PROFILE

Our research group aspires to contribute to the Society by enabling *protein-based directed therapeutics* and making *covalent inhibitor precision therapeutics* possible in the future. In this perspective, we are spearheading chemical technologies for the *precision engineering of proteins*. Subsequently, they empower homogeneous antibody conjugates (ADCs and AFCs) for directed cancer chemotherapeutics and image-guided tumor surgery.

Our technologies led to the foundation of Plabeltech Private Limited. The state-of-the-art proprietary platforms, LDM®, Gly-Tag®, and Maspecter®, empowers Plabeltech.

CONTACT

PHONE:
(Off) +91-755-2691339
(Lab) +91-755-2691340
(Mob) +91-7566189001

WEBSITE:
http://home.iiserb.ac.in/~vrai/

EMAIL:
vrai@iiserb.ac.in

ADDRESS

Department of Chemistry
IISER Bhopal, Bhopal Bypass Road
Bhauri, Bhopal 462 066 MP
INDIA

VISHAL RAI

Assoc. Professor & Swarnajayanti Fellow, IISER Bhopal

ACADEMIC QUALIFICATION

Ph.D.
2003 – 2008, IIT Bombay
CSIR Fellow; Coursework SPI 9.23/10
Supervisor: Prof. I. N. N. Namboothiri

M.Sc.
2001 – 2003, BHU
Chemistry, Major: Organic Chemistry (Marks 74.4%)

B.Sc.
1998 – 2001, BHU
Physics, Chemistry (Honors), Mathematics (Marks 70.3%)

WORK EXPERIENCE

Associate Professor, Department of Chemistry, IISER Bhopal
2017–till date (Swarnajayanti Fellowship: 2020-till date)

Assistant Professor, Department of Chemistry, IISER Bhopal
2011–2017 (Ramanujan Fellowship: 2011-2016)

Postdoctoral and MITACS Elevate Fellow, University of Toronto
2008–2011 (Area: Amphoteric molecules and peptide macrocycles, Mentor: Prof. Andrei Yudin)

PROFESSIONAL RECOGNITION

CRSI Bronze Medal, 2022

CDRI Award for Excellence in Drug Research, 2021

SERB-TETRA Technology Translation Award, 2021

Swarnajayanti Fellowship, DST and SERB, India, 2020

Invited FRSC, Leaders in the Field Scheme, UK, 2020

ACS Chemical Biology, Early Career Board Member, 2020

DAE Young Scientist Award, 2012

Young Scientist Award, RSC-WIS, India, 2012

Ramanujan Fellowship, DST, India 2011

From IISER Bhopal

Publications

[20] Linchpin empowers promiscuous electrophile to render site-selective modification of histidine and aspartic acid in proteins, Rawale, D. G.; Thakur, K.; Pranav, S.; Sajeev, T. K.; Ramesh, A.; Adusumalli, S. R.; Mishra, R. K.; **Rai, V.** *Chem. Sci.* **2021**, *12*, 6732-6736. (LDM® technology) Impact factor: 9.346; Citations: 2

[19] Chemical technologies for precise protein bioconjugation enabling biology and medicine, Kumar, M.; Reddy, N. C.; **Rai. V.** *Chem. Commun.* **2021**, *57*, 7083-7095. (Invited feature article) Impact factor: 5.996; Citations: 0

[18] Reactivity and selectivity principles in native protein bioconjugation, Ramesh, A.; Thakur, K.; **Rai, V.** *Chem. Rec.* **2021**, *21*, 1941-1956. (Invited article) Impact factor: 6.163; Citations: 0

[17] Single amino acid Gly-tag enables metal free protein purification, Purushottam, L.; Unnikrishnan, V. B.; Rawale, D. G.; Gujrati, M.; Mishra, S. D.; Sajeev, T. K.; Reddy, N. C.; Adusumalli, S. R.; Mishra, R. K.; **Rai, V.** *Chem. Sci.* **2020**, *11*, 13137-13142. (also see, Gly-tag® purification resin @Plabeltech) Impact factor: 9.346; Citations: 4

[16] Chemoselective and site-selective lysine-directed lysine modification enables single-site labeling of native proteins, Adusumalli, S. R.; Rawale, D. G.; Thakur, K.; Purushottam, L.; Reddy, N. C.; Kalra, N.; Shukla, S.; **Rai, V.** *Angew. Chem. Int. Ed.* **2020**, *59*, 10332-10336. (also see, Video tutorial; LDM® technology @Plabeltech). Impact factor: 15.34; Citations: 15

