Sudhir Kashyap, Ph. D

Assistant Professor
Department of Chemistry
Malaviya National Institute of Technology Jaipur
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Professional Experience

Assistant Professor in Chemistry 2016-Present
Malaviya National Institute of Technology Jaipur Jaipur, INDIA

DST-INSPIRE Faculty & Assistant Prof. AcSIR 2012-2016
CSIR-Indian Institute of Chemical Technology Hyderabad, INDIA

Assistant Professor in Chemistry 2012
MNIT Jaipur (July-August), NIT Kurukshetra (August-October) INDIA

Post-Doctoral Research in Chemistry & Cell Biology 2008-2011
The Rockefeller University, New York New York, USA

Education

Doctor of Philosophy in Organic Chemistry 2003-2008
National Chemical Laboratory Pune, INDIA

Bachelor of Education in Science Education 2002-2003
Maharshi Dayanand University Rohtak, INDIA

Master of Science in Organic Chemistry 2000-2002
Maharshi Dayanand University Rohtak, INDIA

Bachelor of Science in Chemistry, Botany and Zoology 1997-2000
Maharshi Dayanand University Rohtak, INDIA

Fellowships, Honors and Awards

Core Research Grant (CRG) in Organic Chemistry **2021**
Science and Engineering Research Board (SERB) New Delhi, INDIA

Early Career Research Award (ECRA) in Chemical Science **2018**
Science and Engineering Research Board (SERB) New Delhi, INDIA

Start-up Research Grant for Young Scientists in Chemical Science **2014**
Science and Engineering Research Board (SERB) New Delhi, INDIA

DST INSPIRE Faculty Award for Young Researchers **2012**
DST-Indian National Science Academy (INSA) New Delhi, INDIA

Keerti Sangoram Memorial Endowment Award for the BEST RESEARCH SCHOLAR **2007**
National Chemical Laboratory Pune, INDIA

Rajappa Award for the BEST RESEARCH PUBLICATION **2006**
National Chemical Laboratory Pune, INDIA

CSIR Senior Research Fellow **2005-2008**
Council of Scientific and Industrial Research New Delhi, INDIA

CSIR Junior Research Fellow **2003-2005**
Council of Scientific and Industrial Research New Delhi, INDIA

Secured place among the top 20% CSIR-JRF (NET) awardees in Chemical Sciences **2003**
Invited for SHYAMA PRASAD MUKHERJEE (SPM) fellowship test New Delhi, INDIA

Graduate Aptitude Test in Engg (GATE) 99.25 percentile; All India Rank 21 (*Declined*) 2003, IIT Madras

Research Experience

Assistant Professor & INSPIRE Faculty: **Department of Chemistry, Malaviya National Institute of Technology Jaipur.**

Recipient of ECR Award for Young Scientist & Core Research Grant in Chemistry *(April 2016-Present)*

- Development of stereoselective methods for the synthesis of carbohydrate mimics by employing ruthenium catalysis.
- Development of novel sulfonium iodate(I) reagents and its synthetic application in modern organic chemistry.
- Design and synthesis new generation of sugar-fused hybrid compounds bearing different size fused heterocyclic moieties, with different substituent and heteroatoms at anomeric position.
- Design and development of novel glycosylation approaches employing green reagent system and One-Pot transformations.

INSPIRE Faculty: **Discovery Laboratory, Organic & Biomolecular Chemistry Division, CSIR-Indian Institute of Chemical Technology.**

Recipient of DST INSPIRE Faculty Award & SERB Young Scientist *(Nov 2012-April 2016)*

- Development of transition metal free reactions which could serve as excellent chemical tools in 1,2-cohalogenation of multiple double bond.
- Synthesis of saccharides bearing different size fused heterocyclic moieties, with different substituent and heteroatoms at anomeric position.
- Diversity Oriented Synthesis (DOS) on sugar scaffold to synthesize a focus novel chiral library consisting of quinoline, benzopyran and heterocyclic rings rich in complexity and screening for their biological activities.
- Demonstrated an efficient and convenient ruthenium-catalyzed highly α-selective glycosylation and syn-dihydroxylation to obtain α-D-mannopyranosides in one-pot.

Postdoctoral Research: **Laboratory of Chemistry and Cell Biology, The Rockefeller University, USA**

Research Advisor: Prof. Tarun M. Kapoor *(Sept 2008-Oct 2011)*

- Structure-based design of small molecule inhibitors based on "privileged" chemical scaffolds; a rapid and rational approach was developed towards the identification of potential lead compounds against Histone lysine Methyltransferase.
- Photo-Cross linking of a mixture of natural and stable isotope labeled inhibitors and mass spectrometry approach used to detect inhibitor-protein adducts and map an allosteric binding site of an ATP-competitive inhibitor of Kinesin-5 in multi-protein complexes.
- Genomics and genetic approaches were used to systematically analyze drug-target divergence of 'MDR-less' fungal strain and drug mechanism of action between human and fungi.

Doctoral Research: **Department of Organic Chemistry, National Chemical Laboratory (Senior Research Fellow);** *Recipient of Keerti Sangoram Memorial Endowment Award for Best Research*

Mentor: Prof. Srinivas Hotha *(Sept 2005–Aug 2008)*

- Alkynophilic reagents were screened for transglycosylation reaction and propargyl glycosides were developed as novel glycosyl donors in the presence of catalytic amount of $AuCl_3$.
- The propargyl and homopropargyl glycosyl donors were used for the synthesis of glycosides, thioglycosides, glycoconjugates and different glycosyl donors for the synthesis of higher saccharides.
- Developed an efficient and flexible approach to the synthesis of various unsaturated and branched chain sugars using gold catalysts.
- A novel and quantitative approach of Berberine-silica nanoconjugate system was developed and antiproliferative activity was studied in HeLa, HepG2 and HEK 293T cell line.

Doctoral Research: **Department of Organic Chemistry, National Chemical Laboratory (Junior Research Fellow);** *Recipient of Dr. Rajappa Award for Best Research*

Mentor: Prof. Srinivas Hotha *(Sept 2003–Aug 2005)*

- Developed a protocol for the chemical ligation of saccharides to saccharides/peptides under neutral reaction conditions exploiting 'Click' Chemistry. Ligation of monosaccharide and peptide building blocks were studied that could potentially give rise to *pseudo*-oligosaccharides and amino acid glycoconjugates.
- Photoresponsive network of BDSAC and ODA capped gold nanoparticles were prepared by linking them with molecules containing an azobenzene moiety.

