CURRICULUM VITAE

Prof. Jayanta Haldar, PhD, FRSC, FASc
Editor-in-Chief, ACS Infectious Diseases
Associate Chair, New Chemistry Unit, JNCASR
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Antimicrobial Research Laboratory at JNCASR

My research integrates various interdisciplinary approaches for understanding and countering antimicrobial resistance (AMR). My group has developed various novel therapeutics and new synergistic strategies for tackling infections caused by pathogenic bacteria, fungi and viruses, and infection associated inflammation. We have also developed smart biomaterials which aid in preventing the spread of infectious diseases, as well as cure infections and enhance wound healing.
The specific aims are:

Novel Therapeutics

- Peptidomimetic small and macromolecular antimicrobial agents
- Semisynthetic glycopeptide and β-lactam antibiotics and β -lactamase inhibitors
- Antibiotic adjuvants
- Antibiofilm and anti-persister agents
- Dual-functional antimicrobial and immunomodulatory agents
- Antiviral therapeutics against Influenza, Ebola
- Antifungal therapeutics

Smart Biomaterials

- Antimicrobial paints and coatings
- Antimicrobial coatings for invasive biomaterials (catheters, ventilator tubing, etc.)
- Antiviral coatings and sheets
- Antimicrobial sealants
- Antimicrobial and haemostatic sponges
- Shear-thinning materials for wound dressing
- Injectable antimicrobial wound healing hydrogels

CURRENT POSITION

2021-present	Professor, New Chemistry Unit and School of Advanced Materials, Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bangalore, India

PREVIOUS POSITIONS

2015–2021	Associate Professor, New Chemistry Unit and School of Advanced Materials, JNCASR, Bangalore, India
2009–2015	Assistant Professor, New Chemistry Unit, JNCASR, Bangalore, India
2004-2009	Postdoctoral Associate, Massachusetts Institute of Technology (MIT), Cambridge, USA; *With Prof. Alexander M. Klibanov (Chemistry) and Prof. Jianzhu Chen (Koch Institute for Integrative Cancer Research at MIT)*

EDUCATION

2005 PhD (Bioorganic Chemistry), Indian Institute of Science, Bangalore, India
With Prof. Santanu Bhattacharya

1999 M.S. (Chemistry, Int. PhD), Indian Institute of Science, Bangalore, India

1996 B.Sc. (Chemistry), Presidency College, University of Calcutta, India

FELLOWSHIPS AND AWARDS

2024 Fellow, Indian Academy of Sciences (IASc), Bangalore

2023 The Materials Research Society of India (MRSI) Medal

2021 Fellow, Royal Society of Chemistry

2020 Indo-U.S. Science & Technology Forum (IUSSTF) Award for COVID-19 Virtual Networks

2018 8th National Award for Technology Innovation, Ministry of Chemicals & Fertilizers, Govt. of India

2018 Sheikh Saqr Career Award Fellowship

2018 Chemical Research Society of India (CRSI) Bronze Medal

2017 Central Drug Research Institute (CDRI) award for Excellence in Drug Research (In the Chemical Sciences category)

2016 BIRAC-SRISTI-Gandhian Young Technological Innovation (GYTI) award

2016 BIRAC-SRISTI appreciation award

2015 BIRAC-SRISTI-Gandhian Young Technological Innovation (GYTI) award

2015 BIRAC-SRISTI appreciation award

2010 Ramanujan Fellowship, Department of Science and Technology (DST), Government of India

2004 Postdoctoral Fellowship, Dept of Chemistry, Massachusetts Institute of Technology, USA

1996 Integrated PhD Fellowship, Chemical Science Division, Indian Institute of Science, India

MEMBERSHIPS/FELLOWSHIPS OF SCIENTIFIC SOCIETIES

2024 Member of British Society for Antimicrobial Chemotherapy (BSAC)

2024 Member of American Society of Microbiology (ASM)

2024 Fellow, Indian Academy of Sciences (IASc), Bangalore

2021 Fellow, Royal Society of Chemistry

2019 Member, The Society for Polymer Science, India

2018 Member, Chemical Research Society of India

2018 Member, American Chemical Society

COMMISSIONS OF TRUST/MEMBERSHIPS OF EVALUATION BOARD

Editorial Responsibilities:

- Editor-in-chief of "ACS Infectious Diseases" (June 2023- onwards)
- Guest editor for special issue on Antimicrobial Resistance for "RSC Medicinal Chemistry" (up to June 2023)
- Member of search committee for Editor-in-chief for two ACS journals
- Guest editor for the journal "Microbial Pathogenesis" of Elsevier
- Editorial board member of the journal "RSC Medicinal Chemistry" (up to June 2023)
- Editorial advisory board member of the journal "Biomacromolecules" of ACS
- Editorial advisory board member of the journal "ACS Infectious Diseases" (up to June 2023)

- Editorial board member of the journal "Microbial Pathogenesis" of Elsevier

Research Grant Reviewing Committee:

