

## CURRICULUM VITAE



**Name** : Sudipti Arora

**Designation** : Research Scientist & Assistant Director

**Affiliation** : Dr. B. Lal Institute of Biotechnology, Jaipur  
**Director, *Prakrit Sustainable Integrated Foundation***  
**Founder, *Prakrit- A Centre of Excellence in Environmental Biotechnology***

**Email** : [sudiptiarora@gmail.com](mailto:sudiptiarora@gmail.com),  
[sudiptiarora@blalbiotech.com](mailto:sudiptiarora@blalbiotech.com)

**Phone** : 91-9829675677

**Address** : Dr. B. Lal Institute of Biotechnology  
6-E, Malviya Industrial Area,  
Malviya Nagar, Jaipur 302017  
Rajasthan

### EXPERIENCE

- Presently working as a Research Scientist & Assistant Director at Dr. B. Lal Institute of Biotechnology, Jaipur since 2016.
- Worked as a Guest Faculty at Malviya National Institute of Technology (MNIT), Jaipur from 2015-16.

### EDUCATIONAL QUALIFICATION

**Ph. D.:** Indian Institute of Technology Roorkee (IITR), Roorkee, India

*Ph. D. Thesis Title:* Performance Evaluation and Microbial Community Dynamics of Vermifiltration

**M. Tech (Environmental Engineering):** Malaviya National Institute of Technology Jaipur, 2009-2011, **CGPA 8.77**

*M. Tech Thesis Title:* Performance Evaluation of 1 MLD STP in terms of Pathological analysis and determination of optimum UV disinfection dosage for different pathogenic species

**B. Tech (Biotechnology):** Amity University, Noida, 2005-2009, **CGPA 8.31**

### **AREA OF INTERESTS**

- Environmental Biotechnology, Environmental microbiology, Waste management, Zero waste modeling
- Nature based Sanitation solutions such as Vermifiltration & Constructed wetland for wastewater treatment
- Wastewater based Epidemiology, Pathogens Surveillance, Antibiotic resistance

### **FUNDED RESEARCH PROJECTS**

- **Early Detection, Surveillance, and prevention of Communicable Viral diseases in Jaipur city: a Wastewater-Based Epidemiological study for COVID-19 (DISCOVER-WBE) funded by SERB, New Delhi.**
- **Local evaluation of RT-PCR vs high-throughput sequencing for detection and prevention of communicable viral diseases in Central India: a wastewater-based epidemiological study** funded by INTERNAL GCRF (Global Challenges Research Funds) RESEARCH AWARDS for COVID19 in collaboration with University of Nottingham, Central India Institute of Medical Sciences and Dr B. Lal Institute of Biotechnology, Jaipur (January- July 2021.)
- **Transforming Aandhi village in Rajasthan towards a zero-waste model through Green Technology Interventions** by Department of Science & technology, New Delhi (2022-2025 Sanctioned)
- **Optimization of the Disinfection Process for Secondary Treated Sewage by Hybrid Disinfection** funded by **Department of Science & Technology, New Delhi**, in collaboration with Malaviya National Institute of Technology, Jaipur (PI- Dr. A. B. Gupta (MNIT, Jaipur), Co- PI- Dr. Sudipti Arora (Dr. B. Lal Institute of Technology, Jaipur), **2017-2019**.
- **Identifying best available technologies for decentralized wastewater treatment and resource recovery for India, a research & innovation action** funded in the Horizon 2020 Programme under Grant Agreement number 821427

### **HONOURS, AWARDS & MEMBERSHIP**

- IWA Member (Id: 1622182) involved in WASH projects
- BRSI Life member (ID: LM 2498)
- Professional member of InSc (Institute of Scholar)
- Research Excellence Award 2020 by InSC for Excellent Research

