

## National Post Doctoral Fellow

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## Academic qualifications

12/2022-To date	SERB National Post Doctoral Fellow, All India Institute of Medical Science (AIIMS), New Delhi, India.
5/2022-11/2022	Postdoctoral Senior Research Fellow on a CCRUM, Govt. of India funded project at Jamia Millia Islamia, New Delhi, India.
7/2018-4/2022	Ph.D. (Interdisciplinary Research), Senior Research Fellow at CIRBSc., Jamia Millia Islamia, New Delhi, India.
7/2016-7/2018	M.Phil. (Interdisciplinary Basic Sciences), Junior Research Fellow, CIRBSc., Jamia Millia Islamia, New Delhi, India.
7/2014-6/2016	M.Sc. (Bioinformatics [Cancer Systems Biology, dissertation]), Dept. of Computer Science, Jamia Millia Islamia, New Delhi, India.
7/2011-6/2014	B.Sc. Hons. (Biotechnology), IFTM University, Moradabad, UP, India.

## Short bio

Dr. Taj Mohammad is currently DST SERB National Postdoctoral Fellow (N-PDF) at All India Institute of Medical Sciences (AIIMS), New Delhi and collaboratively working with Dr. Hassan's Lab at Jamia Millia Islamia, New Delhi. Dr. Taj obtained his PhD on high-throughput analyses of genomic alterations and differential gene expression in prostate cancer. His research interests lie in genomic and proteomic analysis over complex diseases, structure-guided drug discovery and NGS analytics. His current focus is on the development of easy-to-use GUI platforms for people with non-bioinformatics backgrounds.

## Featured research

- InstaDock: A Single-click Graphical User Interface for Molecular Docking-based Virtual High-throughput Screening. *Briefings in Bioinformatics* (2021). **Impact Factor: 13.99** – (First author)
- Mutated CEACAMs Disrupt Transforming Growth Factor Beta Signaling and Alter the Intestinal Microbiome to Promote Colorectal Carcinogenesis. *Gastroenterology* (2020). **Impact Factor: 33.88** – (Co-author)
- Targeting pyruvate dehydrogenase kinase signaling in effective cancer therapy. *BBA – Reviews on Cancer* (2021). **Impact Factor: 11.41** – (Co-author).
- $\beta$ 2-Spectrin (SPTBN1) as a Therapeutic Target for Diet-Induced Liver Disease and Preventing Cancer Development. *Science – Translational Medicine* (2021). **Impact Factor: 19.32** – (Co-author).

## Publication metadata (based on Google Scholar & Clarivate InCites)

Total no. of publications: 100<sup>+</sup>      Citations: 3300<sup>+</sup>      *h*-index: 31      *i10*-index: 55