[15] Chemical methods for modification of proteins, Reddy, N. C.; Kumar, M.; Molla, R.; **Rai, V.** *Org. Biomol. Chem.* **2020**, *18*, 4669-4691. (*Tutoral review for organic chemists*. Also see, the complete web-themed OBC issue on, "Methodology Development for Protein Modifications." Guest Editors: Professors Gonçalo Bernardes, Annemieke Madder, and Hiroyuki Nakamura; Article selected for OBC Editor's Collection, Meet the authors). Impact factor: 3.876; Citations: 15

[14] Single-site glycine-specific labeling of proteins, Purushottam, L.; Adusumalli, S. R.; Singh, U.; Unnikrishnan, V. B.; Rawale, D. G.; Gujrati, M.; Mishra, R. K.; **Rai, V.** *Nat. Commun.* **2019**, *10*, 2539. (Featured in Editors' Highlights of Nature Communications; also see, Gly-tag® purification resin @Plabeltech). Impact factor: 14.92; Citations: 26

[13] Computationally designed antibody-drug conjugates self-assembled via affinity ligands, Gupta, N.; Ansari, A.; Dhoke, G. V.; Chilamari, M.; Sivaccumar, J.; Kumari, S.; Chatterjee, S.; Goyal, R.; Mukherjee, M.; Sarkar, A.; Mandal, S. K. **Rai, V.**; Biswas, G.; Sengupta, A.; Roy, M.; Roy, S.; Sengupta, S. *Nat. Biomed. Eng.* **2019**, *3*, 917-929. (*News and Views*: Affinity-bound antibody-drug conjugates, Nervig, C. S.; Owen, S. C. *Nat. Biomed. Eng.* **2019**, *3*, 850-851; *Nature Blog*). Impact factor: 18.952; Citations: 8

[12] Chemical methods for selective labeling of proteins, Rawale, D. G.; Thakur, K.; Adusumalli, S. R.; **Rai, V.** *Eur. J. Org. Chem.* **2019**, 6749-6763. (*Invited minireview*). Impact factor: 2.889; Citations: 11

[11] Sensitivity booster for mass detection enables unambiguous analysis of peptides, proteins, antibodies, and protein conjugates, Singudas, R.; Reddy, N. C.; **Rai, V.** *Chem. Commun.* **2019**, *55*, 9979-9982. (Maspecter® series products @Plabeltech). Impact factor: 5.996; Citations: 7

[10] Single-site labeling of histidine in proteins, on-demand reversibility, and traceless metal-free protein purification, Joshi, P. N.; **Rai, V.** *Chem. Commun.* **2019**, *55*, 1100-1103. Impact factor: 5.996; Citations: 17

[9] Single-site labeling of native proteins enabled by a chemoselective and site-selective chemical technology, Adusumalli, S. R.; Rawale, D. G.; Singh, U.; Tripathi, P.; Paul, R.; Kalra, N.; Mishra, R. K.; Shukla, S.; **Rai, V.** *J. Am. Chem. Soc.* **2018**, *140*, 15114-15123. (also see, LDM® technology @Plabeltech). Impact factor: 15.42; Citations: 63

[8] Aldehyde can switch chemoselectivity of electrophiles in the protein labeling, Adusumalli, S. R.; Rawale, D. G; **Rai, V.** *Org. Biomol. Chem.* **2018**, *16*, 9377-9381. (*Themed collection*: Chemical Biology and RAOBC). Impact factor: 3.876; Citations: 7

[7] Single-site labeling of lysine in proteins through a metal-free multicomponent approach, Chilamari, M.; Kalra, N.; Shukla, S.; **Rai, V.** *Chem. Commun.* **2018**, 54, 7302-7305. Impact factor: 5.996; Citations: 23

[6] Site-selective labeling of native proteins by a multicomponent approach, Chilamari, M.; Purushottam, L.; **Rai, V.** *Chem. Eur. J.* **2017**, *23*, 3819-3823. Impact factor: 5.236; Citations: 26

[5] Chemoselective and site-selective peptide and native protein modification enabled by aldehyde auto-oxidation, Purushottam, L.; Adusumalli, S. R.; Chilamari, M.; **Rai, V.** *Chem. Commun.* **2017**, *53*, 959-962. Impact factor: 5.996; Citations: 21