- Member of IWBSA (International Worm-based Sanitation Association)
- **Consolation prize** at International Conference on Biotechnology and Applied Microbiology (ICBAM – 20) organized by Institute of Applied Medicines and Research, Ghaziabad on 7-8<sup>th</sup> February, 2020.
- **Green Parrot Award** by Dainik Bhaskar, for contribution to Indigenous water Treatment, in 2019.
- **Young Researcher Award 2019** by National Environmental Science Academy to Ms. Rinki Mishra on National Conference on Water Crisis, Public Health and Sustainable Solutions, 21-22<sup>nd</sup> October 2019.
- **Best Oral Presentation Award** at National Conference on Biotechnology and Environment for Sustainable Development (BioESD 2019), 29th - 30th March, 2019, Jaipur.
- **Best Poster Award** at National Conference on Biotechnology and Environment for Sustainable Development (BioESD 2019), 29th - 30th March, 2019, Jaipur.
- **Young Scientist Award** to Ms. Baby Sharma at 5<sup>th</sup> International Conference on Challenges and Opportunities in Biotechnology for Sustainable Development on 6<sup>th</sup> October 2018
- **Best Poster Award** at National Conference on Impact of Environmental Changes on Indian Ecosystems, organized by Barkatullah University, Bhopal, M.P in collaboration with NESI, New Delhi, December 2017.
- **Best Poster Award** at National Conference on Biotechnology and Environment for Sustainable Development (BioESD 2019), 29th - 30th March, 2019, Jaipur.
- **Young Scientist Award** to Ms. Baby Sharma at 5<sup>th</sup> International Conference on Challenges and Opportunities in Biotechnology for Sustainable Development on 6<sup>th</sup> October 2018
- **Best Poster Award** at National Conference on Impact of Environmental Changes on Indian Ecosystems, organized by Barkatullah University, Bhopal, M.P in collaboration with NESI, New Delhi, December 2017.
- Received Travel grant for attending International Conference by Council of Scientific and Industrial Research (CSIR), New Delhi.
- Received Travel Grant in International Travel Support Scheme by Department of Science and Technology (DST), New Delhi.
- **Best Poster Award** at IWA conference on Global Challenges: Sustainable Wastewater Treatment and Resource Recovery, 26-30<sup>th</sup> October 2014, Kathmandu.
- **Young Scientist Award** at 8th Congress Uttarakhand State Science and Technology Congress, 26-28<sup>th</sup> December 2013, Doon University- Dehradun.

## INVITED TALKS

1. Resource Person for *In service Course for Biological Sciences*, Session on *Joy of Sustainability*, on 16-6-2022.
2. Keynote talk on *Sustainable Entrepreneurship*, Organized by Amity University, E-Cell Jaipur, 5-6-2022.
3. Keynote talk on *Do-it-yourself composting*, Organized by YI, Jaipur 5-6-2022.
4. Keynote talk on *Sustainable Entrepreneurship in Environmental Biotechnology*, Organized by Amity University, Jaipur, 8-9-2021.
5. Guest Speaker on webinar on *Financial Freedom of Indian farmers through cultivation of medicinal plants*, organized by International Institute of Advanced Agriculture Skill Development, 14-8- 2021.
6. Keynote talk on *Transforming Single Use Plastics into Alternative materials*, organized by MSME, 28 July 2021.
7. Resource Person in Online Internship Programme (OIP2021) by Indian Institute of Chemical Engineer (May-June 2021)
8. Keynote talk *The Magic of Biotechnology*, Organized by Delhi Public School, Karnal, 24-6-2021
9. Keynote talk on *The Joy of Sustainability*, Organized by Pratap Public School, Karnal, 5-6-2021
10. Resource Person for *In service Course for Biological Sciences*, Session on *Composting- Do it Yourself*, on 3-6-2021.
11. Interview by Todd Havovi 31-8-2021
12. Worm Based Sanitation Interview 24-7-2021
13. Invited as an expert speaker in **International Virtual Conference on: Vermifiltration for Wastewater Treatment: Progress and Prospects** in India, organized by Innoqua on 15th October 2020.
14. Invited as a key-note speaker in **FDP on Advanced Tools & Techniques in Biotechnology for Startup Ecosystem Development** on 15-20 February, 2021.
15. Invited as a Resource person in an online Webinar on **Role of Research & Development (R&D) in innovation & Entrepreneurship to progress towards sustainable development** organized by SSIIP Cell, PSSHDA, Kadi, November 2020.
16. Invited as a keynote lecture for an online **course on Faecal Sludge management, at Manipal University**, Jaipur titled, treatment technology- Co Treatment with Wastewater by vermifiltration technology dated 31<sup>st</sup> October, 2019.
17. Invited as a key note speaker in **Indo-UK workshop on Green Chemistry for Societal Needs: Healthcare, Pollution and Circular Economies** on Monday, 16 December 2019.
18. Invited as a key Speaker in a workshop conducted by centre of Science and Environment (CSE, New Delhi) titled **Mainstreaming Citywide Sanitation -**

**Opportunities & Challenges for Excreta Management** held at India Habitat Centre, New Delhi dated. 4-5 April 2016.

19. Invited as a keynote lecture for **DST- NIMAT Sponsored Faculty Development Program** at Malaviya National Institute of Technology Jaipur, titled, Green technology- dated 9<sup>th</sup> January 2020.

### PATENTS

- Patent filed: Application No. 202011006554
- Title: A system of wastewater treatment using Vermifiltration

### BOOKS EDITED

1. Editor of Book titled “**Innovations in Environmental Biotechnology**” published by Springer Nature
2. Editor of Book titled “**Biotechnological Innovations for Environmental Bioremediation**,” published by Springer Nature
3. Mentor IIM Udaipur
4. Editor Journal water SI Pathogen detection & Identification in Water
5. International Journal of Life Sciences

