



## Resume (Dr. Mahima Kaushik)

<b>Title</b>	Dr. (Mrs.)	<b>Na me</b>	Mahima Kaushik	<b>Photograph</b>
<b>Designation</b>	Associate Professor			
<b>Department</b>	Cluster Innovation Centre (CIC), University of Delhi, Delhi			
<b>Residential Address</b>	Saraswati Vihar, Pitampura, Delhi			
<b>Phone</b>	011-27666702 (Ext: 205)			
<b>Email</b>	<a href="mailto:mkaushik@cic.du.ac.in">mkaushik@cic.du.ac.in</a> <a href="mailto:kaushikmahima@yahoo.com">kaushikmahima@yahoo.com</a>			
<b>Educational Qualifications</b>				
<b>Degree</b>	<b>College/University</b>		<b>Year</b>	
Ph.D.	Delhi		2003	
M.Phil.	Delhi		1999	
M.Sc.	Meerut		1997	
Post-Doctoral Fellowship	University of Nebraska Medical Center (UNMC), Omaha (Nebraska), USA		2004	
D.S.T. Scientist (Principal Investigator)	“Young Scientist Project” under FAST TRACK Scheme from Department of Science and Technology		2005	
Boyscast Fellowship	Department of Science and Technology (D.S.T.), Gov. of India for working in an eminent research laboratory in USA.		2011	
Vice Chancellor’s Fellowship	University of Delhi, Delhi		2014	
<b>Career Profile (Academic/Research Experience)</b>				
<p><b>Research experience:</b> Working in Department of chemistry, University of Delhi from 2005 onwards continuously for more than ten years now.</p> <p><b>Teaching experience at Colleges:</b></p> <ul style="list-style-type: none"> <li>• Cluster Innovation Centre, University of Delhi, Delhi (From March, 2015 onwards)</li> <li>• Ramjas College, University Campus, Delhi University (From 22-Aug 2006 – March, 2015)</li> <li>• Ramjas College, University Campus, Delhi University (From Sep 2002 – Feb 2004)</li> <li>• Engaged in MSc. Practicals, Department of Chemistry, Univ. of Delhi, Delhi (2005).</li> <li>• Kalindi College, Delhi University (From Jan 2002 – Sep. 2002)</li> </ul>				

## **Administrative/Cultural/Extra-Curricular Assignments**

### **AT CLUSTER INNOVATION CENTRE:**

- Nodal Officer, Admissions for B. Tech (IT and MI) at Cluster Innovation Centre (2016-17)
- Coordinator, Examination Committee of B. Tech (IT and Mathematical Innovations) (May, 2016 and Dec., 2015)
- Member, Maintenance Committee (2016-17)
- Member, Admission Committee of B. Tech (IT and Mathematical Innovations) (Aug., 2015)
- Member, Selection Committee for Admission to B. Tech (IT and Mathematical Innovations) (Aug., 2015)
- Hostel In-charge, Cluster Innovation Centre (2016-17) and (2015-16)
- Compiled Data for NAAC report of CIC (2015 and 2016)
- Given inputs for question paper of entrance examination for B. Tech. (IT and MI), (2015 and 2016)
- Member, Technical Committee for the purchase

### **National Level:**

- Participated as “Jury Member” for INSPIRE awards by Department of Science and technology (D.S.T., Gov. of India); National level Exhibition & project competition (NLEPC)-2012 (October 21-22, 2012).
- Worked for Science Paper setting for National Talent Search Examination (NTSE) by NCERT in schools for various consecutive years

### **University Level:**

- Worked as “Deputy Coordinator” North Campus in the Workshop on Theory and Practical Course “Biochemistry and Environmental chemistry” at Department of Chemistry, University of Delhi, Delhi (2<sup>nd</sup> July – 7<sup>th</sup> July, 2012).

### **College Level:**

- Staff Advisor, Dept. of Chemistry, DBT Star College Project at Ramjas College, University of Delhi, Delhi. (2012-13 and 2013-14).
- Joint Secretary, Staff Association, Ramjas College (2013-2014).
- Member of Executive Council, Staff Association (2013-14)
- Member, Monitoring Committee, Ramjas College (2013-2014)
- Member, Library Committee, Department of Chemistry (2010-11)
- Member (Hostel Committee, Ramjas College), (2009-11)
- Member (Students Welfare Committee, Ramjas College), (2009-11)
- Member, Academic Standard Committee, Ramjas College (2010-11)

### **Department Level:**

- Member Advisory Committee, “International Conference on Interface between Chemistry and Environment (ICICE)” Ramjas College (13-14 December, 2012).
- Member Organizing Committee “National Workshop on Renewable Energy & Environment”, conducted by Department of Chemistry, Ramjas College, University of Delhi, (28-29 January, 2011).
- In-charge, Chemistry Society, Dept. of Chemistry, Ramjas College (2007-09). Organized One day function of the same including two lectures from Eminent Professors followed by poster, quiz and other competitions