- Technical expert committee member for BIG TEP panel projects, BIRAC, India
- Referee for Wellcome Trust Team Science Grants
- Reviewer for project proposals for Science Foundation of Ireland SFI Frontiers for the Future Projects
- Referee for Medical Research Council, UK Grants
- Referee for DAE Grants
- Expert Panel Member for evaluation, monitoring and review of COVID-19 related international research Projects of DST-SERB
- Referee for Agence Nationale de la Recherche funded projects from France
- Referee for FONDECYT Program-Chile´s Research Council- ANID
- Reviewer for Core Research Grants from DST-SERB, India
- Reviewer for research projects funded by DBT India
- Referee for International Project evaluation NSF-USA and USA-Austria bilateral project
- Reviewer for Start-up Company Evaluation, Biotechnology Ignition Grant (BIG) Scheme, DBT India
- Reviewer for GYTI and BIRAC-SRISHTI projects from Govt. of India

Peer Review Contributions:

Contributed as reviewer for international journals such as PNAS USA, Nature Chemistry, Advanced Material, ACS Applied Materials & Interfaces, MedChemComm, Nanoscale, Journal of Medicinal Chemistry, Chemical Sciences, ACS Infectious Diseases, Journal of Polymers and Environment, Comments on Inorganic Chemistry, Polymer, ACS Bio and Med Chem Au, Frontiers in Medical Technology, RSC Advances, Food and function, Biomaterial Science, Materials Chemistry Frontiers, Journal of Biomaterial Sciences, ACS Applied Biomaterials, Chemical Engineering Journal, Organic and Biomolecular Chemistry, European Journal of Medicinal chemistry, ChemBioChem, Journal of Food Sciences, Advanced Functional Materials, ACS Med Chem Letters, ACS Biomaterial Science and Engineering, Emerging Microbes and Infections, British Journal of Pharmacology, Small, Bioorganic Chemistry, Journal of American Ceramic Society, Scientific Reports, Biochemistry, Biochimica et Biophysica Acta, Journal of American Chemical Society, Angewantde Chemie, Bioconjugate Chemistry, Biomacromolecules, ACS Omega, Nature Communications, Biomaterials, Chemical Communication, Journal of Chemical Sciences, Langmuir, RSC Medicinal Chemistry, Pharmaceutical Research, Molecular Pharmaceuticals, Journal of Biological Engineering, International Journal of Antimicrobial Agents, ACS Applied Materials and Interfaces, Journal of Cellular and Molecular Medicine, PLoS One, Frontiers in Microbiology, Letters in Applied Microbiology, Microbial pathogenesis, etc.

Research Thesis Review for Post-graduate and PhD Students:

Contributed as reviewer for PhD and Masters Theses for students from various institutes such as IIT Roorkee, IISER Kolkata, IISER Pune, NCL Pune, CSIR-CSMCRI, IIT Bombay, IISER Bhopal, IICT Hyderabad, IIT Kanpur, IISc Bengaluru, BITS Pilani, IIT Madras, SASTRA University, NCBS Bengaluru, IIT Hyderabad, IACS Kolkata, IIT Delhi, INST Mohali, IISER Mohali, IMTECH Chandigarh, Bangalore University, Nanyang Technological University, Singapore.

ORGANISATION OF SCIENTIFIC MEETINGS

2024	• Arranged India Road Show, ACS on Campus, JNCASR on 1st March 2024 • Arranged a special lecture by Editor-in-Chief, ACS Materials Letters and Chemistry of Materials, Prof. Sara E. Skrabalak from Indiana University, USA, "*Nanoparticle Conversion Pathway to High Entropy Alloy Electrocatalysts"* at JNCASR on 29th February 2024 • Arranged a special lecture by Director, Centre for Engineered Therapeutics, Brigham and Women's Hospital, Prof. Shiladitya Sengupta from Harvard Medical School, USA, "*When small things matter*" at JNCASR on 12th February 2024 • Arranged a special lecture by Editor-in-Chief of Biomacromolecules, Prof. Sébastien Lecommandoux from Université de Bordeaux, France, "*Harnessing Biomimicry with Self-Assembled Bioconjugates: from therapeutics to Protocells*" at JNCASR on 31st January 2024
2024	ACS on Campus, Scripps Institute, California, USA
2018	Bangalore Healthcare Summit, Bangalore, India, Advisory board member
2017	Newton Bhabha Workshop in collaboration with Public Health of England, Bangalore
2010	Coordinator of In-house Symposium, JNCASR

TEACHING ACTIVITIES

2010-Present	Bioorganic and Medicinal Chemistry (for Masters, Int. PhD and PhD students, JNCASR)
2010-Present	Organic Chemistry Practical (for Masters and Int. PhD students, JNCASR)
2010-Present	Molecules in Life (for Undergraduate POCE Students, JNCASR)

INSTITUTIONAL RESPONSIBILITIES

Scientific Responsibilities:

2023-Present	Associate Chair, New Chemistry Unit, JNCASR
2022-Present	Member, Institutional Biosafety Committee (IBSC)
2021-Present	Member, Academic Council, JNCASR
2019-2020	Selection committee for Best Thesis in Biological Sciences, JNCASR
2018-Present	Masters Student selection committee, New Chemistry Unit, JNCASR
2014-Present	Masters Student selection committee, New Chemistry Unit, JNCASR
2010-Present	Summer research fellowship (SRFP) program selection committee, JNCASR

2009-Present	PhD Student selection committee, New Chemistry Unit, JNCASR
2009-Present	Internal comprehensive examiner of many PhD, Int. PhD, MS students

Administrative Responsibilities:

2021	Chairperson, Technical Sub-committee for procurement items for Hostel, JNCASR
2019-2023	Warden, JNCASR
2018-Present	M.Sc. Coordinator, New Chemistry Unit, JNCASR
2017	Member of Electrical Committee, JNCASR
2015-2017	Chairman of the Dining Hall Committee, JNCASR
2014-2015	New Chemistry Unit Seminar Coordinator, JNCASR
2013-2015	Member of the Dining Hall Committee, JNCASR