### LIST OF PUBLICATIONS

S. No.	Publications
1.	Arora, S., Nag, A., Rajpal, A., Tyagi, V.K., Tiwari, S.B., Sethi, J., Sutaria, D., Rajvanshi, J., Saxena, S., Shrivastava, S.K. and Srivastava, V., 2021. Imprints of lockdown and treatment processes on the wastewater surveillance of SARS-CoV-2: a curious case of fourteen plants in northern India. <i>Water</i> , 13(16), p.2265.
2.	Jiang, G., Wu, J., Weidhaas, J., Li, X., Chen, Y., Mueller, J., Li, J., Kumar, M., Zhou, X., Arora, S. and Haramoto, E., 2022. Artificial neural network-based estimation of COVID-19 case numbers and effective reproduction rate using wastewater-based epidemiology. <i>Water research</i> , p.118451.
3.	Li, X., Kulandaivelu, J., Guo, Y., Zhang, S., Shi, J., O'Brien, J., Arora, S., Kumar, M., Sherchan, S.P., Honda, R. and Jackson, G., 2022. SARS-CoV-2 shedding sources in wastewater and implications for wastewater-based epidemiology. <i>Journal of hazardous materials</i> , 432, p.128667.
4.	Arora, S., Nag, A., Kalra, A., Sinha, V., Meena, E., Saxena, S., Sutaria, D., Kaur, M., Pamnani, T., Sharma, K. and Saxena, S., 2022. Successful application of wastewater-based epidemiology in prediction and monitoring of the second wave of COVID-19 with fragmented sewerage systems—a case study of Jaipur (India). <i>Environmental Monitoring and Assessment</i> , 194(5), pp.1-18.
5.	Nag, A., Arora, S., Sinha, V., Meena, E., Sutaria, D., Gupta, A.B. and Medicherla, K.M., 2022. Monitoring of SARS-CoV-2 Variants by Wastewater-Based Surveillance as a Sustainable and Pragmatic Approach—A Case Study of Jaipur (India). <i>Water</i> , 14(3), p.297.
6.	Shekhawat, S.S., Kulshreshtha, N.M., Mishra, R., Arora, S., Vivekanand, V. and Gupta, A.B., 2021. Antibiotic resistance in a predominantly occurring Gram-negative bacterial community from treated sewage to assess the need for going beyond coliform standards. <i>Water Quality Research Journal</i> , 56(3), pp.143-154.

7.	Gahlot, Pallavi Alley, Kelly, Sudipti Arora, Aditi Nag, Das Sukanya, Vinay Tyagi; <i>Waste water surveillance could serve as a pandemic early warning system for COVID 19 and beyond, Wires Water- Under review</i>
8.	Sudipti Arora, Aditi Nag, Jasmine Sethi, Jayana Rajvanshi, Sonika Saxena, Sandeep K. Shrivastava, and Akhilendra Bhushan Gupta. <i>Sewage surveillance for the presence of SARS-CoV-2 genome as a useful wastewater based epidemiology (WBE) tracking tool in India, Water Science and Technology, 82, 2823- 2836, 2020.</i>
9.	Sudipti Arora, Sakshi Saraswat, Rinki Mishra, Jayana Rajvanshi, Jasmine Sethi, Anamika Verma, Aditi Nag, and Sonika Saxena. <i>Design, Performance Evaluation and Investigation of the Dynamic Mechanisms of Earthworm-Microorganisms interactions for wastewater treatment through Vermifiltration technology, Bioresource Technology Reports 12 (2020): 100603.</i>
10.	Sudipti Arora, Sakshi Saraswat. <i>Vermifiltration as a natural, sustainable and green technology for environmental remediation: A new paradigm for wastewater treatment process, Current Research in Green and Sustainable Chemistry, 4, 100061, 2021</i>
11.	Arora, Sudipti, Sakshi Saraswat, Ankur Rajpal, Harshita Shringi, Rinki Mishra, Jasmine Sethi, Jayana Rajvanshi, Aditi Nag, Sonika Saxena, and A. A. Kazmi. <i>Effect of earthworms in reduction and fate of antibiotic resistant bacteria (ARB) and antibiotic resistant genes (ARGs) during clinical laboratory wastewater treatment by vermifiltration, Science of the Total Environment, 773, 145152, 2021.</i>
12.	Sonika Saxena, Dhruv Mishra, Baby Sharma, Sudipti Arora. <i>Bioremedial approach to degrade physico-chemical characteristics by indigenous microbes in paper and pulp industry ,International Journal of industrial Engineering and Technology (IJIET )Vol. 9, Issue 1, Jun 2019, 55-62</i>
13.	Sonika Saxena, Diksha Tiwari, Baby Sharma, Priya Bolia and Sudipti Arora. <i>Gravimetric analysis of the efficiency of hydrocarbon degrading soil bacteria isolated from oil contaminated site, Eco chronicle , Vol. 14, No. 1, March, 2019</i>
14.	Sonika Saxena, Abhay Dev Tripathi, Kaja IKachhawaha, Baby Sharma, Rinki Mishra, Sudipti Arora. <i>Bioremedial approach to degrade hexavalent chromium from pulp and paper industry effluent, Pollution Research , 37 (2) : 321-329 (2018)</i>
15.	<i>Sonika Saxena, Bharti, Baby Sharma, Sudipti Arora. Physicochemical Characterization of Textile waste water by Insitu bioremedial Approach, International Journal on Environmental Sciences 2) 120-126 December 2017</i>
16.	Sanghmitra Thakur, Ambika Kavia, Sonika Saxena, Sudipti Arora, Anil K. Mathur. 2016. <i>Bioremediation of Diesel by Isolated Bacterial Species from River Chambal in Kota Region. International Journal of Current Microbiology &amp; Applied Sciences. 5(12): 465-474.</i>
17.	Baby Sharma, Sonika Saxena, Aparna Datta and Sudipti Arora: "Spectrophotometric Analysis of Degradation of Chlorpyrifos Pesticide by Indigenous Microorganisms Isolated from Affected Soil". <i>International Journal of Current Microbiology &amp; Applied Sciences.2016.5(8): 742-749</i>
18.	Baby Sharma, Sonika Saxena, Shabori Bhattacharaya, Sudipti Arora "Degradation of Acephate pesticide by microbial community isolated from the contaminated soil " <i>International Journal of Environmental Sciences, 7(1):107-113; Jan-Jun 2016; ISSN No. 0976-4534</i>
19.	Sudipti Arora, Ankur Rajpal, A. A. Kazmi 2016. <i>Antimicrobial activity of bacterial community for removal of pathogens during vermifiltration, Journal of Environmental Engineering, ASCE.</i>
20.	Sudipti Arora, A. A. Kazmi 2016. <i>Reactor Performance and Pathogen removal during wastewater treatment by vermifiltration, Journal of Water Sanitation and Hygiene for development (Accepted, in press).</i>

