

Brief Curriculum



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Date of Birth: 15/07/1966

EDUCATIONAL QUALIFICATION:

1981, Matriculation: 71.22 %; Bio, Math, Eng. Hind Arts: Bihar School Examination Board

1983, Intermediate: 51.66%; Bio, chem. Hindi, Eng.: Bihar Intermediate Education Council

1987, B.Sc.(Botany H, Zoo, Chem.) 62.12%; : Magadh University Bodh Gaya, Bihar
(College of commerce, Patna, Bihar)

1991 M.Sc. Botany (63.25%; Spl.-Biotechnology): Patna University, Patna, Bihar

1999 Ph.D. (Biotechnology) : Banaras Hindu University, Varanasi, UP

RESEARCH & TEACHING EXPERIENCE:

- **Research & Teaching EXPERIENCE including Ph.D.** ➤ **31 Years**
- **Research & Teaching EXPERIENCE excluding Ph.D. & including Post. Doc.** ➤ **25 Years.**
- **Teaching EXPERIENCE in M.Sc. as Reader/Associate Professor/ Professor** ➤ **20 Years**

Ph.D./M.Sc. Research Students Guided/Supervised:

- **Ph.D. /M.D.** : **09**
- **Pre Ph.D. seminar delivered** : **02**
- **Registered Ph.D. Student(s)** : **01**
- **M.Sc. dissertation students submitted** : **37**
- **M.Sc. dissertation students working** : **02**

Tenure as Professor : 12-Years-04-Months-16-Days (Completed on 21.04.2025)

05.12.2012 to Till date: Professor in Biotechnology; Institute of Science, Banaras
Hindu University, Varanasi, UP-221 005, INDIA.

ADMINISTRATIVE EXPERIENCE:

- 1. 19 May 2016 to 18 May 2019: Coordinator (HOD) School of Biotechnology, Institute of Science, BHU**
- 2. Coordinator Center for Bioinformatics, School of Biotechnology, Institute of Science, BHU**

PRESTIGIOUS POSITION HOLDING IN BHU, VARANASI

⇒ **COURT MEMBER of BHU Nominated by Hon'ble President of India since 2018.**

CURRENT INTERANATIONAL ACADEMIC REGCOGNITION

1. **Research Gate Score:** Research Interest Score: 1092; Citations: 990; h-index: 17

PATENT FILED: Arvind Kumar & Alok Tripathi: “Chlorogenic acid (CGA) binds to HMGB-1 to enhance anticancerous capability of herbal extract against liver cancer”, with name of investigations “Anti-cancerous enhancement by CGA to cure liver cancer by binding to HMGB-1”. Date of filing 06/05.2014. Docket NO. 11431. Application No. 1220/DEL/2014.

PROFESSIONAL QUALIFICATION:

05.12.2012 to Till date	Professor in Biotechnology; Institute of Science, Banaras Hindu University, Varanasi – 221 005, UP, INDIA.
Nov. 2008 to 04.12.2012	Associate Professor in Biotechnology; Faculty of Science, Banaras Hindu University, Varanasi – 221 005, UP, INDIA.
Nov. 2005 to Nov. 2008	Reader in Biotechnology, Faculty of Science, Banaras Hindu University, Varanasi – 221 005, UP, INDIA.
April 2005 to Oct. 2005	Research Associate - Department of Transplantation Pathology, University of Pittsburgh Medical Center (UPMC); Biomedical Science Tower, University of Pittsburgh, PA 15261, USA.
March 2002 to March 2005	Research Associate - Dept. of Mol. Gen. and Biochem., School of Medicine, E-1240, Biomedical Science Tower, University of Pittsburgh, Pittsburgh, PA 15261, USA.
Oct. 2001 to March 2002	Visiting Scientist/Postdoctoral Fellow - Dept. of Environmental Science, Birmingham, School of Public Health, University of Alabama at Birmingham, Ryales Bldg. 1665 Univ. Blvd. AL 35294, USA.
Sep. 2000 to Oct. 2001	Postdoctoral Fellow - Center for Cell and Gene Therapy (Dept of Neurosurgery), Baylor College of Medicine, One Baylor Plaza, Houston, TX 77054, USA.

MEMBERS IN COMMITTEE:

1. **Member of Board of Examiner (BOE), School of Biotechnology, Institute of Sceince, BHU, Varanasi-221005.**
2. **Member of Depatmental Purchase committee at School of Biotechnology**
3. **Member of Research Progress Committee (RPC) of Dept of School of Biotechnology, Dept of Bioinformatics (MMV), Dept of Biochemistry & Dept. of Zoology**
4. **Member of Departmental/School Research Committee (SRC) of School of Biotechnology.**
5. **Ex-Member of TASK-Force Coordinators meeting of DBT-sponsored School & Dept. of Biotechnology at National level**
6. **Ex-Member of Coordinators meeting of Bioinformatics-DBT at national level**
7. **Ex-Member of Academic council of BHU**
8. **Ex-Member of RDCU committee of BHU**
9. **Ex-Member of PPC of Institute of Science, BHU**
10. **Chairperson and member of PPC of School of Biotechnology**
11. **Member and Chairperson of DRC/SRC of School of Biotechnology, I.Sc.**
12. **Member of Purchase committee of School of Biotechnology, Institute of Science.**
13. **Ex-Member of DBT-JRF question setting from BHU**

14. Examination Observer DBT-JRF and CEEB-M.Sc. JNU
15. Ex-Nodal person of Institute for BHU Alumni meeting.
16. Ex-member training and placement cell of Institute of Science
17. Ex-member of Phone Directory Committee of BHU
18. Ex-member of anti-ragging committee of Institute of Science
19. Ex-member of B.Sc. verification/admission committee of Institute of Science
20. Ex-member of “Biosafety committee” of recombinant DNA technology of Institute of science
21. Ex-member of Ph.D. course designing committee

MEMBER OF OTHER UNIVERSITIES;

1. External member of Advisory Board of DBT sponsored M.Sc. Biotechnology program Central University South Bihar, Gaya
2. Member of BOS of State University Vinoba Bhave University, Jharkhand
3. Member of BOS of Uday Pratap Autonomous College, Varanasi.