Professional & Teaching Experience

- ***Assistant Professor & INSPIRE Faculty: Department of Chemistry, Malaviya National Institute of Technology, Jaipur.*** ***(April 2016-present), INDIA***
  - UG-Instructed Engineering Chemistry-I course & Tutorials (22CYT-101) and supervised Chemistry-I practical (22CYP-101) for B. Tech.
  - PG-Instructed Organic Chemistry (CYT-602) & (21CYT507), Organic Synthesis (CYT-632), Bioorganic Chemistry (CYT-635) & Applied Biocatalysis (Enzymes) (21CYT815), Heterocyclic Chemistry (CYT-638) & (21CYT815), Stereochemistry, Structure & Reaction Mechanism of Organic Compounds (CYT-611), Analytical Chemistry (CYT-603), Spectroscopy and Its Applications (CYT-613) & Advanced Organic Chemistry (21CYT513), Supervised Analytical Chemistry practical (CYP-604) & Organic Chemistry practical (CYP-614) & Organic Chemistry Lab-II (21CYP510).
  - Supervising the research trainees and new graduates, a position that involved instruction in methods, development and design of research schemes, and subsequent evaluation of data.

- ***INSPIRE Faculty, Organic & Biomolecular Chemistry Division, CSIR-Indian Institute of Chemical Technology, Hyderabad.*** ***(November 2012-April 2016), INDIA***
  - Worked as a co-mentor and supervising the research trainees and new graduates, a position that involved instruction in methods, development and design of research schemes, and subsequent evaluation of data.
  - Supervising organic chemistry laboratories, providing knowledge on organic synthesis, purification and associated analytical techniques.

- ***Assistant Professor in Chemistry, MNIT, Jaipur (July-August 2012), NIT, Kurukshetra (August 2012-October 2012), INDIA***
  - Instructed Chemistry-I course & Tutorials (CH-105), and supervised Chemistry-I practical (CH-107) for B. Tech 1st semester (July-Dec, 2012).Supervised Tutorial and Administrated the grade exams.

- ***Postdoctoral Associate, Laboratory of Chemistry & Cell Biology, The Rockefeller University, New York, NY.*** ***(September 2008-Novemebr 2011), USA***
  - Oversaw analytical chemistry laboratories, demonstrating the use of instrumentation including LCMS, NMR, Combiflash etc.
  - Involved in several collaborative projects, including the development of new algorithms and analysis of high-throughput data, team consisted of researchers from a number of fields.

Academic & Administrative Assignments

Institutional: Warden (H-09 Aurobindo), Sports Coordinator (Outdoor), Member (Anti-Raging Vigilant), Member (Annual Convocation Committee), Member (Disciplinary Committee & related), Member Staff & Faculty Cricket/Badminton Teams, Member Exam-Cell Committee & Coordinator NBA Accreditation (Vinodini).

Departmental: Program Advisor (DUGC, DPGC), Faculty Advisor (B.Tech), Faculty Coordinator (M. Sc. Lab, B. Tech Lab), Faculty Incharge (Lab Safety, UG/PG Labs, Seminar Room, Chemicals and Glassware order related), Member DPGC & DSC, and Purchase Committee, MSc thesis evaluation committee (Organic Chemistry), Time-Table Coordinator.

Courses & Curriculum Development

Participated in Curriculum Development Workshop and Completed Organic Chemistry Syllabus along with Course files and Lecture plans of following Courses;

1. Organic Chemistry 21CYT507 (Core)
2. Advance Organic Chemistry 21CYT513 (Core)
3. Lab-1 21CYP502 (Organic Chemistry-I)
4. Lab-2 21CYP510 (Organic Chemistry-II)
5. Organic Synthesis 21CYT814 (PE)
6. Applied Biocatalysis (Enzymes) 21CYT815 (PE)
7. Heterocyclic Chemistry 21CYT816 (PE)
8. Chemistry of Natural Products 21CYT817 (PE)
9. Pharmaceutical Chemistry 21CYT818 (PE)
10. Cell Structure & Biomolecules 21CYT819 (PE)

Membership/Association of Scientific Societies

- Member of Royal Society of Chemistry (**MRSC**), ***'Future Leader's in the Field'*** scheme, Member #738443.
- **Fellow** (LF-791/2017), Indian Society of Chemists and Biologists (ISCB), CSIR-CDRI (INDIA).
- Life Membership (LM/290/17) in ACCT(I) Association of Carbohydrate Chemists and Technologists (INDIA)
- Life Member (L32289), The Indian Science Congress Association (ISCA), Kolkata (INDIA).
- Assistant Professor (AcSIR), Academy of Scientific and Innovative Research, CSIR-IICT (INDIA).
- Life Membership (LM 1906) in Chemical Research Society of India (CRSI) IISC Bangalore (INDIA).
- Member of American Chemical Society (ACS), Member #30916353.
- DST-INSA INSPIRE Faculty Fellow, Department of Science & Technology (INDIA).
- **External Subject Expert** for the Board of Studies of Department of Chemistry at University of Engineering & Management (UEM), Jaipur.
- **Editorial Board** for *Journal of Carbohydrate Chemistry* (Taylor & Francis)

Research Interest

Carbohydrate Chemistry, Organic Chemistry, Medicinal Chemistry, Glycobiology, Chemical Biology

Research Development

Carbohydrate Chemistry Research Laboratory (CCRL) established in the Chemistry Department at MNIT.

Research Summary/Output (*h*-Index: **18**, i10-index **28**, Citation: ~**1000**, Total Impact: ~**150**)

- Thesis Supervision, 8 Ph.D. (MNIT Jaipur **4** Awarded), Co-guide (AcSIR CSIR-IICT **4** Awarded), (17 M.Sc (PG). (MNIT Jaipur **15** Awarded).
- Total Publications-**37**, Book Chapter-1, Average IF (overall; 4.25); **10.20** (top 5); 7.35 (top 10); 6.25 (top 15); 5.60 (top 20), 5.06 (top 25), 4.57 (top 30).
- Invited Talk-**10**, Abstracts/Proceedings in Conferences > **58**. Ph.D. Examiner/Evaluated-**02**
- Vidwan-ID: 108787, ORCID-0000-0001-7722-8554, Web of Science ResearcherID: D-7930-2014, Scopus Author ID: 57217854656/57217846063, ResearchGate; Research Interest Score-377.

Research Publications & Book chapters

Independent

1. Reagent-Controlled Chemo/Stereoselective Glycosylation of L-Fucal to Access Rare Deoxysugars. Nitin Kumar, Monika Yadav, **Sudhir Kashyap*** (*Carbohydr Res.* **2023**, 108992, IF = 2.975), Invited for Special Collection of CARBO XXXVI- International Conference in *Carbohydrate Research* as 'Emerging Trends in Glycochemistry, Glycobiology & Technology'.

