

## PUBLICATIONS

(2019-22)

### Department of Biochemistry

1. Bhattacharya, A., Gupta, A., Kaur, A., & Malik, D. (2019). Alleviation of hexavalent chromium by using microorganisms: insight into the strategies and complications. *Water and Science Technology* 79 (3). 411-424
2. Sansmaran: A Decade of Reminiscence published by Women Development Cell, Shivaji College, University of Delhi (Designed and Printed by Adhya Off set Printers, Noida, Uttar Pradesh), 2020, ISBN: 8190-1856-24.
3. Rashmi Wardhan. Pathological Markers for Brucellosis, a Bacterial Challenge: A Review. *Journal of Advanced Medicine and Medical Research*.32(18),98-106(2020), ISSN:2456-8899,Index; ICV:100.00<https://doi.org/10.9734/jammr/2020/v32i1830667>
4. Rashmi Wardhan, Padmshree Mudgal. Understanding the predisposing risk factors of young suicide.*International Journal of Research in Medical Sciences* . 2020 Dec;8(12):4530-4537.pISSN 2320-6071 | eISSN 2320-6012. UGC approved, scope Med: <http://dx.doi.org/10.18203/2320-6012.ijrms20204985>
5. Rashmi Wardhan, A.Tanwar & Anil K Gupta. Understanding the complexity of Multiple Sclerosis: A short communication. *Journal of Life Sciences (J Life Sci.)* Vol. 2, No. 4, December 2020:67-76. ISSN 2688-1020, <https://www.journaloflifesciences.org/archives/1536/understanding-the-complexity-of-multiple-sclerosis-a-short-communication.html>
6. Wardhan, R.; Tanwar, A.; Dutta, P.; Jha, I.; Sharma, R.; Ali Zaidi, A.; Chawla, R.; Arora, R.; Khan, H.A. Herbal Informatics: A Unique Model to Identify the Anti-Cancerous Agents for Targeting Lung Cancer. *Preprints* 2020, 2020120132 (doi: 10.20944/preprints202012.0132.v1), Preprints Id -35960 [Under Press: Elsevier; Manuscript Number: JAIM-D-21-00114]
7. Wardhan R., Prabhavathi V., Mondal N. (2021). Molecular cloning, In Silico Analysis and Characterization of L-asparaginase gene from *Alcaligene faecalis*. *Ad. Plant Sci.* 34 (I-II) 83-90, ISSN 0970-358.
8. Wardhan R., Tanwar A., Joshi V., Sharma M., Sharma R., Chawla R., Arora R., Khan H.A. (2021). Management of Multiple Sclerosis: Using Herbal Informatics to Identify the Potential Nutraceuticals. *Uttar Pradesh Journal of Zoology*, 42(1): 65-76, ISSN: 0256-971X (P).

9. Saluja S., Gahlot R.K., and Wardhan R. (2021). *Indigofera tinctoria*: traditional dye or a modern medicine? Bull. Env. Pharmacol. Life Sci., Vol 10 (6), 22-26, ISSN 2277-1808.
10. Wardhan R., Tanwar A., Dutta P., Jha I., Sharma R., Zaidi A.A., Chawla R., Arora R. and Khan H.A. (2021). Herbal Informatics: A Unique model to identify the Anti-Cancerous Agents for Lung Cancer. Uttar Pradesh Journal of Zoology. 42(4): 76-90, 2021 ISSN: 0256-971X (P).
11. Rana N., Wardhan R., Sharma R., Zaidi A.A., Chawla R., Arora R., Khan H.A., Tanwar A. (2021) Bioprospection study to identify herbals targeting opportunistic infection *Neisseria gonorrhoeae*. Bull. Env. Pharmacol. Life Sci. Vol 10 (6), 27-33, Online ISSN 2277-1808.
12. Published book chapter: “Digital Educators: Keeping knowledge alive during pandemic” in Women Development Cell, Shivaji College, Coffee table Book- Manaswini 2021, ISBN: 978-81-954354-2-5 published by Color Edge, New Delhi
13. Garima, Prem R, Yadav U and Sundd M. (2021) A GX2GX3G motif facilitates acyl chain sequestration by *Saccharomyces cerevisiae* acyl carrier protein. Journal of Biological Chemistry (DOI: <https://doi.org/10.1016/j.jbc.2021.101394>).
14. Baweja R. (2022). Published article on “Covid-19 Vaccination and Challenges: An Indian Perspective”. Center for Bharat Studies Research Institute of Languages and Cultures of Asia, Mahidol university. Vol XII (special issue) pg no. 45-47 ISSN 1906-9758
15. Chandra A, Malik P, Singh S, Roy A, Sahoo N. and Singh M. (2022), Sustainable research methodology for potassium nitrate recovery from seawater. Chemical Engineering and Processing – Process Intensification, 174, 108870.