[4] Protein self-assembly induces promiscuous nucleophilic biocatalysis in Morita-Baylis-Hillman (MBH) reaction, Joshi, P. N.; Purushottam, L.; Das, N. K.; Mukherjee, S.; **Rai, V.** *RSC Advances* **2016**, *6*, 208-211. Impact factor: 3.36; Citations: 3

[3] A phthalimidation protocol that follows protein defined parameters, Singudas, R.; Adusumalli, S. R.; Joshi, P. N.; **Rai, V.** *Chem. Commun.* **2015**, *51*, 473-476. (Featured on back cover). Impact factor: 5.996; Citations: 32

[2] Small heterocycles in multicomponent reactions, Rotstein, B.; Zaretsky, S.; **Rai, V.**; Yudin, A. K. *Chem. Rev.* **2014**, 114, 8323-8359. Impact factor: 60.62; Citations: 663

[1] Organometallic complexes: catalysis and application in protein modification, Chilamari, M.; **Rai, V.** *Indian J. Chem., Sec. A* **2013**, *52A*, 992-1003. (Invited contribution to special issue on Complex Chemical Systems). Impact factor: 0.491; Citations: 2

Patents

[5] Chemoselective sensitivity booster and the process thereof, Singudas, R.; Reddy, N. C.; Rai, V., Pat. no. 201921022294, June 5, **2019**.

[4] N-terminus Gly-tag specific modification, capture, and release of protein enabling metal-free protein purification, Rai, V. Pat. no. 201921015806, April 22, **2019**.

[3] Hemiaminal-tag for protein labeling and purification, Purushottam, L.; Rai, V., 201621041808, Dec 7, **2016**; PCT/IN2017/ 050570, Dec 5, **2017**; WO-2018104962-A1, June 14, **2018**.

[2] Site-selective protein labelling and synthesis of homogeneous protein conjugates, Chilamari, M.; Purushottam, L.; Rai, V., 201621030484, Sept 7, **2016**; PCT/IN2017/ 050362, Aug 29, **2017**; WO-2018047197-A1, Mar 15, **2018**.

[1] Multi-functional chemical agents for protein modification, Adusumalli, S. R.; Rai, V., 201611009537, Nov 15, **2016**; PCT/IN2016/ 050408, Nov 17, **2016**; WO2017158612-A1, Sept 21, **2017**.

Note: For 20 papers from IISER Bhopal
Total impact factor: 205.81; *Average impact factor*: 10.29; *Citation index*: 945

Our technologies led to the foundation of Plabeltech Private Limited (https://plabeltech.com)
Recognition: (a) BIRAC-BIG grant-in-aid 2018, (b) National Startup Award 2021, DST, India.
Licensed patents: FIVE (Granted: TWO; Filed: THREE)
Registered trademarks: THREE (LDM®, Gly-Tag®, Maspecter®)
Products: FOUR (Biotechnology sector)
Services: Precision protein engineering, antibody-drug conjugates, directed cancer chemotherapeutics
Book chapters, proceedings, etc. are not included in the list.

From University of Toronto

Publications

[5] Twisted amide electrophiles enable cyclic peptide sequencing, Zaretsky, S.; Rai, V.; Gish, G.; Forbes, M. W.; Kofler, M.; Yu, J. C. Y.; Tan, J.; Hickey, J. L.; Pawson, T.; Yudin, A. K. *Org. Biomol. Chem.* **2015**, *13*, 7384-7388. Impact factor: 3.876; Citations: 8

[4] Bending rigid molecular rods: formation of oligoproline macrocycles, Scully, C. C. G.; Rai, V.; Zaretsky, S.; Burns, D. C.; Houliston, R. S.; Lou, T.; Yudin, A. K. *Chem. Eur. J.* **2012**, *18*, 15612-15617. Impact factor: 5.236; Citations: 25

[3] Synthesis of peptide macrocycles using unprotected amino aldehydes, Rotstein, B. H.; Rai, V.; Hili, R.; Yudin, A. K. *Nat. Protoc.* **2010**, *5*, 1813-1822. Impact factor: 13.491; Citations: 51

[2] Synchronized synthesis of peptide-based macrocycles by digital microfluidics, Jebrail, M. J.; Ng., A. H. C.; Rai, V.; Hili, R.; Yudin, A. K. Wheeler, A. R. *Angew. Chem. Int. Ed.* **2010**, *49*, 8625-8629. (Featured on inside cover). Impact factor: 15.34; Citations: 110

[1] Macrocyclization of linear peptides enabled by amphoteric molecules, Hili, R., Rai, V.; Yudin, A. K. *J. Am. Chem. Soc.* **2010**, *132*, 2889-2891. (Highlighted in Science, C&EN and Faculty of 1000 Biology). Impact factor: 15.42; Citations: 206

Patents

[2] Boronic acid catalyzed macrocyclization of linear peptides, Rai, V.; Yudin, A. K. Patent application RIS 10002115, Aug 10, 2010.

