

## **CURRICULUM VITAE (CV)**

**Dr. Waseem Feeroze Bhat.** (PhD)

**Design:** Assistant Professor (Biochemistry)

Department of Higher Education, Jammu and Kashmir, INDIA

(Govt. Degree College Kulgam, 192231)

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**Gender:** Male, **Differently abled:** No



### **Professional Objective:**

*Dedicated, dynamic and independent resourceful professional, committed to fostering the research-driven academic environment. My goal is to inspire and mentor students with a focus on contributing to both teaching excellence and advancing research. I'm flexible, quick to pick up new skills and eager to learn from others and also mentor juniors. I am ready to work in a research group for developing research niche.*

### **Resarch Interest:**

*My research interest has been in understanding protein misfolding disorders towards which my primary focus was to study the role of antiaggregation of amyloid fibrils at low pH. I hypothesized that oxidative stress, lysosomal damage, brain ischemia, and age, could be a driving force for alterations in protein structure in presence of Zn<sup>2+</sup> and may in turn enhance the chances neurological disorders. I have shown that decelerating the abnormally increased rate of ordered aggregation of protein fibrils could be a therapeutic strategy against amyloidosis. Currently I have coordinated the medical daignositic with basic science research to get the maximum and applicable outcomes from the both platforms. So that the findings could potentially help to develop therapeutic agents that could facilitate in designing of new, sophisticated drugs for the diseases.*

## **EDUCATION**

<b>2012 - 2016</b>	<b>PhD</b> ( <i>Biochemistry</i> ) (Awarded)	Department of Biochemistry, AMU, India. <i>In vitro studies on cystatin: Effect of polyphenols, metal ions (Zn, Cu and Fe) and surfactants in the prevention of amyloid fibril formation.</i>
<b>2011-2012</b>	<b>B.Ed</b> (Awarded) (Division I)	University of Kashmir, India. <i>Foundation of Education, Learning and Development, Population and Gender Education, Inclusive Education, Environmental Education, Internship, Educational Guidance &amp; Counselling, Educational Technology, Teacher Education, Teaching of Bioscience.</i>
<b>2009-2011</b>	<b>MSc (<i>Biochemistry</i>)</b> (Division I)	Department of Biochemistry, AMU, India <i>Biochemistry, Cell Biology, Molecular Biology, Genetics and Immunology.</i>
<b>2005-2008</b>	<b>BSc (<i>Biochemistry</i>)</b> (Division I)	Sri Pratap College, University of Kashmir, India <i>Biochemistry, Chemistry, Zoology and English.</i>
<b>2003-2005</b>	<b>Intermediate (10+2)</b> (Division I)	Jammu and Kashmir Board of School Education, J and K, India. <i>(English, Physics, Biology, Chemistry)</i>
<b>2002</b>	<b>High School (10<sup>th</sup>)</b> (Division I)	Jawahar Navodaya Vidyalaya, (CBSE), ( An Autonomous Body Under Ministry of Education ) Government Of India.

## RESEARCH AND TEACHING EXPERIENCE

<b>2024-Till date</b>	<i>Asistant Professor</i>	Working in Higher Education Department, Govt. of Jammu and Kashmir, India.
<b>2019-2023</b>	<i>Teaching/Research</i>	Worked as MBBS as well as Paramedical Teacher and Biochemistry diagnostic laboratory incharge in Govt. Medical College Doda, Jammu and Kashmir, India.
<b>2017-2019</b>	<i>Postdoc Fellow</i>	Worked as National Postdoc Fellow, awarded by Science and Engineering Research Board. Ministry of science and technology. INDIA. (IIT Delhi and UK).
<b>2015-2016</b>	<i>BSR Fellow</i>	Worked as Basic Science Research (BSR) Fellow awarded by University Grants Commission (UGC) Government of India. (AMU Aligarh).
<b>2012-2015</b>	<i>JRF and SRF</i>	Worked as JRF and SRF on Project funded by CSIR (Council of Scientific & Industrial Research, Human Research Development Group, India) (AMU Aligarh).
<b>2011-2012</b>	<i>JRF</i>	Worked as JRF on Project Funded by UGC (University Grants Commission) India. (AMU Aligarh).
<b>2010-2011</b>	<i>MSc (Project)</i>	Worked on MSc project, Effect of glycation on pancreatic cystatin, Purification, function, structure, properties, and stability.