2. An Introduction to Glycosylation and its Biological Significance. **Sudhir Kashyap*** (*Trends in Carbohydrate Research* **2023**, In press), Invited for Special Collection of CARBO XXXVII- International Conference in *Carbohydrate Research* as 'Important aspects of Glycosides in Carbohydrate Chemistry'.

3. Photo-induced Stereo- and Regiospecific Sulfonylation of C-C Multiple Bonds Exploiting the Dual-reactivity of Sulfonium Iodate(I) Species. Aakanksha Gurawa, Nitin Kumar, **Sudhir Kashyap*** (*Org. Chem. Front., **2023**, 10,* 4918-4926, IF = 5.456).

4. Protecting Group Enabled Stereocontrolled Approach for Rare-Sugars Talose/Gulose *via* Dual-Ruthenium Catalysis. Manoj Kumar, Nitin Kumar, Aakanksha Gurawa, **Sudhir Kashyap*** (*Carbohydr. Res.* **2023**, *523,* 108705, IF = 2.975).

5. Stereoselective Synthesis of α-L-Rhamnopyranosides from L-Rhamnal Employing Ruthenium-Catalysis. Manoj Kumar, Nitin Kumar, Aakanksha Gurawa, **Sudhir Kashyap*** (*ChemistrySelect* **2022***, 7, e202200963*, IF = 2.307).

6. Bismuth-Catalyzed Stereoselective 2-Deoxyglycosylation of Disarmed/Armed Glycal Donors. Manoj Kumar, Aakanksha Gurawa, Nitin Kumar, **Sudhir Kashyap*** (*Org. Lett.* **2022***, 24,* 575-580, IF = 6.072).

7. Selective Azidooxygenation of Alkenes Enabled by Photo-induced Radical Transfer Using Aryl-λ^3-azidoiodane Species. Aakanksha Gurawa, Manoj Kumar, **Sudhir Kashyap*** (*ACS Omega* **2021,** *6,* 26623-26639, IF = 4.132).

8. Me_3SI-promoted chemoselective deacetylation: A general and mild protocol. Aakanksha Gurawa, Manoj Kumar, **Sudhir Kashyap*** (*RSC Adv.* **2021***, 11,* 19310-19315, IF = 4.037).

9. $KMnO_4$-catalyzed chemoselective deprotection of acetate and controllable deacetylation-oxidation in one-pot. Aakanksha Gurawa, Dodla S. Rao, Manoj Kumar, **Sudhir Kashyap*** (*New J. Chem.* **2020***, 44,* 16702-16707, IF = 3.925).

10. Copper(II)-Catalyzed Stereoselective 1,2-Addition *vs* Ferrier Glycosylation of "Armed" and "Disarmed" Glycal Donors. Manoj Kumar, Thurpu R. Reddy, Aakanksha Gurawa, **Sudhir Kashyap*** (*Org. Biomol. Chem.* **2020,** *18,* 4848-4862, IF = 3.890).

11. Photoswitchable Regiodivergent Azidation of Olefins with Sulfonium Iodate(I) Reagent. Dodla S. Rao, Thurpu R. Reddy, Aakanksha Gurawa, Manoj Kumar,**Sudhir Kashyap*** (*Org. Lett.* **2019***, 21,* 9990-9994, IF = 6.02).

12. Visible-Light Activated Metal Catalyst-Free Vicinal Diazidation of Olefins with Sulfonium Iodate(I) Species. Thurpu R. Reddy, Dodla S. Rao, **Sudhir Kashyap*** (*Chem. Commun.* **2019***, 55,* 2833-2836, IF = 6.065).

13. Chemoselective and Stereospecific Iodination of Alkynes using Sulfonium Iodate(I) Salt. Dodla S. Rao, Thurpu R. Reddy, **Sudhir Kashyap*** (*Org. Biomol. Chem.* **2018,** *16,* 1508-1518, IF = 3.890).

14. Regioselective vicinal functionalization of unactivated alkenes with sulfonium iodate(I) reagents under metal-free condition. Dodla S. Rao, Thurpu R. Reddy, K. Babachary, **Sudhir Kashyap*** (*Org. Biomol. Chem.* **2016,** *14*, 7529-7543, IF = 3.890).

15. Copper mediated iodoacetoxylation and glycosylation: effective and convenient approaches for the stereoselective synthesis of 2-deoxy-2-iodo glycosides. Suresh K. Battina, **Sudhir Kashyap*** (*Tetrahedron Lett.* **2016**, *57*, 811-814, IF = 2.388).

16. Regioselective Direct Difunctionalization of Glycals: Convenient Access to 2-Deoxyglycoconjugates Mediated by Tetra-*n*-butylammonium Iodide/Sodium Periodate. G. Kundoor, Dodla S. Rao, **Sudhir Kashyap*** (*Asian J. Org. Chem.* **2016,** *5*, 264-270*,* IF = 3.116).

17. Sulfonium Salts of Iodine (I) species as a Novel and Efficient Reagent for Regioselective Bisfunctionalization of Glycals and Enol ethers. Thurpu R. Reddy, Dodla S. Rao, K. Babachary, **Sudhir Kashyap*** (*Eur. J. Org. Chem.* **2016,** 291-311, IF = 3.261).

18. Ruthenium Catalyzed Stereo/Chemo/Regioselective One-pot Synthesis of C(2)-C(3) unsaturated and α-D-Mannopyranosyl sulfones. Sravanthi Chittela, Thurpu R. Reddy, Palakodety Radha Krishna, **Sudhir Kashyap*** (*J. Org. Chem.* **2015,** *80*, 7108-7116, IF = 4.198).

19. A mild and efficient Zn-catalyzed *C*-glycosylation: Synthesis of C(2)-C(3) unsaturated *C*-linked glycopyranosides. Thurpu R. Reddy, Dodla S. Rao, **Sudhir Kashyap*** (*RSC Adv.* **2015**, *5*, 28338-28343, IF = 4.037).

20. Ruthenium-catalyzed thioglycosylation: Synthesis of 2,3-unsaturated-*S*-glycosides. Suresh K. Battina, Thurpu R. Reddy, Palakodety Radha Krishna, **Sudhir Kashyap*** (*Tetrahedron Lett.* **2015**, *56*, 1798-1780, IF = 2.032).

21. Zn(II) triflate-catalyzed N-glycosylation: Synthesis of sulfonamide and amide functionalized 2,3-unsaturated-glycosides. Thurpu R. Reddy, Suresh K Battina, **Sudhir Kashyap*** (*J. Carbohydr. Chem.* **2015**, *34*, 133-144, IF = 1.667).

