Dr. Aman Kaushik

Research Field

Bioinformatics, Artificial Intelligence, Machine Learning, Systems & Synthetic Biology, Genomics, Precision Medicine, Pharmacogenomics and Drug Discovery

Thrust Area

My research has been mainly focused on bioinformatics, particularly interested in **developing** novel methods and computational tools for interpreting large scale genomic and proteomic data and clinical data. I use unique proteomics and computational approaches to understand signaling heterogeneity in cancer. Increasing this knowledge will be valuable in advancing personalized cancer therapies. Cancer Biology, including functional genomics, particularly systems pharmacology to understand the impact of human variation on drug response.



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Research Background

- I have unique interdisciplinary training and over 10+ years of bioinformatics, genomics, and translational research experience. One of my main interests since 2017 is to develop cancer precision medicine approaches and apply to cancer. As a bioinformatics from different institutions, I have acquired rich experience in the analysis of data generated by NGS platforms (Expression, RNA-Seq, scRNA-Seq, Mutational Landscape, methylation).
- Skilled in Bioinformatics, PERL, Python, R, MySQL, JAVA, PHP, AJAX, CSS, HTML, MATLAB, Shell scripting.
- 3. I published more than 100+ research articles with citations of 2200+ times. My research focuses on developing computational methods to drive biological discoveries and medical innovations that will benefit public health by analyzing and modeling large-scale biomedical data, especially cancer genomics data. I developed different machine learning tools ChemGenix, AI-PDDT, Omega-X, Alpha-X, Beta-X, Gamma-X, WeiDock, ACPS, WeiBI, DTI-CDF, SPVec, ChemGenix and A-CaMP have had an impact on system based medicine which fascinate towards the Data Science, Omics Data analytics, Precision Medicine and Genomics.
- 4. Developed computational methods to deal with new types of molecular omics data, provided by our collaborators, exploiting formalized biological knowledge in the form of interaction networks and developed our own sources of pathway information relevant to cancer biology.

Academics

| UTHealth Science Center at Houston, USA Postdoctoral Scholar in Bioinformatics | Batch - 2021 -22 |
|--|-------------------|
| Shanghai Jiao Tong University, <i>Shanghai, China</i> Postdoctoral Scholar in Bioinformatics | Batch - 2017 - 19 |
| Ben Gurion University <i>Beer Sheva, Israel</i> Postdoctoral Scholar in Bioinformatics | Batch - 2016 - 17 |
| Gautam Buddha University Greater Noida, India PhD in Bioinformatics | Batch – 2013 -16 |
| Chhatrapati Shahu Ji Maharaj Kanpur University, India M.Sc. in Bioinformatics | Batch – 2011 -13 |

Research & Work Experience

| CSIR- Central Institute of Medicinal and Aromatic Plants, Lucknow, India | 2024 -Till |
|--|-------------|
| Position: Scientist (Computational Biology & Big Data Analysis) | |
| Topic: Precisions Medicine for Cancer Treatments | |
| AbCodeBio Technology Co., Ltd., Shanghai, <i>China</i> | 2023 - 2024 |
| Position: Scientist | |
| Topic: AbAg Prediction for Cancer Treatments | |
| CSIR-Central Drug Research Institute, Lucknow, India | 2022 - 2023 |
| Position: Project Scientist | |
| Topic: Precisions Medicine for Cancer Treatments | |
| University of Texas Health Science Center at Houston, Texas, USA | 2021 – 2022 |
| Position: J1 Visiting Scholar | |
| Topic: Precisions Medicine for Cancer Treatments | |
| School of Medicine, Jiangnan University, Wuxi, Jiangsu, 214122 China | 2019 – 2021 |
| Position: Assistant Professor (Lecturer) | |
| Courses Taught: Public Health Informatics, Bioinformatics | |
| Shanghai Jiao Tong University, Shanghai, China | 2017 - 2019 |
| Position: Postdoctoral Scholar | |
| Topic: Machine Learning approach to predict Precisions medicine for cancer treatments | |
| Principal Investigator: Prof. Dong-Qing Wei (President) | |
| Ben Gurion University of the Negey, Beer Sheva, Israel | 2016 - 2017 |
| Position: Postdoctoral Scholar | |
| Topic: Development of new cancer therapies (Developed VCF2SPECTRA Pipelines) | |
| Principal Investigator: Prof. Eitan Rubin | |
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🖆 Achievement and Awards