PROJECTS UNDERTAKEN AS PRINCIPAL INVESTIGATOR

Indo-U.S. (IUSSTF for COVID-19), JNCASR-RAK-CAM, DST-SERB Fast Track, Indo-French (CEFIPRA), DBT, India-China-Russia-Brazil (BRICS), DAE-BRNS, Indo-Portugal (DST), Indo-German (DST-DAAD), DST-BIRC, BIRAC-SRISTI-PMU, TRC-JNCASR, Indo-Belgian

Ongoing:

A. National Projects

1. DST-BIRAC COVID-19 SURAKSHA: Antibiotic-adjuvant therapy to target bacterial pulmonary infections and associated infection
2. DST-SERB CRG Project: Development of adjuvants for potentiating and repurposing obsolete antibiotics against multidrug resistant Gram-negative pathogens
3. DBT project: Small Molecular Mimics of Antimicrobial Peptide to Tackle Eye Infections
4. JNCASR and RAK-CAM: Antimicrobial polymeric paint for pavers
5. DST-TRC Project: Antimicrobial and hemostatic sponge: Point of care Technology to tackle infection and hemorrage for traumatic injuries

B. International Collaborative Projects

1. Indo-Belgian Joint Networking Call: Repurposing Vancomycin Analogues as Anti-Mycobacterial Agents
2. Indo-French (CEFIPRA) Joint project: Development and Biophysical Investigations of Small Antimicrobial Peptide Mimetics

Completed:

A. National Projects

1. JNCASR and RAK-CAM: Antimicrobial hydrophobic coatings for tiles
2. DST-SERB Special Call Project on CoVID-19: Development of antiviral surface coatings to prevent the spread of infections caused by influenza virus
3. BRNS project: Development of Cationic Cleavable Amphiphiles and Study Aggregation and Antibacterial Properties

4. SERB-EMR (DST) project: Acyclic and Cyclic Lipopeptides to Combat Bacterial Resistance and Eradicate Biofilms
5. TRS-JNCASR Project: Injectable sealant: new technology to prevent surgical site infections
6. BIRAC-SRISTI-PMU Project: Development of a Powerful New Antibiotic that Kills All Drug Resistant Bacteria
7. BIRAC-SRISTI-PMU Project: Develop a novel compound restores obsolete antibiotics to NDM superbugs
8. DST-BIRAC CRS Project: Development of new class of glycopeptide antibiotics for tackling drug resistance bacterial infections
9. SERC Fast Track Proposals for Young Scientists: Development of Novel Biodegradable Surface Coatings for Biomedical Application

B. International Collaborative Projects

1. IUSSTF Award for COVID-19 Indo-U.S. Virtual Networks Project: Development of Antiviral Coatings to Prevent the Transmission of SARS-CoV-2 Viruses
2. BRICS Research project: MBLI development of new approaches to overcome MBL-related resistance in bacteria
3. Indo-German Joint (DST) Project: Investigating Mechanism of Action of Membrane Targeting Antibacterial Agents
4. Indo-Portugal (DST) Joint project: Development of novel organic-inorganic antimicrobial composites for bone infections: using Lanthanides doped novel glassy materials associated with hydroxyapatite and antimicrobial polymer

MAJOR COLLABORATIONS

International Collaborations:

- Prof. Shiv Pillai, Medicine and Health Sciences & Technology (HST), Ragon Institute of MGH, MIT and Harvard, Cambridge, MA, USA – Development of Antiviral Coatings to Prevent the Transmission of SARS-CoV-2.
- Prof. L. W. Hamoen, University of Amsterdam, Netherlands - Cell division protein inhibition.
- Prof. Cristiano Marcelo Espinola Carvalho, Dom Bosco Catholic University, Brazil - Development of semisynthetic glycopeptide and betalactam derivatives.
- Prof. Tatiana V. Ovchinnikova, Institute of Bioorganic Chemistry Russian Academy Sciences (RAS), Russia - Development of semisynthetic glycopeptide and betalactam derivatives.
- Prof. Hixen Xie, East University Science Technology, China - Development of semisynthetic glycopeptide and betalactam derivatives.
- Prof. Julia Bandow, Rhur-Univ. of Bochum, Germany - Development of semisynthetic glycopeptide and betalactam derivatives.
- Prof. Octa´vio L. Franco, Universidade Catolica Dom Bosco, Campo Grande, Brazil - In vivo infection study.
- Prof. Lorenzo Stella, University of Rome, Italy – Investigation of antibacterial mechanism of actions.
- Prof. Peter Monk, Department of Infection, University of Sheffield, UK - Ex-vivo infection study.
- Prof. M. N. Seleem, Department of Comparative Pathobiology, Purdue University, USA - Antifungal studies.
- Prof. Bechinger Burkhard, Chemistry Institute, University of Strasbourg, France - Biophysical investigations of small antimicrobial peptide mimetics.
- Dr. Mark Sutton, Public Health of England (PHE), UK - Anti-Ebola activity.
- Dr. Nandyala Sooraj Hussain, University of Porto, Portugal - Antimicrobial composites for bone infections.
- Prof. Naresh Kumar, The University of New South Wales, Australia - Antimicrobial surface coatings for eye lenses