MEMBERSHIP OF SOCIETY:

1. Life membership of **The Indian Science Congress Association, Kolkata, India**, Section: New Biology (include. **Biochem. Biophys. & Mol. Biol & Biotechnology**); Membership No. **L37817**, since 29 March 2019.
2. Life membership of **Indian Immunology Society**, since 2012 onwards.
3. Life membership of **Cell Biology Society of India** since 2007 onwards..
4. Member of American Association for Advancement of Science (AAAS) since 2012 karvindr (Membership No. 40764928).
5. Member of American Society for Microbiology (ASM) since 1996, No. karvindr Membership Number: 55267801. Dues Expire Date: 12/31/2012.

TEACHING RESPONSIBILITIES:

1. Taking classes in the M.Sc. previous and final years
2. Guiding M.Sc. final year students one year experimental project course
3. Guiding Ph.D. students and teaching their Ph.D. course work
4. Taught minor elective courses of other department M.Sc. students within the Institute of Science.
5. Took classes of B.Sc. in Faculty of Science, in Ancillary courses

AWARDS, FELLOWSHIPS AND DISTINCTIONS:

- Received National merit Scholarship (during Intermediate 11th & 12th & B.Sc. (H))
- UGC-Junior/Senior Research Fellowship award during Ph.D. in School of Biotechnology, Faculty of Science, BHU, Varanasi
- Post-doctoral Fellowship in NIH project at Baylor College of Medicine, Dept. of Neurosurgery Center for Cell and Gene Therapy & University of Pittsburgh
- **Rashtriya Gaurav Award, New Delhi, 2012**
- Received certificate of appreciation for helping in organizing 20th national children’s science congress of DST the focal theme ENERGY: Explore, Harness and Conserve, held at BHU during 27-31 Dec, 2012.

AREA OF SPECIALIZATION:

- Molecular Immunology and Molecular Biology
- Cell Biology & Toxicology
- Bioinformatics

SIGNIFICANT RESEARCH CONTRIBUTIONS:

- Designing HMGB-1 protein structure of *Mus musculus* (mice) and deciphered active site *in silico* for the first time, submitted to PMDB and performed docking experiment with CGA (chlorogenic acid) to see the anti-cancerous activity in urethane primed Balb/c.
- Constitutive expressions of inflammatory cytokines create micro-environment for genesis and progression of Lungs and Liver cancer (Urethane and MNU mice model). Paper published in Preventive medicine (2012) and Journal of Carcinogenesis (2012).
- Increase in the numbers of cancer patients of all age groups is due to large scale use of herbicides and pesticides in agriculture that normally contains carcinogenic compounds like Ethyl carbamate/Urethane (used also for the ripening of fruits) or MNU to get maximum cereals/food grains production to meet the requirement of increasing population.
- Adduct formed by Urethane and MNU leads to aberration in the expression level of inflammatory cytokines and their Transcription factors responsible for constitutive expression in *in vivo* study.
- *Achyranthes aspera* and *Aegle marmelos* hydro-alcoholic extract has an ability to prevent and cure Lungs and Liver cancer respectively (Paper in Molecular biology report).
- *Herbal products and there components could be used for prevention of cancer targeting inflammatory genes, cancerous genes and Transcription factors responsible to regulate these genes.*
- *The herbal products have immunomodulatory roles.*
- Damage of NMDA receptor during injury is an important cause of memory loss.
- NGF gene can be used for therapeutic purposes to improve the memory that get lost due to old age or due to injury.
- Transcription factors talk to each other to regulate the cytokine genes. Finding will help to understand the mechanism at molecular level to use the gene for therapeutic purposes.

CURRENT RESEARCH INTEREST:

- Molecular Biology, Bioinformatics and Immunology
- Molecular basis of cytokines and chemokines gene regulation, their role in immunity / cancer disease.
- Immunomodulatory role of medicinal herbs, characterization of extract and use of selected biomolecules.
- Search for new therapeutic genes/target molecules for therapeutic purposes.

- Signal transduction pathway elucidation in response to toxic agents, involved in cancer genesis and remedy by targeting those molecules, its role in T2DM disease.

PUBLICATIONS:

