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<b>Residence:</b> B2-1002, Pebbles II, S. No. 270, Bavdhan, Pune 411021, Maharashtra, India.	<b>E-mail :</b> <a href="mailto:cjeet@iiserpune.ac.in">cjeet@iiserpune.ac.in</a> : <a href="mailto:jeet.chem@gmail.com">jeet.chem@gmail.com</a>

## Curriculum Vitae

**Jeetender Chugh, Ph.D.**

(Current as of October 2023)

***Personal Details***

Full Name: Dr. Jeetender Chugh; Born on: March 17<sup>th</sup>, 1980; Place of Birth: New Delhi, India; Indian National; Male; S/o (Late) Mr. Satish Kumar Chugh and Mrs. Sushma Rani Chugh; Married to Dr. Shilpy Sharma (2004); Father of Ms. Simran Chugh (2014) & Mr. Shaurya Chugh (2016)

***Education***

- **2002-2008**  
Ph.D. (Chemistry), Department of Chemical Sciences, Tata Institute of Fundamental Research (TIFR), Mumbai, India  
  
Thesis title : *NMR in Proteomics: Investigations on Large Protein Assemblies and Method Developments*  
Supervisor : Prof. Ramakrishna V. Hosur
- **2000-2002**  
M.Sc. (Chemistry) Organic Chemistry as specialization from Hans Raj College, Department of Chemistry, University of Delhi with 67.1% (Aggregate)
- **1997-2000**  
B.Sc. (H) Chemistry from Hans Raj College, University of Delhi with 62.67% (Aggregate) Subjects: Organic Chemistry, Inorganic Chemistry, Physical Chemistry, Physics, Mathematics, Environmental Chemistry, and Entrepreneurship
- **1996-1997**  
Class XII from CBSE Board with 78.6% (Aggregate) Subjects: Physics, Chemistry, Mathematics, Biology, and English
- **1994-1995**  
Class X from CBSE Board with 81.4% (Aggregate) Subjects: Science, Mathematics, English, Sanskrit, and Social Science

***Professional Experience***

- **May 2023 – present**

Associate Professor in the Department of Chemistry at Indian Institute of Science Education and Research (IISER), Pune, India

- **March 2013-May 2023**  
Assistant Professor in the Department of Chemistry at Indian Institute of Science Education and Research (IISER), Pune, India
- **2008-2012**  
Worked as a 'Post-Doctoral Fellow' with Prof. Hashim M Al-Hashimi at LSA Biophysics, University of Michigan, Ann Arbor, MI, USA.
- **June 2011-Aug 2011**  
Appointed as 'LEO Lecturer I' to teach the Biophysics 450 course for the spring/summer semester of 2011 at the University of Michigan, Ann Arbor, MI, USA.
- **Aug 2008-Sep 2008**  
Worked as a 'Visiting Fellow' with Prof. R. V. Hosur at the Department of Chemical Sciences, TIFR, Mumbai, India.

### ***Publications***

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\*Corresponding author; <sup>1</sup>Authors contributed equally

### ***Research Articles in Peer-reviewed Journals***

34. Saleem Yousf\*, Javid A Malla, Devika M Sardesai, Shilpy Sharma, Pinaki Talukdar, and **Jeetender Chugh\*** *Mapping metabolic perturbations induced by glutathione activatable synthetic ion channels in human breast cancer cells*  
**Journal of Pharmaceutical and Biomedical Analysis**; 2023, 235, 115605
33. Avdhoot Datar, Harshad Paithankar, Pranab Deb, **Jeetender Chugh\***, Sayan Bagchi\*, Arnab Mukherjee\*, Anirban Hazra\* *Water-controlled keto-enol tautomerization of a prebiotic nucleobase*  
**The Journal of Physical Chemistry B**; 2022, 126(31), 5735-5743
32. Harshad Paithankar<sup>1</sup>, Guneet Singh Tarang<sup>1</sup>, Firdousi Parvez<sup>1</sup>, Aniket Marathe, Manali Joshi, and **Jeetender Chugh\*** *Inherent conformational plasticity in dsRBDs enables interaction with topologically distinct RNAs*  
**Biophysical Journal**; 2022, 121(6), 1038-1055  
<sup>1</sup>Authors contributed equally
31. Abhishek Mondal, Javid Ahmad Malla, Harshad Paithankar, Shilpy Sharma, **Jeetender Chugh**, and Pinaki Talukdar\* *A Pyridyl-Linked Benzimidazolyl Tautomer Facilitates Prodigious H<sup>+</sup>/Cl<sup>-</sup> Symport through a Cooperative Protonation and Chloride Ion Recognition*  
**Organic Letters**; 2021, 23(15), 6131-6136
30. Rishabh Gupta, Harshad Paithankar, **Jeetender Chugh\***, and R Boomishankar\* *Construction of Entropically Favored Supramolecular Metal-Ligand Trimeric Assemblies Supported by Flexible Pyridylamino-P(V) Scaffolds*  
**Inorganic Chemistry**; 2021, 60(14), 10468-10477