S. No.↓	Publications 2022	I. F.
93.	Atiya, Akhtar, Habiba Shahidi, <b>Taj Mohammad</b> , Sharaf E. Sharaf, Waleed Al Abdulmonem, Ghulam Md Ashraf, Abdelbaset Mohamed Elsbali et al. "A virtual screening investigation to identify bioactive natural compounds as potential inhibitors of cyclin-dependent kinase 9." <i>Journal of Biomolecular Structure and Dynamics</i> (2022): 1-12.	5.235
92.	Md Imtaiyaz Hassan, Darakshan Anjum, <b>Taj Mohammad</b> , Manzar Alam, Mohd Shahnawaz Khan, Moyad Shahwan, Anas Shamsi, and Dharmendra Kumar Yadav. "Integrated virtual screening and MD simulation study to discover potential inhibitors of Lyn-kinase: targeting cancer therapy." <i>Journal of Biomolecular Structure and Dynamics</i> (2022): 1-11.	5.235
91.	Aiman Mushtaq, Prithvi Singh, Gulnaz Tabassum, <b>Taj Mohammad</b> , Md Imtaiyaz Hassan, Mansoor Ali Syed, and Ravins Dohare. "Unravelling hub genes as potential therapeutic targets in lung cancer using integrated transcriptomic meta-analysis and in silico approach." <i>Journal of Biomolecular Structure and Dynamics</i> (2022): 1-14.	5.235
89.	Akhtar Atiya, Shivani Batra, <b>Taj Mohammad</b> , Nasser M. Alorfi, Waleed Al Abdulmonem, Fahad A. Alhumaydhi, Ghulam Md Ashraf, Saleh S. Baesa, Abdelbaset Mohamed Elsbali, and Moyad Shahwan. "Desmodin and isopongachromene as potential inhibitors of cyclin-dependent kinase 5: phytoconstituents targeting anticancer and neurological therapy." <i>Journal of Biomolecular Structure and Dynamics</i> (2022): 1-11.	5.235
88.	Bader Saud Alotaibi, Jatin Joshi, Mohammad Raghbil Hasan, Mohd Shahnawaz Khan, Salem Hussain Alharethi, <b>Taj Mohammad</b> , Fahad A. Alhumaydhi, Abdelbaset Mohamed Elsbali, and Md Imtaiyaz Hassan. "Identifying Isocononin and Candidissiol as Rho-associated protein kinase 1 (ROCK1) inhibitors: a combined virtual screening and MD simulation approach." <i>Journal of Biomolecular Structure and Dynamics</i> (2022): 1-10.	5.235
87.	Mohd Adnan, Saadgee Koli, <b>Taj Mohammad</b> , Arif Jamal Siddiqui, Mitesh Patel, Nawaf Alshammari, Fevzi Bardakci, Abdelbaset Mohamed Elsbali, and Md Imtaiyaz Hassan. "Searching for novel anaplastic lymphoma kinase inhibitors: structure-guided screening of natural compounds for a tyrosine kinase therapeutic target in cancers." <i>OMICS: A Journal of Integrative Biology</i> 26, no. 8 (2022): 461-470.	3.978
86.	Kashish Azeem, Mofieed Ahmed, <b>Taj Mohammad</b> , Amad Uddin, Anas Shamsi, Md Imtaiyaz Hassan, Shailja Singh, Rajan Patel, and Mohammad Abid. "A multi-spectroscopic and computational simulations study to delineate the interaction between antimalarial drug hydroxychloroquine and human serum albumin." <i>Journal of Biomolecular Structure and Dynamics</i> (2022): 1-17.	5.235
85.	Yousuf Mohd, Anas Shamsi, <b>Taj Mohammad</b> , Naved Azum, Sulaiman YM Alfaifi, Abdullah M. Asiri, Abdelbaset Mohamed Elsbali, Asimul Islam, Md Imtaiyaz Hassan, and Qazi Mohd Rizwanul Haque. "Inhibiting Cyclin-Dependent Kinase 6 by Taurine: Implications in Anticancer Therapeutics." <i>ACS Omega</i> (2022).	4.132



84.	Raza Ali, Riaz Mahmood, Safia Habib, Mohd Talha, Shifa Khan, Md Amiruddin Hashmi, <b>Taj Mohammad</b> , and Asif Ali. "Fructosylation of human insulin causes AGEs formation, structural perturbations and morphological changes: an in silico and multispectroscopic study." <i>Journal of Biomolecular Structure &amp; Dynamics</i> (2022): 1-13.	5.235
83.	Adnan Mohd, Deeba Shamim Jairajpuri, Muskan Chaddha, Mohd Shahnawaz Khan, Dharmendra Kumar Yadav, <b>Taj Mohammad</b> , Abdelbaset Mohamed Elsbali, Waleed Abu Al-Soud, Salem Hussain Alharethi, and Md Hassan. "Discovering Tuberosin and Villosol as Potent and Selective Inhibitors of AKT1 for Therapeutic Targeting of Oral Squamous Cell Carcinoma." <i>Journal of Personalized Medicine</i> 12, no. 7 (2022): 1083.	3.508
82.	Xue Bin, Muskan Chaddha, Abdelbaset Mohamed Elsbali, Zhixin Zhu, Deeba Shamim Jairajpuri, Fahad A. Alhumaydhi, <b>Taj Mohammad</b> , Waleed Al Abdulmonem, Sharaf E. Sharaf, and Md Imtaiyaz Hassan. "Death-Associated Protein Kinase 3 Inhibitors Identified by Virtual Screening for Drug Discovery in Cancer and Hypertension." <i>OMICS: A Journal of Integrative Biology</i> (2022).	3.978
81.	Aggarwal, S., K. Bhadana, B. Singh, M. Rawat, <b>T. Mohammad</b> , L. A. Al-Keridis, N. Alshammari, M. I. Hassan, and S. N. Das. "Cinnamomum zeylanicum Extract and its Bioactive Component Cinnamaldehyde Show Anti-Tumor Effects via Inhibition of Multiple Cellular Pathways." <i>Frontiers in Oncology</i> . 13: 918479. doi: 10.3389/fphar (2022).	5.738
80.	<b>Mohammad T.</b> , P. Singh, D. S. Jairajpuri, L. A. Al-Keridis, N. Alshammari, M. Adnan, R. Dohare, and M. I. Hassan. "Differential Gene Expression and Weighted Correlation Network Dynamics in High-Throughput Datasets of Prostate Cancer." <i>Frontiers in Oncology</i> 12 (2022): 881246.	5.738
79.	Choudhury, Arunabh, <b>Taj Mohammad</b> , Farah Anjum, Alaa Shafie, Indrakant K. Singh, Bekhzod Abdullaev, Visweswara Rao Pasupuleti, Mohd Adnan, Dharmendra Kumar Yadav, and Md Imtaiyaz Hassan. "Comparative analysis of web-based programs for single amino acid substitutions in proteins." <i>PloS one</i> 17, no. 5 (2022): e0267084.	3.752
78.	Anjum, Farah, <b>Taj Mohammad</b> , Purva Asrani, Alaa Shafie, Shailza Singh, Dharmendra Kumar Yadav, Vladimir N. Uversky, and Md Imtaiyaz Hassan. "Identification of intrinsically disorder regions in non-structural proteins of SARS-CoV-2: New insights into drug and vaccine resistance." <i>Molecular and Cellular Biochemistry</i> 477, no. 5 (2022): 1607-1619.	3.842
77.	Habib, Insan, Farah Anjum, <b>Taj Mohammad</b> , Md Nayab Sulaimani, Alaa Shafie, Mazen Almeahadi, Dharmendra Kumar Yadav, Sukhwinder Singh Sohal, and Md Imtaiyaz Hassan. "Differential gene expression and network analysis in head and neck squamous cell carcinoma." <i>Molecular and Cellular Biochemistry</i> 477, no. 5 (2022): 1361-1370.	3.842
76.	Noor, Saba, <b>Taj Mohammad</b> , Malik Abdul Rub, Ali Raza, Naved Azum, Dharmendra Kumar Yadav, Md Imtaiyaz Hassan, and Abdullah M. Asiri. "Biomedical features and therapeutic potential of rosmarinic acid." <i>Archives of Pharmacal Research</i> (2022): 1-24.	6.010



