

## National Post Doctoral Fellow

All India Institute of Medical Science (AIIMS), New Delhi-29, IN

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## ACADEMIC QUALIFICATIONS

12/2022- To date	National Post Doctoral Fellow, Department of Biophysics, All India Institute of Medical Sciences (AIIMS), New Delhi, India
5/2022-11/2022	Senior Research Fellow on a CCRUM-funded project at Centre for Interdisciplinary Research in Basic Sciences, Jamia Millia Islamia, New Delhi
8/2018-9/2022	Ph.D. (Biological Sciences), Senior Research Fellow, Centre for Interdisciplinary Research in Basic Sciences, Jamia Millia Islamia, New Delhi
7/2016-7/2018	M.Phil. (Interdisciplinary Sciences), Junior Research Fellow, Centre for Interdisciplinary Research in Basic Sciences, Jamia Millia Islamia, New Delhi
7/2014-6/2016	M.Sc. (Bioinformatics), Department of Computer Science, Jamia Millia Islamia, New Delhi, India
7/2011-6/2014	B.Sc. Hons. (Biotechnology), IFTM University, Moradabad, Uttar Pradesh, India

## SHORT BIO

Taj Mohammad, M.Phil., Ph.D., is a SERB National Postdoctoral Fellow (N-PDF), working as a Principal Investigator on an ANRF-funded project at the Department of Biophysics, All India Institute of Medical Sciences (AIIMS), New Delhi. Taj obtained his PhD from Jamia Millia Islamia, New Delhi, 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 and structure-guided drug discovery. His current focus is on developing easy-to-use GUI platforms for people with non-bioinformatics backgrounds.

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

Publications: 150<sup>+</sup> Citations: 6100<sup>+</sup> *h*-index: 38 *i10*-index: 80

Featured Publications		I. F.
<i>A complete list of publications can be found at <a href="http://bit.ly/42gulyC">bit.ly/42gulyC</a></i>		
<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.		13.62
Marie Ng, Emmanuela Gakidou, Justin Lo, Yohannes Habtegiorgis Abate, Cristiana Abbafati, ..., <b>Taj Mohammad</b> et al. "Global, regional, and national prevalence of adult overweight and obesity, 1990–2021, with forecasts to 2050: a forecasting study for the Global Burden of Disease Study 2021." <i>The Lancet</i> 405, no. 10481 (2025): 813-838.		98.40
Jessica A. Kerr, George C. Patton, Karly I. Cini, Yohannes Habtegiorgis Abate, Nasir Abbas, ..., <b>Taj Mohammad</b> et al. "Global, regional, and national prevalence of child and adolescent overweight and obesity, 1990–2021, with forecasts to 2050: a forecasting study for the Global Burden of Disease Study 2021." <i>The Lancet</i> 405, no. 10481 (2025): 785-812.		98.40
Shoujun Gu, Sobia Zaidi, Md Imtaiyaz Hassan, <b>Taj Mohammad</b> , Tathiane M. Malta, Houtan Noushmehr, Bryan Nguyen, Keith A Crandall, Jigisha Srivastav, Vincent Obias, Paul Lin, and Lopa Mishra. "Mutated CEACAMs Disrupt Transforming Growth Factor Beta Signaling and Alter the Intestinal Microbiome to Promote Colorectal Carcinogenesis" <i>Gastroenterology</i> (2020) 158:238-252.		33.68