<b>Extra-Curricular:</b>						
<ul style="list-style-type: none"> <li>○ Participated in “ANTARDHVANI 2014”; A Multi-Dimensional Cultural Festival: organized by University of Delhi and displayed a poster exhibiting the activities of the “Innovation Project-RC 201) and a “Vice Chancellor’s Fellow Stall”. (February 14-16, 2014)</li> <li>○ Participated in “ANTARDHVANI 2013”; A Multi-Dimensional Cultural Festival: organized by University of Delhi and displayed a poster exhibiting the activities of the Star College Project in the year 2012-13. (February 22-24, 2013)</li> </ul>						
Convener, Photography Club (2007-08)						
<b>Areas of Interest / Specialization</b>						
Biophysical aspects of DNA and it’s multistranded structures along with their Interactions with various ligands (Drug/Metal Ions/ Protein Interactions etc.); Structural Biology; Biocatalysis, Epigenetics, Cancer Biology and Nanotechnology etc.						
<b>UG/PG Subjects Taught</b>						
<b>(a) Undergraduate:</b>						
<b>Semester Mode:</b>						
B. Tech. (Information Technology and Mathematical Innovations)						
B.Sc. (Hons.) Chemistry Sem.V; Paper CHHT-514, Biochemistry & Env. Chemistry						
B.Sc. (Hons.) Chemistry Sem. V; Paper CHHT-512, Organic Chemistry						
<b>Annual Mode:</b>						
<ul style="list-style-type: none"> <li>▪ B.Sc. (Hons.) Chemistry III Year; Paper XV, Organic Chemistry</li> <li>▪ B.Sc. (Prog.) III Year; Paper CH-302, Organic Chemistry</li> <li>▪ B.Sc. (E.V.S) III Year; Paper V, Toxic Chemicals in the Environment &amp; Methods of Environmental Evaluation</li> <li>▪ B.Sc. (Hons.) Chemistry I Year; Paper VI (b), Environmental Chemistry</li> <li>▪ B.Sc. (Prog.) I Year; Paper CH-103 (Unit V &amp; VI), Organic Chemistry</li> <li>▪ B.Sc. (Hons.) Physics I Year, Organic Chemistry</li> <li>▪ BSc. (Hons.) subsidiary I Year, Organic Chemistry</li> </ul>						
<b>(b) Post-Graduate:</b> Assisted in M.Sc. Practicals at Dept. of Chemistry, Univ. of Delhi, Delhi						
<b>Research Guidance</b>						
Guided Research Scholars, Post-Graduate and Graduate students during their research work in my parent laboratory at Department of Chemistry, University of Delhi, Delhi.						
<b>Publications (Books/Research Articles/Reviews/Others)</b>						
<b>SNo</b>	<b>Authors</b>	<b>Year</b>	<b>Title of paper</b>	<b>Name of the Journal</b>	<b>Vol.</b>	<b>Pages</b>
1.	M. Kaushik*, S. Kaushik, S. Kukreti	2016	Exploring the characterization tools of Guanine- quadruplexes	Frontiers in Bioscience	21	468-78

2.	<b>M. Kaushik,*</b> A. Singh, M. Kumar, S. Chaudhary, S. Ahmed, & S. Kukreti	2016	Structure-Specific Ligand Recognition of Multistranded DNA Structures	Current topics in medicinal chemistry	16(30)	(In Press)
3.	M. Kumar, <b>M. Kaushik *</b> , S. Chaudhary, S. Kukreti	2016	Comparative analysis of the binding interaction of phenothiazinium dyes (thionine acetate, azure A, and Azure B) by using spectroscopic techniques	Journal Of Drug Metabolism And Toxicology	7(3)	1000214
4.	M. Kumar, <b>M. Kaushik</b> , S. Kukreti	2016	Interaction of an electrochemical redox indicator New Methylene Blue with DNA using biophysical techniques	Advanced Material Letters	1(1)	38-45
5.	<b>M. Kaushik*</b> , S. Mahendru, S. Chaudhary and S. Kukreti	2016	DNA Fingerprints: Advances in their Forensic Analysis Using Nanotechnology	Journal of Forensic Biomechanics	7 (3)	(In Press)
6.	<b>M. Kaushik,*</b> S. Mahendru, M. Kumar, S. Chaudhary, S. Kukreti	2016	Genomic Databases and Softwares: In pursuit of Biological relevance through Bioinformatics	Advanced techniques in Biology and Medicine	4(3)	1000185
7.	<b>M. Kaushik,*</b> M. Kumar, S. Chaudhary, S. Mahendru, S. Kukreti.	2016	Advancements in Characterization Techniques of Biopolymers: Cyclic Voltammetry, Gel Electrophoresis, Circular Dichroism and Fluorescence Spectroscopy	Advanced techniques in Biology and Medicine	4(3)	1000184
8.	<b>M. Kaushik,*</b> S. Chaudhary, S. Mahendru, M. Kumar and S. Kukreti	2016	Genetic Variations: Heroes or Villains	Journal of Down Syndrome & Chromosome Abnormalities	2(2)	(In Press)
9.	<b>M. Kaushik*</b> , P. Sinha, P. Jaiswal, S. Mahendru, K. Roy and S. Kukreti	2016	Protein engineering and de novo designing of a biocatalyst	J. Mol. Recognition	29	499-503