75.	Uddin Amad, Sonal Gupta, <b>Taj Mohammad</b> , Diksha Shahi, Afzal Hussain, Mohamed F. Alajmi, Hesham R. El-Seedi, Imtaiyaz Hassan, Shailja Singh, and Mohammad Abid. "Target-Based Virtual Screening of Natural Compounds Identifies a Potent Antimalarial With Selective Falcipain-2 Inhibitory Activity." <i>Frontiers in pharmacology</i> 13 (2022).	5.988
74.	<b>Mohammad Taj</b> and Md Imtaiyaz Hassan. "Serum and glucocorticoid-regulated kinase 1: A potential target for anticancer therapy." In <i>Protein Kinase Inhibitors</i> , pp. 223-238. Academic Press, 2022.	--
73.	Anwar Saleha, Anas Shamsi, <b>Taj Mohammad</b> , Asimul Islam, and Md Imtaiyaz Hassan. "Targeting pyruvate kinase M2 signaling for development of effective cancer therapy." In <i>Protein Kinase Inhibitors</i> , pp. 199-222. Academic Press, 2022.	--
72.	Shamsi Anas, Saleha Anwar, <b>Taj Mohammad</b> , Moyad Shahwan, Md Hassan, and Asimul Islam. "Therapeutic Potential of Polyphenols in Alzheimer's Therapy: Broad-Spectrum and Minimal Side Effects as Key Aspects." In <i>Autism Spectrum Disorder and Alzheimer's Disease</i> , pp. 111-133. Springer, Singapore, 2021.	--
71.	Shamsi Tooba Naz, Roshani Payoe, <b>Taj Mohammad</b> , and Michael NG James. "PTEN-induced kinase1 (PINK1): More than just mitochondrial quality control." In <i>Protein Kinase Inhibitors</i> , pp. 393-407. Academic Press, 2022.	--
70.	Shamsi Anas, Saleha Anwar, <b>Taj Mohammad</b> , Moyad Shahwan, Md Hassan, and Asimul Islam. "Therapeutic Potential of Polyphenols in Alzheimer's Therapy: Broad-Spectrum and Minimal Side Effects as Key Aspects." In <i>Autism Spectrum Disorder and Alzheimer's Disease</i> , pp. 111-133. Springer, Singapore, 2021.	--
69.	Alam, Manzar, Md Meraj Ansari, Saba Noor, <b>Taj Mohammad</b> , Gulam Mustafa Hasan, Syed Naqui Kazim, and Md Imtaiyaz Hassan. "Therapeutic targeting of TANK-binding kinase signaling towards anticancer drug development: Challenges and opportunities." <i>International Journal of Biological Macromolecules</i> (2022).	8.025
68.	Mathur, Yash, <b>Taj Mohammad</b> , Farah Anjum, Alaa Shafie, Abdelbaset Mohamed Elsbali, Vladimir N. Uversky, and Md Imtaiyaz Hassan. "PyPAN: An automated graphical user interface for protein sequence and structure analyses." <i>Protein and Peptide Letters</i> (2022).	1.927
67.	Anjum, Farah, Namrata Joshia, <b>Taj Mohammad</b> , Alaa Shafie, Fahad A. Alhumaydhi, Mohammad A. Aljasir, Moyad JS Shahwan et al. "Impact of Single Amino Acid Substitutions in Parkinsonism-Associated Deglycase-PARK7 and Their Association with Parkinson's Disease." <i>Journal of personalized medicine</i> 12, no. 2 (2022): 220.	3.508
<b>S. No.↓</b>	<b>Publications 2021</b>	<b>I. F.</b>
66.	<b>Taj Mohammad</b> , Yash Mathur and Md. Imtaiyaz Hassan. InstaDock: A Single-click Graphical User Interface for Molecular Docking-based Virtual High-throughput Screening. <i>Briefings in Bioinformatics</i> (2021) 22(4), bbaa279. .	13.994
65.	Shuyun Rao, Xiaochun Yang, Kazufumi Ohshiro, Sobia Zaidi, Zhanhuai Wang, Xiyan Xiang, <b>Taj Mohammad</b> , Md. Imtaiyaz Hassan, Patricia S. Latham, Bao-Ngoc Nguyen, Linda Wong, Herbert	19.359