- I was awarded a "The Cancer Prevention Research Training Program (CPRIT) postdoctoral fellowship" from University of Texas Health Science Center at Houston, Texas, USA- December 2021.
- I was awarded a "Albany 2019 Conversation, New York, USA, Adenine Press (2019)", "Young Scientist Speaker Program".
- 3) I was awarded a "**Outstanding Young Researcher Award**" for Deep learning based approach for prevention of Alzheimer's disease organized by CBSB2018, Shenzhen, **China**.
- I was awarded a Travel grant and total expenses for CBSB2018, Shenzhen, China from the Ministry of Science and Technology of China (2016YFA0501703).
- I was awarded a Travel grant and total expenses for the MCCMB 2017 Conference, Moscow, Russia from Kreitman, Israeli Ministry of Science, ISF.
- 6) I was awarded a Travel grant and total expenses for "Worldwide innovative networking in personalized cancer medicine", WIN 2017 Symposium, Paris, France from WIN 2017 Symposium.
- 7) I was awarded a Travel grant and total expenses for the Joint ICGEB-ICTP-APCTP Workshop on Systems Biology and Molecular Economy of Microbial Communities from ICTP which was governed by UNESCO, IAEA and Italy.
- 8) I was awarded a 4-month Scholarship from the Ministry of Science, Technology Space Israel; I was part of the Cancer project as an attachment student during my Pre-submission to Final-submission of PhD; which was a collaborative project of 5 institutions of Israel.
- I was awarded an Indian Council of Medical Research (ICMR) Senior Research Fellowship (SRF) during my PhD 2016.

10) I was awarded a "Young Researcher Scholar Award" from the 17th International Conference on Healthcare & Life-Science Research (ICHLSR), 22-23 July 2017, Bangkok, Thailand organized by GRDS International Conference.

🖬 Research/Project Funding

Experienced and effective Grant writing helping organizations secure funds for "Evaluation and verification of the synergistic effect of low-temperature atmospheric plasma drugs in the treatment of breast cancer (JUSRP12049)" from Youth Fund Grant 2020-2021 from Jiangnan University, Wuxi, Jiangsu, China as a Principal Investigator. Highly experienced in fundraising and networking, with the mission of an institute at the forefront of my strategies.

Research Publications

- Singh, Samvedna, Aman C. Kaushik, Himanshi Gupta, Divya Jhinjharia, and Shakti Sahi. Identification of prognostic markers and potential therapeutic targets using gene expression profiling and simulation studies in pancreatic cancer. *Current Computer-Aided Drug Design* 20, no. 6 (2024): 955-973. (SCI Journal) Quartiles: Q2.
- Mehmood, Aamir, Sadia Nawab, Guihua Jia, Aman Chandra Kaushik, and Dong-Qing Wei. Supervised screening of Tecovirimat-like compounds as potential inhibitors for the monkeypox virus E8L protein. *Journal of Biomolecular Structure and Dynamics* 42, no. 15 (2024): 8100-8113. (*Co-corresponding Author), (SCI Journal) Quartiles: Q2.
- Mehmood, Aamir, Mohd Sajid Ali, Daixi Li, Aman Chandra Kaushik, and Dong-Qing Wei. Unveiling the Therapeutic Potential of Paclitaxel Combinations Against Breast Carcinoma and Identification of In Vivo Biomarkers. *Chemical Biology & Drug Design* 104, no. 3 (2024): e14627. (*Co-corresponding Author), (SCI Journal) Quartiles: Q1.
- Mehmood, Aamir, Aman Chandra Kaushik, and Dong-Qing Wei. DDSBC: A Stacking Ensemble Classifier-Based Approach for Breast Cancer Drug-Pair Cell Synergy Prediction. *Journal of Chemical Information and Modeling* 64, no. 16 (2024): 6421-6431. (SCI Journal) Quartiles: Q1.
- Jhinjharia, Divya, Aman Chandra Kaushik, and Shakti Sahi. A high-throughput structural dynamics approach for identification of potential agonists of FFAR4 for type 2 diabetes mellitus therapy. *Journal of Biomolecular Structure and Dynamics* (2023): 1-21. (SCI Journal) Quartiles: Q2.
- Mann, Mukesh, Rakesh P. Badoni, Harsh Soni, Mohammed Al-Shehri, Aman Chandra Kaushik, and Dong-Qing Wei. Utilization of deep convolutional neural networks for accurate chest X-ray diagnosis and disease detection. *Interdisciplinary Sciences: Computational Life Sciences* 15, no. 3 (2023): 374-392. (SCI Journal) Quartiles: Q1.
- Wang, Zhen, Aamir Mehmood, Jia Yao, Hui Zhang, Li Wang, Mohammed Al-Shehri, Aman Chandra Kaushik, and Dong-Qing Wei. Combination of furosemide, gold, and dopamine as a potential therapy for breast cancer. *Functional & Integrative Genomics* 23, no. 2 (2023): 94. (*Co-corresponding Author), (SCI Journal) Quartiles: Q1.
- Aman Chandra Kaushik and Zhongming Zhao (2023). Machine Learning-Driven Exploration of Drug Therapies for Triple Negative Breast Cancer Treatment. Frontiers in Molecular Biosciences, 10, 1215204. (SCI Journal) Quartiles: Q1.
- Raj, Desh, Abhilash Vijay Nair, Jyotsna Sharma, Shakti Prakash, Aman Kaushik, Swarnali Basu, Shikha Sahu et al. Salmonella Typhimurium effector SseI regulates host peroxisomal dynamics to acquire lysosomal cholesterol for better intracellular growth. *EMBO Reports* (2023): 2023-02. (SCI Journal) Quartiles: Q1.
- Aamir Mehmood, Sadia Nawab, Aman Chandra Kaushik, Dong-Qing Wei (2022). Ranking breast cancer drugs and biomarkers identification using machine learning and pharmacogenomics approaches. ACS Pharmacology & Translational Science. Pt-2022-00212k (*Co-corresponding