21.	Sudipti Arora, A. A. Kazmi. 2015. <i>The effect of seasonal temperature on pathogen removal efficacy of vermifilter for wastewater treatment</i> . Water Research, Elsevier 74: 88-99.
22.	Sudipti Arora, Ankur Rajpal, Tarun Kumar, Renu Bhargava, A.A. Kazmi. 2014. <i>Pathogen removal during wastewater treatment by vermifiltration</i> . Environmental Technology, Taylor and Francis 35: 2493–2499.
23.	Sudipti Arora, Ankur Rajpal, Renu Bhargava, Vikas Pruthi, Akansha Bhatia, A.A. Kazmi. 2014. <i>Antibacterial and enzymatic activity of microbial community during wastewater treatment by pilot scale vermifiltration system</i> . Bioresource Technology, Elsevier 166: 132–141.
24.	Sudipti Arora, Ankur Rajpal, Tarun Kumar, Renu Bhargava, A.A. Kazmi. 2014. <i>A comparative study for pathogen removal using different filter media during vermifiltration</i> . Water Science and Technology, IWA. Publishing group 70: 996–1003.
25.	Ankur Rajpal, Sudipti Arora, Akansha Bhatia, Tarun Kumar, Renu Bhargava, A.K. Chopra, A.A. Kazmi. 2014. <i>Co-treatment of organic fraction of municipal solid waste (OFMSW) and swage by vermireactor</i> . Ecological Engineering, Elsevier 73: 154–161
26.	Tarun Kumar, Ankur Rajpal, Sudipti Arora, Renu Bhargava, K. S. Hari Prasad, A.A. Kazmi 2015. <i>A comparative study on vermifiltration using epigeic earthworm Eisenia fetida and Eudrilus eugeniae</i> , Desalination and Water Treatment.

### BOOK CHAPTERS

S. No.	Book Chapter
1	Devanshi Sutaria, Sonika Saxena, <b>Sudipti Arora</b> , Kamlesh R Shah. <b>Ecosystem Engineers- A Sustainable catalyst for Environmental Remediation</b> , Biotechnological Innovations for Environmental Remediation, Springer Nature, 2022.
2	Ashwani Kumar, Chamindri Witharana, <b>Sudipti Arora</b> , Sonika Saxena, Yuan Yeu Yau. <b>Metabolic Engineering and Synthetic and Semi- Synthetic Pathways: Biofuel Production for Climate Change Mitigation</b> , Biotechnological Innovations for Environmental Remediation, Springer Nature, 2022.
3	Saurabh Dhakad, Parul Chowdhary, <b>Sudipti Arora</b> . <b>Efficacy of Algae in the bioremediation of pollutants during wastewater treatment: Future prospects &amp; challenges</b> , Biotechnological Innovations for Environmental Remediation, Springer Nature, 2022.
4	Sonia Sethi, Saurabh Dhakad, <b>Sudipti Arora</b> . <b>The use of Bio-Pesticides for sustainable farming: way forward towards sustainable development goals (SDGs)</b> , Biotechnological Innovations for Environmental Remediation, Springer Nature, 2022.
5	Aakanksha Kalra, Akansha Mathur, Tamanna Pamnani, <b>Sudipti Arora</b> , <b>Wastewater based Epidemiology (WBE): an emerging nexus between environment and human health</b> , Biotechnological Innovations for Environmental Remediation, Springer Nature, 2022.
6	<b>Sudipti Arora</b> , Devanshi Sutaria, Ekta Meena, Aditi Nag. <b>Fundamentals of SARS-</b>