### **Department of Botany**

#### Research Papers

1. Verma, A., Meena, R., Maurya, A., Gaharwar, U. S., & Rajamani, P. (2019). Identification, Quantification and In-Vitro Genotoxicity of Major Polyaromatic Hydrocarbons Produced by Sugarcane Fly Ash Emitted from Sugarmill. Journal of Environmental Protection. Vol 10(10): pp 1244-1261
2. Verma, A., Maurya, A. Patra, B., Paulraj R. Extraction of Polyaromatic Hydrocarbons from the Leachate of Major Landfill Sites of Delhi. Journal of Advances and Scholarly Researches in Allied Education. Vol 16(6): pp 1080-1083

3. Maurya, A., Das, M. K., Ramteke, A., & Rajamani, P. (2019). Encapsulation of polyphenols into micro-and nanoparticles for improved health effects. *Research Methods and Applications in Chemical and Biological Engineering*, 169
4. Neelu Singh, M. K. D., Ramteke, A., Rajamani, P., Chandradeka, S., Ansari, A., Mahanta, D., & Maurya, A. (2019). Nanotechnology-based challenges and scope in the food industry: from production to packaging. *Research Methods and Applications in Chemical and Biological Engineering*, 187
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6. Singh, M. K., Maurya, A., & Kumar, S. (2020). Bioaugmentation for the treatment of waterborne pathogen contamination water. In *Waterborne Pathogens* (pp. 189-203). Butterworth-Heinemann
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8. Meena, D. S., Chauhan, V. (2019) Additions to the state flora of Meghalaya, India. *Phytotaxonomy*, 18, 125-126
9. Bamel K and Prabhavathi V (2020) Dopamine in Plant Development and Redox Signaling. In *Neurotransmitters in Plants Signaling and Communication*. Springer. ISBN 978-3-030-54477-5 (Print) - ISBN 978-3-030-54478-2 (eBook)
10. Bamel K and Prabhavathi V (2020) Dopamine in Plant Development and Redox Signaling. In: *Neurotransmitters in Plant Signaling and Communication, Signaling and Communication in Plants*, F. Baluška et al. (Eds.), [https://doi.org/10.1007/978-3-030-54478-2\\_7](https://doi.org/10.1007/978-3-030-54478-2_7)
11. Pragya, Sharma, K. K., Kumar, A., Singh, D., Kumar, V., & Singh, B. (2021). Immobilized phytases: an overview of different strategies, support material, and their applications in improving food and feed nutrition. *Critical Reviews in Food Science and Nutrition*, 1-23.
12. Kumar V. and Babu C.R. (2022). Phenotypic Responses of Some Functional Traits in Four Native Perennial Grass Species Grown on Fly Ash Dump and Native Soil. *Front. Plant Sci.* 13:805568. <https://doi.org/10.3389/fpls.2022.805568>
13. Kumar V., Jolli V. and Babu C.R. (2022). Landuse patterns, air quality and bird diversity in urban landscapes of Delhi. *Zoodiversity* 56 (1): 39-50.
14. Umer Aqoob, Nelofer Jan, Prabhavathi Venkat Raman, Kadambot H. M Siddique, Riffat John (2022) Crosstalk between Brassinosteroid Signaling, ROS signaling and

Phenylpropanoid Pathway During Abiotic Stress in Plants: Does it exist? *Plant Stress* 4 (100075), Elsevier, <https://doi.org/10.1016/j.stress.2022.100075>, Journal homepage: [www.sciencedirect.com/journal/plant-stress](http://www.sciencedirect.com/journal/plant-stress) ISSN: 2667-064X.