Author), (SCI Journal) Quartiles: Q1

- Aamir Mehmood, Sadia Nawab, Yifan Jin, Aman Chandra Kaushik, Dong-Qing Wei (2022). Mutational impacts on the N and C terminal domains of the MUC5B protein: A transcriptomics and structural biology study. ACS Omega. Ao-2022-04871b (acsomega.2c04871) (*Co-corresponding Author), (SCI Journal) Quartiles: Q1
- Mehmood, Aamir, Sadia Nawab, Yanjing Wang, Aman Chandra Kaushik, and Dong-Qing Wei. (2022). Discovering potent inhibitors against the Mpro of the SARS-CoV-2. A medicinal chemistry approach. *Computers in Biology and Medicine* (2022): 105235. (*Co-corresponding Author), (SCI Journal) Quartiles: Q1
- Cheng-Tang Pan, Karishma Dutt, Chung-Kun Yen, Ajay Kumar, Aman Chandra Kaushik, Dong-Qing Wei, Amit Kumar, Zhi-Hong Wen, Wen-Hsin Hsu, You-Ling Shiue. (2022). Characterization of Piezoelectric Properties of Ag-NPs Doped PVDF Nanocomposite Fibres Membrane Prepared by Near Field Electrospinning. *Combinatorial Chemistry and High Throughput Screening*. doi: 10.2174/1386207324666210302100728. (SCI Journal) Quartiles: Q3
- 14. Aman Chandra Kaushik, Qiqi Wu, Li Lin, Haibo Li, Longqi Zhao, Zilu Wen, Yanzheng Song, Qihang Wu, Jin Wang, Xiaokui Guo, Hualin Wang, Xiaoli Yu, Dongqing Wei, Shulin Zhang (2021). Exosomal ncRNAs profiling of mycobacterial infection identified miRNA-185-5p as a novel biomarker for tuberculosis. *Briefings in Bioinformatics.* DOI: 10.1093/bib/bbab210. (SCI Journal) Quartiles: Q1
- Xianfang Wang, Yifeng Liu, Zhiyong Du, Mingdong Zhu, Aman Chandra Kaushik, Xue Jiang, Dongqing Wei (2021). Prediction of Protein Solubility Based on Sequence Feature Fusion and DDcCNN. *Interdisciplinary Sciences: Computational Life Sciences*. <u>https://doi.org/10.1007/s12539-021-00456-1</u>. (SCI Journal) Quartiles: Q2
- 16. Aman Chandra Kaushik, Aamir Mehmood, Gurudeeban Selvaraj, Xiaofeng Dai, Yi Pan and Dong-Qing Wei. (2021). CoronaPep: An Anti-coronavirus Peptide Generation Tool. *IEEE/ACM Transactions on Computational Biology and Bioinformatics.* doi: 10.1109/TCBB.2021.3064630. (SCI Journal) Quartiles: Q2
- 17. Muhammad Tahir Khan, Sajid Ali, Anwar sheed khan, Arif ali, Abbas Khan, Aman Chandra Kaushik, Muhammad Irfan, Sathishkumar Chinnasamy, Shulin Zhang, Yu-Juan Zhang, Zhilei Cui, Amie Jinghua Wei, Yanjie Wang, Mingzhu Zhao, Kejia Liu, Heng Wang, Muhammad Tariq Zeb, Dong Qing Wei. (2021). Insight into the drug resistance whole genome of Mycobacterium tuberculosis isolates from Khyber Pakhtunkhwa, Pakistan. *Infection, Genetics and Evolution*. 92: 104861. <u>https://doi.org/10.1016/j.meegid.2021.104861</u>. (SCI Journal) Quartiles: Q1
- Khan, Muhammad Tahir, Muhammad Irfan, Hina Ahsan, Abrar Ahmed, Aman Chandra Kaushik, Anwar Sheed Khan, Sathishkumar Chinnasamy, Arif Ali, and Dong-Qing Wei. (2021). Structures of SARS-CoV-2 RNA-Binding Proteins and Therapeutic Targets. *Intervirology* 64, no. 2: 55-68. <u>https://doi.org/10.1159/000513686</u>. (SCI Journal) Quartiles: Q3
- Mehmood, Aamir, Aman Chandra Kaushik, Qiankun Wang, Cheng-Dong Li, and Dong-Qing Wei. (2021). Bringing Structural Implications and Deep Learning-Based Drug Identification for KRAS Mutants. *Journal of Chemical Information and Modeling*, 61, 2, 571–586.