1. Avinash Kumar Chaurasia, Ritika Kumari Singh, Arvind Kumar (April 2025) Synthesis, optimization, characterization, anti-oxidant and anti-cancerous activity analysis of nanoparticles *IA-AuNPs* synthesized using leaf extract of soil grown *Ipomoea aquatic*. **Journal of Molecular Structure**. Bibcode: 2025JMoSt132741212C. Doi: <https://doi.org/10.1016/j.molstruc.2024.141212>, [https://authors.elsevier.com/sd/article/S0022-2860\(24\)03717-7](https://authors.elsevier.com/sd/article/S0022-2860(24)03717-7), (<https://www.sciencedirect.com/science/article/pii/S0022286024037177>), Volume 1327, April 2025, 141212, Impact factor: 3.841 Q2
2. Alok Tripathi, Kriti Shrinet, **Arvind Kumar (May 2024)** CGA mitigates HMGB1 mediated TLR4 activated hepatic cancer in urethane primed mice **Phytomedicine plus**. 4 & 2. ISSN 2667-0313, <https://doi.org/10.1016/j.phyplu.2024.100554>. (<https://www.sciencedirect.com/science/article/pii/S2667031324000320>) Elsevier. IF: 2.46 Q2 Emerging Sources Citation Index
3. Ritika Kumari Singh, Avinash Kumar Chaurasiya, **Arvind Kumar (April 2024)**. *ab initio* modeling of human_IRS1_protein to find novel target to dock with drug_MH to mitigate T2DM_diabetes by insulin signaling. **3 Biotech** 14, 108 (2024) Springer Nature, <https://doi.org/10.1007/s13205-024-03955-2>, <https://rdcu.be/dCZUO>. ISSN: 2190572X, 21905738, IF:2.8 Science Citation Index Expanded Q2
4. Kriti Shrinet, Ritika K Singh, Riden Saxena, Avinash K Chaurasia, **Arvind Kumar (Dec 2023)**. *ab initio* modeling and Ligand Docking of bioactive compound quercetin to MC-LR transporter Protein (OATP1b2/OATP1B3) to inhibit transpotation. **Pharmaceutical Science Advances**. ISSN: 2773-2169 100011. DOI: [10.1016/j.pscia.2023.100011](https://doi.org/10.1016/j.pscia.2023.100011) IF:00 Q2
5. Kriti Shrinet, **Arvind Kumar (4 Oct 2023)**. Immunotoxicity of cynobacterial toxin Microcystin-LR is mitigated by Quercitin and himalaya tonic Liv52, DOI: [10.1016/j.toxicon.2023.107310](https://doi.org/10.1016/j.toxicon.2023.107310) **Toxicon**. 2023.107310. IF: 2.8, Q2
6. Sunil Kumar Mishra, Saket Sinha, Amit Kumar Singh, Prabhat Upadhyay, Diya Kalra, Pradeep Kumar, Kavindra Nath Tiwari, Rajan Singh, Rakesh Kumar Singh, **Arvind Kumar**, Alok Tripathi, Brijesh Singh Chauhan, S. Srikrishna (March 2023). Green synthesis, characterization and application of *Ascomyllum nodosum* Silver nanoparticles. **Regenerative Engineering and Translational Medicine**. doi.org/10.1007/s40883-023-00298-x IF: 2.68, Citation: 00 Science Citation Index Expanded Q3
7. Gagandeep Singh, S Gopala Krishnan, **Arvind Kumar**, K K Vinod, Haritha Bollinedi, Ranjith K Ellur, M Nagarajan, P K Bhowmick, S M Madhav, Kuldeep Singh, Ashok K Singh (May 2022). Molecular profiling of BADH2 locus reveals complex functional allelic polymorphism associated with fragrance variation in Indian aromatic rice germplasm. **Physiol Mol Biol Plants**. 28(5):1013-27. doi: 10.1007/s12298-022-01181-9. IF:3.023 Citation: 02
8. Prashant Kumar Gupta, Chandradeo Narayan, **Arvind Kumar**, BM Singh (March 2021). In-vitro analysis of synergistic effect of honey against chemically induced hepetic insult in Balb/c mice. **Research journal of Pharmacy and Technology (RJPT)**. 14(12):6309-6314. DOI:10.52711/0974-360X.2021.01091 IF:1.203 . Citation: 01 Science Citation Index Expanded Q2
9. Alok Tripathi, Kriti Shrinet, VK Singh, Arvind Kumar (July 2019). Modeling and active site finding of Mus musculus HMGB1 inflammatory protein to dock with biomolecule CGA in the context of cancer treatment. **Bioinformation**. 15(7): 467-473 (2019). ISSN 0973-2063 (online) 0973-8894 (print). Average Citation per item: 5.62, h-index: 32 Publisher, **Biomedical Informatics** (P) Ltd. DOI: [10.6026/97320630015467](https://doi.org/10.6026/97320630015467) Citation: 07, Q2, IF 1.9