29. Richa Dubey, Shruti Kulkarni, Sarath Dantu, Rajlaxmi Panigrahi, Devika Sardesai, Nikita Malik, Jhankar Acharya, **Jeetender Chugh**, Shilpy Sharma, and Ashutosh Kumar\* *Myricetin protects pancreatic  $\beta$ -cells from human Islet Amyloid Polypeptide (hIAPP) induced cytotoxicity and restores islet function*  
**Biological Chemistry**; 2020, 402(2), 179-194
28. Shahaji R Gaikwad, Ketan Patel, Satej S Deshmukh, Nilesh R Mote, Rajkumar S Birajdar, Satish S Pandole, **Jeetender Chugh**, and Samir H Chikkali\* *Palladium-Catalyzed Insertion of Ethylene and 1,1-Disubstituted Difunctional Olefins: An Experimental and Computational Study*  
**ChemPlusChem**; 2020, 85, 1200-1209
27. Niraja V Bapat<sup>1</sup>, Harshad Paithankar<sup>1</sup>, **Jeetender Chugh**\*, and Sudha Rajamani\* *NMR analysis of nucleotide pi-stacking in prebiotically relevant crowded environment*  
**Nature Communications Chemistry**; 2020, 3, Article No. 51  
<sup>1</sup>Authors contributed equally
26. Sagar S Datir\*<sup>1</sup>, Saleem Yousf<sup>1</sup>, Shilpy Sharma, Mohit Koshle, Ameeta Ravikumar, and **Jeetender Chugh**\* *Cold storage reveals distinct metabolic perturbations in processing and non-processing cultivars of potato (*Solanum tuberosum* L.)*  
**Nature Scientific Reports**; 2020, 10, Article No. 6268  
<sup>1</sup>Authors contributed equally
25. Madhuri Vangala\*, Saleem Yousf, **Jeetender Chugh**, and Srinivas Hotha *Solid-phase synthesis of clickable Psicofuranose Glycocarbamates and Application of their self-assembled nanovesicles for Curcumin Encapsulation*  
**ChemistrySelect**; 2020, 5(9), 2672-2677
24. Arshad Rizvi<sup>1</sup>, Saleem Yousf<sup>1</sup>, Kannan Balakrishnan, Harish K Dubey, Shekhar C Mande, **Jeetender Chugh**\*, and Sharmishtha Banerjee\* *Metabolomics studies to decipher stress responses in *Mycobacterium smegmatis* point to a potential pathway of methylated amines biosynthesis*  
**Journal of Bacteriology**; 2019, 201(15), 477-489  
<sup>1</sup>Authors contributed equally
23. Saleem Yousf<sup>1</sup>, Devika M Sardesai<sup>1</sup>, Abraham B Mathew, Rashi Khandelwal, Jhankar D Acharya, Shilpy Sharma\*, and **Jeetender Chugh**\* *Metabolic signatures associated with high-glucose and/or palmitate exposure in pancreatic  $\beta$ -cells*  
**Metabolomics**; 2019, 15(4), Article 55  
<sup>1</sup>Authors contributed equally
22. Harshad Paithankar, Pankaj V Jadhav, Amit S Naglekar, Shilpy Sharma and **Jeetender Chugh**\* *<sup>1</sup>H, <sup>13</sup>C and <sup>15</sup>N Resonance Assignment of Domain 1 of Trans-Activation Response Element (TAR) RNA Binding Protein Isoform 1 (TRBP2) and its comparison with that of Isoform 2 (TRBP1)*  
**Biomolecular NMR Assignments**; 2018, 12(1), 189-194
21. Rajasekar Prabhakaran, Swechchha Pandey, Harshad Paithankar, **Jeetender Chugh**\* and Ramamoorthy Boomishankar\* *Imido-P(V) Trianion Supported Enantiopure Neutral Tetrahedral Pd(II) Cages*  
**Chemical Communications**; 2018, 54(15), 1873-1876
20. Vikash Kumar Ravi, Pralay Santra, Niharika Joshi, **Jeetender Chugh**, Sachin Singh, Håkan Rensmo, Prasenjit Ghosh\* and Angshuman Nag\* *Origin of Substitution Mechanism for the Binding of Organic Ligands on the Surface of CsPbBr<sub>3</sub> Perovskite Nanocubes*  
**Journal of Physical Chemistry Letters**; 2017, 8(20), 4988-4994