- Prof. Mark Willcox, University of New South Wales, Australia – Development of peptidomimetic antibacterial small molecules
- Prof. Sonia Henriques, Queensland University of Technology, Australia – Biophysical investigations into mechanism of action of antibacterial peptidomimetics
- Prof. Veronique Fontaine, Universite Libre de Bruxelles, Belgium – Investigation of antimycobacterial properties of glycopeptide antibiotics
- Prof. Rafał Ślusarz, University of Gdansk, Poland – Investigating the mechanisms of action and binding of novel vancomycin derivatives
- Prof. Luiz Alvarez de Cienfuegos, University of Granada, Spain – Development of antimicrobial hydrogels

National Collaborations:

- Prof. B. R. Shome & Dr. P. Krishanmoorthy, ICAR-NIVEDI, Bengaluru, India – In-vivo infection study.
- Dr. Prashant Garg, LV Prasad Eye Institute, Hyderabad, India - Ex-vivo eye infection study.
- Dr. V. K. Aswal, BARC, Mumbai, India - SANS studies for aggregation behavior of gemini surfactants.
- Dr. Utpal Tatu, Biochemistry, Indian Institute of Science, Bangalore, India - Antimalarial study.
- Dr. Shridhar Narayanan, FNDR, Bangalore, India - Activity against Mycobacterium tuberculosis.
- Dr. Suresh Kumar Jewrajka, CSIR-CSMCRI, India - Development of antibacterial filtration membrane.
- Dr. Colin Jamora, In-Stem Joint Laboratory, NCBS, India - In vivo study on wound healing by hydrogel.
- Prof. Satyavani Vemparala, Institute of Mathematical Sciences, Chennai, India - Theoretical study (MD Simulation) for Membrane
- Dr. Chandra, Vipragen Biosciences, India – Outlicenced our inventions
- Dr. Randhir Yedle, TheraIndx Lifesciences, India – In-vivo antibacterial activity and toxicity studies
- Prof. Siddharth Chopra, CSIR-CDRI, Lucknow, India - Antibacterial studies.
- Prof. Nisanth N Nair, IIT-Kanpur, India - Theoretical study (MD Simulation) for betalactamase.
- Dr. R Ravikumar, NIMHANS, Bangalore, India - Development of novel antimicrobial agents to overcome microbial resistance against clinical isolates.
- Prof. Somenath Roy, Vidyasagar University, Midnapore - Studies against clinical isolates of Vancomycin resistant bacteria.
- Dr. Ganesh, Anthem biosciences, Bangalore, India - Antibacterial activity against vancomycin resistant bacteria.
- Prof. C. Narayana, JNCASR, Bangalore, India - Mechanism of action through Raman spectroscopic studies.
- Dr. Meher K Prakash, JNCASR, Bangalore, India - Theoretical study (MD Simulation)- for Membrane
- Dr. Ravi Manjithaya, MBGU, JNCASR, Bangalore, India – Autophagy studies.
- Prof. Kaustav Sanyal, MBGU, JNCASR, Bangalore, India – Antifungal studies.
- Dr. Kushagra Bansal, MBGU, JNCASR, Bangalore, India – immunomodulatory studies
- Dr. Richa Priyadarshini, Shiv Nadar University, Delhi, India – Mechanisms of antibacterial action
- Dr. Anirban Bhunia, Bose Institute, Kolkata, India – Biophysical studies to elucidate mechanisms of antibacterial action of peptidomimetics
- Prof. Uday Maitra, IISc, Bangalore, India – Sensing of b-lactamase producing bacteria
- Prof. Pinaki Talukdar, IISER Pune, India – Development of bactericidal ion channel mimics

PUBLICATIONS

Total Publications: 124

Research Articles 106 (82 as corresponding author) + 14 Review articles (13 as corresponding author) + 4 Editorials (4 as corresponding author) + 9 Book Chapters (8 as corresponding author)

Citations: 6841, **h-index:** 46, **i-10 index:** 98 (According to Google Scholar as on 16th July, 2024)

A. Publications on Antibacterial Therapeutics and Biomaterials

1. Barman, S.; Dey, R.; Ghosh, S.; Mukherjee, R.; Mukherjee, S.; **Haldar, J. *;** Amino Acid-Conjugated Polymer-Silver Bromide Nanocomposites for Eradicating Polymicrobial Biofilms and Treating Burn Wound Infections. *ACS Infectious Diseases*. Just accepted.

2. Dey, R.; Mukherjee, R.; Biswas, S.; **Haldar, J.*;** Stimuli-responsive Release-active Dressing: A promising Solution for Eradicating Biofilm-mediated Wound Infections. *ACS Appl Mater Interfaces.* 2024. DOI: 10.1021/acsami.4c09820

3. Patra, D.; Ghosh, S.; Mukherjee, S.; Acharya, Y.; Mukherjee, R.; **Haldar, J.*;** Antimicrobial Nanocomposite Coatings for Rapid Intervention of Catheter-Associated Urinary Tract Infections. *Nanoscale,* 2024, **16**, 11109 – 11125.

4. Mukherjee, S.; Shinde, S.V.; Talukdar, P.; **Haldar, J.*;** Unveiling the potent activity of a synthetic ion transporter against multidrug-resistant Gram-positive bacteria and biofilms. *RSC Med. Chem.*, 2024, DOI: 10.1039/D4MD00002A.

