

Dr. Vaibhav Mishra

Assistant Professor-III
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Educational Qualification:

- **Ph.D.** - 2014, CSIR-Central Drug Research Institute, under the Internal supervision of **Prof. Haushila Prasad Pandey**, Ex-Head & Professor, Biochemistry Department, Banaras Hindu University, Varanasi, India and External supervision of **Dr. Manoj Kumar Barthwal**, Senior Scientist, Pharmacology Division, CSIR-CDRI, Lucknow, India. And Co-supervision of **Dr. Gautam Palit**, Pharmacology Division, CSIR-CDRI, Lucknow, India. Thesis title “**Evaluation of the gastroprotective effect of natural products & elucidation of its molecular mechanism**”.
- **Ph.D. Exam** - 2011-2012, Department of Biochemistry, Banaras Hindu University, Varanasi with 89% marks.
- **Master of Science (Microbiology)** - 2007, Veer Bahadur Singh Purvanchal University, Jaunpur, with 68% marks.
- **Bachelor of Science (Biology)** - 2005, T. D. S. P.G. College affiliated to Veer Bahadur Singh Purvanchal University, Jaunpur, (U.P.) with 61% marks.
- **Intermediate (Science)**- 1999, (U.P. Board) with 64% marks.
- **High School (Science)** - 1997, (U.P. Board) with 65% marks.

Research/Teaching Experiences:

Assistant Professor-III, Experience- July 2023-till date

Amity Institute of Microbial Technology, Amity University, Noida

Research Summary:

My current research aims to explore various herbs, natural products, and synthetic/herbal compounds for their anti-ulcer activities. The objective is to identify the active lead molecules and understand their mechanism of action. Additionally, I am exploring the role of the HPA axis and aiming to discover new direct pathways involved in the regulation of the brain and gut.

Research Scientist, Experience- November 2022- June 2023

Elchemo Center, Japan.

Drug Discovery from Natural products

Senior Postdoctoral Fellow, Experience- September 2020- October 2022

Department of Neurology, University of Missouri, Columbia, MO, USA.

Research Summary:

Under the valuable supervision of **Professor Mahesh Thakkar** at a specialized sleep laboratory, my research focused on the intricate relationship between alcohol consumption, circadian rhythms, and sleep. A primary objective of our work was to investigate how alcohol disrupts the body's natural sleep-wake cycle and to identify the neural associations between the suprachiasmatic nucleus and drinking behaviors. Also, our work culminated in a publication detailing how Per1 gene knockout in the nucleus accumbens promotes increased alcohol consumption and alters sleep behavior.

Furthermore, our research targeted various genes integral to the circadian rhythm to understand their mode of action in regulating sleep, particularly concerning their influence on gut microbes. To precisely establish these mechanisms of action, we employed advanced methodologies such as optogenetics and chemogenetics.

Senior Research Associate (Adjunct), Experience- May 2019- September 2020

Faculty of Bioengineering & Built Environment, University of Johannesburg, Auckland, South Africa.

Research summary: I was in remote collaboration with University of Johannesburg focusing on the application of Artificial Intelligence (AI) in biomedical research. A significant outcome of this work was the development of novel, cost-effective head electrodes designed to record waves from various brain regions, thereby establishing the potential role of these waves in sleep-related disorders. Our research also extended to understanding how sleep regulates gut microbiota and how these alterations may impact overall human health. Additionally, I was involved in drug development research, sourcing natural products to treat gastric ulceration. Our primary goal was to leverage AI to develop future therapeutics capable of protecting gut function under adverse conditions.

National Postdoctoral Fellow, Experience- April 2017- April 2019

Department of Biochemistry, King George Medical University, Lucknow, India,

Research Summary: During my time at King George's Medical University, my research was centered on understanding how natural products promote successful healing in peptic ulcer disease. My published data indicated that a specific natural product formulation stimulates cell division at hemorrhagic sites by regulating IL-1, IL-10, and IL-6 signaling, a finding validated by both RT-PCR and Western blotting. Similar results were obtained in acute stress models where our natural product formulation, when administered to animal subjects, inhibited the proton pump and CCK-2 receptor. Our laboratory had previously shown that both EGF and VEGF regulate abscission in acute and chronic stress-induced gastric ulcer models, and our subsequent research confirmed that natural products also regulate this process in the intestines.