10.	<b>M. Kaushik*</b> , S. Kaushik, K. Roy, A. Singh, S. Mahendru, M. Kumar, S. Chaudhary, S. Ahmed, S. Kukreti	2016	A Bouquet of DNA Structures: Emerging Diversity	Biochemistry & Biophysics Reports	5	388-395
11.	<b>M. Kaushik</b> , S. Kukreti	2015	Differential structural status of the RNA counterpart of an undecamer quasi- palindromic DNA sequence present in LCR of human $\beta$ -globin gene cluster.	J. of Bio- molecular Structure and Dynamics	3(2)	244-52
12.	<b>M. Kaushik*</b>	2015	Exploring Renewable Energy Sources: Need of the hour	DU J. of Under- graduate Research and Innovation	1 (3)	67-74
13.	<b>M. Kaushik*</b> , S. Kaushik and S. Kukreti	2014	Advancement in the structural polymorphism of G-quadruplexes	International review of Biophysical chemistry	5(2)	37-46
14.	<b>M. Kaushik</b> , S.Kaushik, A.Bansal, S.Saxena, S.Kukreti	2011	Structural Diversity and Specific Recognition of four stranded G- quadruplex DNA	Current Molecular Medicine	11	744-769
15.	S. Kaushik, <b>M. Kaushik</b> , F. Svinarchuk, C. Malvy, S. Fermandjian, S.Kukreti	2011	Presence of divalent cation is not mandatory for the formation of intramolecular purine- motif triplex containing human c-jun protooncogene target.	Biochemistry	50	4132–4142
16	S. Kukreti, H. Kaur, <b>M. Kaushik</b> , A. Bansal, S. Saxena, S. Kaushik, R. Kukreti	2010	Structural polymorphism at LCR and its role in beta-globin gene regulation.	Biochimie	92 (9)	1199-206
			Structural transition from	Biopolymers	93	150-160

17.	<b>M. Kaushik</b> , M.Prasad, S.Kaushik, A.Singh, S. Kukreti.	2010	dimeric to tetrameric i-motif, caused by the presence of TAA at the 3'-end of human telomeric C-rich sequence.		(2)	
18.	<b>M. Kaushik</b> , A. Bansal, S. Saxena, S. Kukreti.	2007	Possibility of an Antiparallel (Tetramer) Quadruplex Exhibited by the Double Repeat of the Human Telomere.	Biochemistry	46	7119-7131
19.	<b>M. Kaushik</b> , N. Suehl, Luis A Marky	2007	Calorimetric unfolding of th bimolecular and i-motif complexes of the hu telomere complementary strand, d(C <sub>3</sub> TA <sub>2</sub> ) <sub>4</sub> .	Biophysical Chemistry	126 (1-3)	154-64
20.	M. Ganguly, F. Wang, <b>M. Kaushik</b> , M. P. Stone, L. A. Marky and B. Gold.	2007	A study of 7-deaza-2'- deoxyguanosine-2'- deoxycytidine base pairing in DNA	Nucleic Acids Research	35 (18)	6181-95
21.	<b>M. Kaushik</b> and S. Kukreti	2006	Structural polymorphism exhibited by a quasi palindrome present in the locus control region (LCR) of the human β- globin gene cluster	Nucleic Acids Research	34	3511-3522
22.	<b>M. Kaushik</b> , R. Kukreti, D. Grover, S.K. Brahmachari, and S. Kukreti	2003	Hairpin-Duplex equilibrium reflected in A→B transition in an undecamer quasi- palindrome present in locus control region (LCR) of Human β-globin gene cluster	Nucleic Acids Research	31	6904-6915
23.	<b>M. Kaushik</b> , and S. Kukreti	2003	Temperature induced hyperchromism exhibited by Hoechst 33258: Evidence of drug aggregation from UV- Melting method.	Spectrochimic a Acta, Part A	59	3123-3129
<b>TOTAL IMPACT FACTOR ~ 64.16 (as per Research Gate, 6th July, 2016)</b>						

▪ **BOOK CHAPTER (41 PAGES): (2007)**

**Building Blocks of Nucleic Acid Nanostructures: Unfolding Thermodynamics of Intramolecular DNA Complexes.**

L. A. Marky, S. Maiti, C. Olsen, R. Shikiya, S. Betzold, **Mahima Kaushik**, and I. Khutsishvili “**Biomedical Applications of Nanotechnology**”, edited by **V. Labhasetwar and D. Leslie-Pelecky**, published by “John Wiley & Sons”, Inc., 111 River Street, Hoboken, New Jersey 07030-5774.