	<b>CoV-2 detection in wastewater for early epidemic prediction and key learnings on treatment processes for removal of viral fragments</b> , Biotechnological Innovations for Environmental Remediation, Springer Nature, 2022.
7	<b>Sudipti Arora</b> , Sonika Saxena, Devanshi Sutaria. <b>The use of Environmental Biotechnology: a tool to progress towards sustainable development goals</b> . Innovations in Environmental Biotechnology, Springer Nature, 2022.
8	<b>Sudipti Arora</b> , Sakshi Saraswat, Devanshi Sutaria, <b>Earthworm-Microorganisms' interactions for sustainable soil ecosystem and crop Productivity</b> , Relationship Between Microbes and Environment for Sustainable Ecosystem Services, Elsevier, 2022.
9	<b>Sudipti Arora</b> , Sonika Saxena, Devanshi Sutaria, Jasmine Sethi. <b>Bioremediation: An Eco friendly approach for the treatment of oil spills</b> . Advances in Oil-Water Separation, Elsevier, 2022.
10	<b>Sudipti Arora</b> , Sonika Saxena, Devanshi Sutaria, Jasmine Sethi, Jayana Rajvanshi. <b>Developing 'zero Waste Model' For Solid Waste Management To Shift The Paradigm Towards Sustainability</b> . Handbook of Solid Waste Management. Sustainability through Circular Economy, Springer Nature, 2021.
11	<b>Sudipti Arora</b> , Saurabh Dhakad, Devanshi Sutaria, Samvida Saxena, Sonika Saxena. <a href="#">Green materials and green technologies for sustainable wastewater remediation</a> , Encyclopedia of Green Materials , Springer Nature, 2022.
12	Sakshi Saraswat, <b>Sudipti Arora</b> . Vermifiltration - A Sustainable Solution for Wastewater Treatment: Performance Evaluation, Applicability and Opportunities, Innovations in Environmental Biotechnology, Springer Nature, 2022.
13	Aditi Nag, Bhavuk Gupta, <b>Sudipti Arora</b> . Metagenomics: A path to take for searching the unknown in known microbial contexts. <b>Microbial Community Studies in Industrial Wastewater Treatment</b> , CRC Press.
14	Aditi Nag, Devendra Sharma, <b>Sudipti Arora</b> . Molecular Advances in Bioremediation of Hexavalent Chromium from Soil and Wastewater. <b>Removal of Refractory Pollutants from Waste Water Treatment Plants</b> , CRC Press (Taylor & Francis Group).
15	<b>Sudipti Arora</b> , Sakshi Saraswat. Vermifilter: A biofilter with Earthworms for Wastewater treatment. An Innovative role of biofiltration in wastewater treatment plants, 2021.
16	Sonia Sethi, Aditi Nag, Sudipti Arora. Gastroenteritis: Symptoms and epidemiology of SARS-CoV-2, Bentham Science, 2022.