## ACHIEVEMENTS AND AWARDS

- Qaulified National Eligibility Test (**CSIR-UGC NET**) conducted jointly by Council of Scientific and Industrial Research (CSIR) and University Grants Commission (UGC) Government of India, for Assistant Professorship.
- Awarded *National Postdoc Fellowship* by Science and Engineering Research Board ministry of science and technolog, **Govt. of India**.
- Grant awarded by Indian Council Of Medical Research Department Of Health Research (Minstry Of Health And Family Welfare), **Govt. of India**, (protein and preteomics) Washington, **USA**.
- Academic visit to **San Francisco, USA**, supported by Aligarh Muslim University (**AMU**).
- Awarded Basic Science Research Junior Research Fellowship (**BSR JRF**) by University Grants Commission (**UGC**) Govt. of India.
- Qaulified All India Graduate Aptitude Test Exam (**GATE**).

## PUBLICATIONS

PubMed link to my Peer reviewed Publications:

<http://www.ncbi.nlm.nih.gov/pubmed/?term=Bhat+WF>

1. **Bhat WF \***, Shah Y, Singh H, Singh G, Bhat MYS, Borole K, Azad TP. Deciphering the upshots of single and second dose of ChAdOx1-S vaccination among patients hospitalized with COVID-19: A multidimensional approach. *International Journal of Contemporary Medical Research* 2023;10(9):11-111.
2. Khan AA, Fazili AA, Bhat SA, **Bhat WF**, Asghar MN, Khan MS, Bano B. Purification, characterization and studies of a novel cysteine protease inhibitor from Juglans regia: Implications as a potential biopesticide. *Journal of King Saud University-Science*. 2022, 34, 3, 101829. (**IF. 4.0**).

3. Bhat SA, Singh G, **Bhat WF**, Borole K, Khan AA. Coronavirus disease-2019 and its current scenario – A review. *Clinical eHealth* 2021, 4, 67-73.
4. Gupta K, Khan AA, Masood T, **Bhat WF\***, Study of biochemical profile in tubercular pleural and peritoneal effusion in the sub-himalayan region patients. *Arch Pulmonol Respir Care*. 2020, 6 (1): 072-077. DOI: 10.17352/aprc.000060.
5. **Bhat WF\***, Ahmed A, Kabli SA, Afsar M, Bano B, Masood A, Deciphering the nature of caffeic acid to inhibit the HSA aggregation induced by glyoxal. *Protein & Peptide Letters*. 2020, 27, 1-11. (**IF. 1.9**).
6. Bhat SA, **Bhat WF**, Arif H, Afsar M, Sohail A, Khan MS, Rehman MT, Khan RA, Bano B. Glycation induced conformational transitions in cystatin proceed to form biotoxic aggregates: A multidimensional analysis. *Biochim Biophys Acta Proteins Proteom*. 2018 Jun.1886;09: 989-1000. (**IF. 3.0**).
7. Bhat SA, **Bhat WF**, Afsar M, Khan MS, Al-Bagmi MS, Bano B. Modification of chickpea cystatin by reactive dicarbonyl species: Glycation, oxidation and aggregation. *Arch Biochem Biophys*. 2018 Jul 15;650:103-115. (**IF. 3.8**).
8. **Bhat WF**, Sohail A, Shah A, Bano B, Investigating the preventive effects of baicalin and gallic acid against glyoxal induced cystatin aggregation. *J Biomol Struct Dyn*. 2017 Nov 30:1-12. (**IF. 4.4**).
9. Bhat SA, **Bhat WF**, Shah Aaliya, Khan SM, K HR and Bano B, Purification and Biochemical Characterization of a Cystatin-Like Thiol Proteinase Inhibitor from *Cicer arietinum* (Chickpea). *Journal of Chromatography Separation Techniques*. 2017 Nov, 8;6: 1-13. (**IF. 4.3**).
10. Bhat IA, **Bhat WF**, Akram M, Kabir-ud-Din, Interaction of novel twin-tailed oxy-diester functionalized surfactant with lysozyme: Spectroscopic and computational perspective, *Int J Biol Macromol*. 2018 Apr 1;109:1006-1011. (**IF. 8.2**).
11. **Bhat WF\***, Bhat IA, Sohail A, Shah A, Bano B, Anti fibrillogenic and fibril-destabilizing effects of metal ions for cystatin fibrils. *Process Biochemistry*. 2017 June 57,105-116. (**IF. 4.4**).
12. **Bhat WF**, Bhat IA, Bhat SA, Bano B, In vitro disintegration of cystatin fibrils using conventional and gemini surfactants: Putative therapeutic intervention in amyloidoses. *Int J Biol Macromol*. 2016 Sep 93: 493-500. (**IF. 8.2**).
13. Bhat SA, **Bhat WF**, Bano B, Spectroscopic evaluation of the interaction between pesticides and chickpea cystatin: comparative binding and toxicity analyses. *Environ. Sci.: Processes Impacts*. 2016, 18:872-881. (**IF. 5.5**).
14. Khaki PS, Feroz A, Amin F, Rehman MT, **Bhat WF**, Bano B, Structural and functional studies on a variant of cystatin purified from brain of *Capra hircus*. *J Biomol Struct Dyn*. 2016 May 21:1-62. (**IF. 4.4**).
15. Fazili NA, Bhat IA, **Bhat WF**, Naeem A, Anti-fibrillation propensity of a flavonoid baicalein against the fibrils of Hen Egg White Lysozyme: Potential therapeutics for lysozyme amyloidosis. *J Biomol Struct Dyn*. 2015 Nov 10:1-45. (**IF. 4.4**).
16. **Bhat WF**, Bhat SA, Bano B, Evaluation of Polyphenols as possible therapeutics for amyloidoses: Comparative analysis of Kaempferol and Catechin. *Int J Biol Macromol*. 2015 Jul 29; 81:60-68. (**IF. 8.2**).
17. Akram M, Bhat IA, **Bhat WF**, Kabir-Ud-Din, Conformational alterations induced by novel green 16-E2-16 gemini surfactant in xanthine oxidase: Biophysical insights from tensiometry, spectroscopy, microscopy and molecular modeling. *Spectrochim Acta A Mol Biomol Spectrosc*. 2015 May 29; 150:440-450. (**IF. 4.4**).