19. Chaitanya Mungi, Sachin Kumar Singh, **Jeetender Chugh**\* and Sudha Rajamani\* *Synthesis of barbituric acid containing nucleotide and its implications for the origin of primitive informational polymers*  
**Physical Chemistry Chemical Physics**; 2016, 18(30), 20144-52
18. Michael D. Swanson<sup>1</sup>, Daniel M. Boudreaux<sup>1</sup>, Loïc Salmon<sup>1</sup>, **Jeetender Chugh**, Harry C. Winter, Jennifer L. Meagher, Sabine André, Paul V. Murphy, Stefan Oscarson, René Roy, Steven King, Mark H. Kaplan, Irwin J. Goldstein, E. Bart Tarbet, Brett L. Hurst, Donald F. Smee, Cynthia de la Fuente, Hans-Heinrich Hoffmann, Yi Xue, Charles M. Rice, Dominique Schols, J. Victor Garcia, Jeanne A. Stuckey, Hans-Joachim Gabius, Hashim M. Al-Hashimi\*, and David M. Markovitz\* *Engineering of a Therapeutic Lectin: Uncoupling Mitogenicity from Antiviral Activity*  
**Cell**; 2015, 163(3), 746-58  
<sup>1</sup>Authors contributed equally
17. Arvind K Gupta, Ashok Yadav, Anant K Srivastava, Kormathmadam R Ramya, Harshad Paithankar, Shyamapada Nandi, **Jeetender Chugh**\*, Ramamoorthy Boomishankar\* *A Neutral Cluster Cage with a Tetrahedral [Pd<sup>II</sup><sub>12</sub>L<sub>6</sub>] Framework: Crystal Structures and Host-Guest Studies*  
**Inorganic Chemistry**; 2015, 54(7), 3196-3202 (One of the Top 20 most downloaded articles of the month)
16. Xiancheng Zeng, **Jeetender Chugh**, Anette Casiano, Hashim M Al-Hashimi\*, Charlie Brooks III\* *Flipping of the ribosomal A-site adenines provides basis for tRNA selection*  
**Journal of Molecular Biology**; 2014, 426(19), 3201-3213
15. Elizabeth A Dethoff<sup>1</sup>, Katja Petzold<sup>1</sup>, **Jeetender Chugh**<sup>1</sup>, Anette Casiano, and Hashim M Al-Hashimi\* *Visualizing Transient Low Populated Structures of RNA*  
**Nature**; 2012, 491(7426), 724-728 (**Featured as News of the Week in C&EN; 2012, 90(42), 10**)  
<sup>1</sup>Authors contributed equally
14. Benjamin C Buer, **Jeetender Chugh**, Hashim M Al-Hashimi and E Neil G Marsh\* *Using fluorine NMR to probe the interaction of membrane-active peptides with the lipid bilayer*  
**Biochemistry**; 2010, 49(27), 5760-5765
13. Dinesh Kumar<sup>1</sup>, **Jeetender Chugh**<sup>1</sup> and Ramakrishna V Hosur\* *Generation of Ser/Thr check points in HN(C)N spectra*  
**Journal of Chemical Sciences (Indian Academy of Sciences)**; 2009, 121(6), 955-964  
<sup>1</sup>Authors contributed equally
12. Dinesh Kumar<sup>1</sup>, Jyoti R Misra<sup>1</sup>, Ashutosh Kumar, **Jeetender Chugh**, Shilpy Sharma and Ramakrishna V Hosur\* *NMR Derived Solution Structure of SUMO from Drosophila melanogaster (dSmt3)*  
**Proteins: Structure, Functions and Bioinformatics**; 2009, 75(4), 1046-1050  
<sup>1</sup>Authors contributed equally
11. Dinesh Kumar, **Jeetender Chugh**, Shilpy Sharma and Ramakrishna V Hosur\* *Conserved structural and dynamics features in the denatured states of drosophila SUMO, human SUMO and Ubiquitin proteins: implications to sequence-folding paradigm*  
**Proteins: Structure, Function and Bioinformatics**; 2009, 76(2), 387-402
10. **Jeetender Chugh**<sup>1</sup>, Shilpy Sharma<sup>1</sup> and Ramakrishna V Hosur\* *Comparison of NMR structural and dynamics featured of urea and guanidine-denatured states of GED*  
**Archives of Biochemistry and Biophysics**; 2009, 481(2), 169-176  
<sup>1</sup>Authors contributed equally

9. **Jeetender Chugh**<sup>1</sup>, Shilpy Sharma<sup>1</sup>, Dinesh Kumar and Ramakrishna V Hosur\* *1H, 15N, 13C resonance assignment of 9.7 M urea-denatured state of the GTPase effector domain (GED) of dynamin*  
**Biomolecular NMR Assignments**; 2009, 3(1), 13-16  
<sup>1</sup>Authors contributed equally
8. **Jeetender Chugh**<sup>1</sup>, Shilpy Sharma<sup>1</sup> and Ramakrishna V Hosur\* *Equilibrium Refolding Transitions driven by TFE and by Gdn-HCl dilution are similar in GED: Implications to Sequence Self-Association Paradigm*  
**Biochemistry**; 2008, 47(49), 12945-12953  
<sup>1</sup>Authors contributed equally
7. **Jeetender Chugh** and Ramakrishna V Hosur\* *Spectroscopic labeling of A, S/T in the <sup>1</sup>H-<sup>15</sup>N HSQC spectrum of uniformly (<sup>15</sup>N-<sup>13</sup>C) labeled proteins*  
**Journal of Magnetic Resonance**; 2008, 194(2), 289-294
6. **Jeetender Chugh**<sup>1</sup>, Shilpy Sharma<sup>1</sup>, Dinesh Kumar, Jyoti R Misra and Ramakrishna V Hosur\* *Effect of a single point mutation on the stability, residual structure and dynamics in the denatured state of GED: relevance to self-assembly*  
**Biophysical Chemistry**; 2008, 137(1), 13-18  
<sup>1</sup>Authors contributed equally
5. **Jeetender Chugh**, Shilpy Sharma and Ramakrishna V Hosur\* *NMR Insights into a megadalton-sized Protein Self-Assembly*  
**Protein Science (Accelerated Communication)**; 2008, 17(8), 1319-1325
4. **Jeetender Chugh**, Dinesh Kumar and Ramakrishna V Hosur\* *Tuning the HNN Experiment: Generation of Serine-Threonine check points*  
**Journal of Biomolecular NMR**; 2008, 40(2), 145-152
3. Dinesh Kumar, Ashutosh Kumar, Jyoti Ranjan Misra, **Jeetender Chugh**, Shilpy Sharma and Ramakrishna V Hosur\* *1H, 15N, 13C resonance assignments of folded and 8 M urea-denatured state of SUMO from Drosophila melanogaster*  
**Biomolecular NMR Assignments**; 2008, 2(1), 13-15
2. **Jeetender Chugh**, Shilpy Sharma and Ramakrishna V Hosur\* *Pockets of Short Range Transient Order and Topological Heterogeneity in Guanidine-Denatured State Ensemble of GED of Dynamin*  
**Biochemistry**; 2007, 46(42), 11819-11832
1. **Jeetender Chugh**, Amarnath Chatterjee, Ashutosh Kumar, Ram K Mishra, Rohit Mittal and Ramakrishna V Hosur\* *Structural Characterization of the Large Soluble Oligomers of the GTPase Effector Domain of Dynamin*  
**FEBS Journal**; 2006, 273(2), 388-97