## CONFERENCES ATTENDED

- **Sudipti Arora**, Jayana Rajvanshi. Potential of earthworms in removal of antimicrobial resistant bacteria (AMR) and antibiotic resistance genes (ARGs) during vermifiltration technology for domestic wastewater Treatment. International Conference on Biotechnology for Sustainable Agriculture, Environment and Health (BSAEH-2021), 4- 8 April 2021.
- Sarita Vatwani, Ritesh Chauhan, Jayana Rajvanshi, Sonika Saxena, **Sudipti Arora**. Investigation of Enzymatic Activity OF Microorganisms to Understand the Removal OF Organics during Vermifiltration of Clinical Laboratory Wastewater. The annual conference on Biological Engineering Society, BESON-2019, IIT Madras, Chennai, 18<sup>th</sup>-19<sup>th</sup> October 2019.
- Gazala, Sachin Sharma, Annatta Thomas, Akshita Sharma, Jasmine Sethi, Jayana Rajvanshi, **Sudipti Arora**, Sonika Saxena: Performance Evaluation of Vermifiltration Technology for Clinical Laboratory Wastewater Treatment. 2<sup>nd</sup> International Conference on Recent Trends in Environment and Sustainable Development (RTESD-2019), Vivekananda Global University, Jaipur 17<sup>th</sup>-18<sup>th</sup> October 2019.
- Divya Vinod, Jayana Rajvanshi, Jasmine Sethi, **Sudipti Arora**, Sonika Saxena: Investigation of Microbial Community Diversity from Earthworms during Vermifiltration for Wastewater Treatment. 2<sup>nd</sup> International Conference on Recent Trends in Environment and Sustainable Development (RTESD-2019), Vivekananda Global University, Jaipur 17<sup>th</sup>-18<sup>th</sup> October 2019.
- Manika Arora, Jayana Rajvanshi, Jasmine Sethi, **Sudipti Arora**, Sonika Saxena: Investigation of Microbial Community Diversity of Active Layer from both Clinical and Domestic Vermifilter Plant. 2<sup>nd</sup> International Conference on Recent Trends in Environment and Sustainable Development (RTESD-2019), Vivekananda Global University, Jaipur 17<sup>th</sup>-18<sup>th</sup> October 2019.
- Naman Koolwal, Aditya Khandelwal, Jasmine Sethi, Jayana Rajvanshi, **Sudipti Arora**, Sonika Saxena: Investigation of Microbial Community Diversity of the Influent and Effluent of the Clinical Wastewater During Vermifiltration. National Seminar on Role of Science and Technology Rural Development Indian Science Congress Association, Jaipur Chapter University of Rajasthan, Jaipur, 11<sup>th</sup>-12<sup>th</sup> November 2019.
- Ritu Kumari, Preeti Samariya, Jasmine Sethi, Jayana Rajvanshi, **Sudipti Arora**, Sonika Saxena. Zero Waste Model at Dr. B. Lal Institute of Biotechnology. National Seminar on Role of Science and Technology Rural Development Indian Science Congress Association, Jaipur Chapter University of Rajasthan, Jaipur, 11<sup>th</sup>-12<sup>th</sup> November 2019.
- Aditya Khandelwal, Naman Koolwal, Jasmine Sethi, Jayana Rajvanshi, **Sudipti Arora**, Sonika Saxena. Fate of Sewage Microorganisms during the Treatment of Domestic Wastewater through Vermifiltration. International Conference on Materials for Environment Sustainable Society And Global Empowerment – 2019 [Message - 2019], VTU, Chikkaballapur, Bangalore, 19<sup>th</sup> -20<sup>th</sup> December 2019.
- Jasmine Sethi, Ritu Kumari, Preeti Samariya, **Sudipti Arora**, Sonika Saxena. Developing A Zero Waste Model at Dr. B. Lal Institute Of Biotechnology. International Conference

on Materials For Environment Sustainable Society And Global Empowerment – 2019 [Message - 2019], VTU, Chikkaballapur, Bangalore, 19<sup>th</sup> -20<sup>th</sup> December 2019.

- Participated in two Days National conference on Biotechnology and Environment for Sustainable Development (BioESD 2019)(29<sup>th</sup> - 30<sup>th</sup> March, 2019)
- Participated in National Conference *on* Chemistry for Human Health and Environment (CHHE-2018) NESAs, New Delhi, 15<sup>th</sup>- 16<sup>th</sup> December 2018
- VI Rajasthan Congress Science, Central University, Ajmer on 13<sup>th</sup>- 14<sup>th</sup> October 2017
- International Conference BESON-2018 IIT Bombay 26<sup>th</sup>- 27<sup>th</sup> October 2018.
- Two Days National Workshop on Bioinformatics and Bio Instrumentation in university of Rajasthan on 7<sup>th</sup>-8<sup>th</sup> January 2019
- 5th Rajasthan Science Congress, Amity University, Jaipur, Rajasthan.
- National conference on recent trends and advances in environmental issues, awareness and health
- National Conference on Basic Biology is the Core of Biotechnology (NCBBCB- 2017), Banasthali University, Jaipur, Rajasthan
- National Conference on Impact of Environmental Changes on Indian Ecosystems, organised by Barkatullah University, Bhopal, M.P in collaboration with NESAs, New Delhi
- Baby Sharma, Sonika Saxena, Rinki Mishra, **Sudipti Arora** (2017), *Analysis of pesticide resistant bacteria as a potential candidate For bioremediation*, national seminar on Climate Change and Sustainable Development organized by Indira Gandhi centre for Human ecology, Environmental and Population studies ,University of Rajasthan, **Jaipur**.
- Pratibha Medok, **Sudipti Arora**, Sonika Saxena, Rinki Mishra (2017), *Potential of vermifiltration technology for lowest sustainable Development for the treatment of sewage wastewater* organized by Indira Gandhi centre for Human ecology, Environmental and Population studies, University of Rajasthan, **Jaipur**.
- Pallav Malik, Sonika Saxena, **Sudipti Arora**, Rinki Mishra (2017), *An innovative initiative to treat diary effluent- bioremediation* organized by Indira Gandhi centre for Human ecology, Environmental and Population studies University of Rajasthan, **Jaipur**.
- Krishna Kumar Meena, Sonika Saxena, Rinki Mishra, **Sudipti Arora**, (2017), *Solid waste dumping practice and its impact assessment in jaipur city* organized by Indira Gandhi centre for Human ecology, Environmental and Population studies University of Rajasthan, **Jaipur**.
- Kirti Agarwal, Sonit Kumari, Vaishali Saboo, Vikky Sinha, Rinki Mishra, **Sudipti Arora** (2016), *Effect of earthworms on contaminant removal during wastewater treatment by vermifiltration*. National Conference On Environmental Challenges, Human Health and Society (NCEHS 2016), University of Rajasthan, **Jaipur**.
- Vaishali Saboo, Vikky Sinha, Sonit Kumari, Kirti Agarwal, Rinki Mishra, **Sudipti**

**Arora** (2016). *Performance Evaluation of Vermifiltration technology for Clinical Laboratory Wastewater treatment*. National Conference on Environmental Pollution: Consequences & Control (NCEP- 2016), The IIS University, **Jaipur**.