22. Ruthenium catalyzed synthesis of 2,3-unsaturated *C*-glycosides from glycals. Batthula Srinivas, Thurpu R. Reddy, **Sudhir Kashyap*** (*Carbohydr. Res.* **2015**, *406*, 86-92, IF = 2.975).

23. Ruthenium trichloride catalyzed synthesis of 2,3-unsaturated-*N*-glycosides *via* Ferrier azaglycosylation. Thurpu R. Reddy, Sravanthi Chittela, **Sudhir Kashyap*** (*Tetrahedron* **2014,** *70*, 9224-9229, IF = 2.388).

24. "One-pot" Access to α-D-Mannopyranosidesfrom Glycals Employing Ruthenium Catalysis.Sravanthi Chittela, Thurpu R. Reddy, Palakodety Radha Krishna, **Sudhir Kashyap*** (*RSC Adv.* **2014**, *4*, 46327-46331, IF = 4.037).

25. Copper(II) triflate as a mild and efficient catalyst for Ferrier reaction: Synthesis of 2,3-unsaturated-*O*-glycosides. Batthula Srinivas, Thurpu R. Reddy, Palakodety Radha Krishna, **Sudhir Kashyap*** (*Synlett*, **2014**, 1325-1329, IF = 2.170).

26. Synthesis of 2,3-unsaturated glycosides and disaccharides *via* Ruthenium(III) chloride catalyzed Ferrier glycosylation. Batthula Srinivas, Gundeboina Narasimha, Palakodety Radha Krishna, **Sudhir Kashyap*** (*Synthesis*, **2014**, 1191-1196, IF = 2.969).

27. $Zn(OTf)_2$-catalyzed glycosylation of glycals: Synthesis of 2,3-unsaturated glycosides *via* a Ferrier reaction. Gundeboina Narasimha, Batthula Srinivas, Palakodety Radha Krishna, **Sudhir Kashyap*** (*Synlett*, **2014**, 523-526, IF = 2.170).

28. Influence of C-4 Axial/Equatorial Configuration and NGP/RGP Driven Conformational Evidences in Chemoselective Activation of Glycals. Nitin Kumar, Aakanksha Gurawa, Monika Yadav, **Sudhir Kashyap*** (*Chem. Sci.* **2023**, IF = 9.669), Invited for Special Collection of RSC CFOS-2022 (Contemporary Facets in Organic Synthesis) (*Manuscript under review*).

29. Sulfonium Iodate(I) Mediated Oxo-Sulfonylation of Alkenes and Alkynes with Sodium Sulfinate and Dioxygen *via* Visible-Light-Triggered Radical Cascade. Aakanksha Gurawa, Nitin Kumar, **Sudhir Kashyap*** (*Synlett* **2024**), Invited for Special Collection on 'Organic Chemistry under Visible Light: Photolytic and Photocatalytic Organic Transformations' in *Synlett* Cluster (*Manuscript under preparation*).

From Post-doc

30. Using 'biased-privileged' scaffolds to identify lysine methyltransferase inhibitors. **Sudhir Kashyap***, Joel Sandler, Ulf Peters, Eduardo J. Martinez, Tarun M. Kapoor* (*Bioorg. Med. Chem.* **2014**, *22*, 2253-2260, IF = 3.461).

31. Examining the mechanism of action of a kinesin inhibitor using Stable Isotope Labeled Inhibitors for Crosslinking (SILIC). Sarah A. Walker, **Sudhir Kashyap**, Xiang Li, Tarun M. Kapoor (*J. Am. Chem. Soc.* **2011**, *133*, 12386-12389, IF = 16.383).

From Ph.D & Collaboration

32. Synthesis of thioglycosides from propargyl glycosides exploiting alkynophilic gold catalyst. Srinivasa Rao Vidadala, Shivaji A. Thadke, Srinivas Hotha*, **Sudhir Kashyap*** (*J. Carbohydr. Chem.* **2012,** *31,* 241-251, IF = 1.667).

33. Dendritic Effect of Ligand-Coated Nanoparticle: Enhanced Apoptotic Activity of Silica-Berberine-Nanoconjugates. Mahantappa Halimani, S. Prathap Chandran, **Sudhir Kashyap**, V. M. Jadhav, B. L. V. Prasad, Srinivas Hotha, Souvik Maiti (*Langmuir* **2009,** *25,* 2339-2347, IF = 4.331).

34. Synthesis of *C*-2 methylene glycosides from *C*-2 propargyloxymethyl glycals exploiting the alkynophilicity of $AuCl_3$. **Sudhir Kashyap**, Srinivasa Rao Vidadala, Srinivas Hotha (*Tetrahedron Lett.* **2007,** *48,* 8960-8962, IF = 2.032). Cited in *Synfacts* **2008**, *03*, 0274-0274 (Synthesis of *C*-2 methylene glycosides by $AuCl_3$ catalysis).

35. Propargyl Glycosides as Stable Glycosyl Donors: Anomeric Activation and Glycoside Syntheses. Srinivas Hotha, **Sudhir Kashyap** (*J. Am. Chem. Soc.***2006,** *128,* 9620-9621, IF = 16.383).

36. "Click Chemistry" Inspired Synthesis of *pseudo*-Oligosaccharides and Amino Acid Glycoconjugates. Srinivas Hotha, **Sudhir Kashyap** (*J. Org. Chem.* **2006,** *71,* 364-367, IF = 4.198, Most cited among articles published in *J. Org. Chem.* **2006**).

37. Stereoselective synthesis of α-glucosides from 3-*O*-propargyl protected glucal exploiting alkynophilicity of $AuCl_3$. **Sudhir Kashyap**, Srinivas Hotha (*Tetrahedron Lett.* **2006,** *47,* 2021-2023, IF = 2.032).

38. Gold Nanoparticle Networks with Photoresponsive Interparticle Spacings. Deepti S. Sidhaye, **Sudhir Kashyap**, Murali Sastry, Srinivas Hotha, B. L. V. Prasad (*Langmuir* **2005,** *21,* 7979-7984, IF = 4.331).

BOOK CHAPTER:

39. Catalytic Organic Synthesis: A New Paradigmin Industrial Process Intensification. G. V. M. Sharma, P. R. Krishna, V. R. Doddi, **Sudhir Kashyap**, P. S. Reddy. (Industrial Catalysis and Separations, *Apple Academic Press, Inc.* **2014**).