### Review Articles

6. Saleem Yousf and **Jeetender Chugh**\* *Nuclear Magnetic Resonance Spectroscopy and Mass Spectrometry: Complementary Approaches to Analyze the Metabolome*  
**Journal of Endocrinology and Reproduction**; 2020, 24(1), 21-30
5. Parnika Bhatia, Shikha Raina, **Jeetender Chugh** and Shilpy Sharma\* *miRNAs: Early Prognostic Markers for Type 2 Diabetes Mellitus?*  
**Biomarkers in Medicine**; 2015, 9(10), 1025-40

4. Elizabeth A Dethoff<sup>1</sup>, **Jeetender Chugh**<sup>1</sup>, Anthony M Mustoe and Hashim M Al-Hashimi\* *Functional Complexity and Regulation through RNA Dynamics*  
**Nature**; 2012, 482(7385), 322-330 (**Featured as an Insight Article**)  
<sup>1</sup>Authors contributed equally
3. Jameson R Bothe, Evgenia N Nikolova, Catherine D Eichhorn, **Jeetender Chugh**, Alexandar L. Hansen, and Hashim M. Al-Hashimi\* *Solution-state NMR Methods for Characterizing the RNA Dynamic Structure Landscape at Atomic Resolution*  
**Nature Methods**; 2011, 8(11), 919-931
2. Ramakrishna V Hosur\* and **Jeetender Chugh** *NMR advances towards the structural characterization of large protein assemblies*  
**Journal of Indian Chemical Society**; 2010, 87, 53-63
1. Amarnath Chatterjee, Ashutosh Kumar, **Jeetender Chugh**, Sudha Srivastava, Neel S Bhavesh and Ramakrishna V Hosur\* *NMR of unfolded proteins*  
**J. Chem. Sci. (Indian Academy of Sciences)**; 2005, 117(1), 3-21

### Chapters in Books

4. Saleem Yousf, Nazia Hussain, Shilpy Sharma\* and **Jeetender Chugh**\* *Identification and Characterization of Secondary Metabolites in the Biological Soup by NMR Spectroscopy*  
**Applications of NMR Spectroscopy**; Bentham Science 2017, Vol 6, Chapter 2, 47-96; edited by Atta-ur-Rahman and M. Iqbal Chaudhary
3. Shilpy Sharma\*, Abraham B Mathew and **Jeetender Chugh** *miRNAs: Nanomachines that micromanage the pathophysiology of Diabetes mellitus*  
**Advances in Clinical Chemistry**; 2017, Vol 82 (1<sup>st</sup> edition), Chapter 5, 199-264; edited by Gregory Makowski
2. **Jeetender Chugh**\*  
*Determining Transient Nucleic Acid Structures by NMR*  
**Chemical Biology of Nucleic Acids: Fundamentals and Clinical Applications**; Springer 2014, 181-198, edited by Volker A. Erdmann, Wojciech T. Markiewicz and Jan Barciszewski
1. Ramakrishna V Hosur\* and **Jeetender Chugh**  
*NMR of large protein assemblies*  
**Future Directions of NMR (INSA Platinum Jubilee Volume)**; Springer 2009, edited by Prof. C. L. Kheterpal, Prof. Anil Kumar and Prof. K. V. Ramanathan

### Conference Abstracts in Journals

3. **Jeetender Chugh**\* (Presenting Author) *Visualizing Transient Structures in A-site RNA of the Ribosome: New Structures of Known Molecules for Drug Target*  
**Journal of Proteins and Proteomics**; 2015, 6(1), JPP10
2. Hashim M Al-Hashimi\* (Presenting Author), Katja Petzold, **Jeetender Chugh**, Anthony M Mustoe, Elizabeth A Dethoff and Charlie Brooks III\* *Predictive Understanding of RNA Dynamic Behavior: Bringing Order to Disorder*  
**The FASEB Journal**; 2013, 27(96.1)
1. **Jeetender Chugh** (Presenting Author), Anette Casiano-Negroni and Hashim M Al-Hashimi\* *NMR Dissection of the Detailed Mechanism for Antibiotic Binding to A-site RNA*