https://doi.org/10.1021/acs.jcim.0c00488. (SCI Journal) Quartiles: Q1

- Aman Chandra Kaushik, Mengyang Li, Aamir Mehmood, Xiaofeng Dai and Dong-Qing Wei. (2021). ACPS: An accurate bioinformatics tool for precision based anti-cancer peptide generation via omics data. *Chemical Biology Drug Design* Volume97, Issue2, Pages 372-382, https://doi.org/10.1111/cbdd.13789. (SCI Journal) Quartiles: Q2
- 21. Aman Chandra Kaushik, Yanjing Wang, Xiangeng Wang and Dong-Qing Wei. (2021). Irinotecan and vandetanib create synergies for treatment of pancreatic cancer patients with concomitant TP53 and KRAS mutations. *Briefings in Bioinformatics*. https://doi.org/10.1093/bib/bbaa149 (*Corresponding Author). (SCI Journal) Quartiles: Q1
- 22. Aman Chandra Kaushik, Aamir Mehmood, Shaoliang Peng, Yu-Juan Zhang, Xiaofeng Dai, and Dong-Qing Wei. (2021). A-CaMP: a tool for anti-cancer and antimicrobial peptide generation. *Journal of Biomolecular Structure and Dynamics*: 39(1), 285-293. https://doi.org/10.1080/07391102.2019.1708796. (SCI Journal) Quartiles: Q2
- 23. Aman Chandra Kaushik, Aamir Mehmood, Dong-Qing Wei, and Xiaofeng Dai. (2020). Globally ncRNAs expression profiling of TNBC and screening of functional lncRNA. *Frontiers in Bioengineering and Biotechnology* 8 (2020): 1480. <u>https://doi.org/10.3389/fbioe.2020.523127</u> (*First and Co-Corresponding Author). (SCI Journal) Quartiles: Q1
- 24. Aman Chandra Kaushik, Aamir Mehmood, Xiaofeng Dai, and Dong-Qing Wei. (2020). Pan-cancer Analysis and Drug Formulation for GPR139 and GPR142. *Frontiers in Pharmacology*, 11: 2154. https://doi.org/10.3389/fphar.2020.521245. (*First and Co-Corresponding Author). (SCI Journal) Quartiles: Q1
- 25. Cheng-Tang Pan, Shao-Yu Wang, Chung-Kun Yen, Ajay Kumar, Shiao-Wei Kuo, Jing-Long Zheng, Zhi-Hong Wen, Rachiat Singh, Satya P. Singh, Muhammad Tahir Khan, Ravi Kumar Chaudhary, Xiaofeng Dai, Aman Chandra Kaushik, Dong-Qing Wei, Yow-Ling Shiue and Wei-Hsi Chang. (2020). Polyvinylidene Fluoride-Added Ceramic Powder Composite Near-Field Electrospinned Piezoelectric Fiber-Based Low-Frequency Dynamic Sensors. ACS OMEGA, 5(28), 17090–17101. https://doi.org/10.1021/acsomega.0c00805 (*Co-corresponding Author). (SCI Journal) Quartiles: Q1
- 26. Yu-Xin Du, Ke-Ning Li, Xian-Geng Wang, Aman Chandra Kaushik, Muhammad Junaid, Dong-Qing Wei. (2020). Identification of chlorprothixene as a potential drug that induces apoptosis and autophagic cell death in acute myeloid leukemia cells. *FEBS Journal*. (Wiley). 287(8):1645-1665. doi:10.1111/febs.15102. (SCI Journal). Quartiles: Q1
- 27. Asma Sindhoo Nangraj, Gurudeeban Selvaraj, Satyavani Kaliamurthi, Aman Chandra Kaushik, William C. Cho and Dong Qing Wei. (2020). Integrated PPI-and WGCNA-Retrieval of Hub Gene Signatures Shared Between Barrett's Esophagus and Esophageal Adenocarcinoma. *Frontiers in Pharmacology*. 11: 881. doi: 10.3389/fphar. (SCI Journal) Quartiles: Q1
- 28. Aman Chandra Kaushik, Aamir Mehmood and Dong-Qing Wei, Xiaofeng Dai. (2020). Systems biology integration and Screening of reliable prognostic markers to create synergies in the control of lung cancer patients. *Frontiers in Molecular Biosciences*, 7, 47. https://doi.org/10.3389/fmolb.2020.00047. (SCI Journal) Quartiles: Q1