15. Neetu Kumari, Kiran Bamel, Prabhavathi, Roopali Pandey, Seema Talwar (2022). Corona Virus and Mucormycosis: Indications and Treatment Methodology of Dark Growth in COVID-19 Patients. *South Asian J Exp Bio.* ISSN: 2230-9799 Vol. 12, Issue 1 Page 64-72 <http://www.sajeb.org>.
16. Rashmi Wardhan, Prabhavathi, Nupur Mondal (2021) Molecular Cloning, 'in silico' Analysis and Characterization of L-asparaginase gene from *Alcaligene faecalis*. ISSN 0970-3586 Available Online at - [www.connectjournals.com](http://www.connectjournals.com), *Ad. Plant Sci.* 34 (I - II) 83 – 90. June-December. Home Page: [www.connectjournals.com/aps](http://www.connectjournals.com/aps). ISSN 0970-3586.
17. Prabhavathi, Kiran Bamel, Nupur Mondal and Pooja (2021) Sustainable energy: a solution to climate change. *Eco. Env. & Cons.* 27 (4), pp. (1978-1984) ISSN 0971–765X.
18. Neetu Rani, Kiran Bamel, Abhinav Shukla and Nandini Singh (2022). Analysis of Five Mathematical Models for Crop Yield Prediction. *South Asian Journal of Experimental Biology* (eISSN: 2230-9799) 12(1): 46-54.
19. Devender Singh Meena and Utkarsha Rathi (2021). *Solanum diphyllum* L. (Solanaceae) a new record to the flora of Rajasthan, India. *Indian Forester* 147 (7): 689. (NAAS Score 2021: 5.10).

Book:

1. Chaudhary JK; Chaudhary PK and Maurya A. National question book for Life Sciences; 2022; Prestige Publisher, New Delhi (ISBN: 978-81-949428-9-4).

### **Department of Chemistry**

1. Reeta, Baek, S. C., Lee, J. P., Rangarajan, T. M., Ayushee, Singh, R. P., Singh, M., Mangiatordi, G. F., Nicolotti, O., Kim, H. & Mathew, B. (2019). Ethyl Acetohydroxamate Incorporated Chalcones: Unveiling a Novel Class of Chalcones for Multitarget Monoamine Oxidase-B Inhibitors Against Alzheimer's Disease. *CNS & Neurological Disorder – Drug Targets.* Vol 18(8): pp 643-654.
2. Reeta, Rajendran, V., Rangarajan, T. M., Ayushee, Singh, R. P. & Singh, M. (2019). Synthesis of novel chalcones through palladium-catalyzed C–O cross-coupling reaction of bromo-chalcones with ethyl acetohydroxamate and their antiplasmodial evaluation against *Plasmodium falciparum* in vitro. *Bioorganic Chemistry.* Vol 86: pp 631-640.

