




Title	Ms.	First Name	Rimpy Kaur	Last Name	Chowhan	Photograph
Designation	Assistant Professor (Ad-hoc)					
Address	Department of Biomedical Science, Acharya Narendra Dev College, University of Delhi, Govindpuri, Kalkaji, Delhi, India-110019					
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Educational Qualifications						
Degree	Institution				Year	
Ph.D. Biomedical Science	Dr. B. R. Ambedkar Center for Biomedical Research, University of Delhi				2021	
M.Sc. Biomedical Science	Dr. B. R. Ambedkar Center for Biomedical Research, University of Delhi				2012	
B.Sc. (H) Biomedical Science	Bhaskaracharya College of Applied Sciences, University of Delhi				2010	
AISSCE	St. Cecilia's Public School, Delhi				2006	
AISSE	St. Cecilia's Public School, Delhi				2004	
Career Profile						
<p>PROFESSIONAL CAREER</p> <p>MAJOR CONTRIBUTIONS :</p> <ul style="list-style-type: none"> • Effect of subcellular pH associated functional compartmentalization on Prdx6's structural allostery and oligomerization propensity. • Structural basis for redox regulation & peroxidatic catalytic cycle of Peroxiredoxin 6. • Pathogenic prediction of single nucleotide polymorphisms of Prdx6 and their impact on its structure and function. • Identification of beneficial mutant of Prdx6 with a probable role in neuro-degeneration prevention. <p>TEACHING EXPERIENCE IN VARIOUS INSTITUTIONS:</p> <p>Aug 2019: Assistant Professor, Department of Biomedical Science, onwards Acharya Narendra Dev college, University of Delhi</p>						

Jul 2017 to
Dec'2018 Guest Lecturer, Department of Biomedical Science,
Bhaskaracharya College of Applied Sciences, University of Delhi

Aug 2014 to
Nov 2014 Teaching Assistant, M.Sc. Biomedical Science,
Dr. B. R. Ambedkar Centre for Biomedical Research,
University of Delhi

RESEARCH EXPERIENCE IN VARIOUS INSTITUTIONS:

Feb 2015 to Ph.D.
Feb 2021 Dr. B. R. Ambedkar Centre for Biomedical Research,
University of Delhi

Oct 2012 to CSIR Research Fellow
Feb 2015 Dr. B. R. Ambedkar Centre for Biomedical Research,
University of Delhi

Administrative Assignments

- Member of Question paper setting team for B.Sc. Biomedical Sciences (2019-2021)
- Organizing committee member for :
 - One-day seminar on “*Career in Indian Forest Service: A session with IFS officers*” in the ANDC career counselling series. April 18, 2021.
 - Two Week Online National Workshop on “*Tools and Techniques in Statistical Analysis*” Under the aegis of DBT Star College Scheme. April 6-19, 2021.
 - One-day Webinar on “*Introduction to digital forensics and electronic evidences*” by Dr Mohit Soni, CEO WhiteLint Global Pvt Ltd. April 03, 2021
 - One-day seminar on “*Career in Forensic Science*” in the ANDC career counselling series. March 20, 2021.
 - One-day seminar on “*Studying in Europe-Interaction with seniors*” in the ANDC career counselling series. March 14, 2021.
 - One-day seminar on “*Career after MBA- exploring the unexplored*” in the ANDC career counselling series. March 7, 2021.
 - Three days online hands-on workshop on “*A step-by step guide to Data mining from literature to pathways*” by Dr Srinivasan Ramachandran, Senior Principal Scientist, CSIR-IGIB. March 1-3, 2021.
 - Invited talk on “*Lessons learned around the pandemic*” by Prof Daman Saluja and “*Covid19 vaccines: From bench to bedside; amidst a pandemic*” by Prof Gagandeep Kang on the occasion of Cathexis 2021 on January 21, 2021.
 - Online *Python learning* workshop by Ms. Shruti Gupta and Mr. Alok Anand, Jawaharlal Nehru University. November 2020. (weekends, 20 hour)
 - Talk on “*Lessons from a career in Science*” by Dr Shaheed Jameel, CEO, Wellcome Trust/DBT Alliance India on the occasion of Cathexis 2020 on February 4 2020.