**PUBLISHED PROCEEDINGS:**

1.	<b>M. Kaushik</b> , A. Singh, S. Kukreti	2015	Duplex to Cruciform transition in a Quasi palindrome present in Human Neuronal Growth Regulator 1( <b>NEGR1</b> ) gene, associated with Cancer	J. of Proteins and Proteomics	6(1)	<b>JPP99</b>
2.	A.Singh, <b>M. Kaushik</b> , S. Kukreti	2015	Preferential Recognition of DNA G-Quadruplex Topologies	J. of Proteins and Proteomics ISSN: 0975-8151	6(1)	<b>JPP 35</b>
3.	M. Kumar, <b>M.Kaushik</b> S. Kukreti	2015	Spectroscopic investigation of interaction between CT-DNA and New Methylene Blue	J. of Proteins and Proteomics	6(1)	<b>JPP 104</b>
4.	A.Singh, <b>M. Kaushik</b> , S. Joshi and S. Kukreti,	2012	G-Quadruplex polymorphism: An attempt to explore the association between G-tracts and intervening T's.	Journal of Proteins And Proteomics, ISSN: 0975-8151	-	<b>JPP 27-28</b>
5.	B.Gold, M.Ganaguly, R.W., Wang, L. Marky, <b>M.Kaushik</b> , M.Stone, and F.Wang	2009	Unfolding thermodynamics of DNA with 7-deaza-2'-deoxyguanosine and 7-aminomethyl 7-deaza-2'-deoxyguanosine: the effect of cationic charge tethered in the major groove	<i>Cancer Research</i> [AACR Annual Meeting, Apr18-22,2009; Denver, Colorado, USA]	69	3539

6.	<b>M. Kaushik</b> , R. Shikiya, S. Betzold, R. Ganugula, A. M. Soto, and Luis A. Marky	2005	Melting Behavior of DNA Triplexes of the Pyrimidine Motif	J. of Biomolecular Structural Dynamics	22 (6)	-
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### Workshop/Conference/Symposia Participated/Organized

#### TALKS DELIVERED:

- Oral Talk on “Alarming and Intertwined Relationship between Cancer and Environmental Pollution” in National Conference on “Nanoscience – Opportunities and Challenges”, Maitreyi College, University of Delhi, 19-20th Feb. 2016.
- Oral Talk on “Environmental Pollution: A Ringing Bell for Cancer” in the National symposium on environmental contamination and public health, at Dept. of Zoology, Zakir Hussain College, Univ. of Delhi, Delhi, India. (Aug. 24, 2015)
- Oral Talk in “Lecture/Workshop / Conference on Emerging Trends in Development of Drugs and Devices” at Department of Chemistry, University of Delhi, Delhi. (21<sup>st</sup>-23<sup>rd</sup> January, 2013).
- Oral Talks as “Resource Person” for the Workshop on Theory and Practical Course “Biochemistry and Environmental chemistry” at Dept. of Chemistry, Univ. of Delhi, Delhi (2<sup>nd</sup>-7<sup>th</sup> July, 2012).
- Oral Talk in IBS National Symposium on “*Biophysics in Medicine and Biology*”, Panjab University, Chandigarh (November 15- 17, 2007).
- Oral talk and Demonstration of a laboratory technique in a “National Workshop on “Challenges and Opportunities in Chemistry”, Maitreyi College, Univ. of Delhi (22-23 Sept, 2006).
- Oral Talk on “Energetic Contributions of C•C<sup>+</sup>/ C•C<sup>+</sup> Base-Pair Stacks to the Formation of Bimolecular Complex and i-motif Structures” on 12 Feb., 2005 in Dept. of Pharmaceutical Science in University of Nebraska Medical Center (U.N.M.C.), Omaha, Nebraska (U.S.A.).