- 29. Aman Chandra Kaushik, Aamir Mehmood and Xiaofeng Dai, Dong-Qing Wei. (2020). WeiBI (web-based platform): Enriching integrated interaction network with increased coverage and functional proteins from genome-wide experimental OMICS data. *Scientific Reports*, 10(1), 1-7. doi: 10.1038/s41598-020-62508-8. (SCI Journal) Quartiles: Q1
- 30. Aman Chandra Kaushik, Aamir Mehmood and Dong-Qing Wei, Xiaofeng Dai. (2020). Robust Biomarker Screening Using Spares Learning Approach for Liver Cancer Prognosis. *Frontiers in Bioengineering and Biotechnology* 8: 241. https://doi.org/10.3389/fbioe.2020.00241. (SCI Journal) Quartiles: Q1
- 31. Kumar, Ajay, Ravi Kumar Chaudhary, Rachita Singh, Satya P. Singh, Shao-Yu Wang, Zheng-Yu Hoe, Cheng-Tang Pan et al. Aman Chandra Kaushik & Dai, Xiaofeng. (2020). Nanotheranostic Applications for Detection and Targeting Neurodegenerative Diseases. *Frontiers in Neuroscience*, 14, 305. https://doi.org/10.3389/fnins.2020.00305. (*Co-corresponding Author). (SCI Journal) Quartiles: Q2
- 32. Khan, Muhammad Tahir, Sajid Ali, Muhammad Tariq Zeb, Aman Chandra Kaushik, Shaukat Iqbal Malik, and Dong-Qing Wei. (2020). Gibbs free energy calculation of mutation in PncA and RpsA associated with pyrazinamide resistance. *Frontiers in Molecular Biosciences*, 7, 52. (*Co-corresponding Author). (SCI Journal) Quartiles: Q1
- 33. Yu-Fang Zhang, Xiangeng Wang, Aman Chandra Kaushik, Yanyi Chu, Xiaoqi Shan, Ming-Zhu Zhao, Qin Xu, Dong-Qing Wei. (2020). SPVec: A Word2vec-inspired feature representation method for Drug-Target Interaction Prediction. *Frontiers in Chemistry*. 7, 895. https://doi.org/10.3389/fchem.2019.00895. (SCI Journal) Quartiles: Q1
- 34. Khan, Muhammad Tahir, Aman Chandra Kaushik, Qurrat ul ain Rana, Shaukat Iqbal Malik, Anwar Sheed Khan, Dong-Qing Wei, Wasim Sajjad, Shabir Ahmad, Sajid Ali, and Muhammad Irfan. (2020). Characterization and synthetic biology of lipase from Bacillus amyloliquefaciens strain. *Archives of Microbiology*, 1497-1506. https://doi.org/10.1007/s00203-020-01869-0. (SCI Journal) Quartiles: Q2
- 35. Dai, Xiaofeng, Olivier Hakizimana, Xuanhao Zhang, Aman Chandra Kaushik, and Jianying Zhang. (2020). Orchestrated efforts on host network hijacking: Processes governing virus replication. *Virulence*, 11(1), 183-198. doi: 10.1080/21505594.2020.1726594. (SCI Journal) Quartiles: Q1
- 36. Chinnasamy, Sathishkumar, Gurudeeban Selvaraj, Chandrabose Selvaraj, Aman Chandra Kaushik, Satyavani Kaliamurthi, Abbas Khan, Sanjeev Kumar Singh, and Dong-Qing Wei. (2020). Combining in silico and in vitro approaches to identification of potent inhibitor against phospholipase A2 (PLA2). *International Journal of Biological Macromolecules*, 144, 53-66. doi: 10.1016/j.ijbiomac.2019.12.091. (SCI Journal) Quartiles: Q1
- 37. Yanyi Chu, Aman Chandra Kaushik, Xiangeng Wang, Wei Wang, Yufang Zhang, Xiaoqi Shan, Dennis R. Salahub, Yi Xiong, and Dong-Qing Wei. (2019). DTI-CDF: a cascade deep forest model towards the prediction of drug-target interactions based on hybrid features. *Briefings in Bioinformatics*. 22(1):451-462. doi: 10.1093/bib/bbz152. (SCI Journal) Quartiles: Q1