Saleha Anwar, Anas Shamsi, <b>Taj Mohammad</b> , Asimul Islam, and Md. Imtaiyaz Hassan. "Targeting pyruvate dehydrogenase kinase signaling in the development of cancer therapy" <i>BBA-Reviews on Cancer</i> (2021) 188568.	11.68
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 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. "β2-Spectrin (SPTBN1) as a Therapeutic Target for Diet-Induced Liver Disease and Preventing Cancer Development". <i>Science – Translational Medicine</i> (2021).	19.96
Krishanu Bhowmick, P Ghosh, X Xiang, X Yang, <b>Taj Mohammad</b> , B Mishra, MI Hassan, AR Krainer, S Dasarathy, KA Crandall, and Lopa Mishra, 2025. Microbial metabolite ammonia disrupts CEACAM1 TGF-β signaling to drive colon cancer progression. <i>Cancer Research</i> , 85(8), 6533-6533.	12.70
<b>Taj Mohammad</b> , Mohd. Amir, Kartikay Prasad, Sagar Batra, Vijay Kumar, Md Tabish Rehman, 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.	8.25
Yang, Xiaochun, Krishanu Bhowmick, Shuyun Rao, Xiyan Xiang, Kazufumi Ohshiro, Richard L. Amdur, Md Imtaiyaz Hassan, <b>Taj Mohammad</b> et al. "Aldehydes alter TGF-β signaling and induce obesity and cancer." <i>Cell Reports</i> 43, no. 9 (2024).	7.50
Bhowmick, Krishanu, Xiaochun Yang, <b>Taj Mohammad</b> , Xiyan Xiang, Christine L. Molmenti, Bibhuti Mishra, Srinivasan Dasarathy et al. "Microbial metabolite ammonia disrupts TGF-β signaling to promote colon cancer." <i>Journal of Biological Chemistry</i> (2025): 108559.	5.49
<b>Selected Book Chapters</b>	
<b>Taj Mohammad</b> , Rashmi Dahiya and Md Imtaiyaz Hassan. "Implication of Synthetic Biology in Biotherapeutic Engineering" <i>Systems and Synthetic Immunology. Springer Nature</i> , 2021.	
<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> , 2020.	
<b>Taj Mohammad</b> and Md Imtaiyaz Hassan. "Genome Microbiology for Synthetic Applications." <i>Synthetic Biology</i> , 75-86. <i>Springer Nature</i> , 2020.	
<b>Abstracts published (in numbers)</b>	
As first author: >50	As co-author: >100

## AWARDS/FELLOWSHIPS

- 'Best Ph.D. Research Student Award -2022' by Bioinformatics and Drug Discovery Society – BIDDs, India.
- 'National Post Doctoral Fellowship' by Science and Engineering Research Board (SERB), Govt. of India.
- 'Jamia Star Award' by Jamia Millia Islamia, New Delhi
- 'Senior Research Fellowship' by CCRUM, Ministry of Ayush, Govt. of India.
- 'UGC-Maulana Azad National Fellowship' by UGC, India.
- 'MFH Beg Education Fund' by Jamia Millia Islamia, New Delhi, India
- 'Sherwani Award' two times by the Bharat Sewa Trust, India.



## ACADEMIC ACHIEVEMENTS AND EXTRA-CURRICULAR ACTIVITIES

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- Featured among the top Global list of 2% scientists (2021, 2022, and 2023) by Stanford University, USA.
- Academic Editor, PLOS ONE (Since May 2024).
- Editorial Board Member, Scientific Reports (Since August 2024).
- Institute for Health Metrics and Evaluation, Affiliated Senior Researcher (Since April 2024).
- Grant reviewer for the Qatar National Research Fund (QNRF) since April 2023.
- Life Member of the International Society for Computational Biology: ISCB, Leesburg, Virginia, United States (Membership No.: 2378).
- Life Member of the Scientific and Technical Research Association, USA (Membership No.: ERCICSTR2003070).
- Life Member of Bioinformatics and Drug Discovery Society, India (Membership No.: BIDD17-183).
- Member of Biotech Club, Centre for Innovation and Entrepreneurship, Jamia Millia Islamia, New Delhi, India.
- Organizer of '*National Conference on Protein Structure and Dynamics in Health and Agriculture (Nov 2017)*', New Delhi, India.
- General Secretary (2015-16), Joint Secretary (2014-15), Placement Coordinator & Member of Subject Association at Department of Computer Science (2014-16), 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:** Married  
**Nationality/Sex:** Indian/Male  
**Language Skills:** English (C1, Advanced), Hindi (First language), Urdu (Intermediate), French (Elementary), and Spanish (Elementary, Learning).  
**Address- (Present):** S-8/29, 303, Ashraf Apartment, Joga Bai Extn., Jamia Nagar, New Delhi-110025, INDIA.  
**Hometown:** Sambhal, Moradabad, Uttar Pradesh

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*CV as of March 2025*