Assistant Professor (Guest), Experience- Sep-2014 – April 2017

Industrial Microbiology, Babasaheb Bhimrao Ambedkar University, Lucknow, India

Research Summary: While working in Ambedkar University I developed a well maintain research lab for an Innovative course “Industrial Microbiology” in the Department of Environmental Microbiology, BBAU, Lucknow, India and published two books and two research papers. For my outstanding performance, I was awarded with “**Excellent Service Award**” by Honorable **Vice-Chancellor, Prof. R. C. Sobati**, at the annual foundation day of the Babasaheb Bhimrao Ambedkar University, Lucknow.

Ph.D. Student- July 2011- August 2015,

Division of Pharmacology, CSIR-Central Drug Research Institute, Lucknow, India.

- **Ph.D.** - 2015, Banaras Hindu University, under the Internal supervision of **Prof. Haushila Prasad Pandey**, Biochemistry Department, Varanasi, India and External supervision of **Dr. Manoj Kumar Barthwal**, Pharmacology Division, CSIR-CDRI, Lucknow, India, and. And Co-supervision of **Dr. Gautam Palit**, Pharmacology Division, CSIR-CDRI, Lucknow, India. Thesis title “**Evaluation of the gastroprotective effect of natural products & elucidation of its molecular mechanism**”.

The objective of my dissertation was to explore various herbs, natural products and synthetic compounds for their anti-ulcer activities and to identify the active lead molecules and their mechanism of action, in a process to identify and develop candidate drugs for the prevention of peptic ulcer diseases. I identified various natural products such as *Terminalia chebula*, *Peganum harmala* and *Nyctanthes arbor-tristis*, etc exhibit a high degree of protection in various rodent models of gastric ulcers either through their anti-secretory or cytoprotective properties. Apart from in-vivo screening of test drugs in ulcer models, we extensively studied the changes in gastric juice components; blood plasma gastrin level and proton pump activity in gastric microsomes and PGE2 levels in the ulcerated mucosa of rats to confirm the mechanism of their action. In addition to ulcer protective activities, these natural products were tested for their healing properties in chronic gastric ulcer models in rodents. The healing parameters such as reduced ulcer crater size, overexpression of growth factors (VEGF, EGF) and COX-2 levels were examined to compare the healing potential of test compounds concerning reference drugs. The respective candidate drugs found satisfactory were further fractionated and finally analyzed for the active component responsible for the anti-ulcer activity of its parent compound.

Junior Research Fellow, Experience- June 2008- April 2011

Division of Pharmacology, CSIR-Central Drug Research Institute, Lucknow, in the lab of Dr. Gautam Palit on a project titled “**Discovery, Development and Commercialization of new Bioactive and Traditional preparation for anti-ulcer and anti-anxiety activity from plant source**”.

M.Sc. Dissertation-14 February-2007 to 14-June-2007, in the lab of Dr. B.N. Paul, Head, Department of Immunobiology, CSIR-Industrial Toxicology Research Centre, Lucknow, on a project entitled “**To Study the Effect of STAT3 Gene Silencing in Normal Mice by STAT3 si-RNA Transfection**”

M.Sc. Training- “Isolation of Microorganism and its Characterization” under the supervision of Dr. Shree Prakash Tiwari, Ex-Head, Department of Microbiology, Faculty of Science, Veer Bahadur Singh Purvanchal University, Jaunpur, India.

