



MAITREYI COLLEGE
(UNIVERSITY OF DELHI)
CHANAKYAPURI, NEW DELHI – 110021
Faculty Details Proforma for College Website

Title	Dr.	First Name	Nishu	Last Name		Photograph
Designation	Assistant Professor					
Department	Chemistry					
Address	Department of Chemistry, Maitreyi College, University of Delhi, Chanakyapuri, New Delhi-110021, India					
Phone No. Office						
Residence						
Mobile						
Email	nishu@maitreyi.du.ac.in					
Web-Page						
Educational Qualifications						
Degree	Institution				Year	
Ph.D. Chemistry	Department of Chemistry, University of Delhi				2023	
M.Sc. Chemistry	Ramjas College, University of Delhi				2017	
B.Sc. (H) Chemistry	Motilal Nehru College, University of Delhi				2014	
Career Profile						
Organization / Institution		Designation			Duration	
Maitreyi College, University of Delhi		Assistant Professor			17 th January 2024 to PRESENT	
Areas of Interest/Specialization						
Biophysical and Biochemical aspects of Nucleic Acids, Multistranded DNA Structures (Hairpin, Duplex, Holliday Junction, G-quadruplexes, etc.). Bioinformatics approaches using NCBI, Clustal, EPD sites, UCSC browser etc. Bimolecular Interactions: DNA-Drug interactions (using UV-Spectroscopy, UV-thermal denaturation, Circular Dichroism, Fluorescence & Gel-electrophoresis).						
Subjects Paper Taught						
DSC- Biomolecules II CHE-DSC-02- Chemical Bonding and Elements in Biological System SEC- Chemistry of Food, Flavors, and Colourants VAC-The Art of Being Happy						
Research papers published in Peer Reviewed/Indexed Journals						
<ol style="list-style-type: none"> Nain, N., Singh, A., Khan, S., & Kukreti, S. (2023). G-quadruplex formation at human <i>DAT1</i> gene promoter: Effect of cytosine methylation. <i>Biochemistry and Biophysics Reports</i>, 34, 101464. (Impact Factor- 2.7) Nain, N., Singh, A., Khan, S., Kaushik, M., Kukreti, S. (2022). Structural switching/polymorphism by sequential base substitution at quasi-palindromic SNP site (G→A) in LCR of human β-globin gene cluster. <i>International Journal of Biological Macromolecules</i>, 201, 216-225. (Impact Factor- 8.2) Khan, S., Singh, A., Nain, N., Gulati, S., Kukreti, S. (2021). Sequence-specific recognition of a coding segment of human <i>DACHI</i> gene via short pyrimidine/purine oligonucleotides. <i>RSC Advances</i>, 11(63), 40011-40021. (Impact Factor- 3.9) Khan, S., Singh, A., Nain, N., & Kukreti, S. (2023). Alkali cation mediated topology displayed by an exonic G-rich sequence of TRPA1 gene. <i>Journal of Biomolecular Structure and Dynamics</i>, 41(19), 9997-10008. (Impact Factor- 4.4) 						

Book Chapter

Anju Singh, Shoab Khan#, Nishu Nain#, Shrikant Kukreti (2023). Deciphering Plausible Role of DNA nanostructures in Drug Delivery. In *Fiber and Textile Engineering in Drug Delivery Systems* (pp. 215-251). Woodhead Publishing. (Chapter 7) (#equal contribution) ISBN: 978-0-323-99500-9.

Conferences Organization/ Presentations

1. Participated in oral presentation on topic “G-quadruplex formation at human DAT1 gene promoter: Effect of cytosine methylation” in International Conference on “Recent Trends in Biological and Chemical Sciences” at ICRTBCS-2023 jointly organized by Shri Ramswaroop Memorial University, Uttar Pradesh and Hindu College, University of Delhi, India held on November 25th, 2023. **(3rd Prize in Oral Presentation)**
2. Participated in “International Conference and Workshop on Twelve Principles of Green Chemistry and UN-SDGs” organized by Green Chemistry Network Centre, Hindu College, University of Delhi on November 9-10th, 2023.
3. Presented a poster on topic “Structural switching/polymorphism by sequential base substitution at quasi-palindromic SNP site (G→ A) in LCR of human β -globin gene cluster” in International Conference on “Recent Advances in Nanomedical Sciences (RANMS-2022)” organized by Institute of Nano Medical Science (INMS) & Institution of Eminence (IOE), University of Delhi, held during June 22-23, 2022. **(Best poster Award)**
4. Participated in “XV J-NOST 2019” Conference for Research Scholar organized by the Department of Chemistry, University of Delhi held during October 18-21, 2019.
5. Participated in “National Symposium on Recent trends, Development and Methodologies in Biophysics” organized by the Department of Biophysics, University of Delhi, South Campus, held on September 7, 2019.
6. Presented a poster on topic “Eukaryotic Telomeric Sequence under Methylation” in International Conference on “6th World Congress on Nanomedical Sciences” organized by Jamia Hamdard University & University of Delhi on January 7-10, 2019.