10. Somya Asthana, Kajal Karsauliya, Sumita Dixit, Anurag Tripathi, **Arvind Kumar**, Sheelendra P. Singh, Mukul Das (2019). Development and validation of the ultra performance liquid chromatography-tandem mass spectrometer method for quantification of methylenecyclopropylglycine in litchi fruits using the standard addition method. ISSN: 1936-9751 (Print) 1936-976X (Online) *Food Analytical Methods*. Vol..... pages 1-8 (Springer) <https://doi.org/10.1007/s12161-019-01536-1> IF: 2.245, Citation: 00 Science Citation Index Expanded
11. R K Singh, K Shrinet, A Tripathi, A K Chaurasia, **Arvind Kumar** (Jan 2019). Risk established between type-II diabetes mellitus and cancer: a review. *Journal of Scientific Research*, Vol 63 (1&2) Pages 69-77. BHU. ISSN: 0447-9483. http://www.bhu.ac.in/research_pub/jsr/ / Citations: 03
12. Alok Tripathi, Kriti Shrinet, **Arvind Kumar** (Feb 2019). HMGB1 protein as a novel target for cancer. *Toxicology report*. Impact Factor: 4.807, Volume 6, 2019, Pages 253-261. <https://doi.org/10.1016/j.toxrep.2019.03.002> Citations: 97 Science Citation Index Expanded
13. Somya Asthana, Sumita Dixit, Anshuman Srivastava, **Arvind Kumar**, Sheelendra P. Singh, Anurag Tripathi, Mukul Das (Feb. 2019). Methylenecyclopropyl glycine, not pesticide exposure as the primary etiological factor underlying hypoglycemic encephalopathy in Muzaffarpur, India. *Toxicology Letters*; Vol. 301, 34-41 (Springer). IF: 3.166; Citations: 14 <https://doi.org/10.1016/j.toxlet.2018.10.033> Citations: 9 Science Citation Index Expanded
14. Ashok Kumar, S M Singh, Arvind M Kayastha, **Arvind Kumar** (2018) Jaiw Pradhogiki school and iski uplabdhiyan. Pragati Kashi Hindu Vishwavidayalya shodh shikshinik patrika, Institute of Science. Vol 5, ISSN: 2321-2934.
15. **Arvind Kumar** (2018). Naye cancer rodhi paudho ki khoj. Pragati Kashi Hindu Vishwavidayalya shodh shikshinik patrika, Institute of Science. Vol 5, ISSN: 2321-2934.
16. Prashant Gupta, Alok Tripathi, Trapti Agrawal, Chandradeo Narayan, BM Singh, Mohan Kumar, **Arvind Kumar** (Aug, 2016). Synergistic protective effect of picrorhiza with honey in acetaminophen induced hepatic injury. *Indian Journal of Experimental Biology*. 54:530-536. IF: 1.165; Citations: 17
17. Ashish Yadav, A. Kumar, M. Das, A. Tripathi (Feb 2016). Sodium benzoate, a food preservative, affects the functional and activation status of splenocytes at non cytotoxic dose. *Food and Chemical Toxicology*, 88, 40-47. IF: 3.977, Citation: 72
18. Prashant Gupta, Brij Mohan Singh, Trapti Agrawal, **Arvind Kumar** (Jun, 2015). Clinical evaluation of potentiating effect of honey and mandur bhasma (herbo-mineral preparation) in anemic children. *World Journal of Pharmaceutical Sciences*. 3 (6) 1173-1179. (ISSN (print): 2321-3310; ISSN (online): 2321-3086. Atom and Cell Publishers. <http://www.wjpsonline.org/admin/uploads/4mAwFn.pdf> IF: 0.453; Citations: 03.
19. Alok Tripathi, Sarika Kumari, **Arvind Kumar** (Feb 2015). Toxicity evaluation of pH dependent stable *Achyranthes aspera* herbal gold nanoparticles. *Applied Nanoscience*. DOI: 10.1007/s13204-015-0414-x. Online First Articles ISSN: 2190-5509 (Print) 2190-5517 (Online) IF: 3.45; Citations: 26
20. Alok Tripathi, Sarika Kumari, Arvind Kumar (2016) Toxicity evaluation of pH dependent stable *Achyranthes aspera* herbal gold nanoparticles. *Appl Nanosci* 6, 61–69 (2016). <https://doi.org/10.1007/s13204-015-0414-x>
21. **Arvind Kumar**, Alok Tripathi, Suchitra Kamle (2015). Global issues of GMO food crops, products reception and denunciation with current status of India. “**Prajna**” journal of BHU.
22. **Arvind Kumar**, Alok Tripathi, Sushil Dawka, Arun Kumar Agnihotri (Feb. 2014). Cytokines in the interface of metabolomics based cancer and type-2 diabetes. *Archives of Medical and Biomedical Research*. 1(3) 113-120. IF: 2.235