[1] A method to insert molecular fragments into cyclic molecules, Rai, V.; Hili, R.; Yudin, A. K. Patent application RIS 10002116, Aug 10, 2010.

Note: Our technologies led to the foundation of Encycle Therapeutics.

From IIT Bombay

Publications

[4] Enantioselective conjugate addition of dialkylphosphites to nitroalkenes, Rai, V.; Namboothiri, I. N. N. *Tetrahedron: Asymmetry* **2008**, *19*, 2335-2338. Impact factor: 2.01; Citations: 51

[3] Effect of achiral and mixed chiral ligands in the synthesis of γ-nitrophosphonates via michael addition, Rai, V.; Namboothiri, I. N. N. *Tetrahedron: Asymmetry* **2008**, *19*, 767-772. Impact factor: 2.01; Citations: 13

[2] Cinchonine catalyzed diastero- and enantioselective michael addition of α-lithiated phosphonates to nitroalkenes, Rai, V.; Mobin, S. M.; Namboothiri, I. N. N. *Tetrahedron: Asymmetry* **2007**, *18*, 2719-2726. Impact factor: 2.01; Citations: 23

[1] A theoretical evaluation of the michael-acceptor ability of conjugated nitroalkenes, Rai, V.; Namboothiri, I. N. N. *Eur. J. Org. Chem.* **2006**, 4693-4703. Impact factor: 2.889; Citations: 24

Patents

[1] Asymmetric synthesis of γ-nitrophosphonates in the absence of any other chiral catalyst, Rai, V.; Namboothiri, I. N. N. Patent Application 2359/MUM/2007, Nov 30, **2007**.

Ongoing projects

Project Title	Funding agency	Total Cost (INR)	Period
Chemical toolbox for precision engineering of proteins (***Swarnajayanti Fellowship*** & contingency)	DST	40,00,000	1/2/20 to 31/1/25
Chemical toolbox for precision engineering of proteins (***Swarnajayanti fellowship*** research support)	SERB	3,16,49,280	2/3/20 to 1/3/25
Gly-tag for precision labeling of proteins (***Core Research Grant***)	SERB	55,25,850	1/7/19 to 30/6/22
Multi-functional chemical agents, and the method for protein modification (***SERB Technology Translation Award***)	SERB	30,10,000	24/3/21 to 23/3/23

Past projects

Chemoselectivity regulation of functional groups in the chemical labelling of proteins (***OC Special Drive***)	SERB	66,72,000	27/7/2018 to 26/7/2021
Chemical methodologies directed towards synthesis of antibody-drug conjugates (***Graded excellent***)	SERB	32,74,000	1/8/2015 to 31/7/2018
Chemical methodology hinged on peptide-protein interaction for site-selective protein labeling (***Rapid Grant for Young Investigators***)	DBT	19,45,000	1/12/2013 to 30/11/2016
Entropy regulation of amino acid oligomers: New modes of catalysis (***Young Scientist Award***)	DAE	13,00,000	1/8/2012 to 31/7/2015
Conformationally constrained peptide based ligands in organocatalytic transformations (***Fast Track Scheme for Young Scientists***)	SERB	27,00,000	1/08/2012 to 31/7/2015
Peptide based catalyst for asymmetric synthesis (***Ramanujan Fellowship***)	SERB	73,00,000	1/7/2011 to 30/6/2016

Translation of Science

Our group contributed three trademark technological platforms: **LDM®**, **Gly-Tag®**, and **Maspecter®**. Two technologies from our proprietary **LDM** platform reached the TRL9 level and is being used commercially for the precision engineering of proteins, enzymes, and antibodies. One product (TRL9) derived from the **Gly-Tag** platform is commercialized, whereas one more is in the pipeline (TRL6). Our **Maspecter** technology rendered three commercially available products (TRL9). Plabeltech is now taking its ADC candidates forward and plans to out-license them at pre-IND/IND stage.