- Sonit Kumari, Vaishali Saboo, Kirti Agarwal, Vikky Sinha, Rinki Mishra, Sudipti Arora (2016). *Vermifiltration: An Ecofriendly and Sustainable technology for Domestic Wastewater treatment*. National Conference on Environmental Pollution: Consequences & Control (NCEP- 2016), The IIS University, Jaipur.
- Vikky Sinha, Kirti Agarwal, Sonit Kumari, Vaishali Saboo, Rinki Mishra, **Sudipti Arora** (2016). *Operation and Challenges during the use of vermifilters for different wastewater treatment: A Review*. National Seminar on Science And Technology- The Indian Perspective, The Indian Science Congress Association (ISCA, **Jaipur**)
- Vaishali Saboo, Vikky Sinha, **Sudipti Arora** (2016). *Vermifiltration: An Innovative and Sustainable Option for Clinical Laboratory Wastewater Treatment*, Technoraj, Jaipur National University, **Jaipur**.
- **Sudipti Arora**, A.A. Kazmi, *Performance Evaluation and Microbial Community Dynamics of Vermifiltration Technology for Wastewater Treatment* at “IWA International Conference on Innovations in Sustainable Water & Wastewater Treatment Systems (ISWATS)”, 21-23 April, 2016, **Pune**, India.
- Ankur Rajpal, **Sudipti Arora**, Akansha Bhatia, A. A. Kazmi, *Microbial diversity in vermifilter used for the co- treatment of organic fraction of municipal solid waste (OFMSW) and sewage*, at “International Conference on Solid waste Knowledge Transfer for Sustainable Resource Waste Management”, 19-23 May, 2015, **Hong Kong**.
- **Sudipti Arora**, A.A. Kazmi, *Reactor performance and pathogen removal during the wastewater treatment by vermifiltration*, at “IWA 1st Specialist Conference on Municipal Water Management and Sanitation in Developing Countries”, 2-4 December 2014, Asian Institute of Technology (AIT), **Bangkok**, Thailand.
- **Sudipti Arora**, A.A. Kazmi at *Microbial diversity in vermifiltration system for the combined wastewater and organic fraction of municipal solid waste (OFMSW) treatment*, “11th International Symposium on Southeast Asian Water Environment (SEAW11)”, at 26-28 November, 2014, Asian Institute of Technology (AIT), **Bangkok**, Thailand.
- **Sudipti Arora**, Ankur Rajpal, Renu Bhargava, A.A.Kazmi, *Pathogen removal from domestic wastewater in vermifilter* at “The international water association specialist conference global challenges: Sustainable wastewater treatment and Resource Recovery, 26-30 October 2014, Kathumandu, **Nepal** (Best Poster Award).
- **Sudipti Arora**, Ankur Rajpal, Renu Bhargava, *Performance Evaluation of a vermifilter for removal of Pathogens from synthetic domestic wastewater*, “8th Congress on Uttarakhand State Science and Technology congress-2013”, 26-28 December, 2013 Doon University, **Dehradun** (Best Poster Award).
- **Sudipti Arora**, Renu Bhargava, A.A. Kazmi, *Vermifiltration: An Innovative*

*technology for water conservation*, at “International Conference on Reproductive Health: Issues and Strategies under Changing Climate Scenario and the 24th Annual Meeting of the Indian Society for the Study of Reproduction & Fertility (ISSRF-2014)” February, 2013, Indian Veterinary Research Institute, Izatnagar.

- **Sudipti Arora**, Ankur Rajpal, Renu Bhargava, Tarun Verma, *An Eco-friendly and Innovative Technology for Wastewater Treatment*, at “International Conference on Innovative trends In Natural/ Applied Sciences and Energy Technology for Sustainable Development (ITNASSD - 2013)” 27- 28 July, 2013, JNU, **New Delhi**.
- **Sudipti Arora**, Tarun Verma, Ankur Rajpal, Renu Bhargava, *Vermifiltration: A low-cost and sustainable alternative for wastewater treatment*, at “International Conference on Sustainable Innovative techniques in Civil and Environmental Engineering (SITCEE-2013)” 5-6 June, 2013, JNU, **New Delhi**.