23. Chandradeo Narayan, **Arvind Kumar** (Jan 2014). Antineoplastic and immunomodulatory effect of polyphenolic components of *Achyranthes aspera* (PCA) on urethane induced lung cancer in vivo". *Molecular Biology Reports*. **41(1)**, 179-191. IF: 1.698; Citations: 39 <https://link.springer.com/article/10.1007/s11033>
24. Shalini Verma, Theeshan Bahorune, Ranjan Kumar Singh, Okezie I. Aruomae, **Arvind Kumar** (Oct. 2013). Effect of *Aegle marmelos* leaf extract on N-methyl N-nitrosourea induced hepatocarcinogenesis in Balb/c mice. *Pharmaceutical biology*. 51, 10: 1272-1281. IF: 1.546; Citations: 29
25. Ashish Yadav, **Arvind Kumar**, Anurag Tripathi, Mukul Das (March 2013). Sunset yellow FCF, a permitted food dye, alters functional responses of splenocytes at non-cytotoxic dose. doi: 10.1016/j.toxlet.2012.12.016 *Toxicology Letter*. Vol 217, Issue 3 Pages 197-204. IF: 3.522 Citations: 83
26. Chandradeo Narayan, **Arvind Kumar** (March 2013). Identification and characterization of phenolic compounds in hydro methanolic extract of *Achyranthes aspera* (HMEA) by UPLC and MALDI-TOF-MS and in vivo antioxidant activity. *Oriental Pharmacy and Experimental Medicine*. 13 (1) 51-59. IF: 0.73, Citations: 19
27. Alok Tripathi, **Arvind Kumar** (2013). Medicinal value of *Ficus religiosa* (peepal tree). Science India (ISSN 0972-8287, the National Science Magazine), Published by Swadeshi Science Movement.
28. Suchitra Kamle, A. Ojha, **Arvind Kumar** (Sept. 2012). Safety assessment of Cry2AB protein in genetically modified crops: Digestibility assay and IgE evaluation. *Journal of Clinical immunology*. 32 (1) 232-233. IF: 3.094
29. Chandradeo Narayan, **Arvind Kumar** (July 2012). Constitutive expression of IL-1 β , IL-6, NF- κ B and Stat3 is a potential cause of lung tumorigenesis in urethane (ethyl carbamate) induced Balb/c mice. *Journal of Carcinogenesis*. 11:9. 0974.6773. IF: 3.81 DOI: [10.4103/1477-3163.98965](https://doi.org/10.4103/1477-3163.98965) (RG); Citations: 51
30. Chandradeo Narayan, **Arvind Kumar** (2012). Carcinogenicity and Immunological effects of urethane present in various food products *in vivo*. **Conference Full Proceeding**. "National Conference on Biotechnology and Biodiversity" March 13th and 14th Dept. of Botany and Biotechnology Govt. New Science College, Rewa, M.P. Pp37-45. IF:
31. Shalini Verma, T. Bahorun, **Arvind Kumar** (Jan 2012). N-methyl N-nitroso Urea induced altered DNA structure initiate hepatocarcinogenesis. *Preventive Medicine*. Vol 54 (1) S130-S136. IF: 2.47; Citations: 14 DOI: [10.1016/j.ypmed.2012.01.005](https://doi.org/10.1016/j.ypmed.2012.01.005)
32. Ashish Yadav, **Arvind Kumar**, Premendra Dhar Dwivedi, Anurag Tripathi, Mukul Das (Feb 2012). *In vitro* studies on immunotoxic potential of Orange II in splenocytes. *Toxicology Letters*. 208 (3) 239-245. IF: 3.522; Citations: 50.
33. Suchitra Kamle, A. Ojha, **Arvind Kumar** (April 2011). Development of an enzyme linked immune sorbent assay for the detection of Cry2Ab protein in transgenic plants. doi: 10.4161/gmcr.2.2.16191. *G. M. Crops*. (Vol 2, Issue 2). IF: 1.76 (RG); Citations: 25
34. Suchitra Kamle, **Arvind Kumar**, Raj K. Bhatnagar (March 2011). Development of multiplex and construct specific PCR assay for detection of cry2Ab transgene in genetically modified crops and product. *G.M. Crops*. 2:1, 1-8. IF: 1.76 (RG); Citations: 38
35. **Arvind Kumar**, Santosh Kr. Singh, T.D. Singh, Satyaprakash (July 2009); "Methods, potentials and limitations of gene delivery to regenerate neuronal cells", *Biologics: Targets & Therapy* 2: 245-256 (Review). ISSN: 1177-5491 (Online); ISSN: 1177-5475. IF: 2.70 (RG), Citation: 6
36. S. Unlu, **Arvind Kumar**, W.R. Waterman, J. Tsukada, Kent Z.Q. Wang, D. L. Galson, Philip E. Auron (March 2007). Phosphorylation of IRF8 in a pre-associated complex with Spi-1/PU.1 and non-phosphorylated Stat1 is critical for LPS induction of the IL1B gene. *Molecular Immunology*. 44(13): 3364-79. <http://www.ncbi.nlm.nih.gov/pubmed/17386941>. IF 2.916 Citation: 60

37. Unlu, S; Kumar, Arvind; Galson, DL; Auron, P E. (March 2006). A complex involving IRF8, Spi-1 and non-tyrosine-phosphorylated Stat1 is essential for induction of human IL-1 β gene transcription. *The Journal of the Federation of American Societies for Experimental Biology (FASEB JOURNAL)*. 20 (5): A1344-A1344. IF 5.712;
38. Yasuhiro Yoshida, **Arvind Kumar**, Yoshinobu Koyama, Haibing Peng, Ahmet Arman, Jason A. Boch, and Philip E. Auron (Jan 2004). IL-1 Activates Stat3/NF κ B Cross-talk via Unique TRAF6 and p65 Dependent Mechanism. *J. Bio. Chem.* 279 (3): 1768-1776. <http://www.ncbi.nlm.nih.gov/pubmed/14593105>. Citation: 162.
39. **Arvind Kumar**, Linglong Zou, Xiaoqing Yuan, Long Yuan, Keyi Yang (Feb 2002) N-methyl-D-aspartate receptors: Transient loss of NR1/NRA/NR2B subunits after traumatic brain injury in a rodent model. *J. Neuro Sci. Res.* 67(6):781-786. <http://www3.interscience.wiley.com/journal/90512386/abstract>. Citation: 126.
40. L. Zou, **Arvind Kumar**, X. Yuan, J. Hannay, D. Shine, K. Yang (Feb 2001). Improvement of Cognitive Function and Cholinergic Neuron Transmission by Adenovirus-Mediated Nerve Growth Factor Gene Transfer in Aged Rat Brain. *Molecular Therapy* 3(5): S125-S126.
41. D. P. Singh, M. B. Tyagi, **Arvind Kumar**, J. K. Thakur, Ashok Kumar (Feb 2001). Antialgal property of a hepatotoxin-producing cyanobacterium *Microcystis aeruginosa*. *World-J. Microbiol. Biotechnol.* 17(1):15-22. Citation: 187. <https://link.springer.com/article/10.1023/A:1016622414140>
42. Ashok Kumar, D.P.Singh, M.B. Tyagi, **Arvind Kumar**, E.G.Prasuna and J.K.Thakur (Jun 2000). Production of hepatotoxin by the cyanobacterium *Scytonema* sp. strain BT 23. *J. Microbiol. Biotechnol* 10 (3): 375-380. Citation: 09 <https://www.jmb.or.kr/journal/view.html?uid=761&vmd=Full>
43. Madhubala Tayagi, J. K. Thakur, D. P. Singh, **Arvind kumar**, E.G. Prasuna, Ashok Kumar (Feb 1999). Cyanobacterial Toxins: The Current Status. *J. Microbiol. Biotechnol.* 9: 9-21 (Review). Citation: 43 <https://www.jmb.or.kr/journal/view.html?page=9&volume=9&number=1>
44. Kusum Lata Singh, **Arvind Kumar**, Ashok Kumar (Oct 1998). Short communication: *Bacillus cereus* capable of degrading SDS shows growth with a variety of detergents. <https://link.springer.com/article/10.1023/A:1008883915003> *World-J. Microbiol Biotechnol.* 14: 777-779. Citation: 38.
45. **Arvind Kumar**, Ashok Kumar (Aug 1998). Isolation of *Pseudomonas aeruginosa* strain capable of degrading acrylamide. *J. Microbiol Biotechnol* 8: 347-352. Citation: 13 <https://www.jmb.or.kr/journal/view.html?page=347&volume=8&number=4>