Disruptive technology driven start-up company: Our innovations for precision engineering of proteins led to the foundation of Plabeltech Private Limited in 2018. The initial grant-in-aid of INR 49.5 lakhs was

generated through BIRAC-BIG. Plabeltech was awarded National Startup Award 2021 from Technology Development Board, DST, Government of India. The products and services of the company started generating revenues in FY 2019-2020 (For details, see: www.plabeltech.com).

Other services

[**5**] Committee Member, SERB-PAC Chemical Sciences, 2021-2024

[**4**] Invited member, SERB-PAC Biological Sciences

[**3**] Invited member, SERB-COVID19 task force

[**2**] Head, Computer Center, IISER Bhopal, 2012-2018

[**1**] Administrative committees, 2011-till date

Invited Lectures

[**57**] CSIR-CDRI Award 2021 Talk on "Precision engineering of proteins enabling biology and medicine." CDRI Lucknow, September 27, **2021**.

[**56**] Webinar on "Harnessing the potential of protein engineering to combat diseases." Talk: Protein engineering and directed therapeutics. Tata Institute for Genetics and Society (TIGS) and Biotech Consortium India Limited (BCIL), August 10, **2021**.

[**55**] First Virtual Indo-German Meeting, Talk: Social life of a nucleophile. April 24, **2021**.

[**54**] 8th Indian Peptide Symposium, IISc Bangalore, March 24-26, **2021**.

[**53**] iMed.ULisboa Seminar, Pharmacy Faculty, Lisbon University, March 19, **2021**.

[**52**] Colloquium Series, Department of Chemical and Physical Sciences, University of Toronto Mississauga, March 17, **2021**.

[**51**] Colloquium on "Peptide Chemistry," DRILS Hyderabad, January 8, **2021**.

[**50**] 16th J-NOST (1st Virtual) Symposium, Ethics in Science, Indian Institute of Science, Bangalore, October 31-November 1, **2020**.

[**49**] IICE Entrepreneurship Talk at IISER Bhopal, Values of entrepreneur filters in the selection of translational research problem, October 23, **2020**.

[**48**] 3rd ChemBioChem Virtual Symposium on Chemical Translational Biology, Chemical technologies empowering biologics with precision and modularity, October 14, **2020**.

[**47**] Chemistry Department Talks, IIT Bombay, Organic chemistry with proteins enabling biology and medicine, September 18, **2020**.

[**46**] Interactive Lecture at Hansraj College, Delhi University, Science-T: opportunities for chemistry researchers, August 22, **2020**.

[**45**] ACS Science Talks - Virtual Lecture Series, Organic chemistry with proteins creating opportunities in biology and medicine, August 14, **2020**.

[**44**] CDRI MPC-Friday Seminar, Precision chemistry of native proteins enabling biology and medicine, CDRI Lucknow, July 31, **2020**.

[**43**] International virtual conference, Chemical science for drug discovery and therapy, VNIT Nagpur, July 22-26, **2020**.

[**42**] International virtual conference, Recent advances in organic, medicinal, and biological chemistry, VIT Chennai, July 8-9, **2020**.

[**41**] PAC-SERB Webinar, Research Project Ideation & Innovation, July 6, **2020**.

[**40**] SERB-VORTEX Conclave, IIT Bombay, Feb 13-14, **2020**.

[**39**] RSC Roadshow, JNCASR, Bangalore, November 4, **2019**.

[**38**] SPARC Workshop on Peptide and nanotechnological approaches for novel theranostics, Panjab University, Chandigargh, October 31, **2019**.