	Yu, Bibhuti Mishra, Michele Vacca, Gareth Guenigault, Michael ED Allison, Antonio Vidal-Puig, Jihane N Benhammou, Marcus Alvarez, Päivi Pajukanta, Joseph R. Pisegna, and Lopa Mishra. “ $\beta$ 2-Spectrin (SPTBN1) as a Therapeutic Target for Diet-Induced Liver Disease and Preventing Cancer Development”. <i>Science – Translational Medicine</i> (2021).	
64.	Saleha Anwar, Anas Shamsi, <b>Taj Mohammad</b> , Asimul Islam, Md. Imtaiyaz Hassan. “Implications of Pyruvate dehydrogenase kinase in cancer therapeutics and insight into recent developments in PDK inhibitors”. <b>BBA- Reviews on Cancer</b> (2021).	11.414
63.	<b>Taj Mohammad</b> , Arunabh Choudhury, Insan Habib, Purva Asrani, Yash Mathur, Mohd Umair, Farah Anjum, Alaa Shafie, Dharmendra Kumar Yadav, Md Imtaiyaz Hassan. “Genomic Variations in the Structural Proteins of SARS-CoV-2 and Their Deleterious Impact on Pathogenesis: A Comparative Genomics Approach”. <i>Frontiers in Cellular and Infection Microbiology</i> 11:785039 (2021).	6.073
62.	Shoab Alam, <b>Taj Mohammad</b> , Rayees Poddar, Md Imtaiyaz Hassan, and Mohammad Husain. “Thymoquinone and quercetin induce enhanced apoptosis in non-small cell lung cancer in combination through the Bax/Bcl2 cascade”. <i>Journal of Cellular Biochemistry</i> (2021).	4.480
61.	Saba Noor, <b>Taj Mohammad</b> , Gulam M. Ashraf, Joviana Farhat, Mathew Suji Eapen, Sukhwinder Singh Sohal, Dharmendra Kumar Yadav, Md Imtaiyaz Hassan. “Mechanistic insights into the role of serum-glucocorticoid kinase 1 in diabetic nephropathy: A systematic review”. <i>International Journal of Biological Macromolecules</i> (2021).	8.025
60.	Mohamed F. AlAjmi, Shama Khan, Arunabh Choudhury, <b>Taj Mohammad</b> , Saba noor, Afzal Hussain, Wenying Lu, Mathew Suji Eapen, Vrushali Chimankar, Philip M. Hansbro, Sukhwinder Sohal, Abdelbaset M. Elsbali, Md Imtaiyaz Hassan. “Impact of Deleterious Mutations on Structure, Function, and Stability of Serum/Glucocorticoid Regulated Kinase 1: A Gene to Diseases Correlation”. <i>Frontiers in Molecular Biosciences</i> (2021).	6.113
59.	Shariq Qayyum, <b>Taj Mohammad</b> , Radomir M. Slominski, Md. Imtaiyaz Hassan, Robert C. Tuckey, Chander Raman, Andrzej T. Slominski. “Vitamin D and lumisterol novel metabolites can inhibit SARS-COV-2 replication machinery enzymes”. <i>AJP-Endocrinology and Metabolism</i> (2021).	5.960
58.	Farah Anjum, Fatima Ali, <b>Taj Mohammad</b> , Afzal Hussain, Md. Tabish Rehman, Mohamed F. Alajmi, Md. Imtaiyaz Hassan. “Discovery of natural compounds as potential inhibitors of human carbonic anhydrase II: An integrated virtual screening, docking and MD simulation study”. <i>OMICS: A Journal of Integrative Biology</i> (2021).	3.978
57.	Asifa Khan <sup>#</sup> , <b>Taj Mohammad</b> <sup>#</sup> , Anas Shamsi, Syed Akhtar Husain, Mohammad Askandar Iqbal, Md. Imtaiyaz Hassan. “Identification of Plant-based Hexokinase 2 Inhibitors: Combined Molecular Docking and Dynamics Simulation Studies”. <i>Journal of Biomolecular Structure and Dynamics</i> (2021).	5.235
56.	Mohd Umair <sup>#</sup> , Shama Khan <sup>#</sup> , <b>Taj Mohammad</b> <sup>#</sup> , arah Anjum, Asimul	4.480