**Biophysical Journal**; 2011, 100(3), Supplemental 1, 603a (Abstract)

### ***Extra-mural Funding***

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- Department of Health Research, ICMR, Govt. of India “**Unraveling the metabolic nexus in the granulosa cells of women with PCOS**” Approved March 2023
- International Collaborative Research Grant, Osaka University, Japan for the period April 2019 - March 2020 “**Dynamics of RNA-binding proteins**” Travel for two visits to Osaka, Japan + 30 days of 950 MHz NMR time
- International Collaborative Research Grant, Osaka University, Japan for the period April 2018 - March 2019 “**Plasticity of Protein-RNA interactions**” Travel for two visits to Osaka, Japan + 30 days of 950 MHz NMR time
- Department of Biotechnology, Govt. of India “**Understanding structural and dynamic basis for adaptive targeting of dsRNAs comprising of corrupted helices by TAR RNA binding protein (TRBP)**” BT/PR24185/BRB/10/1605/2017 **Rs. 64,93,800/-**
- SERB, DST, Govt. of India “*Structural delineation of Smad mediated regulation of miRNA biogenesis pathway using Smad3 and miRNA-21 as model system(s)*” EMR/2015/001966 **Rs. 59,35,600/-**

### ***Technical Expertise***

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- Trained in *in-vitro* transcription to synthesize oligoribonucleotides (small RNAs) at NMR concentrations.
- Well acquainted with BRUKER and VARIAN spectrometer handling and setting up solution-state NMR experiments for peptides, proteins, and nucleic acids.
- Pulse programming on BRUKER and VARIAN spectrometer.
- NMR data processing using Felix and NMR Pipe, data analysis using Felix, SPARKY, NMRView and CARA and structure determination software: CYANA.
- Trained in cloning using recombinant DNA technology, point mutations, expression and purification of recombinant proteins with affinity tag and ion exchange chromatography.
- Trained in various biophysical techniques like Circular Dichroism, Fluorescence measurements (Steady-state and Stopped-flow), Dynamic Light Scattering, Capillary Electrophoresis, Differential Scanning Calorimetry, Isothermal Calorimetry, Size Exclusion Chromatography etc.
- Operating Systems used: Mac OSX, Windows and UNIX.

### ***Awards & Recognitions***

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- Selected as a participant under SSP 2017 to visit Osaka University, Japan during 23 Nov – 2 Dec 2017 sponsored by Japan Science & Technology Agency
- Received a Travel and Accommodation award from AILM2015 organizer for attending the AILM2015 conference held at Grenoble, France during Feb 2-5, 2015
- Received a **Travel Award of \$300** from 46<sup>th</sup> ENC committee for attending 46<sup>th</sup> ENC conference held at Providence, Rhode Island, USA during April 10-15, 2005
- Received **50% Travel Grant** from CSIR for attending 46<sup>th</sup> ENC conference at Providence, Rhode Island, USA during April 10-15, 2005
- Received **50% Travel Grant** from DST for attending 46<sup>th</sup> ENC conference held at Providence, Rhode Island, USA during April 10-15, 2005
- Received support from NMRS, India for attending 46<sup>th</sup> ENC conference held at Providence, Rhode Island, USA during April 10-15, 2005
- Selected for **Travel Award of \$750** from the conference organizers for attending 15<sup>th</sup> ISMAR conference held at Ponte Vedra Beach, Florida, USA during Oct 24-28, 2004
- Selected for **50% Travel Grant** from CSIR for attending 15<sup>th</sup> ISMAR conference held at Ponte Vedra Beach, Florida, USA during Oct 24-28, 2004.
- Selected for INSA support for attending 15<sup>th</sup> ISMAR conference held at Ponte Vedra Beach, Florida, USA during Oct 24-28, 2004
- **Best poster award** at 10<sup>th</sup> NMRS conference held at Kolkata during Feb 17-20, 2004
- Received fellowship from Department of Atomic Energy, Govt. of India during August 2002 – July 2008 for pursuing PhD
- Received TIFR Alumni Association Scholarship for career development in 2002-03, 2003-04, 2004-05 supported by TIFR endowment fund.
- Qualified Graduate Aptitude Test in Engineering (GATE) 2002 in Chemical Sciences with 98.89 percentile and **All India Rank 29**.
- Qualified Council for Scientific and Industrial Research (CSIR) University Grants Commission (UGC) National Eligibility Test (NET) in Chemical Sciences of Dec 2001. **Ranked in Top 20 %**
- Received Jean and Ashit Ganguly Education Scholarship, University of Delhi, 2001
- Received Science Meritorious Award, University of Delhi, 2001
- Received Merit Scholarship from Ministry of Education during 1995-1996