#### POSTER PRESENTATIONS:

##### International:

- Interaction of an electrochemical redox indicator New Methylene Blue with DNA using biophysical techniques,  
M. Kumar, **M. Kaushik**, S. Kukreti,  
International Conference on Materials Science & Technology 2016, Conference Centre, University of Delhi, Delhi, India (01-04<sup>th</sup> March, 2016)
- Structural switch from duplex to cruciform in a quasipalindrome present in promoter region of human *otog* gene  
**M. Kaushik**, A. Singh and S. Kukreti\*  
International Congress on “Friedreich’s Ataxia and DNA Structure in Health & Disease” at the All India Institute of Medical Sciences, New Delhi, India. (11<sup>th</sup>-13<sup>th</sup> April, 2015) **[Best Poster]**



### **Award]**

- A Novel Parallel Triple Stranded G-Quadruplex Formation In Promoter Region Of Human Myosin  $\beta$  (*Myh7*) Gene **[ORAL]**  
S. Kukreti, **M. Kaushik** and A. Singh  
International Congress on “Friedreich’s Ataxia and DNA Structure in Health & Disease” at the All India Institute of Medical Sciences, New Delhi, India. (11<sup>th</sup>-13<sup>th</sup> April, 2015)
- G-Quadruplex polymorphism: An attempt to explore the association between G-tracts and intervening T’s.  
A. Singh, **M. Kaushik**, S. Joshi and S. Kukreti\*,  
International Interdisciplinary Science Conference (I-ISC, 2012) on protein folding and diseases,  
Center for Interdisciplinary research in basic science, Jamia Millia Islamia, New Delhi, India. December 8-10, 2012.
- Self-Association of Coralyne: A Plausible Drawback for DNA targeting.  
S. Kaushik, **M. Kaushik**, A. Singh, Anuradha and S. Kukreti\*,  
International Symposium on Trends in Drug Discovery and Development,  
Department of Chemistry, University of Delhi, Delhi, India. January, 05<sup>th</sup>-08<sup>th</sup>, 2010.
- A Study of 7-Deaza-2'-Deoxyguanosine•2'-Deoxycytidine Base Pairing in DNA  
M. Ganguly, F. Wang, **M. Kaushik**, M. P. Stone, Luis A. Marky and B. Gold,  
Nucleic Acids: Structure and Interactions III, SERMACS 2007,  
October 24 -27, 2007, Greenville, South Carolina (U.S.A.).
- Structural polymorphism exhibited by the C-rich strand of the Human Telomeric DNA  
**M. Kaushik**, Shrikant Kukreti  
Second International Symposium on Green / Sustainable Chemistry  
10-13 January, 2006, Convention centre, University of Delhi, Delhi.
- Melting Behavior of DNA Triplexes of the Pyrimidine Motif  
I.Khutsishvili, **M. Kaushik**, R. Shikiya, S. Betzold, R. Ganugula and L. A. Marky, (March, 29; 2006), Second Annual Research Expo, Lincoln, Nebraska (USA).
- Stability and Melting Behavior of DNA Triplexes of the Pyrimidine Motif.  
S. Betzold, **M. Kaushik**, C. Olsen and Luis A. Marky.  
Eighth Annual Pharmacy Student Research Conference – Western Region,  
June 03-04<sup>th</sup>, 2005. Denver, CO (USA).
- Unfolding of the Complimentary Strand of the Human Telomere.  
N. Suehl, **M. Kaushik**, and Luis A. Marky  
Eighth Annual Pharmacy Student Research Conference – Western Region,  
June 03-04<sup>th</sup>, 2005. Denver, CO (USA).
- Hemiprotonated CC<sup>+</sup> Duplex  $\rightleftharpoons$  i-Motif Equilibrium in the Unfolding of d[C<sub>3</sub>TA<sub>2</sub>]<sub>4</sub> and d[C<sub>3</sub>TA<sub>2</sub>]<sub>3</sub>C<sub>3</sub>T Below Physiological pH  
**M. Kaushik**, N. Suehl and Luis A. Marky.,  
18<sup>th</sup> Annual Gibbs Conference on Biothermodynamics, Oct. 9-12<sup>th</sup>, 2004. Carbondale, Illinois (U
- Unfolding of d[C<sub>3</sub>TA<sub>2</sub>]<sub>3</sub>C<sub>3</sub>T: Interconversion of the i-motif and Hemiprotonated C.C<sup>+</sup> Duplex Below Physiological pH’s.  
N. Suehl, **M. Kaushik** and Luis A. Marky  
Research Colloquium, Poster session, August 2004  
University of Nebraska Medical Center, Omaha, Nebraska, (USA).
- Hairpin-Duplex equilibrium reflected in A→B transition in an undecamer quasi-palindrome

present in locus control region (LCR) of Human  $\beta$ -globin gene cluster

**M. Kaushik**, R. Kukreti, D. Grover, S.K.Brahmachari, and S. Kukreti.

IUPAC international conference on Biodiversity and Natural Products: Chemistry and Medical applications, 26-31 Jan. 2004, New Delhi, India.