	Islam & Md. Imtaiyaz Hassan. "Structural and functional impact of single amino acid substitution on the structure and function of TANK-binding Kinase-1". <i>Journal of Cellular Biochemistry</i> (2021).	
55.	Azaj Ahmad, Anas Shamsi, <b>Taj Mohammad</b> , Md. Imtaiyaz Hassan. "Aurora B Kinase: A Potential Drug Target for Cancer Therapy". <i>Journal of Cancer Research and Clinical Oncology</i> (2021).	4.322
54.	Alaa Shafie, Sagar Batra, <b>Taj Mohammad</b> , Shoaib Alam, Dharmendra Kumar Yadav, Asimul Islam, Md. Imtaiyaz Hassan. "Investigating single amino acid substitutions in PIM1 kinase: A structural genomics approach". <i>PloS ONE</i> 16(10):e0258929 (2021).	3.752
53.	Insan Habib <sup>#</sup> , Shama Khan <sup>#</sup> , <b>Taj Mohammad</b> <sup>#</sup> , Afzal Hussain, Mohamed F. Alajmi, Tabish Rehman, Farah Anjum & Md. Imtaiyaz Hassan. "Impact of non-synonymous mutations on the structure and function of Telomeric repeat binding factor 1". <i>Journal of Biomolecular Structure and Dynamics</i> (2021).	5.235
52.	Arunabh Chaudhary <sup>#</sup> , <b>Taj Mohammad</b> <sup>#</sup> , Nikhil Samarth, Afzal Hussain, Md. Tabish Rehman, Asimul Islam, Mohamed F. Alajmi, Shailza Singh, Md. Imtaiyaz Hassan. "Structural Genomics Approach to Investigate Deleterious Impact of nsSNPs in Conserved Telomere Maintenance Component 1". <i>Scientific Reports</i> (2021).	4.996
51.	Shariq Shamsi, Hina Anjum, Mohd Shahbaaz, Farid S Ataya, Alya-Alamiri, Fahad A Alhumaydhi, Fohad Mabood Husain, Md. Tabish Rehman, Taj Mohammad, Asimul Islam, Anas Shamsi. "A computational study on active constituents of Habb-ul-aas and Tabasheer as inhibitors of SARS-CoV-2 main protease" <i>Journal of Biomolecular Structure and Dynamics</i> (2021).	5.235
50.	Rashid Waseem, Anas Shamsi, Taj Mohammad, Fahad A. Alhumaydhi, Syed Naqui Kazim, Md Imtaiyaz Hassan, Faizan Ahamad, and Asimul Islam. "Multispectroscopic and Molecular Docking Insight into Elucidating the Interaction of Irisin with Rivastigmine Tartrate: A Combinational Therapy Approach to Fight Alzheimer's Disease" <i>ACS Omega</i> (2021).	4.132
49.	Manzar Alam, Sabeeha Ali, <b>Taj Mohammad</b> , Gulam Mustafa Hasan, Dharmendra Kumar Yadav, Md Imtaiyaz Hassan. "B Cell Lymphoma 2: A Potential Therapeutic Target for Cancer Therapy". <i>International Journal of Molecular Sciences</i> 22(19):10442 (2021).	6.208
<b>S. No.↓</b>	<b>2020</b>	<b>I. F.</b>
48.	Shoujun Gu, Sobia Zaidi, <b>Taj Mohammad</b> , Md Imtaiyaz Hassan, Tathiane M. Malta, Houtan Noushmehr, Bryan Nguyen, et al. "Mutated CEACAMs Disrupt Transforming Growth Factor Beta Signaling and Alter the Intestinal Microbiome to Promote Colorectal Carcinogenesis" <i>Gastroenterology</i> (2020) 158:238-252.	33.883
47.	<b>Taj Mohammad</b> , Mohd. Amir, Kartikay Prasad, Sagar Batra, Vijay Kumar, Md Tabish Rehman, Mohamed F AlAjmi, Md Imtaiyaz Hassan. "Impact of amino acid substitution in the kinase domain of Bruton tyrosine kinase and its association with X-linked agammaglobulinemia" <i>International Journal of Biological Macromolecules</i> (2020) 164, 2399-2408.	8.025
46.	Anas Shamsi <sup>#</sup> , <b>Taj Mohammad</b> <sup>#</sup> , Saleha Anwar, Samreen Amani,	8.025