SEMINARS/WORKSHOPS ORGANIZED/PARTICIPATED:

1. Attended an Adhoc In-house Advisory Committee meeting on 28th March 2025 at the Central university of South Bihar, Gaya, DBT-PG-programs in two years M.Sc. Biotechnology sponsored by the Department of Biotechnology, Ministry of Science & Technology, Government of India, New Delhi
2. Participated and delivered talk in “Nalanda Vigyan Sammelan-2025, Organized by Vigyan Bharti, Bihar in collaboration with Nalanda Open University, on ‘Indian Knowledge System and Contemporary Sciences”, held during 28th Feb to 1st March 2025, Title of talk, “Herbal nano-medicine synthesis and application in cancer cure”.
3. Member in International/National Conferences organizing committee: <https://www.enb2023.in/organizing-committee.php>; International Conference on Exploring New Horizons in Biotechnology (ENB-2023) & Mini-symposium on Recent Advances in Biotechnology Innovations (RABI-2023), 10th – 12th Feb, 2023, organized by School of Biotechnology, Institute of Science, BHU. Varanasi, UP India-221005, in collaboration with Institute of Eminence, (IoE), BHU, Varanasi, UP India.

4. Member of the Panelist **Going Green: Environmental conservation & Sustainability**. National conference Sunbeam Women's college Varuna **27th -28th Nov 2022**. Member of the Panel discussion: Green growth and sustainable development. Chaired presentation session.
5. Chief Guest and key note speaker at Basmatti Devi Sankatha Prasad Mahila PG College, Faculty of Science, Khochawan, Varanasi-221313. Workshop on **"Basic Molecular Techniques"**, From **28th Nov 2022 to 4th Dec 2022**.
6. Convener of DBT sponsored workshop organized on the topic entitled, **"Recent Bioinformatics Tools and Techniques in Biological Sciences"** **20-22 February, 2019** organized by **Centre for Bioinformatics**, School of Biotechnology, Institute of Science, Banaras Hindu University, Varanasi
7. Convener of DBT sponsored workshop organized on the topic entitled, "Application of *in silico* approaches in Biological sciences", Feb 19-21; 2018
8. Convener for organizing a talk for **Nobel Laureate Prof. Joachim Frank**, Columbia University, New York, USA on "Structure and Function of Ribosome as seen by cryo-electron microscopy" at Swatantrata Bhawan, 06 Nov 2017 at 3.00PM.
9. Organizing secretary of national workshop and seminar on Genes to Genomics: The current status. March 1-7; 2017
10. Organizing secretary of national seminar and workshop on "Sequence analysis, Molecular modeling and docking (SAMMD)", March 9-15, 2016
11. Delivered oral presentation in **IMUNOCON-15** (Oct. 9 to Oct. 11, 2015) national conference on topic **"Over expression of Immune molecules and respective TFs modulate genesis of lung and liver cancer could be controlled by herbal plant extract"**, on **Oct. 10, 2015** being organized by Rajendra Memorial Research Institute of Medical Sciences (ICMR), Department of Health Research, Agamkuan, Patna-800007, Bihar
12. **Co-organizing secretary** of DBT sponsored **workshop** on **"In silico approaches to drug designing (IADD)"**, March 23-28, 2015, (a part of centenary year celebration of BHU) organized by centre for Bioinformatics (Sub-Dic), School of Biotechnology, Faculty of Science, BHU, Varanasi-221005.
13. **Organizing secretary** of DBT sponsored **workshop** on **"Applications of Bioinformatics in Microbial Diversity (ABMD)"**, February 18-20, 2015, (a part of centenary year celebration of BHU) organized by centre for Bioinformatics (Sub-Dic), School of Biotechnology, Faculty of Science, BHU, Varanasi-221005.
14. Chandradeo Narayan and **Arvind Kumar (2013)**. "Immunomodulatory role of chlorogenic acid in urethane activated peritoneal macrophage reduces the risk of cancer in vitro" **IMMUNOCON-2012**, Nov. 9-11, organized by: UGC Advanced Immunodiagnostic Training & Research Centre and Department of Pathology Institute of Medical Sciences, Banaras Hindu University, Varanasi-221005 (U.P.), INDIA. (Abstract P-49).
15. Chandradeo Narayan and **Arvind Kumar (2012)**. Isolation, characterization and evaluation of medicinal value of phenolic compounds of *Achyranthes aspera* National seminar on "Recent Trends in Life Sciences" and Prof. R. P. Roy Memorial Lecture, May 30, 2012. Organized by Department of Botany, Patna University, Patna-800005, Bihar (Abstract P57).
16. Chandradeo Narayan and **Arvind Kumar (2009)**. Activation of NFkB & STAT3 promotes urethane-induced lung carcinogenesis in mice model. XXXIII all India Cell biology conference and International workshop on cell cycle regulation (AICBC-2009) at Hyderabad (Abstract P-143).
17. Shalini Verma and **Arvind Kumar (2009)**. Up regulation of pro-inflammatory cytokines in response to N-nitroso-N-methyl Urea induced cancerous liver of mice (Balb/C). International symposium on cancer chemoprevention and translational research **Dec. 21 2009** at JNU (Abstract p-34).