- Panel discussion session with ANDC Biomedical Science Alumni to commemorate 20 years of Biomedical Science department on 4th February 2020.
- One day inter-disciplinary exhibit presentation entitled “New Frontiers in Science” (Under the aegis of DBT star college program) held on October 22, 2019
- BMS Alumni Lecture series entitled “*Sci-Art*” by Dr. Lipsa on September 19, 2019
- BMS Alumni Lecture series entitled “An interactive session on Science Communication” by Dr. Shruti Murlidhar and Mr. Abhishek Chari on August 28, 2019.
- Cathexis 2019 Inaugural lecture entitled Drug Discovery against MDR Microbes by Dr. Sidharth Chopra on August 14, 2019.
 - BMS Alumni Lecture series entitled “*Transition from a Cancer Researcher to an Engineer and finally a Manufacturer-Salesman*” by Dr. Pawan Mehrotra on August 14, 2019.
- Escorted students for educational trips:
 - Four days educational cum excursion trip with ANDC’s B.Sc. (H) Biomedical Science and B.Sc. Life Science students to Jhansi to attend National conference on “Emerging synergistic trends in Ayurvedic and Biomedical Science” held at Bundelkhand University, Jhansi, India from February 18-21, 2020 and visit Jhansi fort and Ochra river.
 - One day educational trip with B.Sc. (H) Biomedical Science 2nd year students to Regional Center for Biotechnology on February 28, 2020.
 - One day educational trip with B.Sc. (H) Biomedical Science 3rd year students to Regional Center for Biotechnology on October 18, 2019.
- Member of Academic events committee of college (2020-till date)
- Member of Eco club of college (2020-till date)
- Member of Proctoral committee of college (2019-till date)
- Member of Fellowship/Scholarship committee of college (2019-till date)
- Mentor for SWAYAM-NPTEL’s several online courses including “Biochemistry”, “Demystifying the brain”, “Bioinformatics: Algorithms and applications” and “Medical Biomaterials”.

Areas of Interest / Specialization

Areas of Interest

Protein structure, function & folding dynamics; Protein misfolding/aggregation; Amyloidosis; Proteinopathies; Neurodegenerative disorders; Oxidative stress, Redox homeostasis; Antioxidant defense system, Small cellular solute’s effect on cellular antioxidant system , deleterious nucleotide polymorphisms and their impact on protein structure and function

Specialization

Biomedical Sciences, Biochemistry, Microbiology, Biophysics, Molecular Biology and Human Genetics, Immunology, Cell Biology, Spectroscopy, Structural Biology, Proteomics, Bio-statistics, Toxicology, Medicinal chemistry, Instrumentation, Bioinformatics
Subjects Taught
<p>B.Sc. Biomedical Science: Computational Biology and Drug Discovery, Molecular Biotechnology, Principles of Genetics (Jan-April 2021); Biophysics, Genome organization and Function, Medical Microbiology, Pharmacology, Bioorganic Chemistry (July-Dec 2020); Computational Biology and Drug Discovery, Medicinal chemistry, Principles of Genetics (Jan-April 2020); Bioorganic Chemistry, Cell and Radiation Biology, Methods in Epidemiological data analysis (Aug-Dec 2019); Biochemistry and Medical Microbiology (July-Dec 2018); Toxicology and Immunobiology (Jan-Apr 2018); Biochemistry and Tools in Modern Biology (July-Dec 2017).</p> <p>M.Sc. Biomedical Science : Biochemistry Practical (2014)</p>
Research Guidance
<u>None</u>
Publications Profile
<ol style="list-style-type: none"> 1. Rimpy Kaur Chowhan, Sunaina Hotumalani, Hamidur Rahaman, and Lasihram Rajendrakumar Singh. pH induced conformational alteration in human peroxiredoxin 6 might be responsible for its resistance against lysosomal pH or high temperature. Scientific reports (<i>NatureResearch</i>) 11, 9657: https://doi.org/10.1038/s41598-021-89093-8. 2. Rimpy Kaur Chowhan, Hamidur Rahaman, and Lasihram Rajendrakumar Singh. (2020) Structural basis of peroxidase catalytic cycle of human Prdx6. Scientific reports (<i>NatureResearch</i>) 10, 17416: https://doi.org/10.1038/s41598-020-74052-6. 3. Sharifun Shahnaj, Potshangbam Angamba Meetei, Rimpy Kaur Chowhan, Z A Parray, Pushpa Kakchingtabam, A Kumari, A Islam, A Khan, Laishram Rajendrakumar Singh and Hamidur Rahaman (2020). The anti-oxidant enzyme, Prdx6 might have cis-acting regulatory sequence(s). <i>International Journal of Biological Macromolecules</i> 149: 1139–1150. 4. Sharifun Shahnaj*, Rimpy Kaur Chowhan*, Potshangbam Angamba Meetei, Pushpa Kakchingtabam, Khundrakpam Herojit Singh, Laishram Rajendrakumar Singh, Potshangbam Nongdam, Aron B. Fisher, and Hamidur Rahaman (2019) Hyperoxidation of Peroxiredoxin 6 Induces Alteration from Dimeric to Oligomeric State. <i>Antioxidants</i> 8(2): 33. (* Equal contributors)