Paper/Presentations/Abstracts/Proceedings in Conferences and Symposia

1. **International Conference on Frontiers at the Chemistry-Allied Sciences Interface,** April 20-21, 2023 *at* Centre of Advanced Study Department of Chemistry, University of Rajasthan, Jaipur.

   Oral presentations:

   i) Nitin Kumar: *"Conformational and Stereoelectronic Participation of C-4 Axial/Equatorial Group in Chemoselective Activation of Glycals"* (OP-22, FCASI-2023).

   Poster presentations:

   i) Monika Yadav: *"Stereodivergent & Kinetic/Thermodynamic Controlled Access to Deoxy Sugars via Chemoselective Glycosylation"* (PP-152, FCASI-2023) **(Best presentation award)**.

   ii) Divya Pal: *"Stereodivergent and Orthogonal Synthesis of Diverse Acceptors for Chemical Glycosylation"* (PP-97, FCASI-2023)

   iii) Saurabh Saini: *"Synthesis and Applications of Diversely Functionalized Glycal Donors in Chemical Glycosylation"* (PP-151, FCASI-2023).

2. **1st International conference on Recent Advances in Chemical Sciences-2023 (ICRACS-2023)**, January 16-18, 2023 *at* Department of Chemistry, Mohanlal Sukhadia University, Udaipur.

   Invited Talk:

   i) Sudhir Kashyap: "*Stereoselective Glycosylation of Glycals: Access to Rare & Deoxy-Sugars"* (IL-05, ICRACS-2023).

   Oral presentations:

i) Dr. Aakanksha Gurawa: *"RegioselectiveSulfonylation of Multiple bonds by using Sulfonium Iodate Reagent"* (OP-49, ICRACS-202).

ii) Nitin Kumar: *"Investigation of the Conformational Effect of C-4 Axial/Equatorial Participation in Glycal Activation"* (OP-45, ICRACS-202) **(Best presentation award, Third)**.

Poster presentations:

i) Monika Yadav: *"Stereoselctive Access to Rare 6-Deoxyglycoconjugates under Kinetic/Thermodynamic Controlled Process"* (PP-97, ICRACS-202).

3. **International Carbohydrate Conference (CARBO-XXXVI) on Emerging Trends in, Glycochemistry, Glycobiology & Technology**, December 5-7, 2022 *at* Department of Chemistry, IIT Bombay.

Invited Talk:

i) Sudhir Kashyap: "*Stereo/Chemoselective Activation of Glycals: 2-Deoxyglycosylation vs Ferrier Rearrangement"* (SL-06, CARBO-XXXVI-2022).

Poster presentations:

i) Saurabh Kumar: *"Kinetically vs Thermodynamically Controlled Chemo/Stereoselective Glycosylation of L-Fucal to Access Rare Deoxysugars"* (PP-53, CARBO-XXXVI-2022).

ii) Nitin Kumar: *"Regio/Stereodivergent Strategy for Rare-Sugars Talose/Gulose via Dual-Ruthenium Catalysis in One-Pot"* (OP-54, CARBO-XXXVI-2022). **(Best presentation award, ACS-RSC-IITB)**.

iii) Aakanksha Gurawa: *"Stereoselective Synthesis of Deoxy glycosides from "Armed" and "Disarmed" Glycal Donors"* (PP-75, CARBO-XXXVI-2022).

4. **International Conference on Contemporary Facets in Organic Synthesis (RSC-CFOS2022)**, December 1-4, 2022 *at* Department of Chemistry, IIT Roorkee.

Invited Talk:

i) Sudhir Kashyap: "*Investigation the Influence of Remote Participation of C-4 Axial/Equatorial Group in Stereoselective Glycosylation of Glycals"* (IL-43, RSC-CFOS-2022).

Poster presentations:

i) Aakanksha Gurawa: *"Regiospecific Sulfonylation of Multiple bonds employing Sulfonium Iodate Reagent"* (PP-04, RSC-CFOS-2022).

5. **International Conference on Organic, Medicinal, and Pharmaceutical Chemistry (ICOMP-2022),** Navrachna University, February 24-27, 2022 *at* Vadodara.

Oral presentation

i) Manoj Kumar: *"Stereoselective Synthesis of Deoxyglycosides and Oligosaccharide from Glycal Donors"* (OP-23, ICOMP-2022).

ii) Aakanksha Gurawa: "*Photoinduced Radical Azidation of Olefins using λ^3 Iodane Species"* (OP-1, ICOMP-2022). **(Best presentation award, Second)**.

iii) Nitin Kumar: *"Ruthenium-Catalyzed a Concise Stereoselective Synthesis of α-L-Rhamnopyranosides from L-Rhamnal"* (OP-27, ICOMP-2022).

6. **National Symposium on Chemistry for Sustainable Future,** Rajasthan University, February 16, 2022 *at* Jaipur.

Poster presentation

i) Manoj Kumar: "*Stereoselective Glycosylation of Glycals: Synthesis of 2-Deoxy and 2,3-Dideoxyglycoconjugates*" (OF-34).

ii) Aakanksha Gurawa: "*Sulfonium Iodate Reagent Mediated Stereodivergent Azidation of Alkenes under Visible Light"* (OF-14). **(Best poster award, Third)**.

iii) Nitin Kumar: "*Stereocontrolled Synthesis of a-L-rhamnopyranosides via ruthenium catalysis Glycosylation of Glycals"* (OF-33). **(Best poster award, Second)**.

7. **National Organic Chemistry Symposium (XVII-JNOST 2022),** Radisson, January 6-9, 2022 *at* Hyderabad.

Oral presentations:

i) Aakanksha Gurawa: "*Regioselective Azidation of Olefins using Sulfonium Iodate Reagent "*(FP-54, JNOST-2022).

8. **Web Conference on Frontiers in Organometallics and Catalysis (FOMC-2021),** Malaviya National Institute of Technology Jaipur, January 20-22, 2021 *at* Jaipur.

Poster presentations:

ii) Manoj Kumar: *"Stereoselective Thermo vs Kinetic Controlled Activation of "Armed" and "Disarmed" Glycal Donors"* (OP-29, FOMC - 2021).

ii) Aakanksha Gurawa: "*Sulfonium Iodate Mediated Vicinal Oxo Azidation and Iodoazidation of Vinyl arenes"* (PP-49, FOMC-2021).

9. **International Conference 7th Asian Network for Natural and Unnatural Materials (ANNUM VII)** Gujarat University, September 27-29, 2019 *at* Ahmadabad.

Oral presentations:

i) Dodla Sivanageswara Rao: "*Visible-Light Mediated Selective Azidation of Olefins"* (OP-03, ANNUM-2019).