Membership of Societies:

- Annual Member of Society for Neuroscience, 2020-22
- Life Member of Vijana Bharti, ID #21658, 2020
- Life Member of Indian Academy of Biomedical Science, 2019
- Executive Member of Society for Environmental Sustainability, 20-2018
- Life Member of Indian Society for Genetics, Biotechnology, Research & Development, 2017
- Life Member of Society for Indian Environment & Biological Sciences, 1501-2016
- Life Member of Association of Microbiologist of India, 4191-2015

Academic Experience

- Assistant Professor (Guest) – 02-September-2014 to 01-April-2017, in Industrial Microbiology, Department of Environmental Microbiology at Babasaheb Bhimrao Ambedkar University, Lucknow, India.
- Lecturer (BSc. Biotechnology) – 01-October-2007 to 08-April-2008, at Degree College (Sri Ram Institute of technology; Affiliated to CCS University, Meerut & Approved by NCTE) Muzaffarnagar, India.

Awards and Honors

- **Travel award** from SFN to attend the conference in Chicago, USA on 28th-30th October-2021.
Travel award from KDS to attend the short course training program in Seoul, South Korea on 10th-14th October-2019.
- **Travel award** to attend the World congress on Gastroenterology in Istanbul, Turkey on 21st-24th September-2019.
- **Selected in preceptorship program** organized by SICEM, Seoul, South Korea 17th-21st April-2019.
- **IBRO-APRC Fellowship** to attend the school organized by IBRO on Neurology & Molecular biology 03rd-09th March-2019.
- **Elected as Fellow of Environmental and Biological society** 09th January-2019.
- **Certificate of Appreciation** award for outstanding services for the development of Babasaheb Bhimrao Ambedkar University, Lucknow-25, Uttar Pradesh, India, given by Honorable Vice-Chancellor of the University on the auspicious occasion of 22nd foundation day i.e. on 10th January-2018.
- **Travel award** from ICAR to attend the short course training program on “Preparation of bio-formulation of fungal and bacterial bio-control agents for the management of biotic stress” 01st-10th September-2017.
- **Travel award** from ICAR to attend the short course training program on “Upliftment of the socioeconomic status and nutritional security in highlander through the implementation of scientific interventions in animal husbandry practices” 20th-29th July - 2017.

- **Travel award** from IBRO/APRC to attend the Associate School on “Computational approaches in Neuroprotection and Neurorehabilitation” 5th -10th June-2017.
- **Young Scientist** award by Society for Indian environmental & biological sciences (SIEBS) at K. P. College, 07th-08th May-2017.
- **Young Scientist** award by Indian society for genetics, biotechnology, research & development (ISGBRD) at Dr. B.R.A. University 22nd-23rd April-2017.
- **SERB-NPDF** (National Post-Doctoral Fellowship) File Number: PDF/2016/003174 from 01-April-2017 to 01-April-2019.
- **Third position award in oral presentation** on the title “Integrated approach towards drug development from *Nyctanthesarbortristis* (Indian medicinal plant) used in peptic ulcer diseases”. In National Conference on Biodegradation of Wildlife, Environment and Biodiversity (B-WEB-2017) venue at Gandhi Faiz-E-Aam (PG) College, Shajahanpur, Uttar Pradesh, India. 19th-20th March-2017.
- **Best oral presentation** award on the title “Integrated approach towards drug development from Indian medicinal plants used in peptic ulcer”. In 4th Lucknow Science Congress, the venue at Babasaheb Bhimrao Ambedkar University, Lucknow-25, Uttar Pradesh, India. 3rd-4th March-2017.
- **EMBO travel** grant awarded a (500 Euros) in EMBO “Workshop: Metabolic disorders and liver cancer” at Palma de Mallorca, Spain. 23rd -26th April-2017.
- **Qualified National Eligibility Test** (NET) from “Indian Council of Agricultural Research (ICAR)”, Govt. of India. 4th October-2016
- **Gold Medal** award for excellent contribution in education 2016 from SIEBS.
- **Certificate of Appreciation** in International Congress of Ethnopharmacology organized by “School of Natural Product Studies” Jadavpur University, Kolkata, India. 12th-15th February-2012.
- **Recipient** of Senior Research Fellowship from “Council of Scientific Industrial Research (CSIR)”, Govt. of India. 11th-April-2011 to 31st-April-2014.
- **Recipient** of Senior Research Fellowship from Indian Council of Medical Research (ICMR), Govt. of India. 1st December-2010.
- Three times “Combined Research Entrance Test-CRET” Qualified conducted by Banaras Hindu University, Varanasi, India. 2009-2011.
- **Certificate of Appreciation** in International conference on translational pharmacology & 41st Annual conference of Indian Pharmacological Society, 18th-20th December 2008.
- GATE qualified, AIR 676, Percentile 94.82, 15th March-2008.
- **2nd topper** in M.Sc. Microbiology at V.B.S.P. University, Jaunpur 2007.
- **Best poster presentation** award on the title “Isolation and Characterization of Microorganism from the soil” in National symposium on Issues and challenges for environmental management vision 2025, 17th -19th February-2006.
- **2nd topper** at BRP Inter College in Junior high school 1995.