5. **Rimpy Kaur Chowhan**, Upendra Bhele, Mohd. Safikur Rahman, and Laishram Rajendrakumar Singh (2017) Understanding structural basis for redox regulation of Peroxiredoxin 6 using in-silico approach. *Journal of Proteins & Proteomics* 8(4): 195-204
6. **Rimpy Kaur Chowhan**, Fasil ali, Y. Bhat, Mohd. Safikur Rahman, Laishram Rajendrakumar Singh, Faizan ahmad, Tanveer Ali Dar (2016) Alanine Counteracts the Destabilizing Effect that Urea has on RNase-A. *Protein and Peptide Letters* 23(9): 795-799.
7. Shruti Mittal, **Rimpy Kaur Chowhan** and Laishram Rajendrakumar Singh (2015) Macromolecular Crowding: Macromolecules friend or foe. *Biochimica et Biophysica Acta* 1850(9): 1822-1831.
8. **Rimpy Kaur Chowhan**, Tanveer Ali Dar, and Laishram Rajendrakumar Singh (2015) Proteopathies: Biological, Molecular and Clinical Perspectives. *Proteostasis and Chaperone Surveillance* (Springer Press): 139-169.
9. **Rimpy Kaur Chowhan**, Shruti Mittal, Tanveer Ali Dar, Mohammad Amjad Kamal and Laishram Rajendrakumar Singh (2014) Ignored avenues in alpha-synuclein associated proteopathy. *CNS & Neurological Disorders - Drug Targets* 13(7): 1246-1257.
10. **Rimpy Kaur Chowhan**, Marina Warepam, Tanveer Ali Dar, and Laishram R. Singh (2013) Recent trends in treating neuronal proteinopathies. *Journal of Proteins & Proteomics* 4(2): 139-148.
11. **Rimpy Kaur Chowhan** and Laishram R. Singh (2012) "Polyamines in modulating protein aggregation" *Journal of Proteins & Proteomics* 3(2): 141-150.

Conference/ Presentations/Workshops

Poster/Platform presentations:

1. **Rimpy Kaur Chowhan** and Laishram Rajendrakumar Singh (2019) "Chemical chaperones act as functional modulators of antioxidant enzymes". 43rd Annual Meeting of the Indian Biophysical Society organized by IISER Kolkata, Kolkata, India.
2. **Rimpy Kaur Chowhan**, Sunaina Hotumalani and Laishram Rajendrakumar Singh (2018) "Peroxiredoxin 6, a cytosolic antioxidant protein has high aggregation propensity at physiological conditions". 11th Annual Symposium on Frontiers in Biomedical Research 2018 organized by Dr. B. R. Ambedkar Center For Biomedical Research, University of Delhi, New Delhi, India.
3. **Rimpy Kaur Chowhan** and Laishram Rajendrakumar Singh (2017) "Suppression of thermal aggregation of a moonlighting protein, Peroxiredoxin 6 by polyamines". National Conference on Protein structure and Dynamics in Health and Agriculture organized by Jamia Millia Islamia, New Delhi, India.
4. **Rimpy Kaur Chowhan** and Laishram Rajendrakumar Singh (2017) "Human Prdx6 T177I might be beneficial for patients suffering from neurodegenerative diseases: an in silico study". Alzheimer's & Parkinson's Diseases Congress - AD/PD™ Vienna, Austria.