**Invited Talks**

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2023	
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	FORCE-IICS 2023, Kathmandu, 28 Sept-1 Oct 2023. Invited Speaker ( <i>Understanding Protein-RNA Interactions via Conformational Dynamics</i> )
	Refresher Course in Basic Science from 22 August to 4 September, 2023 organized by The Human Resource Development Centre, Jamia Millia Islamia. Invited Speaker ( <i>Application of solution-state NMR Spectroscopy: From Metabolomics to Understanding RNA-Protein Interactions</i> )
	IISER Mohali, on April 6, 2023. Invited Speaker ( <i>Applications of solution NMR: From Metabolomics to understanding Protein-RNA interactions</i> )
	28th Annual Meeting of the National Magnetic Resonance Society of India, hosted by IISER Berhampur, during Feb 24 – 27, 2023. Invited Speaker ( <i>Understanding Protein-RNA Interactions via Conformational Dynamics</i> )
2022	
	ICGEB Meeting on “Protein RNA interaction in cellular regulations” from November 22-24, 2022, at ICGEB, New Delhi. Invited Speaker ( <i>Understanding RNA-Protein interaction via conformational dynamics</i> )
	Webinar series hosted by Biology Club La Vida of IISER Berhampur on 18 <sup>th</sup> June 2022. Invited Speaker ( <i>Inherent conformational plasticity in dsRBDs enables interaction with topologically distinct RNAs</i> )
	Training course on “Omics in Biomedical Research and Clinical Practice, 2022” conducted by NIRRH, Mumbai during 9 <sup>th</sup> May to 3 <sup>rd</sup> June 2022. Invited Speaker ( <i>Metabolomics in disease biomarker discovery</i> )
	44th Annual Meeting of the Indian Biophysical Society (Conceptual Advances in Biophysics and its Applications), hosted by ACTREC Mumbai, during March 30-31 and April 1, 2022. Invited Speaker ( <i>Inherent conformational plasticity in dsRBDs enables interaction with topologically distinct RNAs</i> )
	Short-term course under AICTE-QIP Scheme (Emerging Techniques and Applications in Biosciences and Bioengineering Research), hosted by IIT Indore via Zoom, during 21-26, March, 2022. Invited Speaker ( <i>An overview of NMR spectroscopy and a few applications to biomolecules</i> )
	27th Annual Meeting of the National Magnetic Resonance Society of India, hosted by IIT Gandhinagar via Zoom, during March 6 – 9, 2022. Invited Speaker ( <i>Conformational plasticity of dsRBDs and their interaction with topologically distinct dsRNAs</i> )
2021	
	Webinar on Magnetic Resonance: Theory Instrumentation, and Applications, jointly organized by Magnetic Resonance Society Kerala (MRSK) and Srinivasa Ramanujan Institute for Basic Sciences (SRIBS), Pampady, Kottayam, during 20-23 May, 2021. Invited Speaker ( <i>2-Dimensional NMR Spectroscopy: Basics and Applications</i> )
	Chemotsav’21 organized by Department of Chemistry, Rajdhani College, University of Delhi on 9th March, 2021. Invited Speaker ( <i>NMR-based metabolomics – a versatile tool to understand the effect of stressors on cells, tissues, and organisms</i> )
	National Webinar on Emerging Trends and Future Challenges in Chemical Sciences (ETFC-2021) organized by Department of Chemistry, Kirori Mal College, University of Delhi on 4 and 5 March, 2021. Invited Speaker ( <i>NMR-based metabolomics – a versatile tool to understand the effect of stressors on cells, tissues, and organisms</i> )
	Indo-Finnish work shop on Tools and Techniques for Analysis of Skin Microbiome and Metabolome” an international online workshop sponsored by SPARC, MHRD, India scheduled on 4th-5th January, 2021 at Department of Zoology, Savitribai Phule Pune University (formerly university of Pune). Invited Speaker ( <i>NMR-based metabolomics – a versatile tool to understand the effect of stressors on cells, tissues, and organisms</i> )
2020	
	26th National Magnetic Resonance Society Meeting and Conference on NMR – From Molecules to Human Behaviour and Beyond held at Saurashtra University, Rajkot, Gujrat during February 18-21, 2020. Invited Speaker ( <i>Biophysics of RNA-Protein Interactions</i> )
	National Conference on Relationship between Chemical Sciences and Society (RCSS-2020) held at Shivaji College, University of Delhi during Jan 6-7, 2020. Invited Speaker ( <i>Biophysics of RNA-Protein Interactions</i> )