- 38. Mehmood, Aamir, Muhammad Tahir Khan, Aman Chandra Kaushik, Anwar Sheed Khan, Muhammad Irfan, and Dong-Qing Wei. (2019). Structural dynamics behind clinical mutants of PncA-Asp12Ala, Pro54Leu, and His57Pro of Mycobacterium tuberculosis associated with pyrazinamide resistance. *Frontiers in Bioengineering and Biotechnology* 7: 404. https://doi.org/10.3389/fbioe.2019.00404. (SCI Journal) Quartiles: Q1
- 39. Aman Chandra Kaushik, Aamir Mehmood, Arnav Kumar Upadhyay, Shalinee Paul, Shubham Srivastava, Prayuv Mali, Yi Xiong, Xiaofeng Dai, Dong-Qing Wei, Shakti Sahi. (2019). CytoMegaloVirus Infection Database: a public omics database for systematic and comparable information of CMV. *Interdisciplinary Sciences: Computational Life Sciences*. 12(2):169-177. doi: 10.1007/s12539-019-00350-x. (SCI Journal) Quartiles: Q2
- 40. Yanjing Wang, Xiangeng Wang, Yi Xiong, Cheng-Dong Li, Qin Xu, Lu Shen, Aman Chandra Kaushik, Dong-Qing Wei. (2019). An Integrated Pan-Cancer Analysis and Structure-Based Virtual Screening of GPR15. *International Journal of Molecular Sciences (MDPI)*. 10;20(24):6226. doi: 10.3390/ijms20246226. (*Co-corresponding Author). (SCI Journal) Quartiles: Q1
- Xiaofeng Dai, Aman Chandra Kaushik, Jianying Zhang. (2019). The emerging role of major regulatory RNAs in cancer control. *Frontiers in Oncology.* doi: 10.3389/fonc.2019.00920. (SCI Journal) Quartiles: Q1
- 42. Sathishkumar Chinnasamy, Gurudeeban Selvaraj, Aman Chandra Kaushik, Satyavani Kaliamurthi, Asma Sindhoo Nangraj, Chandrabose Selvaraj, Sanjeev Kumar Singh, Ramanathan Thirugnanasambandam, Keren Gu, Donq-Qing Wei. (2019). Molecular docking and molecular dynamics simulation studies to identify potent AURKA inhibitors: assessing the performance of density functional theory, MM-GBSA and mass action kinetics calculations. *Journal of Biomolecular Structure and Dynamics.* 38(14):4325-4335. doi: 10.1080/07391102.2019.1674695. (SCI Journal) Quartiles: Q2
- 43. Muhammad Tahir Khan, Aman Chandra Kaushik, Aamer Iqbal Bhatti, Yu-Juan Zhang, Shulin Zhang, Amie Jinghua Wei, Shaukat Iqbal Malik, Dong Qing Wei. (2019). Marine Natural Products and Drug Resistance in Latent Tuberculosis. *Marine Drugs (MDPI)*. 17(10):549. doi: 10.3390/md17100549. (SCI Journal) Quartiles: Q2
- 44. Aman Chandra Kaushik, Dong Qing Wei. (2019). Evaluation and validation of synergistic effect of predicted amyloid-beta (A beta) inhibitor by deep neural network. In *Journal of Biomolecular Structure and Dynamics*, vol. 37, pp. 8-8. 530 WALNUT STREET, STE 850, PHILADELPHIA, PA 19106 USA: TAYLOR & FRANCIS INC, 2019. (SCI Journal) Quartiles: Q2
- 45. Cheng-Tang Pan, Wei-Hsi Chang, Ajay Kumar, Satya P Singh, Aman Chandra Kaushik, Jyotsna Sharma, Zheng-Jing Long, Zhi-Hong Wen, Sunil Kumar Mishra, Chung-Kun Yen, Ravi Kumar Chaudhary, Yow-Ling Shiue. (2019). Nanoparticles-mediated Brain Imaging and Disease Prognosis by Conventional as well as Modern Modal Imaging Techniques: a Comparison. *Current Pharmaceutical Design (Bentham Science)*. 25(24):2637-2649. doi: 10.2174/1381612825666190709. (SCI Journal) Quartiles: Q2
- 46. Yongqin Yin, Bo Li, Kejie Mou, Muhammad T. Khan, **Aman Chandra Kaushik**, Dongqing Wei, Yu-Juan Zhang. (2019). Stoichioproteomics reveal oxygen usage bias, key proteins and pathways in

glioma. *BMC Medical Genomics, volume 12, Article number: 125.* https://doi.org/10.1186/s12920-019-0571-y. (SCI Journal) Quartiles: Q2