5. **Rimpy Kaur Chowhan**, Sharifun Shahnaj, Laishram Rajendrakumar Singh, and Md. Hamidur Rahaman, (2016) “pH induced conformational switch: Implications to bifunctional activities of rat Prdx6”. Annual Meeting of the Indian Biophysical Society organized by Indian Institute of Science, Bangalore, India.
6. **Rimpy Kaur Chowhan**, Md. Hamidur Rahaman, and Laishram Rajendrakumar Singh (2016) “pH dependent variable structural stability of human Peroxiredoxin6”. Annual Meeting of the Indian Biophysical Society organized by Indian Institute of Science, Bangalore, India.
7. **Rimpy Kaur Chowhan**, Sudhir Kumar Pal, and Laishram Rajendrakumar Singh (2015) “First comprehensive in silico identification of deleterious nsSNPs of human peroxiredoxin6 and their structural and functional characterization”. National Symposium on Biophysics & Golden Jubilee Meeting of Indian Biophysical Society organized by Jamia Millia Islamia, New Delhi, India.
8. **Rimpy Kaur Chowhan**, Md. Hamidur Rahaman, and Laishram Rajendrakumar Singh (2014) “Effect of Phosphorylation on Peroxiredoxin-6”. 9th Symposium on Frontiers in Biomedical Research organized by Dr. B. R. Ambedkar Center For Biomedical Research, University of Delhi, New Delhi, India.
9. **Rimpy Kaur Chowhan**, Md. Hamidur Rahaman, and Laishram Rajendrakumar Singh (2013) “Exploring Allosteric regulation of Peroxiredoxin 6”. National Conference on Recent Trends in Protein Structural Biology organized by Jamia Millia Islamia, New Delhi, India.
10. **Rimpy Kaur Chowhan** (2009) “Gastroenteritis”. National symposium on Infectious diseases- Basic and applied research organized by Bhaskaracharya College of Applied Sciences, University of Delhi, Delhi, India.

Attended:

11. Faculty development program on “Basics of Research” organized by Hansraj college, University of Delhi (18-24th June 2021).
12. International webinar on ‘Role of Host Immune system in Development of Covid-19’ organized by bundelkhand University, Jhansi (11th May 2020).
13. Workshop on “Design of Experiment (DoE) using statistical tools” organized by Phytomics: the Botanical Society of Bhaskaracharya College of Applied Sciences, University of Delhi (6-7th November 2020).
14. Abcam seminar given by David A. Grotzky covering optimization techniques for western blotting and optimization techniques for immunohistochemistry and immunocytochemistry at Dr. B. R. Ambedkar Center for Biomedical Research, University of Delhi, New Delhi, India. (2017)
15. 32nd Annual Convention of Indian Association for Cancer Research & International Symposium: Infection & Cancer organized by Dr. B. R. Ambedkar Center For Biomedical Research, university of Delhi, Delhi, India (2013).
16. Orientation workshop on Radiation Biology for 1 week at INMAS, Delhi (2012).

Research Projects (Major Grants/Research Collaboration)

1. **ICMR SRF Project** entitled “Cellular mechanisms underlying Prdx6’s enhanced half-life within oxidatively stressed cells: an insight into therapeutic intervention for neurodegeneration” (June’2018-Aug’2019).
2. **CSIR SRF project** entitled “Investigating the effect of pH (due to sub-cellular localization), redox state and genetic polymorphism on the structure and multifunctionality of Peroxiredoxin 6” (Feb’2015-Oct’2017).

3. **CSIR JRF project** entitled “Effect of Polyamines on proteins structure and function” under the guidance of Dr. L.R. Singh at ACBR, University of Delhi, Delhi, India (Oct’2012-Jan’2015).

Awards and Distinctions

1. Awarded Indian Council of Medical Research - **Senior Research Fellowship** from 25th June 2018 to 24th June 2021.
2. Recipient of **International travel support (ITS) award** by Science and engineering Research board, Department of Science & technology, Government of India for attending the conference, Alzheimer's & Parkinson's Diseases Congress - AD/PD™ Vienna, 2017.
3. Awarded Council of Scientific and Industrial Research - **Senior Research Fellowship** from November 2014 to October 2017.
4. Awarded Council of Scientific and Industrial Research - **Junior Research Fellowship** from October 2012 to October 2014.
5. Awarded with certification of qualifying 2012 **National level lecturer-ship eligibility** test (NET) for Life Sciences discipline (All over Indian rank 0055), conducted by Council of Scientific and Industrial Research, Ministry of Science and Technology, government of India and University Grants Commission, India.
6. Recipient of **Prof. H.C. Gaur scholarship** instituted by University of Delhi for the duration of 2 years (2010-2012).
7. Awarded with certification of qualifying 2011 **Graduate Aptitude Test in Engineering** (GATE) for Life Sciences discipline (90.15 percentile), conducted by Department of Higher Education, Ministry of Human Resource Development, Government of India.
8. Awarded with certificate of “**Business Professional Programmer**” on completion of DOEACC “O” LEVEL diploma in computers by DOEACC Society (2007).
9. Awarded with “**Chhatra pratibha award**” by Hindi Sahitya academy, India in 2004.

Association With Professional Bodies

- **Indian Biophysical Society**
- **Protein society**
- **ACBR Alumni Association**

Other Activities

- **Editor of ANDC Department of Biomedical Science's annual magazine Biomer'20 and Biomer'21.**
- **Compere for ANDC's Annual day celebrations 2020.**