3. Kumar, R., Gulia, K., Chandra, M. & Aggarwal, A. K., Kumar, A., Mitta, S. & Mishra, P. (2019). Biomolecular interaction simulation of supramolecular topologies of organometalli assemblies of Bi(V) with antibiotic Tetracycline Amoxicilline drugs and their experimental evaluation. *Journal of Biomedical and Therapeutic Sciences* Vol 6(2): pp 61-72.
4. Sharma, S., Sharma, M. & Kanojia, R. (2019). Corrosion Inhibition of Morus Rubra Leaf Extract on Mild Steel in Acidic Media. *International Journal of Engineering & Technology (UAE)*. Vol 8 (1.10): pp 55-63.
5. Sharma, S., Sharma, M. & Kanojia, R. (2019). Investigation of Dalbergia Sisso Leaf Extract as an effective green inhibitor for corrosion of mild steel in 0.5 M sulphuric acid medium. *Proceedings of XVI International Conference of Recent Trends in Engineering Science and Management (ICRTESM-19)*. pp 204 -216.
6. Barak, A., Kumari, M., Vanita, Mishra, D., Giri, N.G. & Shukla, S. K. (2019). Thermocatalytic Conversion of Waste Polyethylene Bags into Value Added Products. *Indian Journal of Chemical Technology*. Vol 26: pp 95-99.
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8. S. Bhattacharya; U. Narang; K. K. Yadav; A. Dandia and S. M. S Chauhan, Synthesis of Newer Mercury(II) Complexes of Meso-Tetraaryl-21,23-Dithiaporphyrins, *Advanced Science, Engineering and Medicine*, 2020, 12, 416-421.
9. Oh, J. M., Rangarajan, T. M., Chaudhary, R., Singh, R. P., Singh, M., Singh, R. P., Tondo, A. R., Gambacorta, N., Nicolotti, O., Mathew, B. & Kim, H. (2020). Novel Class of Chalcone Oxime Ethers as Potent Monoamine Oxidase-B and Acetylcholinesterase Inhibitors. *Molecules* Vol 25:pp 2356.
10. Singh, V. K., Giri, N. G., Abbas, N. S. & Shukla, S. K. (2020). Contemporary Advances of Electrochemical sensors in Forensic Applications. *Journal of Forensic Chemistry and Toxicology* Vol 6(2): pp 131-138.
11. Jaiswal, A. K., Giri, N. G. & Gupta, M. (2021). Practical Book, 'Forensic Chemistry and Toxicology', published by Selective and Scientific Books, New Delhi, First Ed., ISBN: 978-81-89128-98-2.
12. Yadav, S., Vijayan, P., Yadav, S. & Gupta, R. (2021). Ruthenium complexes of phosphine–amide based ligands as efficient catalysts for transfer hydrogenation reactions. *Dalton Trans.* Vol 50:pp 3269–3279.

13. Varshneya, A., Kumara, A. & Yadav, S. (2021). Catalytic activity of bis p-nitro A2B (oxo)Mn(V) corroles towards oxygen transfer reaction to sulphides. *Inorganica Chimica Acta* Vol 514:pp 120013.
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15. Ujjain, S. K., Ahuja, P. & Kanojia, R. (2021). Chapter titled “Electrochemical Studies of Green Corrosion Inhibitors” in the book “Theory and Applications of Green Corrosion Inhibitors”, published by Materials Research Forum LLC, Millersville, PA, pp. 204-232.
16. Ujjain, S. K., Ahuja, P. & Kanojia, R. (2021). Chapter titled “Green Corrosion Inhibitor for Electronics” in the book “Theory and Applications of Green Corrosion Inhibitors”, published by Materials Research Forum LLC, Millersville, PA, pp. 91-126.
17. Kumar, D., Meena, M. K., Kumari, K., Patel, R., Jayaraj, A. & Singh, P. (2020). In-silico prediction of novel drug-target complex of nsp3 of CHIKV through molecular dynamic simulation. *Heliyon* Vol 6:pp e04720.
18. Meena, M.K., Kumar, D., Kumari, K., Kaushik, N.K., Kumar, R.V., Bahadur, I., Vodwal, L. & Singh, P. (2021) Promising inhibitors of nsp2 of CHIKV using molecular docking and temperature-dependent molecular dynamics simulations. *Journal of Biomolecular Structure and Dynamics*. DOI: 10.1080/07391102.2021.1873863.
19. Meena, M.K., Kumar, D., Jayaraj, A., Kumar, A., Kumari, K., Katata-Seru, L. M., Bahadur, I., Kumar, V., Sherawat, A. & Singh, P. (2020) Designed thiazolidines: an arsenal for the inhibition of nsP3 of CHIKV using molecular docking and MD simulations. *Journal of Biomolecular Structure and Dynamics*. DOI: 10.1080/07391102.2020.1832918.
20. D. Kumar, M.K. Meena, K. Kumari, R.V. Kumar, I. Bahadur P. Jain & P. Singh (2021). Exploring the effect of temperature on inhibition of non-structural protease 3 of Chikungunya virus using molecular dynamics simulations and thermodynamics parameters. *Journal of Molecular Liquids* pp 116164.
21. Arora, R., Giri, N. G., (2021). Effect of Soil pH on Germination and Growth of *Triticum aestivum* and *Zea mays*. Published in *Conference Proceedings of Virtual Conference on Chemistry and its Applications* P-173. ISBN: 978-999-99949-783-0
22. Siddhartha Dan, Deeksha Sharma, Kartikey Rastogi, Shaloo, Himanshu Ojha, Mallika Pathak & Rahul Singhal (2022). Therapeutic and Diagnostic Applications of Nanocomposites in the Treatment Alzheimer’s Disease Studies. *Biointerface Research in Applied Chemistry* Vol. 12, pp 940-960.