- 47. Aamir Mehmood, Aman Chandra Kaushik and Dong-Qing Wei. (2019). Prediction and validation of potent peptides against Herpes Simplex Virus Type 1 (HSV-1) via immunoinformatics and systems biology approach. *Chemical Biology Drug Design*. 94(5), pp1868-1883, doi: 10.1111/cbdd.13602. (SCI Journal) Quartiles: Q2
- 48. Wang, Yanjing, Xiangeng Wang, Yi Xiong, Aman Chandra Kaushik, Junaid Muhammad, Abbas Khan, Hao Dai, and Dong-Qing Wei. (2019). New Strategy for Identifying Potential Natural HIV-1 Non-nucleoside Reverse Transcriptase Inhibitors Against Drug-Resistance: an *in silico* study. *Journal of Biomolecular Structure and Dynamics.* 19:1-19. doi: 10.1080/07391102.2019.1656673. (SCI Journal) Quartiles: Q2
- 49. Aman Chandra Kaushik, Ajay Kumar, Satya P Singh, Xiangeng Wang, Yan-Jing Wang, Cheng-Tang Pan, Yow-Ling Shiue, Dong-Qing Wei. (2019). Evalution of anti-EGFR-iRGD recombinant protein with GOLD nanoparticles synergistic effect on antitumor efficiency using optimized Deep neural network. *RSC Advances*. DOI: 10.1039/C9RA01975H. (SCI Journal) Quartiles: Q1
- 50. Aman Chandra Kaushik, Ajay Kumar, Chun-Yen Yu, Shiao-Wei Kuo, Shih-Shin Liang, Satya P Singh, Xiangeng Wang, Yan-Jing Wang, Chung-Kun Yen, Xiaofeng Dai, Dong-Qing Wei, Cheng-Tang Pan, Yow-Ling Shiue. (2019). PCL-DOX Macro drops: Evaluation of enhanced intracellular delivery of doxorubicin in metastatic cancer cells by in-silico and in-vitro approach. *New Journal of Chemistry (RSC)*. DOI: 10.1039/C9NJ01902B. (SCI Journal) Quartiles: Q1
- 51. Ke-Ning Li, Cong-Ling Xu, Muhammad Junaid, Aman Chandra Kaushik, Dong-Qing Wei. (2019). Comprehensive epigenetic analyses reveal transcription regulatory network driving lung metastasis of breast cancer. *Journal of Cellular and Molecular Medicine* (Wiley). DOI: 10.1111/jcmm.14424 (SCI Journal) Quartiles: Q1
- 52. Aman Chandra Kaushik, Deeksha Gautam, Asma Sindhoo Nangraj, Dong-Qing Wei and Shakti Sahi. (2019). Protection of Primary Dopaminergic Midbrain Neurons through impact of small molecule ligands using Virtual screening of GPR139 supported by a molecular dynamic simulation and Systems Biology. *Interdisciplinary Sciences: Computational Life Sciences (Springer)*. DOI: 10.1007/s12539-019-00334-x. (SCI Journal) Quartiles: Q2
- 53. Abbas Khan, Aman Chandra Kaushik, Syed Shujait Ali, Nisar Ahmad and Dongqing Wei. (2019). Deep-learning-based targets screening and similarity search for the predicted inhibitors of the pathways in Parkinson's diseases. *RSC Advances*. DOI:10.1039/c9ra01007f. (*Equal First Author). (SCI Journal) Quartiles: Q1
- 54. Muhammad T. Khan, Aman Chandra Kaushik, Shaukat I. Malik, Sajid Ali and Dongqing Wei. (2019). Artificial neural networks for prediction of tuberculosis disease. *Frontiers in Microbiology*. doi: 10.3389/fmicb.2019.00395. (*Equal First Author). (SCI Journal) Quartiles: Q1
- 55. Shah SB, Aman Chandra Kaushik, Ali F, Huang L, Lu X, Sartaj L, Xu P, Tang H, (2019). Computational and in vitro analysis of an HBCD degrading gene DehHZ1 from strain HBCD-sjtu.

Journal of biological regulators and homeostatic agents; 33(1):157-162. (SCI Journal) Quartiles: Q3

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Poster presentation

91. Aman Chandra Kaushik, Yanjing Wang, Dongqing Wei. Machine Learning approach to predict Precisions medicine for cancer treatments, From Computational Biophysics to

Systems Biology (CBSB2018), Shenzhen, China.

- 92. Aman Chandra Kaushik, Deeksha Gautam and Shakti Sahi, Insights into the signalling pathways studies of GPR139 and impacts of their inhibitors using systems biology and pharmacokinetics, 8th Moscow Conference on Computational Molecular Biology (MCCMB'17) Moscow, Russia, July 27-30, 2017.
- 93. Aman Chandra Kaushik and Sanjay Kumar, Activity analysis of economically importance antibiotics drugs in Mycobacterium tuberculosis H37Rv, Joint ICGEB-ICTP-APCTP Workshop on Systems Biology and Molecular Economy of Microbial Communities from ICTP which governed by UNESCO, IAEA and Italy, July 03-07, 2017 (One Week Workshop).
- 94. Aman Chandra Kaushik and Eitan Rubin, Molecular Investigation of Wild and Mutant Active Binding Site Expression of GPR15 in Cancer using Structure based Virtual Screening and Molecular Dynamics Simulation in Expediting Global Innovation in Precision Cancer Medicine, WIN 2017 Symposium, Paris, France, June 26-27, 2017.
- 95. Aman Chandra Kaushik and Shakti Sahi, Natural Drug Database for Liver cancer-NDDLC Server, Development and advancement in conservation, propagation and sustainable utilization of medicinal plants (DSUMP 2017), School of Biotechnology, Gautam Buddha University, Greater Noida, India, January 20-21, 2017.
- 96. Aman Chandra Kaushik and Shakti Sahi, Insight Molecular Dynamics Simulations studies of Unbound-Bound states of GPR142 Receptor in a Membrane-Aqueous System, INDUSTRY-ACADEMIA MEET, 2016, School of Biotechnology, Gautam Buddha University, Greater Noida, India, April 18, 2016.
- 97. Aman Chandra Kaushik, Anshul Raghuvanshi, Pavan Kumar, Vikrant Nain, Rekha Puria and Shakti Sahi, Identification of novel inhibitors of mTOR-kinase through docking studies, Accelerating Biology 2014 (Computing Life) on current trends in Bioinformatics, BRAF, C-DAC, Pune, India, February 18-20, 2014.