Professional experience: -

- **Assistant Editor** of Journal Environmental Sustainability, published by SPRINGER-NATURE.
- **Co-topic Editor** of entitled “Neuroinflammation in neuropsychiatric and neurodegenerative conditions; Insight and advancements” in the journal Frontiers in Cellular Neuroscience, 2025.

- **Reviewer Committee Member “In 4th Lucknow Science Congress, the venue at Babasaheb Bhimrao Ambedkar University, Lucknow-25, Uttar Pradesh, India. 3rd -4th March-2017.**
- **Committee Member in National Seminar on “University-Industry Partnership: A March towards Sustainable Growth (AMTSG)- 12th-13th March-2015**
- **A nominated faculty member in one-day workshop on “Developing skills to manage stress” 12-April-2016.**
- **Reviewer of Environmental Sustainability Journal (Impact factor 3.472)**
- **Reviewer of Clinical and Translational Gastroenterology (Impact factor 3.472)**
- **Reviewer of Indian Journal of Pharmacology (Impact factor 1.0)**
- **Reviewer of American Journal of Gastroenterology (Impact factor 10.383)**
- **Reviewer of Current Medical Research & Opinion (Impact factor 2.345)**
- **Reviewer of The Journal of Prevention of Alzheimer Disease (Impact factor 3.180)**
- **Reviewer of The Journal of Advance Research (Impact factor 6.669)**
- **Reviewer of Cancer Management Research (Impact factor 2.582)**
- **Reviewer of The Journal of Neuroscience Research (Impact factor 3.212)**
- **Reviewer of Food Research International (Impact factor 7.426)**
- **Reviewer of Cancer and Metastasis Reviews (Impact factor 9.623)**
- **Reviewer of Applied Food Research (Impact factor 7.9)**
- **Reviewer of In Silico Research in Biomedicine**
- **Reviewer of Journal of Visualized Experiments**
- **Reviewer of Intelligent Pharmacy (Impact factor 3.9)**
- **Reviewer of Artificial Intelligence in medicine (Impact factor 6.9)**
- **Reviewer of Engineering applications of Artificial Intelligence**

Administrative experience: -

- **Subject expert for Ph.D. area specific courses at AIMT, Amity University (AUUP).**
- **Member, AIMT- IQAC team AUUP, Noida.**
- **Member of the AIMT Non-Teaching Credit Courses (NTCC) project research.**
- **Member of the AIMT, Examination Committee.**
- **Coordinator of Departmental Student Welfare (DSW) committee AUUP Noida.**
- **Member of Departmental NAAC assessment team and looking at criteria VII.**
- **Member of AIMT Anti-Narcotics and Anti-Ragging team.**
- **Co-Chair of Biosinchan Club** meant for departmental conference.
- **Coordinator of AIMT Higher Education.**
- **Co-coordinator of AIMT Paper moderator and setter.**
- **Chief Course Coordinator at AUUP.**

Student Mentorship Experience:

- **External Co-supervisor of Mr. Arinjai Jain, pursuing PhD from IFTM University Muradabad.**
- **Co-supervisor of Ten (10) M.Sc. students in their dissertation works at BBA University Lucknow.**

- **Supervisor of Two (02) M.Sc. & five (05) B.Sc. students in their dissertations work at Amity University Noida, India.**

Principal Investigator/Project handled: -

- Principal Investigator of SERB project funded by DST-SERB, New Delhi, India. File Number: PDF/2016/003174 from 01-April-2017 to 01-April-2019.