- Interaction of polymorphic DNA sequences with intercalants  
A.Bansal, **M. Kaushik** and S.Kukreti  
IUPAC international conference on Biodiversity and Natural Products: Chemistry and Medical applications, 26-31 Jan. 2004, New Delhi, India.
- Duplex and Triplex DNA: Stabilization Aspects.  
**M. Kaushik**, S. Saxena, and S. Kukreti.  
International Symposium on Trends in Medicinal Chemistry and Biocatalysis, 26-29 Jan, 2000, Deptt of Chemistry, Univ. of Delhi, Delhi (India).
- Regulation of Gene Expression using Antigene Strategy.  
S. Saxena, **M. Kaushik**, and S. Kukreti.  
International Symposium on Trends in Medicinal Chemistry and Biocatalysis, 26-29 Jan, 2000, Department of Chemistry, University of Delhi, Delhi (India).

#### **National:**

- Structural polymorphs of a quasipalindrome located in *NEGR1* oncogene  
**M. Kaushik**, A. Singh and S. Kukreti  
*ACBR* Symposium on Frontiers in Biomedical Research -2015 (*FBR-2015*), 29-31 Oct. 2015
- Spectroscopic investigation of interaction between ctDNA and New Methylene Blue”  
M. Kumar, **M. Kaushik**, S. Kukreti  
National symposium on Biophysics and Golden Jubilee Meeting of the Indian Biophysical Society at Jamia Millia Islamia, New Delhi, India, 14<sup>th</sup> – 17<sup>th</sup> Feb, 2015
- Diverse Topology of G-Quadruplexes,  
A. Singh, **M. Kaushik**, S. Joshi and Shrikant Kukreti,  
Lecture Workshop/Conference on Emerging Trends in Development of Drugs and Devices, Department of Chemistry, University of Delhi, Delhi, India, January 21<sup>st</sup>-23<sup>rd</sup>, 2013.
- G-Quadruplexes: Incredible Topology  
A. Singh, **M. Kaushik**, S. Joshi and S. Kukreti\*,  
National Symposium on “Frontiers of Biophysics, Biotechnology & Bioinformatics” & 37<sup>th</sup> Annual Meeting of Indian Biophysical Society (IBS), Department of Biophysics and Centre for Excellence in Basic Sciences, University of Mumbai, India, January 13-16, 2013.
- Self-Association of a ligand: A Cautionary aspect of DNA targeting.  
S. Kaushik, **M. Kaushik**, A. Singh, Anuradha and S. Kukreti\*,  
Symposium on recent trends in Biophysics,  
Department of Physics, BHU, Varanasi, India. February, 13<sup>th</sup>-15<sup>th</sup>, 2010.
- Structural Polymorphism exhibited by the C-rich strand of the Human Telomere: Intercalated-motif DNA  
**M. Kaushik**, S. Kukreti\*  
Indian Biophysical Society’s National Symposium on “*Biophysics in Medicine and Biology*”, Panjab University, Chandigarh. November 15- 17, 2007.
- Formation of a Py•Pu\*Pu Type Intermolecular Triplex Containing Human *c-jun* Protooncogene Sequence

S. Kaushik, M. Prasad, **M. Kaushik** and S.Kukreti\*

3<sup>rd</sup> Indo-Italian Workshop on Chemistry and Biology of Antioxidants,  
November 28-30, 2007 University of Delhi, Delhi.

- Selective Recognition of DNA by Minor Groove Binding Ligands  
M. Prasad, S. Kaushik, **M. Kaushik** and S.Kukreti\*  
National Seminar on Green Chemistry and Natural Products,  
November, 26-27, 2007, Univ. of Delhi, Delhi.
- Formation and stability of a DNA triple helical structure at Herpes Virus 4 gene target  
S. Kaushik, **M. Kaushik**, S. Kukreti\*  
9<sup>th</sup> CRSI, National Symp. in Chemistry (NSC-9), 1-4 February 2007, Univ. of Delhi, Delhi.
- DNA-Ligand Interactions: Sequence and Structure Selectivity  
M. Prasad, S. Kaushik, A. Bansal, **M. Kaushik** and S. Kukreti\*  
CARBO-XXI Symposium, 26-29 November 2006 University of Delhi, Delhi.
- DNA tetraplexes : Interaction with intercalants  
A. Bansal, M. Prasad, **M. Kaushik** and S. Kukreti.  
Chemistry Biology Interface: Synergistic New Frontiers, (Conference), Nov 21-26, 2004,  
Delhi.
- Structural polymorphism at a quasipalindromic site in  $\beta$ -globin gene LCR.  
**M. Kaushik**, R. Kukreti, D. Grover, S.K.Brahmachari, and S. Kukreti.  
National Symposium on cellular and molecular Biophysics, 14-17 Jan. 2004,  
NIMHANS, Bangalore, India.
- 11. Interaction of a minor groove binder Hoechst 33258 with G/C-rich deoxyoligonucleotides.  
**M. Kaushik, and S. Kukreti.**  
National Symposium on Biophysics, 21-23 Feb. 2003.  
Indian Institute of Technology, Roorkee (India).
- Interaction of Proflavine and Acridine Orange with Polymorphic DNA Sequences.  
**M. Kaushik**, S. Saxena, and S. Kukreti.  
National Bioorganic Symposium 7, Nov. 9-10, 2001.  
Department of Chemistry, Guru Nanak Dev University, Amritsar (India)-143005