10. **14th Biyani International Conference (BICON-2019) on Emerging Sustainable Technologies and Innovations for Safe Water and Health,** Biyani College-Jaipur, September 23-25, 2019 *at* Jaipur. (ISBN: 978-93-83462-95-7)

Oral presentations:

i) Dodla Sivanageswara Rao: "*Stereodivergent Azidation of Alkenes Employing Sulfonium Iodate (I) Reagent"* (OP-23, BICON-2019).

ii) Manoj Kumar: "*Oligosaccharides and Deoxyglycosides Synthesis Fromthe Glycals"* (OP-38, BICON-2019).

Poster presentations:

i) Aakanksha Gurawa: "*Sulfonium Iodate Mediated Vicinal Oxo Azidation and Iodoazidationof Vinyl arenes"* (P-01, BICON-2019).

11. **Proceedings of 1st International Conference on Integrative Chemistry, Biology and Translational Medicine,** February 25-26, 2019, Jointly Organized by Centre for Global Health, Hansraj College University of Delhi, India & Loyola University Chicago Stritch School of Medicine, USA.(ISBN:978-93-5351-396-2).

Oral presentations:

i) Dodla Sivanageswara Rao: "*Sulfonium Iodate (I) Reagent Mediated 1,2-diazidation of Alkenes: A Simple Metal Free Approach for the Synthesis of Biologically Active Scaffold*" (OP-24, ICBTM-2019).

ii) Manoj Kumar: "*Stereoselective Synthesis of Deoxysugar and Glycomimetics From Glycals"* (OP-23, ICBTM-2019).

iii) Aakanksha Gurawa: "*Sulfonium Iodate Mediated Vicinal Difunctionalization of Olefins"* (OP-27, ICBTM-2019).

12. **25th ISCB International Conference; Frontiers Research in Chemistry & Biology Interface,** January 12-14, 2019 *at* Lucknow.

Oral presentations:

i) Dodla Sivanageswara Rao: "*Chemoselective Iodination of Alkynes using Sulfonium Iodate (I) Complex*" (O-14, ISCB-2019).

ii) Thurpu Raghavender Reddy: "*Sulfonium Iodate Reagent Mediated Stereoselective Synthesis of 2-Deoxy Glycosides and Glycoconjugates*" (O-15, ISCB-2019).

Poster presentations:

i) Manoj Kumar: "*Stereoselective Synthesis of Deoxyglycosides and Glycomimetics From Glycals*" (P-44, ISCB-2019).

ii) Aakanksha Gurawa: *Regioselective Azidation of Alkenes using Sulfonium Iodate Reagent*. (P-42, ISCB-2019).

13. **International Conference on Frontiers at the Chemistry-Allied Sciences Interface,** December 21-22, 2018 *at* Centre of Advanced Study Department of Chemistry, University of Rajasthan, Jaipur.

Oral presentations:

i) Dodla Sivanageswara Rao: *A simple convenient method for the synthesis of 1-iodoalkynes and (E)-1, 2-diiodoalkene employing sulfonium iodate species*. (A-139, FCASI-2018).

ii) Thurpu Raghavender Reddy: *An efficient method for the synthesis of 2-deoxy-2-iodo-glycosides from glycals using sulfonium salt*. (A-154, FCASI-2018).

Poster presentations:

i) Manoj Kumar: *Stereoselective glycosylation of galcals: synthesis of 2-deoxy and 2,3-dideoxyglycoconjugates*. (A-361, FCASI-2018).

ii) Aakanksha Gurawa: *Regioselective Azidation of Alkenes using Sulfonium Iodate Reagent*. (A-360, FCASI-2018).

14. **International Conference on Environmental Sensitivity Sustainable Development, The 13th Anniversary India-Japan Fest,** November 27, 2018 *at* Biyani Group of Colleges, Department of Science and Nursing, Jaipur. (ISBN:978-93-83462-636)

Poster presentations:

i) Dodla Sivanageswara Rao: *Sulfonium Iodate(I) Salt Mediated Stereodivergent Iodination of Alkynes: Solvent-Switched Selective Access to1-Iodoalkyne and (E) 1,2-Diiodoalkenes.*(P-179, BICON-2018).

ii) Manoj Kumar: *Stereoseletive synthesis of O-glycosides from glycals*. (P-189-190, BICON-2018).

15. **International Conference on Sustainable Chemistry for Health Environment and Materials,** August 6-8, 2018 *at* CSIR-Indian Institute of Chemical Technology, Hyderabad.

Poster presentations:

i) Dodla Sivanageswara Rao: *Sulfonium Iodate(I) Salt Mediated Stereodivergent Iodination of Alkynes: Solvent-Switched Selective Access to1-Iodoalkyne and (E) 1,2-Diiodoalkenes.*(P-24, Su-Chem-2018).

16. **International Conference Indo-US Colloquium Recent Developments in Inter Disciplinary Research**, July 2, 2018 Jointly Organized by Department of Chemistry, Hansraj College University of Delhi, Delhi, India & Loyola University Stritch School of Medicine Maywood, IL USA.

Poster presentations:

i) Dodla Sivanageswara Rao: *Sulfonium Iodate(I)Salt Mediated Chemoselective and Stereospecific Iodination of Alkynes*.(PP-7).

17. **24th ISCB International Conference; Frontiers Research in Chemistry & Biology Interface**, January 11-13, 2018 *at* Department of Chemistry, Manipal University Jaipur.

Poster presentations:

i) Dodla Sivanageswara Rao: *Efficient Method for Regioselective Vicinal Iodofuntionalized molecule by using Sulfonium Iodate(I) Reagent.*(P-171, ISCB-2018).

18. **International Conference on Contemporary Facets in Organic Synthesis**, December 22-24, 2017 *at* Department of Chemistry, IIT Roorkee.

Invited Talk:

i) Sudhir Kashyap: *Sulfonium Iodate(I) Salt as Novel Reagent for Selective Functionalization of C-C multiple Bond.*(SIL-16, CFOS-2017).

Poster presentations:

i) Dodla Sivanageswara Rao: *Stereodivergent Functionalization of Unactivated Alkenes Employing Sulfonium bis(acetoxy) Iodate(I) Complex.*(P-112, CFOS-2017).

19. **International Conference on Frontiers at the Chemistry-Allied Sciences Interface,** July 22-23, 2017 *at* Centre of Advanced Study Department of Chemistry, University of Rajasthan, Jaipur.

Invited Talk:

i) Sudhir Kashyap: *Reagent Directed Stereoselective Synthesis of α-D-Mannopyranosides in "One-Pot" Process.* (SIL-09, FCASI-2017).