	107 <sup>th</sup> Indian Science Congress held at The University of Agricultural Sciences Bangalore, India during Jan 3-7, 2020. Invited Speaker ( <i>Biophysical Insights into RNA-Protein Interactions</i> )
2019	DBT National Symposium on Applied Spectroscopy: Biology and Medical Science at Udai Pratap College, Varanasi, during Feb 18-20, 2019. Invited Speaker ( <i>Dynamical basis of shape-dependent dsRNA-recognition by dsRNA-binding domains</i> )
	Conference on Magnetic Resonance in Medicine and 25th National Magnetic Resonance Society Meeting at Indian National Science Academy (INSA), New Delhi, during Feb 13-16, 2019. Invited Speaker ( <i>Dynamical basis of shape-dependent dsRNA-recognition by dsRNA-binding domains</i> )
	Advanced Omics Technologies & Approaches at Mumbai, India during Jan 17-18, 2019. Invited Speaker ( <i>NMR based Metabolic Signatures in Glucotoxic, Lipotoxic, and Glucolipotoxic Stresses in Pancreatic Beta Cells</i> )
2018	4th NMR Meets Biology Meeting at Khajuraho, India during Dec 16-21, 2018. Invited Speaker ( <i>Dynamical modes in RNA binding protein allow for shape-dependent RNA recognition</i> )
	1st Sakura Science Club Alumni Meeting at Embassy of Japan in India on Oct 5th, 2018. Invited Speaker ( <i>SSC program, IISER Pune and RNA-Protein Interactions</i> )
	Refresher Course in Natural Sciences at Department of Botany, SP Pune University during Aug 16th – Sept 5th 2018. Invited Speaker and Resource Person ( <i>Applications of NMR in drug-design/discovery</i> )
	Expanding Horizons of NMR at TIFR Mumbai on May 12 2018. Invited Speaker ( <i>Understanding the Complexity of Ligand Binding Interactions prevailing in Protein-RNA Complexes</i> )
	Special lecture at Defense Institute of Advanced Technology at Pune, Maharashtra on Feb 7 2018. Invited Speaker ( <i>Applications of NMR in drug-design/discovery</i> )
	Special lecture at Institute of Bioinformatics and Biotechnology, SP Pune University at Pune, Maharashtra on Feb 3 2018. Invited Speaker ( <i>NMR as a high-throughput screening method in drug-design/discovery</i> )
2016	ICGEB Course on NMR Spectroscopy: Role of NMR Spectroscopy in Structural Biology, Metabonomics and Drug Discovery at ICGEB, New Delhi, India during 15-26 November, 2016. Invited Speaker ( <i>Solution-state NMR Methods to Study RNA Motional Modes Critical for Gene Regulation</i> )
	Rasayanika: Chem Festival at Miranda House, New Delhi during March 4, 2016. Invited Speaker ( <i>Basics of NMR Spectroscopy and its Applications to Small Molecules</i> )
	USP Biology Workshop at Hyderabad during February 15-16, 2016. Invited Speaker ( <i>Characterization of Therapeutic Peptides by NMR</i> )
2015	National Symposium on Biophysics and Golden Jubilee Meeting of Indian Biophysical Society at Jamia Millia Islamia, New Delhi during February 14-17, 2015. Invited Speaker ( <i>Visualizing Transient Structures in A-site RNA of the Ribosome: New Structures of Known Molecules for Drug Target</i> )
2014	NSASST-2014 at Swami Ramanand Teerth Marathwada University, Nanded, Maharashtra during March 21 – 22, 2014. Plenary Speaker.
	ISCBC-2014 at University of Delhi, Delhi, India during March 1 – 4, 2014. Invited Speaker ( <i>Visualizing Transient Structures in A-site RNA of the Ribosome: New Structures of Known Molecules for Drug Target</i> )
	India-UK Scientific Seminar on “Complementary Approaches in Structural Molecular Biology” at IISER Pune, India during Jan. 27 – 29, 2014. Invited Speaker ( <i>Visualizing Transient Structures in A-site RNA of the Ribosome</i> )
2013	International Conference on Biomolecular Simulations and Dynamics at IIT Madras, India during Nov. 28 – 30, 2013. Invited Speaker ( <i>Visualizing Transient Structures in A-site RNA of the Ribosome</i> )
2012	26 <sup>th</sup> July 2012 at RCB Gurgaon ( <i>Visualizing Transient Structures in A-site RNA of the Ribosome</i> )
	23 <sup>rd</sup> July 2012 at Biology, IISER Pune ( <i>Visualizing Transient Structures in A-site RNA of the Ribosome</i> )
	18 <sup>th</sup> June 2012 at Chemistry, CBS Mumbai ( <i>Visualizing Transient Structures in A-site RNA of the Ribosome</i> )

	15 <sup>th</sup> June 2012 at Department of Chemical Sciences, TIFR Mumbai ( <i>Visualizing Transient Structures in A-site RNA of the Ribosome</i> )
	14 <sup>th</sup> June 2012 at NMR Research Center, IISc Bangalore ( <i>Visualizing Transient Structures in A-site RNA of the Ribosome</i> )
	13 <sup>th</sup> June 2012 at Molecular Biophysics Unit, IISc Bangalore ( <i>Visualizing Transient Structures in A-site RNA of the Ribosome</i> )