#### **PARTICIPATION AT SEMINARS/ SYMPOSIA/ WORKSHOPS:**

- Publishing Connect Workshop, conducted by Central Science Library, Delhi University with Elsevier at convention hall, University of Delhi, Delhi (11 September, 2013).
- Workshop on Foundation course on Science and Life, Organized by CPDHE, University of Delhi at Institute of Lifelong Learning (ILL) (21-22 June, 2013).
- A Workshop on test and measurement, Organized by Dept. of Physics (under DBT star college project scheme), Ramjas college, University of Delhi, Delhi. (04-05 March, 2013)
- One day National Seminar on Natural Products: Application in Human welfare, organized by Ramjas College, University of Delhi, Delhi. (27 June, 2013)
- National Seminar on Chemistry in Interdisciplinary Applications organized by Hansraj College, University of Delhi, Delhi. (19 March, 2013).
- A Symposium entitled "Ramachandran manifestation: From peptide to proteome" South Campus and Sri Venkateswara College, Univ. of Delhi, (14-15 March, 2013).
- Workshop on Molecular Modeling and it's Applications, organized by Department of Chemistry, Ramjas College, University of Delhi, Delhi (4 March, 2013).
- Lecture/Workshop / Conference on Emerging Trends in Development of Drugs and Devices at

Department of Chemistry, University of Delhi, Delhi. (21-23 January, 2013).

- International Conference on Interface between Chemistry and Environment (ICICE), Ramjas College, Delhi. (13-14 December 2012).
- Author Workshop on 'How to Write for and Get Published in Scientific Journals and Publish Manuscripts', Springer in collaboration with Delhi University Library System, at Convention Hall, University of Delhi, Delhi, India, (23 August, 2012).
- Workshop on Theory & Practical Course "Biochemistry & Environmental Chemistry" [Bsc. (H) Chemistry (CHHT514 & CHHP 514), Department of Chemistry, University of Delhi, India. (July 2-7, 2012).
- Workshop on Information Literacy & Competency, Delhi University Library System, University of Delhi, Delhi, India. (23 February, 2012).
- National Seminar on Recent Trends in chemistry at Sri Venkateswara College, University of Delhi, Delhi. (20-22 March, 2012).
- International Symposium on 'Green chemistry and Sustainable Development' organized by Miranda House, University of Delhi, Delhi (30-31 march, 2012).
- National Seminar on "Role of analytical techniques in Biological and environmental Sciences" organized by Kirori Mal College at Convention Hall, University of Delhi, Delhi, 2011. (27-29 January, 2011).
- National workshop on "Renewable Energy and Environment", organized by Ramjas College at Convention Hall, University of Delhi, Delhi, 2011.(28-29 January, 2011).
- 4<sup>th</sup> Indo-Italian Seminar on "Green Chemistry and Natural Products" at Department of Chemistry, University of Delhi, Delhi (17 November, 2010).
- 7<sup>th</sup> Indo – Italian Workshop on "Chemistry and Biology of Antioxidants", Department of Chemistry, University of Delhi, (16 November 2010).
- One day Workshop on Improvement of Chemistry Lab Safety Lab Manual at the Institute of Lifelong Learning, University of Delhi, Delhi. (3 August, 2010)
- Symposium on Recent Trends in Biophysics on 13<sup>th</sup>-15<sup>th</sup> February, 2010 at Department of Physics, Banaras Hindu University, Varanasi. (13-15 February, 2010)
- Workshop on Emerging Techniques of Biophysics on 16<sup>th</sup> February, 2010 at Department of Physics, Banaras Hindu University, Varanasi. (16 February, 2010).
- Indo-French Seminar on "Biomolecular Chemistry", at Dept. of Chemistry, University of Delhi, Delhi. (4 March, 2009)
- National Symposium on Biophysics: Trends in Biomedical Research, organized by Indian Biophysical Society-2007, at Indian National Science Academy, Delhi. (13-15 Feb., 2007)
- National Symposium on Biophysics "Biophysics in Medicine and Biology", organized by Indian Biophysical Society, at Department of Biophysics, Panjab University, Chandigarh. (15-17 November, 2007)
- 3<sup>rd</sup> Indo- Italian workshop on Chemistry and Biology of Antioxidants, Department of Chemistry, University of Delhi, Delhi, India. (28-30 November, 2007).
- One day seminar on Third year Chemistry course of the restructured B.Sc. Programme, organized by Department of Chemistry, Univ. of Delhi. (27 Oct., 2007).
- One day seminar on second year chemistry course of the restructured B.Sc. Programme, organized by Department of chemistry, Univ. of Delhi. (11 Nov., 2006).
- 6<sup>th</sup> Annual Symposium on Frontiers in Biomedical Research, Organized by A.C.B.R., Univ. of Delhi. (30 Nov.-02 December, 2006).
- National Symposium on Cellular and Molecular Biophysics, organized by Indian Biophysical