5. De, K.; Dey, R.; Acharya, Y.; Aswal, V.K.; **Haldar, J.***; Cleavable Amphiphilic Biocides with Ester-Bearing Moieties: Aggregation Properties and Antibacterial Activity. *Langmuir.* **2024**, *40(7)*, 3414–3428.

6. Dutta, A.; Mukherjee, S.; **Haldar, J**.; Maitra, U*.; Augmenting Antimicrobial Resistance Surveillance: Rapid Detection of β-Lactamase-Expressing Drug-Resistant Bacteria through Sensitized Luminescence on a Paper-Supported Hydrogel. *ACS Sensors*. **2024** *9 (1)*, 351-360.

7. Ghosh, S.; Patra, D.; Mukherjee, R.; Biswas, S.; **Haldar, J**.*; Multifunctional Suture Coating for Combating Surgical Site Infections and Mitigating Associated Complications. *ACS Appl. Bio Mater.* **2024,** *7 (2)*, 1158-1168.

8. Dey, R.; Mukherjee, S.; Mukherjee, R.; **Haldar, J.***; Small Molecular Adjuvant Repurposes Antibiotics towards Gram-negative Bacterial Infections and Multispecies Bacterial Biofilm. *Chem. Sci.* **2024***, 15,* 259 – 270.

9. Bhattacharjee, B.; Ghosh, S.; **Haldar, J.***; Versatile and User-Friendly Anti-infective Hydrogel for Effective Wound Healing. *ACS App. Bio. Mat.* **2023**, *6(11)*, 4867-4876.

10. Ghosh, S.; Mukherjee, R.; Patra, D.; **Haldar, J**.*; Engineering Photo-Crosslinked Antimicrobial Coating to Tackle Catheter-Associated Infections In Vivo. *ACS Biomater. Sci. Eng.* **2023**, *9 (7)*, 4404–4414.

11. Barman, S.; Mukherjee, S.; Jolly, L.; Troiano, C.; Grottesi, A.; Basak, D.; Calligari, P.; Bhattacharjee, B.; Bocchinfuso, G.; Stella, L.; **Haldar, J.*,** Isoamphipathic Antibacterial Molecules Regulating Activity and Toxicity through Positional Isomerism. *Chem. Sci.* **2023**, *14 (18)*, 4845–4856.

12. Xu, W; Ma, Z; Dhanda, G; **Haldar, J.***; Xie, H; Selective inhibition of resistant bacterial pathogens using a β-lactamase-activatable antimicrobial peptide with significantly reduced cytotoxicity. *Chinese Chemical Letters*, **2023**, *34(5)*, 107847

13. Sarkar, P.; De, K.; Modi, M.; Dhanda, G.; Priyadarshani, R.; Bandow, J. E.; **Haldar, J.*.** Next-generation membrane-active glycopeptide antibiotics that also inhibit bacterial cell division. *Chem. Sci.* **2023**, *14*, 2386-2398.

14. De, K.; Aisenbrey, C.; **Haldar, J.***; Faure, S.; Forestier, C.; Charbonnel, N.; Bechinger, B. Biophysical investigations of antimicrobial peptide mimics for mechanistic studies. *Biophys. J.* **2023**, *122*, 368a.

15. Barman, S.; Mukherjee, S.; Bhattacharjee, B.; De, K.; Mukherjee, R.; **Haldar, J.*.** Biocide loaded shear-thinning hydrogel with anti-biofilm efficacy cures topical infection. *Biomater. Sci.* **2023**, *11*, 998-1012.

16. Bortolotti, A.; Troiano, C.; Bobone, S.; Konai, M. M.; Ghosh, C.; Bocchinfuso, G.; Acharya, Y.; Santucci, V.; Bonacorsi, S.; Di Stefano, C.; **Haldar, J*.**; Stella, L. Mechanism of lipid bilayer perturbation by bactericidal membrane-active small molecules. *Biochim. Biophys. Acta Biomembr.* **2023**, *1865*, 184079.

17. Dey, R.; Mukherjee, R.; **Haldar, J.*.** Photo-crosslinked Antimicrobial Hydrogel Exhibiting Wound Healing Ability and Curing Infections In-vivo. *Adv. Healthc. Mater.* **2022**, *11*, 2200536.

18. Ghosh S.; Mukherjee, R.; Mahajan, V. S.; Boucau, J.; Pillai, S.; **Haldar, J.***. Permanent, Antimicrobial Coating to Rapidly Kill and Prevent Transmission of Bacteria, Fungi, Influenza, and SARS-CoV-2. *ACS Appl Mater Interfaces.* **2022**, *14*, 42483-42493.

19. Bhattacharjee, B.; Mukherjee, R.; **Haldar, J.***. Biocompatible Hemostatic Sponge Exhibiting Broad-Spectrum Antibacterial Activity. *ACS Biomater. Sci. Eng.* **2022**, *8*, 3596–3607.

20. Bhattacharjee, B.; Mukherjee, S.; Mukherjee, R.; **Haldar, J.***. Easy Fabrication of a Polymeric Transparent Sheet to Combat Microbial Infection. *ACS Appl. Bio Mater.* **2022**, *5*, 3951–3959.

21. Dhanda, G.; Mukherjee, R.; Basak, D.; **Haldar, J.***. Small-Molecular Adjuvants with Weak Membrane Perturbation Potentiate Antibiotics against Gram-Negative Superbugs. *ACS Infect. Dis.* **2022**, *8*, 1086-1097.