<u>Book</u>

- 98. Aman Chandra Kaushik, Aamir Mehmood, Ajay Kumar, Dong-Qing Wei, Shakti Sahi, Zhengtian Yu, (2022). Cheminformatics and Bioinformatics at the Interface with Systems Biology: Bridging Chemistry and Medicine, (Total 10 Chapters). Royal Society of Chemistry, Cambridge, United Kingdom, ISBN-1839161620.
- 99. Aman Chandra Kaushik, Ajay Kumar, Shiv Bharadwaj, Ravi Kumar Chaudhary, Shakti Sahi, Bioinformatics Techniques for Drug Discovery Applications for Complex Diseases in Springer Briefs in Computer Science (Springer Nature). 2018/4/25. Print ISBN: 978-3-319-75731-5, Online ISBN: 978-3-319-75732-2, Series Print ISSN:

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- 100. Aman Chandra Kaushik, Shakti Sahi and Dong-Qing Wei (2022). Computational Methods for Structure-Based Drug Design Through System Biology, in Book Title: Computational Methods for Estimating the Kinetic Parameters of Biological Systems. DOI: 10.1007/978-1-0716-1767-0 9.
- 101. Aman Chandra Kaushik and Shakti Sahi (2021). Computational cancer genomics in Book Title: Chemoinformatics and Bioinformatics in the Pharmaceutical Sciences (Academic Press is an imprint of Elsevier) Chapter 11, pp 329-346, Edited By Navneet Sharma Himanshu Ojha Pawan Kumar Raghav Ramesh K. Goyal, 125 London Wall, London EC2Y 5AS, United Kingdom, ISBN: 978-0-12-821748-1. https://doi.org/10.1016/B978-0-12-821748-1.00007-5.
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- 103. Aman Chandra Kaushik, Shiv Bharadwaj, Ajay Kumar, Avinash Dhar, Dongqing Wei (2018). New Trends in Artificial Intelligence: Applications of Particle Swarm Optimization in Biomedical Problems in Book Title: Intelligent System (InTechOpen). Chapter 9, pp 193-207, Edited by Chatchawal Wongchoosuk, ISBN 978-1-78923-606-4, eISBN 978-1-78923-607-1.
- 104. Aman Chandra Kaushik and Shakti Sahi (2018). Perspective on Trends in Drug Discovery: Deciphering GPCRs through integration of systems and switching biology in "Frontiers in Drug Design and Discovery" (Bentham Science Publishers), Chapter 3, pp 91-112, Edited by Atta-ur-Rahman, M. Iqbal Choudhary, ISSN: 1574-0889 (Print), ISSN: 2212-1064 (Online), ISBN: 978-1-68108-583-8 (Print), ISBN: 978-1-68108-582-1 (Online).

Software Copyright

- **105.** Chinese Copyright acceptance for "Anti-cancer Vaccine Scanner (ACVS): Precision- based approach for cancer treatments" [2018R11L326262].
- Chinese Copyright acceptance for "CytoMegaloVirus Database: CMVdb V1.0" [2020SR0249161].

🚔 Editor in Journals

- 1. Section Editor (Artificial Intelligence for Computer-Assisted Drug Discovery) for Current Computer-Aided Drug Design, Bentham Science.
- Guest Editor for Special Issue "Artificial Intelligence approaches in CCADD and potential impacts and applications to Conventional Medicines (BMS-CCADD-2022-HT-8)" for Current Computer-Aided Drug Design, Bentham Science.
- **3.** Guest Editor for Special Issue "CADD and Molecular Dynamic Simulations: Potential Impacts to Conventional Medicines"): Combinatorial Chemistry & High Throughput Screening (CCADD, Bentham Science).
- 4. Former Assistant Editor: Interdisciplinary Sciences: Computational Life Sciences (Springer Nature)
- 5. Guest Editor for Special Issue on "Computational Genomics and Molecular Medicine for Emerging COVID-19" (IEEE/ACM Transactions in Computational Biology and Bioinformatics). <u>https://www.computer.org/digital-library/journals/tcbb/call-for-papers-special-issue-on-co</u> mputational-genomics-and-molecular-medicine-for-emerging-covid-19
- 6. Guest Editor for Special Issue (BMS-CPD-2018-HT12-500 "Computational perspective on the current state of the methods and new challenges in cancer drug discovery"): Current Pharmaceutical Design (Bentham Science). https://www.ncbi.nlm.nih.gov/pubmed/30675829
- 7. Guest Editor for Frontiers in Genetics for Functional Genomics of Host-Microbiome Interactions Mediated Disease Resistance in Livestock.

Harak Invited Talk

Invited talk on **Computational Aspects of Systems Biology** organized by National Assembly Systems Biology and Computational Systems Biology Conference at Shanghai Jiao Tong University Minhang Campus, 21-22 September 2019.

Research Based Participation in Workshop

1) 2014 - Participated in International symposium on "Accelerating Biology 2014 (Computing Life)" on current trends in Bioinformatics, BRAF, C-DAC, Pune.

 2013 - Workshop Training on System Biology From Indian Institute of Information Technology (IIIT) Allahabad organized by Council of Scientific and Industrial Research (CSIR).

3) 2012- A Workshop Training on Drug Discovery Technology From Indian Institute of Technology (IIT) Guwahati organized by Biodiscovery.

I hereby certify that the information given above is true and correct to the best of my knowledge and belief.

(Aman Chandra Kaushik)