18. **Bhat WF**, Bhat SA, Khaki PS, Bano B, Employing in vitro analysis to test the potency of methylglyoxal in inducing the formation of amyloid-like aggregates of cystatin. *Amino Acids*. 2015 Jan 21; 47(1):135-46. **(IF. 3.5)**.
19. Fazili NA, **Bhat WF**, Naeem A, Induction of amyloidogenicity in wild type HEWL by a dialdehyde: analysis involving multi-dimensional approach. *Int J Biol Macromol*. 2014 Mar 28; 64:36-44. **(IF. 8.2)**.
20. Bhat TM, Ansari MYK, Choudhary S, Aslam R, **Bhat WF**, Alteration in anti-oxidant defense system and protein expression in response to varied concentrations of EMS in *Psoralea corylifolia*. *Acta Physiologiae Plantarum*. November 2014, 37:1707. **(IF. 2.4)**.

### **INTERNATIONAL CONFERENCES**

1. Presented the Paper at 7<sup>th</sup> Annual Conference of Indian Academy of Biomedical Sciences. Theme: Biochemical Innovations: Translating Cellular Cues into Novel Therapeutics. held on 20-22 April 2018 at Department of Clinical Biochemistry, Sher-I-Kashmir Institute of Medical Sciences, Sher-I-Kashmir International Conference Centre (SKICC), **Srinagar, Kashmir, India**.
2. Presented the Paper (*In vitro* disintegration of Cystatin fibrils using conventional and gemini surfactants: Putative therapeutic intervention in amyloidoses) at International conference on Emerging Trends in Biomedical Sciences held on March 06-08, 2016 at Department of Biochemistry, AMU, **Aligarh, India**.
3. Presented the Paper (Distinct Effects of Cu<sup>2+</sup>, Fe<sup>3+</sup> and Zn<sup>2+</sup> on Amyloid Fibril Formation of Cystatin (C) at Low pH) at World Congress on Microscopy: Instrumentation, Techniques and Applications in Life Sciences and Materials Science held on Oct 09-11, 2015 at Mahatma Gandhi University, **Kottayam, Kerala, India**.
4. Presented the Paper (Anti Fibrillogenic and Fibril-Destabilizing Effects of Metal ions for Cystatin Fibrils in vitro) at Neurological Disorders Summit held on July 06-08, 2015 at **San Francisco, USA**.
5. International Conference on chemistry: Frontiers and Challenges {ICCF-2011} held on 5-6 March, 2011 at Department of Chemistry, Faculty of Sciences, AMU, **Aligarh, India**.

### **NATIONAL CONFERENCES**

1. National Symposium on Recent Advances in Free radical Biology and Biochemistry held on 06 March 2014, under the auspices of UGC-SAP-DRS III program of the Department of Biochemistry, Faculty of Life sciences, AMU, Aligarh.
2. Workshop on Biomedical Engineering and Its Recent Trends (BERT 2014) held on 11 Feb 2014 at Zakir Hussain College of Engineering & Technology, AMU, Aligarh INDIA, {Under TEQIP-II}, Jointly organized by Ergonomics Research Division and Biosignal Research Division.
3. Aligarh Nano –III National Conference on Nanoscience and Nanotechnology under DST/UGC/CST (UP) program March 15-16 2013, at Dept. of Applied Physics. Z. H College of Engineering and Technology, Aligarh.
4. Participated in the one day National Symposium on “Nanotechnology for Chemical Applications” held on 27 Feb 2013 at Dept. of Chemical Engineering Z.H College of Engineering and Technology, Aligarh.