23. Afreen Jahan Rahman, Lajpreet Kaur, Mallika Pathak, Anju Singh, Piyush Verma, Rahul Singhal, Vinod Kumar & Himanshu Ojha (2021). Spectroscopic studies of binding interactions of 2-chloroethylphenyl sulphide with bovine serum albumin. *Journal of Molecular Liquids* Vol. 340, pp 117144.
24. Singhal R., Chapter “The role of chalcogenide in conducting polymers for enhanced battery performance” for book ‘Conducting Polymers for Advanced Energy Applications’ published by CRC Press in 2021. eBook ISBN: 9781003150374.
25. Arora, R., Chapter “Computational Approach Toward Identification and Catalytic Degradation of Chemical Warfare Agents Using MOFs” for book ‘Metal-Organic Frameworks (MOFs) as Catalysts’ published by Springer in 2022. Print ISBN: 9789811679582, 9811679584 · eText ISBN: 9789811679599, 9811679592.
26. Arora, R., Chapter “Theoretical Study on Catalytic Capture and Fixation of Carbon Dioxide by Metal–Organic Frameworks (MOFs)” for book ‘Metal-Organic Frameworks (MOFs) as Catalysts’ published by Springer in 2022. Print ISBN: 9789811679582, 9811679584 · eText ISBN: 9789811679599, 9811679592.
27. Arora, R., Chapter “Functionalized Carbon Nanomaterials (FCNMs): A Green and Sustainable Vision” for book ‘Environmental Applications of Carbon Nanomaterials-Based Devices’ published by Wiley-VCH in 2021. ISBN: 9783527348657 3527348654.
28. Abhishek Verma, Parveen Gahlyan, Rashim Bawa, Soumya Ranjan Dash, Ashok K. Prasad and Rakesh Kumar (2021). Glycerol-Triazole Conjugated Rhodamine as Colorimetric and Fluorimetric Sensor for Cu<sup>2+</sup>. *Chemistry Select* Vol. 6, pp 9288-9292.
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30. Sharma, B., Garg, M., Chopra, R., & Sadhu, S. D. Edible Packaging of Liquid Foods 24. *Edible Food Packaging: Applications, Innovations and Sustainability*, 461.
31. Sharma, S., Sharma, B., Shekhar, S., & Jain, P. (2022). Natural Polymer-Based Composite Wound Dressings. In *Polymeric and Natural Composites* (pp. 401-423). Springer, Cham.
32. Shekhar, S., Sharma, S., Kumar, A., Taneja, A., & Sharma, B. (2021). The framework of nanopesticides: a paradigm in biodiversity. *Materials Advances*, 2(20), 6569-6588.
33. Sharma, B., Goswami, Y., Sharma, S., & Shekhar, S. (2021). Inherent roadmap of conversion of plastic waste into energy and its life cycle assessment: a frontrunner compendium. *Renewable and Sustainable Energy Reviews*, 146, 111070.