	Mohd Shahnawaz Khan, Fohad Mabood Husain, Md. Tabish Rehman, Asimul Islam and Md Imtaiyaz Hassan. "Potential drug targets of SARS-CoV-2: From genomics to therapeutics" <i>International Journal of Biological Macromolecules</i> (2020).	
45.	Deeba Shamim Jairajpuri, Khalida Nasreen, Afzal Hussain, <b>Taj Mohammad</b> , Md. Tabish Rehman, Gulam Mustafa Hasan, Mohamed F. Alajmi and Md. Imtaiyaz Hassan. "Targeting SARS-CoV-2 main protease using natural compounds using screening, docking and molecular dynamics simulation" <i>Saudi Journal of Biological Sciences</i> (2021).	4.052
44.	<b>Taj Mohammad</b> , Shiza Shiddiqui, Anas Shamsi, Mohamed F. Alajmi, Afzal Hussain, Asimul Islam, Faizan Ahmad and Md Imtaiyaz Hassan. "Virtual screening approach to identify high-affinity inhibitors of Serum and glucocorticoid-regulated kinase 1 among bioactive natural products: Combined molecular docking and simulation studies" <i>Molecules</i> (2020).	4.927
43.	<b>Taj Mohammad</b> , Kaynat Arif, Mohamed F. Alajmi, Asimul Islam, and Md. Imtaiyaz Hassan. "Identification of high-affinity inhibitors of pyruvate dehydrogenase kinase-3: Towards therapeutic management of cancer" <i>Journal of Biomolecular Structure and Dynamics</i> (2020) 25(4), 823.	5.235
42.	Anas Shamsi, <b>Taj Mohammad</b> , Saleha Anwar, Mohamed F. Alajmi, Afzal Hussain, Md Imtaiyaz Hassan, Faizan Ahmad, and Asimul Islam. "Probing the interaction of Rivastigmine Tartrate, an important Alzheimer's drug, with serum albumin: Attempting treatment of Alzheimer's disease" <i>International Journal of Biological Macromolecules</i> (2020) 148, 533-542.	8.025
41.	Anas Shamsi, <b>Taj Mohammad</b> , Saleha Anwar, Md Imtaiyaz Hassan, Faizan Ahmad and Asimul Islam. "Insight into the binding of PEG-400 with eye protein alphacrystallin: Multi spectroscopic and computational approach: Possible therapeutics targeting eye diseases" <i>Journal of Biomolecular Structure and Dynamics</i> (2020).	5.235
40.	Mohd Amir, <b>Taj Mohammad</b> , Ravins Dohre, Asimul Islam, Faizan Ahmad and Md Imtaiyaz Hassan. "Structure, function and therapeutic intervention of OB-fold proteins: A lesson from past to present". <i>Briefings in Functional Genomics</i> (2020).	4.840
49.	Anas Shamsi <sup>#</sup> , <b>Taj Mohammad</b> <sup>#</sup> , Saleha Anwar, Mohamed F. Alajmi, Afzal Hussain, Md. Tabish Rehman, Asimul Islam and Md Imtaiyaz Hassan. "Glecaprevir and Maraviroc are high-affinity inhibitors of SARS-CoV-2 main protease: Possible therapeutic implication in COVID-19" <i>Bioscience Reports</i> (2020) 40(6). ( <b>#equal contributor</b> )	3.976
38.	Rashmi Dahiya, <b>Taj Mohammad</b> , Mohamed F. Alajmi, Afzal Hussain, Md. Tabish Rehman and Md Imtaiyaz Hassan. "Insights into the Conserved Regulatory Mechanisms of Human and Yeast Aging" <i>Biomolecules</i> (2020) 10(6), 882.	6.064