5. Presented the poster (Effect of glycation on cystatin Purification, function, structure, and stability, in National symposium (silver jubilee celebration) on: Emerging trends in biological and toxicological sciences on March 6, 2012, under the auspices of UGC-SAP-DRS II programme, at Dept. of biochemistry, Faculty of Life science, AMU.
6. National symposium on current trends in biochemical, biomedical and Environmental Science on February 22, 2011 at Dept. of biochemistry, Faculty of Life science, AMU.

## **TALKS**

- Investigating the preventive effects of baicalin and gallic acid against glyoxal induced cystatin aggregation at 7<sup>th</sup> Annual Conference of Indian Academy of Biomedical Sciences. Theme: Biochemical Innovations: Translating Cellular Cues into Novel Therapeutics. held on 20-22 April 2018 at Department of Clinical Biochemistry, Sher-I-Kashmir Institute of Medical Sciences, Sher-I-Kashmir International Conference Centre (SKICC), Srinagar, Kashmir, India.
- *In vitro* disintegration of Cystatin fibrils using conventional and gemini surfactants: Putative therapeutic intervention in amyloidoses at International conference on Emerging Trends in Biomedical Sciences held on March 06-08, 2016 at **Department of Biochemistry, AMU, Aligarh, India.**
- Anti-fibrillogenic and fibril destabilizing effects of metal ions for Cystatin (C) fibrils. August 6-8, 2015, Neurological Disorders Summit held at **San Francisco, USA.**
- Distinct Effects of Cu<sup>2+</sup>, Fe<sup>3+</sup> and Zn<sup>2+</sup> on Amyloid Fibril Formation of Cystatin (C) at Low pH. Oct 09-11, 2015, World Congress on Microscopy: Instrumentation, Techniques and Applications in Life Sciences and Materials Science held at Mahatma Gandhi University, **Kottayam, Kerala, India.**

## **SUMMARY OF MAJOR TECHNICAL EXPERTISE**

**Protein purification, expression and detection techniques:** Bacterial Expression, Salt Fractionation, Gel Filtration Chromatography, Polyacrylamide Gel Electrophoresis, SDS-PAGE, Affinity chromatography, PCR, RTPCR, RNA isolation, Western blotting, ELISA.

**Protein Aggregation and Antiaggregation studies:** UV, FTIR, CD, DSC, ITC, Fluorescence using with dyes like ThT, Congo Red and ANS

**Microscopic imaging:** AFM, TEM, SEM.

**Medical Lab Diagnostic Techniques:** *Biochemistry, Pathology and Microbiology*

## **PROFESSIONAL DEVELOPMENT**

**Independently handled Project as Principal Investigator (2017)** Awarded by Department of Science and Technology, Science and Engineering Research Board (DST SERB), Govt. Of India. Project No.: PDF/2016/001986. (IIT Delhi and UK).

**Organizing Member (2019)** Biochemical Techniques Training Programme (Nov. 25-29-2019) sponsored by Indian Council of Medical sciences (ICMR), conducted by department of biochemistry Govt. medical college Doda. J&K. India.

**Organizing Member  
(2022)**

Screening Camp (Diabetes and Obesity) (Oct. 18- 2022) conducted by department of biochemistry Govt. medical college Doda. J&K. India.

**Selected as Assistant Professor  
(2023)**

(Biochemistry and Clinical Biochemistry) in Higher Education department as well as in Health and Medical Education Department (Biochemistry) via Public Service Selection, Govt. of Jammu and Kashmir, India.

**OTHER ACTIVITIES**

- ❖ Awarded First Grade in National Drawing Competition organized by B.M.S.V. kendra, Aurangabad.
- ❖ Awarded First Position in painting at Cluster Meet held at Jawahar novodaya vidyalaya Aishmuqam J&K.
- ❖ Computer proficiency: Working knowledge of MS Office/ word, excel, paint, PowerPoint.

**REFERENCES**

**1. Prof. Bilqees Bano (Professor)**

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Faculty of Life Science  
AMU, Aligarh, UP, India. 202002  
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**2. Prof. Ta Yuan Chang (Professor)**

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Edu Tel. 603-650-1622 Laboratory  
Website: <http://www.Dartmouth.edu/~tychang>

**3. Dr. Mosin Saleem Khan (Assistant Professor)**

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