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35. Gautam, S., Sharma, B., & Jain, P. (2021). To investigate interfacial interaction between soy protein isolate biocomposite thin films reinforced with poly (vinyl alcohol) matrix. *Polymer Composites*, 42(6), 3114-3124.
36. Bushra Fatima, Basem Al Alwan, Sharf Ilahi Siddiqui, Rabia Ahmad, Mohammed Almesfer, Manoj Kumar Khanna, Ruby Mishra, Rangnath Ravi & Seungdae Oh (2021). Facile Synthesis of Cu-Zn Binary Oxide Coupled Cadmium Tungstate (Cu-ZnBO-Cp-CT) with Enhanced Performance of Dye Adsorption. *Water* Vol. 13, pp 3287.
37. Arora, R., Giri, N. G., (2021). Effect of Soil pH on Germination and Growth of *Triticum aestivum* and *Zea mays*. Published in *Conference Proceedings of Innovation and Modernization in Commerce, Science, Technology, Business Management, Leadership and Entrepreneurship. (ICIMBL & E)* (4-5 February, 2022). Jointly organized by G H Rasoni College of Commerce, Science and Technology, Nagpur and G H Rasoni School of Management, Madhavnagri, Nagpur, in association with International Knowledge partner IIC University of Technology, Cambodia and National Knowledge Partner ICT Academy, India.

#### **Department of Zoology**

1. Vats, T.K., Rawal, V., Mullick, S., Devi, M. R., Singh, P. & Singh, A. K. (2019). Bioactivity of *Ageratum conyzoides* (L.) (Asteraceae) on feeding and oviposition behaviour of diamondback moth *Plutellaxylostella* (L.) (Lepidoptera: Plutellidae). *International Journal of Tropical Insect Science* . Vol 39 (4), pp. 311–318
2. Title Book: “Perspectives in Practical Ecology” (2020). Name of publisher: Scientific International Pvt Ltd. Publisher: National. Name of author/s: Dr.Sunita Gupta and Dr.Parul Kulshreshtha ISBN/ISSN number: 9789389393545.
3. Dr. Sunita Gupta & Dr. Parul Kulshrestha, Published a book titled “ Perspective In Practical Ecology “in January 2021, ISBN No. 978-81-949428-4-9; Prestige Publishers.
4. Chaudhary JK and Rath PC (2020). Stem cells and ageing. Book Title- Models, Molecules and Mechanisms in Biogerontology, ISBN: 78-981-13-3585-3. Publisher-Springer Nature Singapore.
5. Yadav, R.; Chaudhary, J.K.; Jain, N.; Chaudhary, P.K.; Khanra, S.; Dhamija, P.; Sharma, A.; Kumar, A.; Handu, S. Role of Structural and Non-Structural Proteins and Therapeutic

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  7. A cost-effective set-up to demonstrate embryonic limb development in Aseel (*Gallus gallus domesticus*) South Asian Journal of Experimental Biology(SAJEB) (eISSN: 2230-9799), (Volume 2021 in Issue 2)
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- internal standard analyte to determine the uncertainty and variability in multi-step processing of Potato during pesticide residue analysis. *International Journal of Entomology Research*, 6(4), 23-28.
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  20. Chaudhary, J. K., Yadav, R., Chaudhary, P. K., Maurya, A., Roshan, R., Azam, F., Mehta, J., Handu, S., Prasad, R., Jain, N., Pandey, A. K., & Dhamija, P. (2021). Host Cell and SARS-CoV-2-Associated Molecular Structures and Factors as Potential Therapeutic Targets. *Cells*, 10(9), 2427. <https://doi.org/10.3390/cells10092427>.
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4. Nimita Kant\*, Shamashree Samanta, Ishika Panchal, Abhishek Pandey, Lagna Ghatak, Adyasha Rout, Jitendra Kumar Chaudhary\* Biological Characteristics of SARS-CoV-2 Variants of Concern (VOC) and their Prevalence across India" Published in Proceedings of International Conference on INFECTIONS AND IMMUNITY, ICII-2021 organized by Daulat Ram College, University of Delhi held from OCTOBER 8-10, 2021. ISBN Paperback: 978-93-91465-02-5.