### DISSERTATIONS STUDENTS

No	Name Student	Class	Topic
1.	Vikky Sinha	UG	Performance Evaluation Vermifilter for Clinical Laboratory Wastewater Treatment and its Relationship with Enzymatic Activity
2.	Vaishali Saboo	UG	Antimicrobial Activity of Microbial Community Diversity during Clinical Laboratory Wastewater Treatment by Vermifiltration
3.	Kirti Agarwal	UG	Antimicrobial Activity of Microbial Community Diversity during Domestic Wastewater Treatment by Vermifiltration
4.	Sonit Kumari	UG	Performance Evaluation of Vermifiltration Technology for Domestic Wastewater Treatment and Its Relationship with Enzymatic Activity
5.	Pratibha Medok	PG	Potential of vermifiltration technology for lowest sustainable Development for the treatment of sewage wastewater organized by Indira gandhi centre for Human ecology, Environmental and Population studies
6.	Shruti Kakkar	PG	Performance Efficiency and Microbial Community Dynamics during Vermitechnology for Combined Treatment of Municipal Solid Waste, Domestic Wastewater And Clinical Laboratory Wastewater
7.	Sakshi Saraswat	UG	Investigation of Microbial Community Dynamics in vermifilter for Combined Treatment of Municipal Solid Waste and Domestic Wastewater
8.	Harshit Chhabra	UG	Investigation of Microbial Community Dynamics and Antibacterial and Antifungal Activity during Vermifiltration of Clinical Laboratory Wastewater
9.	Mukund Mendiratta	UG	Performance Efficiency of Vermi-Technology for Combined Treatment of municipal Solid Waste and Domestic Waste Water
10.	Rahul Yadav	UG	Performance Efficiency of Vermi-Technology Clinical Laboratory Wastewater
11.	Yashwant Ujjawal	UG	Performance Efficiency of Vermi-Technology Domestic Laboratory wastewater
12.	Samvida	UG	Isolation, Characterization and Identification of antibiotic resistant bacteria in Domestic treated effluent sample by

			Vermifiltration technology
13.	Jyoti Yadav	UG	Determine the Drug Sensitivity of Candida Stains Isolated from Candidiasis Patients in Jaipur Rajasthan
14.	Manoj Kumar	UG	Effect of Chlorination for Disinfection during Clinical Laboratory and Domestic Wastewater Treatment by Vermifiltration
15.	Anamika Verma	UG	Investigation of coelomic Fluid Activity of Earthworm ( <i>Eisenia fetida</i> ) for wastewater treatment by Vermifiltration
16.	Kritika Jain	UG	Antibiotic Resistant Pattern of Microorganism Isolated from Treated Effluent by Vermifiltration
17.	Ankit Kumar	UG	Investigation of Protein Profiling through SDS-PAGE of Active Layer Bacteria isolated from Vermifiltration
18.	Deepika Kanwar	UG	Investigation of Microbial Community Diversity during Vermifiltration Technology
19.	Anjali Sharma	PG	Effect of Chlorination for Disinfection during Clinical Laboratory and Domestic Wastewater Treatment by Vermifiltration
20.	Aditya Khandelwal	UG	Fate Of Sewage Microorganisms During The Treatment Of Domestic Wastewater Through Vermifiltration.
21.	Akshita Sharma	UG	Deciphering the role of symbiotic and synergistic interaction of earthworms and microorganisms during Vermifiltration of domestic wastewater.
22.	Annatta Thomas	UG	Deciphering the role of symbiotic and synergistic interaction of earthworms and microorganisms during Vermifiltration of Clinical wastewater.
23.	Anil Kumar	UG	Tackling the anti-microbial resistance in domestic wastewater during Vermifiltration process.
24.	Divya Vinod	UG	Investigation of Microbial Community Diversity from earthworm <i>Eisenia fetida</i> during Vermifiltration.
25.	Preeti Samariya	UG	Zero waste model at Dr. B. Lal Institute of Biotechnology.
26.	Ritesh Singh Chauhan	UG	Determination of Enzymatic Activity of microorganisms from the vermifilter during domestic wastewater treatment.
27.	Ritu Kumari	UG	Zero waste model at Dr. B. Lal Institute of Biotechnology.
28.	Ekta Meena	PG	Investigation of antimicrobial activity of microbial community diversity for elucidating the mechanism behind vermifiltration
29.	Kartikeya Bajpai	PG	Bioremedial Approach for the treatment of the influent of STPs of Dravyawati river.
30.	Madhu	PG	Bioremedial Approach for the post treatment of treated clinical wastewater received from vermifilter plant by the microorganisms isolated from earthworm crushing.
31.	Devanshi	PG	Enhanced production of cellulose from newly isolated Actinomycetes from solid waste: A Bioremedial approach.

## REFERENCES

**Dr. A. A. Kazmi**

Professor

Environmental Engineering Group

Department of Civil Engineering Indian

Institute of Technoloy Roorkee - 247667

Email: [absarakazmi@yahoo.com](mailto:absarakazmi@yahoo.com)

Contact No. +91-9837262698

**Dr. Akhilendra Gupta**

Professor

Department of Civil Engineering

Malaviya National Institute of

Technology Jaipur - 302017

Email: [akhilendra\\_gupta@yahoo.com](mailto:akhilendra_gupta@yahoo.com)

Contact No. +91-9549654179