Total funds Budget- 19,20,000 Rs.

Patent: -

- **File Number: TEMP/E-1/40095/2024-DEL; Application Number: 202411034312; Name of Inventors:** Naveen Chandra Joshi, Neha Sharma, Himanshi Aggarwal, **Vaibhav Mishra**, Arti Mishra. A Method and System for Biocontrol of Plant Pathogens Using *Zhihengliuella* sp. ISTPL4
- **File Number: TEMP/E-1/76631/2024-DEL; Application Number: 2024-08-29; Name of Inventors:** Akanksha Srivastava, Naveen Chandra Joshi, Navaneet Chaturvedi, Prem Chandra, Bhudev C Das, **Vaibhav Mishra**. A Bioreactor provided with a method for Bioremediation of Lead (Pb) Contamination in Water Using *Escherichia fergusonii* Strain U1”

Publications

Research articles in National and International Journals:

1. Yuktika Malhotra, Jerry John, Deepika Yadav, Deepshikha Sharma, Vanshika, Kamal Rawal, **Vaibhav Mishra**, Navaneet Chaturvedi. Advancements in protein structure prediction: A comparative overview of AlphaFold and its derivatives. *Comput Biol Med* 2025, 188:109842. doi: 10.1016/j.combiomed.2025.109842. **(Impact factor-7.9)**
2. Sandeep Kumar Mishra and **Vaibhav Mishra**. Sargolitar (a dual PPAR agonist) improves spatial learning and retention memory and enhances adult neurogenesis via up-regulation of Wnt signaling in the rat model of dementia. *ACS Chemical Neuroscience* 2024, 2;15(19):3449-3458. **(Impact factor-5.7)**
3. Rishi Sharma, Meet Parikh, **Vaibhav Mishra**, Anshul Soni, Pradeep Sahota, Mahesh Thakkar. Activation of dopamine D2 receptors in the medial shell region of the nucleus accumbens increases Per1 expression to enhance alcohol consumption. *Addiction Biology* 2022, 27(2):e13133. DOI:10.1111/adb. **(Impact factor 4.3)**
4. Rishi Sharma, **Vaibhav Mishra**, Meet Parikh, Anshul Soni, Pradeep Sahota, Mahesh Thakkar. Antisense-induced down regulation of major circadian genes modulates the expression of histone deacetylase-2 (HDAC-2) and CREB-binding protein (CBP) in the medial shell region of nucleus accumbens of mice exposed to chronic excessive alcohol consumption. *J Neurochemistry* 2022, 161(1), 8-19.doi: 10.1111/jnc.15547. **(Impact factor 5.4)**
5. Rishi Sharma, Meet Parikh, **Vaibhav Mishra**, Abigail Zuniga, Pradeep Sahota, Mahesh Thakkar. Sleep, sleep homeostasis and arousal disturbances in alcoholism. *Brain Research Bulletin* 2022, 182, 30-43. **(Impact factor 4.07)**