18. Shalini Verma, Chandradeo Narayan and **Arvind Kumar (2009)**. Anti-cancerous properties of natural growing herbs or medicinal plants to regulate cancerous and anti-cancerous genes. International conference on recent trends in life sciences researches vis a vis natural resource management sustainable development and human welfare. June 27-29, 2009 at VBU, Haz. (Abstract p-251).
19. Linglong Zou, P. Yotnada, T. Zhao, **Arvind Kumar**, X. Yuan, H. Zhou, M. Brenner, K. Yang. (2001). Extended transgene expression mediated by a helper-dependent adenoviral vector in traumatically injured rat brain. Poster presentation in Gene Therapy meets in Houston March 2001.
20. Linglong Zou, Julia Hannary, Xiaoqing Yuan, **Arvind Kumar**, David Shine and Keyi Yang (2001). Improvement of cognitive function and cholinergic neuron morphology by Adenovirus mediated nerve growth factor gene therapy in aged rat brain. Poster presentation in Gene Therapy meets in Houston March 2001.
21. M.B. Tyagi, D.P. Singh, **Arvind Kumar**, E.G. Prasuna, G. Srinivas and Ashok Kumar (2000). Toxins from cyanobacteria: an overview. In: National symposium on phycology in the new millennium. Being organized by centre for advanced studies in botany, University of Madras, Guindy, Chennai, India. March 1-3, pp. 70-71.
22. **Arvind Kumar** and Ashok Kumar (1998). Acrylamide degradation by a *Pseudomonas aeruginosa* strain. 97th American Society for Microbiology General Meeting, Abstract No.-11073.
23. **Arvind Kumar** and Ashok Kumar (1998). Degradation of Acrylamide by a strain of *Pseudomonas aeruginosa*. In ISME-8 Conference, held at Halifax, Nova Scotia, B3J3N8.
24. Ashok Kumar, **Arvind Kumar**, D.P. Singh and G. Prasuna (1996). Hydrogen production by cyanobacteria (Blue Green Algae) present status and future prospects. Abstract presented in Govt. of India-UNDP Umbrella programme for technical Assistance TCDC workshop and Training programme on Hydrogen Energy and Related Technologies (29th November to 1st Dec. 1996), being organized by CSIR in collaboration with B.H.U.
25. **Arvind Kumar** and Ashok Kumar (1996). Phenol and Acrylamide degradation by a *Pseudomonas* species. Paper presented in oral form in National Seminar on Conservation of Endangered species and Ecosystems: Biotechnological and Ecological approaches, B.H.U., Varanasi (December 5-7, 1996), Abstract No.-22.
26. **Arvind Kumar**, Kusum Lata Singh and Ashok Kumar (1996). Isolation and Characterization of Acrylamide Degrading Bacteria. Paper presented in poster form in National Seminar on Biotechnology, Hardwar, (26-28 Dec.-1996), Abstract No.-54.
27. J.K. Thakur, G. Srinivas, G. Prasuna, **Arvind Kumar**, M.B. Tyagi, and A. Kumar (1995). Long Term preservation of N₂ fixing BGA on various immobilizing matrices. Presented in National Seminar on Azolla and Algal Biofertilizers for Rice, Coimbatore (Dec.-1995).
28. **Arvind Kumar (1991)**. Interaction of Environment and Development. Sixth, paper presentation contest for Prof. B.M. Johri Rolling Shield competition, sponsored by ministry of Environment and Forest, organized by Delhi University Botanical Society, Dept. of Botany, University of Delhi (Jan. 14, 1991).

INVITED TALK/Poster presentation GIVEN IN CONFERENCES/INSTITUTIONS:

1. Avinash Kumar Chaurasia, Ritika Kumari Singh, **Arvind Kumar (2023)**. **Characterization of herbal gold nanoparticles (HGNPS) of *Ipomea aquatica* and its anti-oxidant and anti-cancerous properties (12 Feb 2023)**. International Conference on Exploring New Horizons in Biotechnology (ENB-2023) & Mini-symposium on Recent Advances in Biotechnology Innovations (RABI-2023), 10th – 12th Feb, 2023, organized by School of Biotechnology, Institute of Science, BHU. Varanasi, UP, India-221005, in collaboration with Institute of Eminence, (IoE), BHU, Varanasi, UP India. **DOI:10:13140/RG.2.16038.19521**