Poster presentations:

i) Thurpu Raghavender Reddy: *Synthesis of 2-Deoxy-2-Iodo Glycosides and Glycoconjugates using Hypervalent Iodine System*. (PS-44, FCASI-2017).

ii) Dodla Sivanageswara Rao: *A Novel and Efficient Protocol for Regioselective Vicinal Functionalization of Olefins*. (PS-45, FCASI-2017).

20. **21st CRSI-ACS Symposium in Chemistry (CRSI-ACS/CRSI-NCS-21),** July13-16, 2017*at* CSIR-Indian Institute of Chemical Technology, Hyderabad.

Poster presentations:

i) Thurpu Raghavender Reddy: *Stereoselective Synthesis of 2-Deoxy Glycosides and Glycoconjugates Using Sulfonium Iodate (I) Complex*. (PA-306, CRSI-NSC-2017).

ii) Dodla Sivanageswara Rao: *Synthetic Application of Sulfonium Iodate(I) Reagent in Modern Organic Chemistry*. (PA-355, CRSI-NSC-2017).

21. **Indo-German workshop on Recent Applications of Carbohydrates in Chemistry and Biology,** February 14-16, 2017 *at* Department of Chemistry, IIT (BHU) Varanasi.

Invited Talk:

i) Sudhir Kashyap: *Ruthenium Catalyzed Stereo/Chemo/Regioselective Preparation of Mannopyranosides From Glycals.* (SL-05, RACCB-2017).

Poster presentations:

i) Dodla Sivanageswara Rao: *Sulfonium Bis(Acetoxy)Iodate (I) Complex Promoted Iododglycosylation of Glycal: Stereoselective Synthesis of 2-Deoxy Sugars.* (PP-01, RACCB-2017). **(Best poster award)**.

22. **2nd National Conference on New Frontiers in Chemistry-from Fundamentals to Applications-II ,** January 28-29, 2017 *at* Department of Chemistry, BITS Pilani K K Birla Goa Campus, Goa.

Invited Talk:

i) Sudhir Kashyap: *Stereoselective Synthesis of Mannose from Glycals: Scope and Application of Ruthenium Catalysis.* (OL-2, NFCFA-2017).

Poster presentations:

i) Dodla Sivanageswara Rao: *Stereoselective and divergent functionalization of unactivated olefins with sulfonium iodate(I) reagents.* (P-80, NFCFA-2017).

23. **National Conference on Organic Chemistry in Sustainable Development: Recent Advances and Future Challenges,** August 29-30, 2016 *at* Department of Chemistry, BITS Pilani.

Invited Talk:

i) Sudhir Kashyap: *Stereoselective Synthesis of Mannose from Glycals.* (IL-18, OCSD-2016).

Poster presentations:

i) Dodla Sivanageswara Rao: *Regioselective Bisfunctionalization of glycals using Sulfonium iodate (I) complex.* (PP-43,OCSD-2016).

24. Participated in **National Conference on Advances in Cancer Therapeutics** (ACT-2016) *held at* Indian Institute of Chemical Technology, Hyderabad, India from April 4-5, 2016.

25. Participated in **APAS Golden Jubilee Science Congress** *held at* Indian Institute of Chemical Technology, Hyderabad, India from November 13-15, 2014.

26. **International Conference on Emerging Trends in Chemical and Pharmaceutical Sciences,** October 15-17, 2014 *at* CSIR-Indian Institute of Chemical Technology, Hyderabad.

    Poster presentations:

    i) S. Chittela: *One-pot" Sequential Glycosylation-Dihydroxylation from Glycals*. (EP-27, ICETCPS-2014).

27. **International Symposium on Natural Inspired Initiatives in Chemical Trend,** March 2-5, 2014 *at* CSIR-Indian Institute of Chemical Technology, Hyderabad.

    Poster presentations:

    i) Thurpu Raghavender Reddy: *Stereoselective synthesis of 'Pseudo-glycals': Scope of $Cu(OTf)_2$ as economical and environmental-friendly catalyst.* (PP-178, NIICT-2014).

    ii) Battula Srinivas: *$RuCl_3$ catalyzed glycosylation: Stereoselective synthesis of 2,3-unsaturated O- and C-glycosides*. (PP-177, NIICT-2014).

28. **International Conference on Chemical Biology: Disease Mechanism and Therapeutics,** February 6-8, 2014 *at* CSIR-Indian Institute of Chemical Technology, Hyderabad.

    Invited Talk:

    i) Sudhir Kashyap: *Design and development of 'biased-privileged' scaffold based Inhibitors of lysine methyltransferase.*(OP-2, PP-247, IICB-2014).

29. **27th International Carbohydrate Symposium,** January 12-17, 2014 *at* Indian Institute of Science, Bangalore.

    Poster presentations:

    i) S. Prabhakar: *Synthesis of C-glycosides via Ferrier Reaction using $Zn(OTf)_2$.* (I-P-40, ICS-27).

    ii) G. Narasimbha: *Ferrier glycosylation of glycals using $RuCl_3$*. (I-P-42, ICS-27).

    iii) Battula Srinivas: *Glycosylation of glycals via Ferrier reaction*. (I-P-88, ICS-27).

30. Presented a poster/paper in **A Satellite Meeting on Frontiers in Chemistry & Biology of Oligosaccharides** (FCBO-2014) *held at* Indian Institute of Science Education & Research, Pune from January 18-19, 2014.

31. Participated in **Advances in Glycochemistry (AIG-2014), a satellite symposium of ICS-27** *held at* Department of Chemistry, IIT Bombay on January 20, 2014.

32. Propargyl Activation for Glycosides and Saccharides Syntheses. **Sudhir Kashyap** and Srinivas Hotha, **National Science Day function** *held at* National Chemical Laboratory, Pune, India, February 2007.

33. Synthesis of Glycosides, Saccharides and Glycoconjugates via Alkyne Activation. **Sudhir Kashyap** and Srinivas Hotha, **RSC-West India section Student symposium** *held at* Goa University, Goa, India from October 19-20, 2007. (SHORT TALK)

34. Diversity Oriented Synthesis of Tricyclic compounds from Glycals. Ashish Tripathi, **Sudhir Kashyap** and Srinivas Hotha, **ACS-CSIR joint international conference on Building Bridges, Forging bonds for 21st Century Organic Chemistry & Chemical Biology** *held at* National Chemical Laboratory, Pune, India from January 6-9, 2006.