22. Bhattacharjee, B.; Jolly, L.; Mukherjee, R.; **Haldar, J.***. An easy-to-use antimicrobial hydrogel effectively kills bacteria, fungi, and influenza virus. *Biomater. Sci.* **2022**,*10*, 2014-2028

23. P. V. Panteleev, P. V.; Bolosov, I. A.; Khokhlova, V. A.; Dhanda, G.; Balandin, S. V.; **Haldar, J.;** Ovchinnikova, T. V. Analysis of Antibacterial Action of Mammalian Host-Defense Cathelicidins and Induction of Resistance to Them in MβL-Producing *Pseudomonas aeruginosa*. *Bull. Exp. Biol. Med.* **2022**, *172*, 447-452.

24. Barman, S.; Dhanda, G.; Naik, P.; Mukherjee, R.; Joseph, J.; **Haldar, J.***. Multi-Functional Small Molecules with Temporal Charge-Switchability Tackle Infection and Inflammation *Adv. Therap.* **2022**, *2100234*, 1-14.

25. Ghosh, S.; Jolly, L.; **Haldar, J.***. Polymeric paint coated common-touch surfaces that can kill bacteria, fungi and influenza virus. *MRS Comm.* **2021**, *11*, 610-618.

26. Sarkar, P.; Basak, D.; Mukherjee, R.; Bandow, J. E.; **Haldar, J.***. Alkyl-Aryl-Vancomycins: Multimodal Glycopeptides with Weak Dependence on the Bacterial Metabolic State. *J. Med. Chem.* **2021**, *64*, 10185-10202.

27. Bhattacharjee, B.; Ghosh, S.; Mukherjee, R.; **Haldar, J.***. Quaternary Lipophilic Chitosan and Gelatin Cross-Linked Antibacterial Hydrogel Effectively Kills Multidrug-Resistant Bacteria with Minimal Toxicity toward Mammalian Cells. *Biomacromolecules* **2021**, *22*, 557-571.

28. Ghosh, S.; Mukherjee, R.; Basak, D.; **Haldar, J.***. One-Step Curable, Covalently Immobilized Coating for Clinically Relevant Surfaces That Can Kill Bacteria, Fungi, and Influenza Virus. *ACS Appl Mater Interfaces*. **2020**, *12*, 27853-27865.

29. Ghosh, C.; Abdel Khalek, A.; Mohammad H, Seleem M. N.*; **Haldar, J.***. Aryl-alkyl-lysines: Novel agents for treatment of *C. difficile* infection. *Sci Rep*. **2020**, *10*, 5624-5631.

30. Mukherjee, S.; Barman, S.; Mukherjee, R.; **Haldar, J.***. Amphiphilic Cationic Macromolecules Highly Effective Against Multi-Drug Resistant Gram-Positive Bacteria and Fungi with No Detectable Resistance. *Front Bioeng Biotechnol*. **2020**, *8*, 55, 1-19.

31. Sarkar, P.; Samaddar, S.; Ammanathan, V.; Yarlagadda, V.; Ghosh, C.; Shukla, M.; Kaul, G.; Manjithaya. R.; Chopra, S.; **Haldar, J.*.** Vancomycin Derivative Inactivates Carbapenem-Resistant Acinetobacter baumannii and Induces Autophagy. *ACS Chem Biol.* **2020**, *15*, 884-889.

32. Konai, M. M.; Pakrudheen, I.; Barman, S.; Sharma, N.; Tabbasum, K.; Garg, P.; **Haldar, J.***. Cyclam-based Antibacterial Molecule Eradicates Gram-negative Superbugs with Potent Efficacy against Human Corneal Infection. *Chem. Commun*. **2020**, *56*, 2147-2150.

33. Konai, M. M.; **Haldar, J.***. Lysine-Based Small Molecule Sensitizes Rifampicin and Tetracycline against Multidrug-Resistant *Acinetobacter baumannii* and *Pseudomonas aeruginosa*. *ACS Infect. Dis*. **2020**, *6*, 91-99.

34. Barman, S.; Konai, M. M.; Samaddara, S.; **Haldar, J.***. Amino-Acid Conjugated Polymers: Antibacterial Agents Effective against Drug-resistant *A. baumannii* with no Detectable Resistance. *ACS Appl. Mater. Interfaces*, **2019**, *11*, 33559−33572.

35. Barman, S.; Mukherjee, S.; Ghosh, S.; **Haldar, J.***. Amino-Acid-Conjugated Polymer-Rifampicin Combination: Effective at Tackling Drug-Resistant Gram-Negative Clinical Isolates. *ACS Appl. Bio Mater*. **2019**, *2*, 5404-5414.

36. Hoque, J.; Ghosh, S.; Paramanandham, K.; **Haldar, J.***. Charge-Switchable Polymeric Coating Kills Bacteria and Prevents Biofilm Formation in Vivo. *ACS Appl. Mater. Interfaces,* **2019***, 11*, 39150-39162.

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38. Ghosh, C.; Harmouche, N.; Bechinger, B.; **Haldar, J.***. Aryl-Alkyl-Lysines Interact with Anionic Lipid Components of Bacterial Cell Envelope Eliciting Anti-Inflammatory and Antibiofilm Properties. *ACS Omega*, **2018**, *3,* 9182-9190.