37.	Anas Shamsi, Saleha Anwar, <b>Taj Mohammad</b> , Mohamed F. Alajmi, Afzal Hussain, Md. Tabish Rehman, Gulam Mustafa Hasan, Asimul Islam and Md Imtaiyaz Hassan. "MARK4 Inhibited by AChE Inhibitors, Donepezil and Rivastigmine Tartrate: Insights into Alzheimer's Disease Therapy" <i>Biomolecules</i> 10.5 (2020): 789.	6.064
36.	Deeba Shamim Jairajpuri <sup>#</sup> , <b>Taj Mohammad</b> <sup>#</sup> , Kirtika Adhikari, Preeti Gupta, Gulam Mustafa Hasan, Mohamed F. Alajmi, Md. Tabish Rehman, Afzal Hussain and Md Imtaiyaz Hassan. "Identification of Sphingosine kinase-1 inhibitors from bioactive natural products targeting cancer therapy" <i>ACS Omega</i> (2020). ( <sup>#</sup> equal contributor)	4.132
35.	Anas Shamsi, <b>Taj Mohammad</b> , Saleha Anwar, Faizan Ahmad, Md Imtaiyaz Hassan and Asimul Islam. "Biophysical insight into implications of PEG-400 on alpha-crystallin structure: Multi spectroscopic and microscopic approach" <i>ACS Omega</i> (2020).	4.132
34.	<b>Taj Mohammad</b> , Anas Shamsi, Saleha Anwar, Mohd Umair, Afzal Hussain, Md. Tabish Rehman, Mohamed F. Alajmi., Asimul Islam, and Md Imtaiyaz Hassan "Identification of high-affinity inhibitors of SARS-CoV-2 main protease: Towards the development of effective COVID-19 therapy" <i>Virus Research</i> (2020) 288, 198102.	6.286
33.	Sonam Roy, <b>Taj Mohammad</b> , Preeti Gupta, Rashmi Dahiya, Shahnaz Parveen, Suaib Luqman, Gulam Mustafa Hasan, and Md Imtaiyaz Hassan. "Discovery of Harmaline as a Potent Inhibitor of Sphingosine Kinase-1: A Chemopreventive Role in Lung Cancer" <i>ACS Omega</i> (2020).	4.132
32.	Ahmad Abu Turab Naqvi, Kisa Fatima, <b>Taj Mohammad</b> , Urooj Fatima, Indrakant K. Singh, Archana Singh, Shaikh Mohammad Atif, G. Hariprasad and Md Imtaiyaz Hassan. "Insights into SARS-CoV-2 genome, structure, evolution, pathogenesis and therapies: A comparative genomics approach" <i>BBA-Molecular Basis of Disease</i> (2020) 165878.	6.633
31.	Saleha Anwar, <b>Taj Mohammad</b> , Anas Shamsi, Aarfa Queen and Md Imtaiyaz Hassan. "Discovery of Hordenine as a Potential Inhibitor of Pyruvate Dehydrogenase Kinase 3: Implication in Lung Cancer Therapy" <i>Biomedicines</i> , 8(5), 119, 2020.	4.757
30.	Sonam Roy, Amarjyoti Das Mahapatra, <b>Taj Mohammad</b> , Preeti Gupta, Mohamed F. Alajmi, Afzal Hussain, Md. Tabish Rehman, Bhaskar Datta and Md Imtaiyaz Hassan. "Design and development of novel urea, sulfonamide and sulfonamide derivatives as potential inhibitors of Sphingosine kinase 1" <i>Pharmaceuticals</i> , (2020) 13(6), 118.	5.215
29.	Amad Uddin, Vigyasa Singh, Iram Irfan, <b>Taj Mohammad</b> , Rahul Singh Hada, Md Imtaiyaz Hassan, Mohammad Abid and Shailza Singh. "Identification and structure–activity relationship (SAR) studies of carvacrol derivatives as potential anti-malarial against Plasmodium falciparum falcipain-2 protease" <i>Bioorganic Chemistry</i> (2020)103, 104142.	5.307





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<b>S. No.↓</b>	<b>2019</b>	<b>I. F.</b>
23.	<b>Taj Mohammad</b> , Faez Iqbal Khan, Kevin A. Lobb, Asimul Islam, Faizan Ahmad, and Md Imtaiyaz Hassan. "Identification and evaluation of bioactive natural products as potential inhibitors of human microtubule affinity-regulating kinase 4 (MARK4)" <i>Journal of Biomolecular Structure and Dynamics</i> (2019) 19:1-17.	5.235
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<b>S. No.↓</b>	<b>2018</b>	<b>I. F.</b>
6.	<b>Taj Mohammad</b> and Md Imtaiyaz Hassan. "Genome Microbiology for Synthetic Applications." <i>Synthetic Biology</i> , 75-86. <i>Springer Nature</i> , 2018.	N/A
5.	<b>Taj Mohammad</b> , and Md Imtaiyaz Hassan. "Modern Approaches in Synthetic Biology: Genome Editing, Quorum Sensing, and Microbiome Engineering." <i>Synthetic Biology</i> , 189-205. <i>Springer Nature</i> , 2018.	N/A
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11.	<b>Mohammad Taj</b> , and Md Imtaiyaz Hassan. "Serum and glucocorticoid-regulated kinase 1: A potential target for anticancer therapy." In <i>Protein Kinase Inhibitors</i> , pp. 223-238. Academic Press, 2022.	