<p>Society at National Institute of Mental Health and Neurosciences, Bangalore. (14-17 January, 2006)</p> <ul style="list-style-type: none"> <li>▪ National Bioorganic Symposium-7 at Department of Chemistry, Guru Nanak Dev University, Amritsar. (9-10 November, 2001)</li> <li>▪ International Symposium on Green Chemistry, Department of Chemistry, University of Delhi, Delhi (India). (10-13 January, 2001).</li> <li>▪ Indo-Russian ILTP Seminar on Trends in Chemical Sciences, Department of Chemistry, University of Delhi, Delhi (India). (24-25, January, 2000).</li> </ul> <p>First National Symposium on Green Chemistry, Department of Chemistry, University of Delhi, Delhi (India). (11-13 January, 1999).</p>
<b>Research Projects (Major/Minor Grants/Research Collaborations)</b>
<ul style="list-style-type: none"> <li>• <b>INNOVATION PROJECT</b> as Principal Investigator from Univ. of Delhi, Delhi (2015-16) [(Title: Holistic Approach of Fighting Cancer: From Prevention to Cure (CIC 306)]</li> <li>• Research and Development Grant from University of Delhi, Delhi (2015-16)</li> <li>• <b>INNOVATION PROJECT</b> as Principal Investigator from Univ. of Delhi, Delhi (2013-15) [(Title: Exploring the use of Biocatalysis in laboratory chemical reactions: A Green Chemistry Approach. (RC 201)]</li> <li>• “<b>YOUNG SCIENTIST PROJECT</b>” under FAST TRACK Scheme, from DST, Gov. of India, (April, 2005) [(Title: Physico-chemical and Biochemical Investigations of the polymorphic DNA (RNA) sequences present in regulatory region of the beta-globin gene cluster.)]</li> </ul>
<b>Achievements/Awards/Distinctions</b>
<ul style="list-style-type: none"> <li>• Awarded Certificate of appreciation for “<b>Best Display</b>” in <b>Environmental issues section</b> to the “<b>INNOVATION PROJECT</b>” (RC-201) during “<b>ANTARDHWANI 2015</b>”, from University of Delhi, Delhi (2013-15)</li> <li>• Awarded “<b>VICE-CHANCELLOR’S FELLOWSHIP</b>” from Univ. of Delhi, (Dec. 2014)</li> <li>• Awarded “<b>BOYSCAST FELLOWSHIP</b>” from Department of Science and Technology (DS.T., Gov. of India), (2010-11)</li> <li>• Awarded “<b>YOUNG SCIENTIST PROJECT</b>” under FAST TRACK Scheme, from DST, Gov. of India, (April, 2005)</li> <li>• Awarded free membership from AAAS for one year along with subscription of Science magazine for one year during Post-Doctoral Fellowship (2004-05)</li> <li>• C.S.I.R / U.G.C. [National Eligibility Test for Lecturership (<b>NET</b>) Qualified (2001).</li> </ul>
<b>Membership/Association with Professional Bodies/Societies</b>
<p>Indian Biophysical Society (I.B.S.); DNA Society (Life time membership), Ramanujan Mathematical Society (Life time membership)</p>
<b>Other Activities</b>
<b>International Level Participation:</b>
<ul style="list-style-type: none"> <li>• Reviewer of various esteemed Journals like Chemical Communications (Chem. Comm.), RSC</li> </ul>

Advances, RSC Analyst etc.

- Given Inputs for Lab Manual, Department of Chemistry, prepared under DBT-Star College Project; Feb. 2013.
- Inputs given for Lab Manual prepared under the Workshop on Theory and Practical Course “Biochemistry and Environmental chemistry” at Dept. of Chemistry, Univ. of Delhi, Delhi (2<sup>nd</sup>-7<sup>th</sup> July, 2012).

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**Dr. Mahima Kaushik**

**Signature of Faculty Member**

**Date: 6<sup>th</sup> Nov., 2016**