2. Ritika Kumari Singh, Avinash Kumar Chaurasia, **Arvind Kumar (2023). Molecular and Immunological study of alloxan monohydrate treated BALB/c mice liver (Poster No. TII-031). (12 Feb 2023)** International Conference on Exploring New Horizons in Biotechnology (ENB-2023) & Mini-symposium on Recent Advances in Biotechnology Innovations (RABI-2023), 10th – 12th Feb, 2023, organized by School of Biotechnology, Institute of Science, BHU, Varanasi, UP, India-221005, in collaboration with Institute of Eminence, (IoE), BHU, Varanasi, UP India. **DOI:10:13140/RG.2.16038.19521**
3. **Invited talk** entitle: Current scenario of *Indian Biotech Industries*, Bio-safety Issues and Sustainability. Seminar cum workshop organized by Center of Food Science and Technology, Institute of Agriculture Sciences, BHU, Varanasi on **September 11, 2019**.
4. **Speaker in** International Symposium on “**Tumor Microenvironment and Cancer Prevention & Therapeutics**” being organized by the Jawaharlal Nehru University (JNU), New Delhi, India during **08-09 February 2019** entitle “**Lung Cancer Genesis Microenvironment formation by ethyl carbamate and mitigation of cancer by Achyranthes aspera extract**”.
5. Invited talk entitle: Bioinformatics & Its application in Modern Science development. In Bioinformatics Workshop organized by Aagrasen Kanaya PG College, Varanasi **16 Feb. 2018**.
6. Invited talk entitle: Revelation of new targeting molecule for cancer therapy. International symposium on cancer prevention and treatment **Feb, 9-10, 2018** at School of Life Sciences, JNU, New Delhi, India.
7. Invited talk entitle: Modern general biotechnology in relation with food science technology. Seminar cum workshop organized by Center of Food Science and Technology, Institute of Agriculture Sciences, BHU, Varanasi **25 Oct 2017**.
8. Invited talk entitle: Food Science Food Commodities Dye and Its Immunomodulatory Effects. Seminar cum workshop organized by Center of Food Science and Technology, Institute of Agriculture Sciences, BHU, **Varanasi 9 Nov 2017**
9. Convener of 1day seminar and 6-day workshop “Genes to Genomics, a current status from **1st March to 7th march, 2017**.”
10. Given invited talk in International conference “Persepectives on modern india and the emerging world order:old issues and new challenges” held between **20-21 Feb, 2016** at BHU, Institute of Science, seminar hall on topic entitled “Technology-Economy interface problems and prospects for India on **21 Feb. 2016**.”
11. Invited talk has been given on the topic entitle “**Carcinogenicity and Immunological effects of urethane present in various food products *in vivo***”. National Conference on Biotechnology and Biodiversity ”Biological Resources Conservation, Management and Sustainable Uses” **13-14th March 2012**, at Govt. M.S. Golwalkar College, Rewa (M.P.), India.
12. Talk has been delivered to the Lecturer and Assistant Professor on the topic entitles “**Gene and gene expression in eukaryotes**”, **January 5, 2007** (3 Jan to 25 Jan) at Academic Staff College, BHU.

BOOK PUBLISHED:

- **Arvind Kumar (2013). “Text book of Immunology” from TERI (International press & publisher). In book: Natural Bioactive Compounds Technological advancements, by AP;Elsevier**

CHAPTERS IN BOOK/ARTICLES:

1. Kriti Shrinet ^{1,2}, Ritika K. Singh ¹, Avinash K. Chaurasia ¹, Alok Tripathi ¹, Arvind Kumar ¹ 2021 Chap 17, Bioactive compounds and their future therapeutic applications. Natural Bioactive Compounds Technological Advancements p337-362 DOI: [10.1016/B978-0-12-820655-3.00017-3](https://doi.org/10.1016/B978-0-12-820655-3.00017-3)
2. Kamle S, Li D, Ojha A, Kumar A. (2019) Development of an Enzyme-Linked Immunosorbent Assay for the Detection of GM Proteins in Transgenic Crops/Produce. Methods Mol Biol. 2019; 1902:159-166. doi: 10.1007/978-1-4939-8952-2_12. PubMed PMID: 30543068.
3. S. Asthana, A. Tripathi, P.D. Dwivedi, A. Kumar and M. Das (2017). Chapter Methylene-Cyclo-Propyl Glycine in Sapindaceae. Book: Production and protection of horticultural crops by K.V. Peter ISBN: 9789386546418. Publisher: New India Publishing Agency (NIPA), New Delhi- 110088.
4. Arvind Kumar (2013). Aushdhiye paudho kee viagyanik pramanikta (Scientific proof of medicinal plants) article in Hindi. Vigyan Ganga p48-50 (ISSN 2331-2455) Publisher: Hindi Prakashan Samiti, BHU, Varanasi.
5. Suchitra Kamle, A. Ojha, Arvind Kumar (2013). Development of Enzyme linked Immunosorbant (ELISA) Assay for the detection of Bt-protein in transgenic cotton. Transgenic Cotton: Methods in Molecular Biology; Vol 958, page 131-138. (ISSN 978-1-62703-211-7) Springer. Citations:07
6. Arvind Kumar (2008). Gene: Expression and Regulation. Recent Advances in Life Sciences. Chapter-16: 353-381, IK international publisher. (ISSN 978-93-81141-04-5)
7. Singh, D.P., Tyagi, M.B., Kumar A., Prasuna E.G. and Kumar Ashok (2002). Bioactive secondary metabolites from cyanobacteria pp275-292, In: The Algological Research in India Volume-3rd. Festschrift to Prof. V N Raja Rao Edited by Prof. Anand, N.) Charok (ID 886143) Dehra Dun Bishen Singh and Mahendra Pal Singh. (ISBN: 10: 8121102081 9788121102087)

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Article In At National Level			
1.	2019	Jaiw Pradhogiki school and iski uplabdhiyan.	Pragati Kashi Hindu Vishwavidayalya shodh shikshinik patrika, Institute of Science. Vol 5, ISSN:2321-2934.
2.	2018	Naye cancer rodhi paudho ki khoj	“Prajna” journal of BHU
3.	2015	Global issues of GMO food crops, products reception and denunciation with current status of India	“Prajna” journal of BHU
4.	2015	Medicinal value of <i>Ficus religiosa</i> (peepal tree).	Science India (ISSN 0972-8287), the National Science Magazine), Published by Swadeshi Science Movement
5.	2013	Risk established between type-II diabetes mellitus and cancer: a review	Journal of Scientific Research, Vol 63 (1&2) Pages 69-77. BHU. ISSN: 0447-9483.

Project handled: Rs.

1	DBT	Departmental	01/04/2017	31/03/2018	0 Year(s) 11 Month(s) 31 Day(s)	Rs. 3710000	Edit	Remove
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