6. Rishi Sharma, **Vaibhav Mishra**, Meet Parikh, Anshul Soni, Pradeep Sahota, Mahesh Thakkar. Antisense-induced knockdown of cAMP response element-binding protein downregulates Per1 gene expression in the shell region of nucleus accumbens resulting in reduced alcohol consumption in mice. *Alco clin exp res* 2021, 45(10):1940-1949 (**Impact factor 3.5**)
7. Sunil K. Mishra, Shashi Tiwari, Shishir Shrivastava, Ravi Sonkar, **Vaibhav Mishra**, Sunil K. Nigam, Anil K. Saxena, Gitika Bhatia, Snober S. Mir. Pharmacological evaluations of the efficacy of *Dysoxylum binectariferum* stem bark and its active constituent rohitukine in the regulation of dyslipidemia in rats. *J Nat Med* 2018 Sep;72(4):837-845. DOI 10.1007/s11418-014-0830-3 (**Impact factor 2.9**)
8. Vijai Lakshmi, Abbas Ali Mahdi, **Vaibhav Mishra** and Santosh Kumar Agarwal. Antidiabetic Potential of *Achyranthes Aspera* Leaves in Rats. *J Biopharm Therchal*. 2018, Volume 1(1), 1-3.
9. **Vaibhav Mishra**, Sunil Kumar Mishra, Gautam Palit, Abbas Ali Mahdi, Santosh Kumar Agarwal and Vijai Lakshmi. Potent gastroprotective effect Chrysophanol and Emodin from *Rehumemodi* via H+K+ATPase inhibition and increasing the PGE₂ level in rats. *Nat. Prod. Indian J* 2016, 12, 3, 06-12. (**Impact factor 0.78**)
10. Samuel A. Onasanwo, Taiwo O. Oyagbemi, Ademola A. Oyagbemi, **Vaibhav Mishra**. Anti-histaminic potentials of *Cnidioscolusa conitifolius* in the laboratory rodents. *Tropical Veterinarian* 2016, 34 (1-2), 12-20 (**Impact factor 0.65**)
11. Koneni V. Sashidhara, Srinivasa Rao Avula, **Vaibhav Mishra**, Neetu Singh Gopal Reddy palnati, Yashpal S. Chhonker, Priyanka Swami, R.S. Bhatta and Gautam Palit. Identification of quinoline-chalcones hybrid as potential anti-ulcer agents. *Europ j med chem* 2015, 89, 638-653. (**Impact factor 6.8**)
12. Rohit Singh, **Vaibhav Mishra**, Sukanya Pandeti, Gautam Palit, Manoj K. Barthwal, Haushila Prasad Pandey and Tadigoppula Narender. Cytoprotective and anti-secretory effects of Azadiradione isolated from the seeds of *Azadirachta indica* (neem) on gastric ulcers in rat models. *Phytother Res* 2015, 29, 910-916. (**Impact factor 5.9**)
13. Vijai Lakshmi, **Vaibhav Mishra** and Gautam Palit. *In vivo* gastroprotective effect of xyloccensin-E and xyloccensin-I from *Xylocarpus molluccensis* in rats. *Nat Prod Res*. 2015, 29, 469-473. (**Impact factor 2.9**)
14. Onasanwo SA, Adeyemi JA, Latinwo GG, Faborode SO, **Vaibhav Mishra**. Evaluation of anti-ulcerogenic and ulcer-healing activities of nevirapine in rats. *Afr J Med Med Sci* 2015, 44, 251-9.
15. Sunil Kumar Mishra, **Vaibhav Mishra**, Anil Kumar Pandey, Akanksha Srivastava, CKM Tripathi, Gautam Palit, Snober S Mir, Abbas Ali Mahdi, Santosh Kumar Agrawal, Vijai Lakshmi. Docking study of the rohtukine for the prevention of peptic ulcer- A new Target. *J Phytopharma* 2014, 3, 9-15.
16. Vijai Lakshmi, **Vaibhav Mishra** and Gautam Palit. A new gastroprotective effect of Limonoid compounds Xyloccensins X and Y from *Xylocarpus molluccensis* in rat. *Nat. Prod. Bioprospect* 2014, 4(5), 277-83. (**Impact factor 4.9**)
17. Vijai Lakshmi, **Vaibhav Mishra**, Gautam Palit, S. Gupta and S.K. Agarwal. Lupeol and Lupeol esters protect the gastric ulcer in rats. *Nat Pro Ind J* 2014, 10(4), 113-122. (**Impact factor 0.78**)
18. **Vaibhav Mishra**, Manali Agrawal, Samuel Adetunji Onasanwo, Gaurav Madhur, Preeti Rastogi, Haushila Prasad Pandey, Gautam Palit and Tadigoppula Narender. Anti-secretary

and cytoprotective effects of chebulinic acid isolated from the fruits of *Terminalia chebula* on gastric ulcers. *Phytomed* 2013, 20, 506–511. **(Impact factor 6.7)**