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C. Publications on Antiviral Therapeutics and Biomaterials

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D. Publications on Host Modulatory Therapeutics

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REVIEW ARTICLES

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2. Dhanda, G.; Acharya, Y.; **Haldar, J.***. Antibiotic adjuvants: A versatile approach to combat antibiotic resistance, *ACS Omega* **2023**, *8(12)*, 10757–10783.

3. Ghosh S.; Mukherjee, S.; Patra, D.; **Haldar, J.***. Polymeric Biomaterials for Prevention and Therapeutic Intervention of Microbial Infections, *Biomacromolecules* **2022**, *23*, 592–608.

4. Acharya, Y.; Dhanda, G.; Sarkar, P.; **Haldar, J.***. Pursuit of Next-generation Glycopeptides: A Journey with Vancomycin. *Chem. Commun.* **2022**, *58*, 1881-1897.

5. Acharya, Y.; Bhattacharyya, S.; Dhanda, G.; **Haldar, J.***. Emerging roles of glycopeptide antibiotics: moving beyond Gram-positive bacteria. *ACS Infect. Dis.* **2022**, *8*, 1-28.

6. Dey, R.; Mukherjee S.; Barman S.; **Haldar, J.***. Macromolecular Nanotherapeutics and Antibiotic Adjuvants to Tackle Bacterial and Fungal Infections. *Macromol. Biosci.* **2021**, *21,* 2100182 2100217.

7. Bhattacharjee, B; Ghosh, S; Patra, D; **Haldar, J.***. Advancements in release-active antimicrobial biomaterials: A journey from release to relief. *Wiley Interdiscip. Rev. Nanomed. Nanobiotechnol.* **2021**, *14,* e1745-e1783

8. Ghosh, C.; Sarkar, P.; Issa, R.; **Haldar, J.***. Alternatives to Conventional Antibiotics in the Era of Antimicrobial Resistance*. Trends. Microbio*l, **2019**, *27*, 323-338.

9. Dhanda, G.; Sarkar, P.; Samaddar, S.; **Haldar, J.*** . Battle against Vancomycin-Resistant Bacteria: Recent Developments in Chemical Strategies. *J. Med. Chem.* **2018, *62*, 3184-3205.**

10. Konai, M. M.; Bhattacharjee, B.; Ghosh, S.; **Haldar, J.***. Recent Progress in Polymer Research to Tackle Infections and Antimicrobial Resistance. *Biomacromolecules* **2018**, 19, 1888–1917

11. Sarkar, P.; Yarlagadda, V.; Ghosh, C.; **Haldar, J.***. A Review on Cell Wall Synthesis Inhibitors with an Emphasis on Glycopeptide Antibiotics. *Med. Chem. Comm.* **2017**, *8,* 516-533.

12. Ghosh, C.; **Haldar, J.***. Membrane Active Small Molecules: Designs Inspired from Antimicrobial Peptides. *ChemMedChem* **2015**, *10*, 1606-1624.

13. Uppu, D. S. S. M.; Ghosh, C.; **Haldar, J.***. Surviving Sepsis in The Era of Antibiotic Resistance: Are There Any Alternative Approaches to Antibiotic Therapy? *Microb. Pathog.* **2015**, *80*, 7-13.

14. Bhattacharya, S.*; **Haldar, J**. "Molecular design of surfactants to tailor its aggregation properties", *Colloids Surf. A: Physiochem. Eng. Aspects*, **2002**, 205, 119-126.

Editorials

1. Sanyal, K.; **Haldar, J.***; Lindsley, C. W.; Chibale, K. Call for Papers: Fungal Pathogens-Life Cycle, Infection, Host Immunity and Drug Discovery. A*CS Infect. Dis.* **2024***, 10(1),* 4.; A*CS Med. Chem. Lett.* **2024***, 15(1),* 1.; *J. Med. Chem.* **2024**, *67*(1), 1.
2. **Haldar, J.***; Confronting the Rising Threat of Antimicrobial Resistance: A Global Health Imperative. A*CS Infect. Dis.* **2024***, 10(1),* 1–2.
3. **Haldar, J.***; Combating Sepsis: A Call to Action. A*CS Infect. Dis.* **2023***, 9(10),* 1793–1794.
4. **Haldar, J.***; Garneau-Tsodikova, S.; Fridman, M.; Introduction to the themed collection on antimicrobial resistance. *RSC Med. Chem.* **2023***, 14,* 1398–1399.

BOOK CHAPTERS

1. Dey, R.; Mukherjee, S.; Barman, S.; Acharya, Y.; **Haldar, J.***. Antimicrobial lipopeptides: Multifaceted designs to curb antimicrobial resistance. A Chapter in a book entitled "Antibiotics - Therapeutic Spectrum and Limitations", *Macromol. Biosci.,* Elsevier, 2021, *21,* 2100182-2100217

2. Acharya, Y.; **Haldar, J.*.** Upgrading the antibiotic arsenal against Gram-positive bacteria: Chemical modifications of vancomycin. A Chapter in a book entitled "Alternatives to Antibiotics: Recent Trends and Future Prospects", Springer, 2022, pp 199-222.

3. Konai, M. M.; Barman, S.; Acharya, Y.; De, K.; **Haldar, J.***. Recent development of antibacterial agents to combat drug-resistant Gram-positive bacteria. A Chapter in a book entitled "Drug Discovery Targeting Drug-Resistant Bacteria", Elsevier, pp 71-104.