35. Synthesis of Glycoconjugates and Nanomaterial by "Click" Methods. **Sudhir Kashyap** and Srinivas Hotha, **National Science Day function** *held at* National Chemical Laboratory, Pune, India, February 2006.

36. Participated in **18th National Seminar on Crystallography (NSC)** *held at* National Chemical Laboratory, Pune, India, January 8-10, 2004.

Editorial/Reviewer Assignments

- American Chemical Society (ACS); *The Journal of Organic Chemistry, ACS Catalysis, ACS Omega*
- The Royal Society of Chemistry (RSC); *Chemical Science, New Journal of Chemsitry*
- Elsevier; ScienceDirect; *Carbohydrate Research*
- Wiley-VCH; *Advanced Synthesis & Catalysis, ChemistrySelect, Chemistry An Asian Journal*
- Taylor & Francis; *Journal of Carbohydrate Chemistry*
- Bentham Science; *Current Organic Chemistry*

Sponsored Research Projects

1. **Core Research Grant in Organic Chemistry,** SERB INDIA, *"Stereoselective Synthesis of Rare-Sugars and Unnatural Glycoconjugates Comprising 2-Deoxy and 6-Deoxy Saccharides"*, Date: From **30-11-2021 to 29-11-2024** (3 years), Amount: Rs 42,46,240.00 (research grant only), Role: Principal Investigator, Current status: Ongoing.

2. **Early Career Research Award in Chemical Science,** SERB INDIA, *"Studies & Application of Unprecedented Sulfonium Iodate(I) Reagent in Selective Functionalization of C-C Multiple Bond"*, Date: From **19-07-2018 to 18-07-2021** (3 years), Amount: Rs 39, 90,000.00 (research grant only), Role: Principal Investigator, Current status: Completed.

3. **DST INSPIRE Faculty Award for Young Researchers,** DST-INSA INDIA, *"Designing Sugar-Fused Glycosidase Inhibitors Using Glycal Template"*, Date: From **23-11-2012 to 22-11-2017** (5 years), Amount: Rs 86, 27,600.00 (including Award amount and research grant 35 lakh), Role: Principal Investigator, Current status: Completed.

4. **Start-up Research Grant for Young Scientists in Chemical Science,** SERB INDIA, *"Diversity oriented synthesis (DOS) approach to sugar-based therapeutic"*, Date: From **08-08-2014 to 07-08-2017** (3 years), Amount: Rs 24, 68,000.00 (research grant only), Role: Principal Investigator, Current status: Completed.

5. **Research Grant Scheme for Faculty under Technical Education Quality Improvement Programme Phase-III** National Project Implementation Unit (NPIU), MHRD, New Delhi, *"Designing a chiral library containing heterocyclic ring on Sugar Scaffold- Sweet Medication for Tuberculosis"*, Date: From **27-09-2019 to 26-09-2020** (1 year), Amount: Rs 4,00,000.00 (research grant only), Role: Principal Investigator, Current status: Completed.

Date: 04-12-2023
Place: MNIT Jaipur

Dr. Sudhir Kashyap

Summary of Research Contributions by Dr. Sudhir Kashyap

Dr. Sudhir Kashyap has contributed significantly in the field of carbohydrate chemistry. His pioneering work on the discovery of propargyl glycoside as glycosyl donor for the chemical glycosylation led to enormous advancement in chemical glycosylation. Beside his brilliant academic achievements, a continuous hunger for knowledge and passion for science has made him an ideal scientist, an academician and an educator.

Dr. Kashyap, prior to joining MNIT Jaipur, worked as INSPIRE Scientist in the Organic & Biomolecular Chemistry Division, at CSIR-IICT Hyderabad. He was instrumental in establishing the carbohydrate chemistry focusing on developing a pathway for DOS and generates a carbohydrate-based library of small molecules. In this context, his research group developed efficient methods for incorporating glycosidic linkage in sugar scaffold en route to several glycosides and amino-acid glycoconjugates *(Carbohydr. Res.* ***2023****, 523, 108705, ChemistrySelect* **2022***, DOI:10.1002/slct.202200963, Org. Lett.* ***2022****, 24, 575-580, Org. Biomol. Chem.* ***2020,*** *18, 4848, J. Org. Chem.* ***2015****, 80, 7108, RSC Adv* ***2015****, 5, 28338 & RSC Adv* ***2014****, 4, 46327).*

In addition, Kashyap research group discovered a novel sulfonium-iodate reagent system and investigated its potential for the stereo- and regioselective vicinal functionalization of C=C multiple bonds *(Org. Chem. Front.* ***2023****,10, 4918, ACS Omega* ***2021,*** *6,* 2662*, Org. Lett.* ***2019****, 21, 9990, Chem. Comm.* ***2019****, 55, 2833, Org. Biomol. Chem.* ***2018,*** *16, 1508, Eur. J. Org. Chem.* ***2016,*** *291, Asian J. Org. Chem.* ***2016,*** *264, & Org. Biomol. Chem.* ***2016,*** *14, 7529).* In addition, he has grants from DST-SERB, for his ideas on the synthesis of heterocycle fused glycomimetics. Thus, overall focus of his research is on the development of pathway for DOS to generate carbohydrate-based library of small molecules.

Dr. Kashyap worked for his PhD at the CSIR-National Chemical Laboratory, Pune under the supervision of Prof. Srinivas Hotha (Currently in IISER Pune). During that, he developed two important techniques in carbohydrate chemistry *viz.* a ligation protocol using the CuAAC click reaction (*J. Org. Chem.* ***2006****, 71, 367)* and a novel glycosyl donor by the activation of propargyl glycosides using gold salts *(J. Am. Chem. Soc.* ***2006,*** *128, 9620),* useful for the glycobiology community. His research contributions were acknowledged by Keerti Sangoram Memorial Endowment Award and Dr. Rajappa Award.

As a post-doctoral associate at Rockefeller University, USA, Dr. Kashyap worked in the chemical biology group and demonstrated that SILIC approach can be used to map the binding site of an inhibitor to its target, this approach should be effective in analyzing inhibitor-target interactions *(J. Am. Chem. Soc.* ***2011****, 133, 12386).* In addition, he successfully demonstrated the concept of 'Privileged-Chemical' Scaffolds and its application in the design and synthesis of Indole-based inhibitors of histone lysine methyltransferase *(Bioorg. Med. Chem,* ***2014****, 22, 2253).*

Short summary:

Dr. Kashyap has made remarkable contribution in the field of glyco-chemistry, in particular for developing novel glycosylation methods. He emphasized the importance of one-pot glycosylation in stereo-controlled functionalization of biologically important glycoconjugates employing efficient and environmental benign reagent system.