19. Amit K. Gupta, Kanika Varshney, **Vaibhav Mishra**, Mridula Saxena, Gautam Palit and Anil K. Saxena. Identification of novel amino acid derived CCK-2R antagonists' potential antiulcer agent: Homology modeling, design, synthesis, and pharmacology. *J Chem Information and Modeling* 2013, 53, 173-87. **(Impact factor 6.16)**
20. **Vaibhav Mishra**, AsthaShukla, Sukanya Pandey, Manoj Kumar Barthwal, Haushila Prasad Pandey, Gautam Palit and TadiGoppula Narender. Arbortristoside-A and 7-O-Trans-cinnamoyl- 6 β - hydroxyloganin isolated from *Nyctanthes arbortristis* possess anti-ulcerogenic and ulcer-healing properties. *Phytomed* 2013, 20, 1055–1063.**(Impact factor 6.7)**
21. Vinay Kumar Singh, **Vaibhav Mishra**, Srinivas Tiwari, Tanvir Khaliq, Manoj Kumar Barthwal, Haushila Prasad Pandey, Gautam Palit and TadiGoppula Narender. Anti-secretory and cytoprotective effects of Peganine hydrochloride isolated from the seeds of *Peganumharmala* on gastric ulcers. *Phytomed*2013, 20, 1180–1185. **(Impact factor 6.7)**
22. **Vaibhav Mishra**, Haushila Prasad Pandey, Manoj Kumar Barthwal Gautam Palit, Abbas Ali and Vijai Lakshmi. Andrographolide of *Andrographis paniculata* significantly inhibited the H⁺ K⁺-ATPase and increase the PGE2 level in rats. *Nat. Prod. Indian J* 2013, 9, 81-87.**(Impact factor 0.78)**
23. Vijai Lakshmi, Abbas Ali, **Vaibhav Mishra**, Gaurav Mishra, Haushila Prasad Pandey and Gautam Palit. *Verbena bonariensis* is protect the gastric mucosa in rats. *Nat. Prod. Indian J* 2013, 9, 88-93.**(Impact factor 0.78)**
24. **Vaibhav Mishra**, Vijai Lakshmi, Haushila Prasad Pandeyand Gautam Palit. Better therapy via Andrographolide in gastric ulcerated rats. *Ind soc gene biotech Res* 2013, 5, 1. **(Impact factor .03)**
25. Vijai Lakshmi, Abbas Ali, **Vaibhav Mishra**, Haushila Prasad Pandey, Gautam Palit. Vincamine and Vindoline from *Catharanthus roseus* Linn protect the gastric mucosa in gastric ulcer in rats. *Pharmacologia* 2013, 4, 234-248.
26. Vijai Lakshmi, Keerti Ameta, **Vaibhav Mishra**, Akanksha Srivastava, Santosh Kumar Agrawal, Gautam Palit, Abbas Ali Mahdi. Gastroprotective effect of ethanolic extract of *Parmelia perlata* in rats. *J Phytopharma* 2013, 2, 19-25.
27. **Vaibhav Mishra**, Haushila Prasad Pandeyand Gautam Palit. Natural product shows protection in gastric ulcer. *Internat Res J Humanities, Engine Pharmceut Sci* 2012, 1, 1-7. **(Impact factor 3.53)**
28. Onasanwo SA, Neetu Singh, Olaleyea SB, **Vaibhav Mishra** and Gautam Palit. Antiulcer and antioxidant activities of *Hedranthera barteri* {(Hook F.) Pichon} with possible involvement of H⁺, K⁺ ATPase inhibitory activity. *Ind J Med Res* 2010,132, 442-449. **(Impact factor 5.2)**
29. Naila Rasheed, Neetu Singh, Pratibha Singh, **Vaibhav Mishra**, Mohtashim Lohani and Gautam Palit. Differential response of A68930 and sulpiride in stress-induced gastric ulcers in rats. *Europ J Pharmacol* 2010, 643, 121-128. **(Impact factor 4.43)**
30. Neetu Singh, Shishir Shrivastava, Sunil Kumar Mishra, Poonam Dharmani, **Vaibhav Mishra** and Gautam Palit. Gedunin and Photogedunin of *Xylocarpus granatum* show significant antiseecretory effects and protect the gastric mucosa of peptic ulcer in rats. *Phytomed* 2010, 17, Issues 8-9, 569-574. **(Impact factor 6.7)**