Workshops

1. Participated in 7 Day Technical Hands-On-Workshop on “**Molecular Docking | Study to predict interaction energy between molecules**” organized by BDG LIFESCIENCES from November 24-30, 2021.
2. Participated in the National Workshop on “**Thieme Chemistry: Science of Synthesis**” organized by Department of Chemistry, University of Delhi, held on September 28, 2018.
3. Participated in the “**American Chemical Society (ACS) on-campus Meeting**” at North Campus, University of Delhi held on February 5, 2018.

Webinars

1. Attended the International webinar on “**Personalized Medicine and Pharmacogenomics: A Novel Cost Effective Approach in Therapeutics**” organized by ISPOR Student Educational Society, Department of Pharmacy Practice, NIPER Mohali, India held on January 20, 2022.
2. Attended the International webinar on “**Post-COVID challenges and opportunities for the Chemist**” jointly organized by Indian Science Congress Association (Delhi Chapter) and Department of Chemistry, University of Delhi held on December 28, 2021.
3. Attended the webinar on Popular Science Writing “**AWSAR (Augmenting Writing Skills for Articulating Research)**” organized by DST, GOI & Vigyan Prasar, held on October 14, 2021
4. Attended the webinar on “**Communicating Science to the Citizen during COVID19 pandemic: Be prepared not panic**” organized by National Council for Science & Technology Communication, DST, GOI and Gujarat Council on Science and Technology, DST, Government of Gujarat on May 11, 2020.
5. Attended the webinar on “**Learning to live with virus**” organized by National Council for Science & Technology Communication, DST, GOI and Gujarat Council on Science and Technology, DST, Government of Gujarat on May 12, 2020.
6. Attended the webinar on “**Genome sequencing in search of vaccine for coronavirus**” organized by National Council for Science & Technology Communication, DST, GOI and Gujarat Council on Science and Technology, DST, Government of Gujarat on May 13, 2020.

7. Attended the webinar on “**S & T Intervention in fighting COVID 19 pandemic**” organized by National Council for Science & Technology Communication, DST, GOI and Gujarat Council on Science and Technology, DST, Government of Gujarat on May 15, 2020.
8. Attended the National webinar on “**रोग में योग**” organized by Yoga Club, Bhaskaracharya College of Applied Science, University of Delhi held on May 16, 2020.

Awards and Distinctions

- **3rd Prize** in Oral Presentation jointly organized by Shri Ramswaroop Memorial University, Uttar Pradesh and Hindu College, University of Delhi, 2023
- **Best Poster Award** presented by Institute of Nano Medical Science (INMS) & Institution of Eminence (IOE), University of Delhi, 2022.
- Senior Research Fellowship (**SRF**) from CSIR, Govt. of India [2020-2023] Ph.D. period.
- Junior Research Fellowship (**JRF**) from CSIR, Govt. of India. [2018-2020] Ph.D. period.
- Qualified Graduate Aptitude Test in Engineering (GATE), 2018
- Secured **AIR-36** in CSIR NET JRF, Dec-2017
- Secured **AIR-15** in CSIR NET LS, June-2017
- **AIR-2** in Ph.D. Entrance Exam 2017, Delhi University
- **AIR-22** in M.Sc. Entrance Exam 2015, Delhi University
- Secured **AIR-438** in IIT-JAM 2014

Faculty Development Programme (FDP)/Refresher Course

Successfully completed Four Week Faculty Orientation/Induction Programme for “**Faculty in Universities/Colleges/Institutions of Higher Education**” Organized by Teaching Learning Centre Ramanujan College, University of Delhi under the aegies of Ministry of Education, Pandit Madan Mohan Malaviya National Mission on Teachers, and Teaching (PMMMNTT) held from **22 January 2024 – 20 February 2024** and obtained **A+ grade**.