[**37**] IIT Kanpur Organic Chemistry Symposium, Hyatt Regency, Lucknow, September 13-14, **2019**.
[**36**] IICE-FITT Workshop, IISER Bhopal, July 24, **2019**.
[**35**] Emerging Trends in Chemistry (IIT Indore 10th year celebration), IIT Indore, July 12-15, **2019**.
[**34**] R&D Center, Thermo Fisher Scientific, Rockford, IL, USA, June 17, **2019**.
[**33**] Department of Chemistry, Boston College, Boston, MA, USA, June 7, **2019**.
[**32**] IIT Bombay Faculty Alumni Network symposium on new and advanced materials and sustainable sciences, Hotel Taj Exotica, Goa, April 6, **2019**.
[**31**] Recent Advances in Organic and Bioorganic Chemistry Symposium (RAOBC), IISER Mohali, March 22-24, **2019**.
[**30**] IIT Bombay Diamond Jubilee Chemistry Symposium, Mumbai, February 25-28, **2019**.
[**29**] INYAS-FoS, Pragati Resort, Hyderabad, December 9-11, **2018**.
[**28**] FICS-2018, Department of Chemistry, IIT Guwahati, December 6-8, **2018**.
[**27**] Molecular Biophysics Unit, Indian Institute of Science, Bangalore, November 27, **2018**.
[**26**] NOST-OCC 2018, XIX Organic Chemistry Conference, Grand Hyatt, Goa, September 6-9, **2018**.
[**25**] CRSI-NSC-23, IISER Bhopal, Bhopal, July 13-15, **2018**.
[**24**] National symposium on bioactive compounds, challenges, and opportunities for chemists, Khalsa College, Mumbai, June 22, **2018**.
[**23**] Department of Chemistry, IIT Bombay, Mumbai, June 21, **2018**.
[**22**] DST-DBT-SERB Joint Conclave, Jaipur, June 8-10, **2018**.
[**21**] Invictus Oncology Private Limited, New Delhi, March 31, **2018**.
[**20**] SCIEX Centre for Analytical Science, Gurgaon, March 30, **2018**.
[**19**] Symposium: Peptides in Biology and Material Science, Shankarpur, Kolkata, February 22-23, **2018**.
[**18**] 2nd ACS Industry Symposium, Mumbai, December 14-15, **2017**.
[**17**] UK-India Newton Research Links Workshop, IIT Kanpur, November 6-8, **2017**.
[**16**] RSC-NOST Symposium, Leeds, UK, October 3-6, **2017**.
[**15**] NOST Symposium, IISER Bhopal, August 24-26, **2017**.
[**14**] Gordon Research Conference, Andover, NH, USA, June 11-16, **2017**.
[**13**] Indian Peptide Society Symposium, HBCSE Mumbai, Feb 23-24, **2017**.
[**12**] preICOS Conference, IISER Bhopal, Dec 9, **2016**.
[**11**] IVP Nurturance Program, IISER Bhopal, Dec 2, **2015**.
[**10**] Chemical Frontiers, Goa, August 15-18, **2015**.
[**9**] Emerging Trends in Chemical Sciences, IISER Bhopal, June 25-26, **2015**.
[**8**] TIFR-DCS Seminar, TIFR Mumbai, June 8, **2015**.
[**7**] ABM-2015, IISER Bhopal, Jan 10-11, **2015**.
[**6**] GJIHS-2014, IIT Bombay, Mumbai, Oct 16-17, **2014**.
[**5**] Kaleidoscope, The International Centre Goa, Goa, July 3-6, **2014**.
[**4**] NCERT Nurturance Programme, IISER Bhopal, Bhopal, Dec 9-13, **2013**.
[**3**] RSC- West India IYC-Challenge Symposium 2012, Nagpur, Aug 31 - Sept 1, **2012**.
[**2**] 37th BSC, BRNS Meeting, BARC, Mumbai, Apr 12, **2012**.
[**1**] Department of Chemistry, IIT Bombay, Mumbai, Dec 19, **2011**.

Poster Presentations

[**5**] Precision chemical tools for protein engineering, Gordon Research Conference - Bioorganic Chemistry, Andover, NH, USA, June 9-14, **2019**.
[**4**] Native proteins can be labeled at single-site using chemical methods, UK-India, Newton-Bhabha Fund Researcher Links Workshop, IIT Kanpur, November 6-8, **2017**.
[**3**] Chemical platforms for single-site labeling of native proteins, RSC-NOST Symposium, Leeds, UK, October 3-6, **2017**.

[**2**] Organic chemistry with proteins, XVIII-NOST-OCC, IISER Bhopal, August 24-26, **2017**.
[**1**] Single-site chemical modification of un-engineered proteins, Gordon Research Conference - Bioorganic Chemistry, Andover, NH, USA, June 11-16, **2017**.

Other activities

(a) Organization: conferences, meetings, workshops, and conclave; (b) Administrative and organizational duties. (c) Teaching: *Appreciation letters* for courses on Basic Organic Chemistry, Spectroscopy, Asymmetric Synthesis, Frontiers of Organic Chemistry, and Chemical Biology.

(*Last updated: October 19, 2021*)