### Conferences – Oral Presentations, Posters, and Meetings

2020	Hosted 2 <sup>nd</sup> Alumni Meeting of the Sakura Science Club Alumni Association at IIT Delhi on 15 <sup>th</sup> Feb, 2020.
2019	5 <sup>th</sup> Anniversary Symposium of Sakura Science Plan held at The University of Tokyo, Japan on Nov 11, 2019. Participated in Panel Discussion.
	Japan-Korea Bilateral Symposium on Multi-Scale Structural Life Science and the Advanced Technologies at Institute for Protein Research, Osaka University on March 15, 2019.
2018	Innovations in Frontier Chemistry (IFC2018) at IISER Pune during May 8-9 2018.
2017	Invited as a mentor to attend 7 <sup>th</sup> Ramalingaswami Conclave held at Imphal, Manipur during Aug 29-31 2017 organized by IBSD, Imphal and DBT India
2015	7 <sup>th</sup> Young Investigator Meeting (YIM 2015) at Gulmarg, J&K, India during March 28-31, 2015. Poster Presentation ( <i>Expanding Current Structural Understanding of the miRNA Biogenesis Pathway</i> )
	Advanced Isotopic Labeling Methods for Integrated Structural Biology (AILM2015) at Grenoble, France during February 2-5, 2015. Oral Presentation ( <i>Visualizing Transient Structures in A-site RNA of the Ribosome: New Structures of Known Molecules for Drug Target</i> )
2013	International Meeting on Chemical Biology at IISER Pune, India during May 26-28, 2013.
2011	52 <sup>nd</sup> Experimental Nuclear Magnetic Resonance Conference at Asilomar, Pacific Grove, CA during April 10-15, 2011. Poster presentation ( <i>Combined NMR and Stopped-Flow Fluorescence Dissection of Flux Through Induced-Fit Versus Conformational Selection in A-site–Antibiotic Adaptive Recognition</i> )
	55 <sup>th</sup> Biophysical Society Annual Meeting at Baltimore Convention Center, Baltimore, MD during March 5-9, 2011. Poster presentation ( <i>NMR Dissection of the Detailed Mechanism for Antibiotic Binding to A-site RNA</i> )
	SuperRNA meeting at University of Michigan, MI, on Feb 7, 2011. Oral presentation ( <i>Long-range Activation of RNA Base Flipping by a Non-canonical U.U Base Pair</i> )
2010	51 <sup>st</sup> Experimental Nuclear Magnetic Resonance Conference at Daytona Beach, FL during April 18-23, 2010. Poster presentation ( <i>The Two Zinc-Finger Domains in NC Protein Dynamically and Semi-independently Engage Sites on the SL1 RNA</i> )
2009	50 <sup>th</sup> Experimental Nuclear Magnetic Resonance Conference at Asilomar, Pacific Grove, CA during March 29-April 3, 2009. Poster presentation ( <i>Visualizing NC mediated kissing to duplex transition in SL1 using NMR</i> )
2008	Special symposium on Advanced MR applications and 14 <sup>th</sup> NMRS meeting held at INMAS, Delhi during January 16-19, 2008. Poster Presentations: <ol style="list-style-type: none"> <li>1. <b>Dinesh Kumar</b>, Jeetender Chugh, Shilpy Sharma, Ashutosh Kumar, Jyoti Ranjan Misra, and Ramakrishna V hosur (<i>NMR investigations of structural and dynamic features of SUMO from Drosophila melanogaster</i>) (<b>Awarded Best Poster Prize</b>)</li> <li>2. Jeetender Chugh, Dinesh Kumar, <b>Shilpy Sharma</b>, Jyoti Ranjan Misra, and Ramakrishna V hosur (<i>Dynamics perturbations caused by single point mutations in the GED of Dynamin influence its association characteristics</i>)</li> </ol>

	<p>3. <b>Jeetender Chugh</b>, Dinesh Kumar, and Ramakrishna V Hosur (<i>Tuning the HNN experiment: Generation of Serine-Threonine Check Points</i>)</p> <p>4. <b>Jeetender Chugh</b>, Shilpy Sharma, and Ramakrishna V Hosur (<i>NMR insights into ~5 MDa assembly of GED of Dynamin</i>)</p>
2007	Workshop on NMR: Principles and Applications held at TIFR, Mumbai from December 3-7, 2007.
	National Symposium on Biophysics: Trends in Biomedical Research, IBS Meeting held at INSA, New Delhi from February 13-15, 2007. Poster presentation ( <i>NMR view of the topological preferences and fluctuations in the denatured state of the GTPase Effector Domain of Dynamin</i> )
	Current trends in Solid State NMR Methodology and Practice, 13 <sup>th</sup> NMRS Meeting at NCL, Pune from February 5-8, 2007. Poster presentation ( <i>Structural and dynamic heterogeneities in guanidine denatured state of GED: all beta propensities in an all alpha helical protein</i> )
2006	TIFR-Weizmann Interaction Meeting at TIFR, Mumbai from Nov 26-Dec 1, 2006.
	Workshop on Biomolecular NMR at TIFR, Mumbai from Jan 16-20, 2006.
2005	12 <sup>th</sup> National Magnetic Resonance Society Meeting (National Symposium on Advances in Magnetic Resonance and its Applications) at Gulmarg, J&K and RRL, Jammu from October 8-11, 2005. Oral presentation ( <i>Structural Characterization of the large Soluble Oligomers of GTPase Effector Domain of Dynamin</i> )
	46 <sup>th</sup> Experimental Nuclear Magnetic Resonance Conference at Rhode Island Convention Center, Providence, RI, USA during April 10-15, 2005. Poster presentation ( <i>Structural studies on GTPase Effector Domain of Dynamin</i> )
	International conference on Magnetic Resonance in Biological Systems at Shilp Kala Vedika, Hyderabad, India during Jan 16-21, 2005 Poster presentation ( <i>GTPase Effector Domain of Dynamin: structure, function, relationships</i> )
2004	National symposium on NMR Drug Design and Bioinformatics organized by NMRS during Feb 17-20, 2004 at SINP, Kolkata Poster presentation ( <i>GTPase Effector Domain of Dynamin forms stable helical structures</i> ), <b>received the BEST POSTER Award.</b>
	National symposium on Cellular and Molecular Biophysics organized by IBS during Jan 14-17, 2004 at NIMHANS, Bangalore Poster presentation ( <i>Biophysical studies on GTPase Effector Domain of Dynamin</i> )
2003	Solid state NMR workshop during Dec 22-26, 2003 at TIFR, Mumbai

### Memberships

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- Executive committee member of Indian Biophysical Society (IBS), India 2019-2022
  - Executive committee member of National Magnetic Resonance Society (NMRS), India 2019-2022
  - Selected as first President of India Sakura Science Club Alumni Association (ISAA) during 1<sup>st</sup> Alumni Meet of SSC on 5<sup>th</sup> Oct 2018 held at Embassy of Japan, New Delhi, India. Sakura Science Club is a club that organizes Japan-Asia Youth Exchange Program in Science
  - Lifetime membership of Indian Biophysical Society (IBS, India)
  - Lifetime membership of National Magnetic Resonance Society of India (NMRS, India)