BOOK CHAPTERS /REVIEW ARTICLES:

1. **Vaibhav Mishra**, Chavvi Atri, Akanksha S. Unraveling the Gut Microbiome: Connecting with AI for Deeper Insights. *Methods in Microbiology*, Vol 55, 2024, Pages 231-246 <https://doi.org/10.1016/bs.mim.2024.05.012>. **(Impact factor 3.0)**
2. Prashant Tripathi, Akanksha Srivastava, Chetan Kumar Dubey, **Vaibhav Mishra**, Shipra Dwivedi, Amit Kumar Madeshiya, Implementation of artificial intelligence (AI) and machine learning (ML) in microbiology. *Methods in Microbiology*, Vol 55, 2024, Pages 29-41. <https://doi.org/10.1016/bs.mim.2024.05.003>. **(Impact factor 3.0)**
3. **Vaibhav Mishra**, Sandeep k Mishra, Akanksha, Chetan K Dubey, Komal Dharmani and Navneet Chaturvedi. AI and ML in drug discovery and development from microbes. *Methods in Microbiology*. ISSN-0580-9517, *Methods in Microbiology*, Vol 55, 2024, Pages 125-140 doi.org/10.1016/bs.mim.2024.05.007. **(Impact factor 3.0)**
4. Yakshit Arora., Lalwani Kumar, Mathur, Navneet Chaturvedi, Vaibhav Mishra. (2024), AI Driven antimicrobial peptides for drug development. In *Methods in Microbiology*. Elsevier. <https://doi.org/10.1016/bs.mim.2024.08.003> **(Impact factor 3.0)**
5. Tanya Garg, Padmanabh Dwivedi, Manoj Mishra, Naveen C Joshi, Neeraj Srivastava and **Vaibhav Mishra**. Garg, T., Dwivedi, Mishra M, Joshi NC, Srivastava N and Mishra. Artificial Intelligence in Plant Disease Identification: Empowering Agriculture. *Methods in Microbiology*. ISSN-0580-9517, *Methods in Microbiology*, Vol 55, 2024, Pages 179-193. <https://doi.org/10.1016/bs.mim.2024.05.007> **(Impact factor 3.0)**
6. Chetan Kumar Dubey, Jitendra Mishra, Abhishek Nagar, M.K. Gupta, Archana Sharma, Subham Kumar, Vaibhav Mishra, Haushila Prasad Pandey. (2024), Microbial protease: an update on sources, production methods, and applications. Editor(s): Vaibhav Mishra, Jitendra Mishra, Naveen Kumar Arora, In *Developments in Applied Microbiology and Biotechnology, Bioactive Microbial Metabolites*, Academic Press, Pages 233-260, ISBN 9780443185687, <https://doi.org/10.1016/B978-0-443-18568-7.00006-9>.
7. **Vaibhav Mishra**, Parikh Meet, Akanksha S., Niraj Jha, Kavindra Kesari. Sleep disturbance–induced free radical formation in the gut may be blocked by Melatonin. In: *Free radical biology and environmental toxicity*. Eds. Kavindra Keshari & Niraj Jha, Springer-Nature Publisher Switzerland 2021. ISSN; 2168-4235 https://doi.org/10.1007/978-3-030-83446-3_11. ISBN 978-3-030-83445-6
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