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5.	Rashmi Dahiya, <b>Taj Mohammad</b> and Md Imtaiyaz Hassan. "Role of Genome-Wide Association Studies in Host Genetics: Toward Understanding of Microbiome Association" <i>Metagenomic Systems Biology</i> , 3-20. <i>Springer Nature</i> , 2020.
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3.	Abu Turab Naqvi, <b>Taj Mohammad</b> and Md Imtaiyaz Hassan. "Discovery of Novel Drug Targets in Microbial Pathogens Among Hypothetical Proteins: Methods and Significance" <i>Pathogenicity and Drug Resistance of Human Pathogens</i> , 377-391. <i>Springer Nature</i> , 2020.
2.	<b>Taj Mohammad</b> and Md Imtaiyaz Hassan. "Modern Approaches in Synthetic Biology: Genome Editing, Quorum Sensing, and Microbiome Engineering." <i>Synthetic Biology</i> , pp. 189-205. <i>Springer Nature</i> , 2018.
1.	<b>Taj Mohammad</b> and Md Imtaiyaz Hassan. "Genome Microbiology for Synthetic Applications." <i>Synthetic Biology</i> , 75-86. <i>Springer Nature</i> , 2018.
<b>Abstracts published (in numbers)</b>	
As first author: >15	As co-author: >20

### Awards/Fellowships

- 'Ph.D. Research Student Award -2022' by Bioinformatics and Drug Discovery Society – BIDDs, India.
- UGC-Maulana Azad National Fellowship by University Grant Commission, India as-
  - Senior Research Fellowship (SRF) from July 2018 to till date for pursuing PhD and
  - Junior Research Fellowship (JRF) from July 2016 to June 2018 for pursuing M.Phil.
- Received '*MFH Beg Education Fund*' from Jamia Millia Islamia, New Delhi, India.
- Received '*Merit-cum-means*' scholarship from Government of Uttar Pradesh, India.



- Received '*Sherwani Award*' two times by the Chairman of Bharat Sewa Trust, India.

### **Academic achievements and extra-curricular activities**

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- 'Best Ph.D. Research Student Award -2022' by Bioinformatics and Drug Discovery Society – BIDDs, India.
- Attended and presented work in more than 10 international and 30 national conferences, workshops and scientific meetings across India.
- Organizer of '*National Conference on Protein Structure and Dynamics in Health and Agriculture*' November 3-4, 2017, New Delhi, organized by the Protein Society, India.
- Life Member of Scientific and Technical Research Association, USA (Membership No.: ERCICSTR2003070).
- Life Member of Bioinformatics and Drug Discovery Society, India (Membership No.: BIDDs17-183).
- Member of Biotech Club, Centre for Innovation and Entrepreneurship, Jamia Millia Islamia, New Delhi, India.
- General Secretary (2015-16) and Joint Secretary (2014-15), Subject Association at Department of Computer Science, Jamia Millia Islamia, New Delhi, India.
- Class Representative (2016-18 M.Phil.) and (2014-16 M.Sc.), Jamia Millia Islamia, New Delhi, India.
- Member of Subject Association, CIRBSc. (2016-18 M.Phil.) and DCS (2014-16 M.Sc.), Faculty of Natural Sciences, Jamia Millia Islamia, New Delhi, India.
- Placement Coordinator, Department of Computer Science, Faculty of Natural Sciences, Jamia Millia Islamia, New Delhi, India.

### **Personal Detail**

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**Mother:** Fatma Begum  
**Father:** Late Mohammad Saeyroon  
**Date of Birth:** 10<sup>th</sup> July 1994  
**Marital Status:** Single  
**Nationality/Sex:** Indian/Male  
**Language Skills:** English (C1, Advanced), Hindi (First language), Urdu (Intermediate), French (Elementary), and Spanish (Elementary, Learning).  
**Address- (Present):** 107, AIH Boys Hostel, Jamia Nagar, New Delhi-110025, INDIA.  
**Hometown:** Sambhal, Moradabad, Uttar Pradesh

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*CV as of October 2022*