environmental Awareness Online Quiz on World Environment Day and passed with A grade. Organized by Department of Chemistry, Mohanlal Sukhadia University, Udaipur, Rajasthan, 5th June.
11. E-Quiz on "AtmaNirbhar Bharat Abhiyaan" conducted by Faculty of Management Studies, Mohanlal Sukhadia University, Udaipur in June, 2020.
12. E- Quiz on the occasion of 'World Milk Day' - "Test Your Dairy and Food Products Knowledge" Organized by: College of Dairy and Food Technology, Maharana Pratap University of Agriculture and Technology, Udaipur, Rajasthan

Online Webinars (7)

13. National Webinar On Better Data Better Lives 29th June, 2020 National Statistics Day. Organized by Department of Mathematics & Statistics, Mohanlal Sukhadia University & Department of Statistics, Maharana Pratap University of Agriculture & Technology, Udaipur (Raj.)
14. National Webinar On Explore Mathematics To New Dimensions In Pandemic : COVID-19, Organized by: Department of Mathematics & Statistics Mohanlal Sukhadia University, Udaipur(Raj.) INDIA 12-13th June, 2020
15. Online Webinar on "Covid-19: A wake-up call to progress towards sustainability". Organized by: Dr. B. Lal Institute of Biotechnology, Jaipur, Rajasthan. 16th May 2020
16. Online Webinar on "Sustain-Preneurship, The key to self-reliance mission of India". Organized by: Dr. B. Lal Institute of Biotechnology, Jaipur, Rajasthan. 5th June 2020
17. Online Webinar on "COVID-19 Pandaemic demonstrates The power of Biotechnology". Organized by: Dr. B. Lal Institute of Biotechnology, Jaipur, Rajasthan. 2nd May 2020
18. National webinar on "Career and Happiness" organized by Department of Botany, Vidya Bhawan Rural Institute, Udaipur, 20th June 2020
19. National Level Webinar on the "Nanomaterials: Past, Present and Future Scenarios" organized by the Department of Chemistry, Gokhale Education Society's Arts, Commerce And Science College, Jawhar, Palghar on 30/05/2020.

CONFERENCES / SEMINARS / SYMPOSIUMS / WEBINARS / ONLINE ACTIVITY ORGANIZED

1. Co-Ordinator for organizing International Webinar: Career Prospects in Life Sciences: Let's Explore, June 7, 2020 Organized by Department of Biotechnology & Microbiology, Mohanlal Sukhadia University, Udaipur, Rajasthan.
2. Organized E-Quiz series on COVID-19 for Spreading Awareness: Level One (Basics) on 20th May 2020 organized by Department of Biotechnology & Microbiology, University College of Science (UCoS), Mohanlal Sukhadia University (MLSU), Udaipur, Rajasthan, attended by 7000 plus candidates across the country.
3. Current scenario in Science and Technology: Facing the Challenges and Creating Opportunities" (VII-Rajasthan Science Congress). October 14-16, 2019 at University College of Science, Mohanlal Sukhadia University Udaipur, Rajasthan.

UNIVERSITY LEVEL RESPONSIBILITIES

NSS Program Officer, University NAAC committee member, University student election member, Organizing secretary for E Quiz series on Covid 19. Rajasthan Science Congress committee member, Co-ordinated poster presentation for IBRO-APRC Conference, Coordinator International Webinar, Coordinator National Science Day, Coordinator Anandam Day Celebration, Organizing committee for NEP Webinar, Committee member for National Webinar on Higher education, Coordinator for National webinar on Covid 19, College admission committee member, University Examination and Evaluation member, Examination paper evaluation, Organizing Committee for NEYP 2022, Committee member for IVC Microbiology, Committee member and session Co Chair for IVC Biotechnology, etc.

DEPARTMENT LEVEL RESPONSIBILITIES

Dept. student grievances In-Charge, Dept. DSIR In-Charge, Dept. achievements In-Charge, Dept. purchase committee member, Dept. IQAC/NAAC In-Charge, Dept. Committee member for student attendance monitoring, Dept. Committee member for allotment of laboratory & equipment's, Dept. Committee member for providing logistic support for training, Mentor mentees students duties, Dept. responsibilities for clean & green campus, students visits, Infrastructure & learning resources, students club, Member for Committee of courses, Dept. Academic council related duties, Dept. Coordinator member for academic time table, Dept. Library In-Charge, Dept. Campus development In-Charge, Biotech and Micro Dept. Discipline Committee member, Biotech and Micro Dept. Guest Faculty Bill Verification Committee member, Biotech and Micro Dept. grievance redressed Committee member, Coordinator Anandam activities, Coordinator DST KARYA, Coordinator Induction Programme, Coordinator Dept. Cultural Activities, Mentor mentees students duties, Coordinator National Science Day, etc.

TECHNIQUES KNOWN

1. **Nanotechnology:** Synthesis of various nanoparticles and its characterization.
2. **Bioinformatics:** Command on various Bioinformatics Software's and Tools such as MEGA 4.0, RDP, Hex, 3DJIGSAWN, NCBI tools, Expasy, SAVA, BioEdit, DNAMAN, etc.
3. **Biotechnology:** DNA isolation from Plants, Insects and bacterial culture, ELISA Test, RID, ODD, TLC (silica plate), AGAROSE GEL ELECTROPHORESIS, Preparation of MS media and culturing of various explants, RFLP, RADP, etc.
4. **Microbiology:** Isolation of micro-organisms from soil, water and air, Serial dilution method of micro-organism, Antibiotic sensitivity test by Disc Diffusion Method, Effect of pH, temperature and UV light on Bacterial growth, Gram's staining, Glycerol cultures, etc.
5. **Pathology:** Collection of blood sample, Serum analysis for various diagnostic uses, R.B.C and W.B.C count, etc.
6. **Instrumentation:** Nanodrop, PCR, Gel doc, Spectrophotometer, Centrifuge, Laminar Air Flow, pH Meter, Colony Counter, Autoclave, Colorimeter, Microwave oven, FTIR, Ball Mill, etc.
7. **Biochemistry:** Quantization of proteins, carbohydrates and lipids.

MEMBERSHIP AND AFFILIATIONS

Fellow member of Scholars Academic and Scientific Society (SASS)
Professional member of Institute of Scholar (InSc)
Lifetime member of Microbiologist Society, India (MSI)
Lifetime member of Indian Science Congress Association (ISCA)
Lifetime member of Indian Phytopathological Society (IPS)
Lifetime member of Indian Virological Society (IVS)