4. Ghosh, S.; **Haldar, J.***. Cationic Polymer Based Antimicrobial Smart Coatings. A Chapter in a book entitled "Advances in Smart Coatings and Thin Films for Future Industrial and Biomedical Engineering Applications", Elsevier, pp 557-582.

5. Sarkar, P.; **Haldar, J.***. Glycopeptide Antibiotics: Mechanism of Action and Recent Developments. A Chapter in a book entitled "Antibiotic Drug Resistance", John Wiley & Sons, Inc., 2019, pp 73-95.

6. Konai, M. M.; Dhanda, G.; **Haldar, J.***. Talking Through Chemical Languages: Quorum Sensing and Bacterial Communication. A Chapter in a book entitled "Quorum Sensing and its Biotechnological Applications", Springer, 2018, pp 17-42.

7. Uppu, D. S. S. M.; Ghosh, C.; **Haldar, J.***. Alternative Strategies to Target Quorum Sensing (QS): Combination of QS Inhibitors with Antibiotics and Nanotechnological Approaches. A Chapter in a book entitled "Quorum Sensing vs Quorum Quenching: A battle with no end in sight", Springer, 2015, pp 335-342.

8. Uppu, D. S. S. M.; Hoque, J.; **Haldar, J.***. Engineered Polymers and Organic-inorganic Hybrids as Antimicrobial Materials for Water Disinfection. A Chapter in a book entitled "Aquananotechnology: Global Prospects", CRC Press-Taylor and Francis Group, 2014, Chapter 12, pp 218-238.

9. **Haldar, J.** and Bhattacharya, S.*. "The molecular design of surfactant based Materials", a Chapter in a book entitled 'Materials research: current research future projections', Eds. R. Chidambaram and S. Banerjee, Allied publishers-New Delhi, **2003**, p. 78.

PATENTS

1. Maity, S.; Haldar, J.*. '' Quaternary ammonium polymers, preparation and applications thereof'. Patent application no. 202441044869

2. Mukherjee, S.; Singh, H.; Haldar, J.*. "Antimicrobial immunomodulatory composite and uses thereof". Patent application no. 202341083890\

3. Dey, R.; Haldar, J.*. Hemostatic Composite, It's method and applications thereof. PCT/IN2023/050784

4. Ghosh, S.; Mukherjee, R.; Haldar, J.*. "Antimicrobial compounds and uses thereof". PCT/IN2021/050329.

5. Dhanda, G.; **Haldar, J.***. "Small-molecular adjuvants to repurpose existing antibiotics against multidrug-resistant bacterial infections". PCT/IN2020/050358, WO202013008A1, US 2022-0323383 A1, Indian Patent No: 408041.

6. Hoque, J, Manjunath, G. B.; Akkapeddi, P.; **Haldar, J.***. Chitin Derivatives, Method for Production and Uses Thereof, - US20180201694A1, IN2013CH05893A.

7. Yarlagadda, V.; Akkapeddi, P.; **Haldar, J.***. Cationic Antibacterial Composition. WO2013072838 A1, US10081655 B2, KR101816228 B1, CA2855753 C, EP2780359 B1, US20140308347 A1, AU2012338461 C1.

8. Ghosh, C.; Manjunath, G. B.; Akkapeddi, P.; **Haldar, J.***. Antimicrobial Compounds, Their Synthesis and Applications Thereof. WO2014097178 A1, US9783490 B2, CA2894202 A1, JP6533466 B2, CN104981249 B, AU2013365769 B2, BR112015014391 A2, HK1210437 A1.

9. Yarlagadda, V.; **Haldar, J.***. Glycopeptide and Uses Thereof. WO2016103284A1 CA2972276 A1, EP3240574 A1, US20170342110 A1.

10. Konai, M. M.; Carroll, M.; **Haldar, J.***. Antimicrobial Conjugates, Method for Production and Uses Thereof. JP2017514887 A, WO2015136311 A1 EP3116597 A1, CA2941933 A1, US20170144969 A1

11. Hoque, J.; **Haldar, J.***. A Polymer Network Method for Production, and Uses Thereof. US20200030368 A1, WO2018020516 A2, CA3032292A1.

12. Uppu, D. S. S. M.; Akkapeddi, P.; Manjunath, G. B.; **Haldar, J.***. Nanoparticle Compositions of Antimicrobial Polymers and Their Uses Thereof. WO2014006601A2, US9636356 B2, EP2870186 A2, (KR20150038026A).

13. Yarlagadda, V.; Konai, M. M.; Manjunath, G. B.; **Haldar, J.***. Vancomycin- Sugar Conjugates and Uses Thereof. IN2013CH04314A, CA2925005 A1, WO2015040467A1, US20160303184A1, AU2014322817A1, EP3049115A1.

14. Yarlagadda, V.; **Haldar, J.***. Glycopeptide Antibiotic Derivatives. Indian Patent 605/CHE/2015, Indian Patent 6565/CHE/2014.

15. **Haldar, J.**; De Cienfuegos, L. A.; Chen, J.*; Klibanov, A. M.*. Bi-functional Polymer-attached Inhibitors of Influenza Virus. WO2009032605A2, US20090081249A1, EP2192923A2, CA2698108A1, JP2010537997A.

16. **Haldar, J.**; An, D.; De Cienfuegos, L. A.; Chen, J.*; Klibanov, A. M.*.Polymeric Coatings that Inactivate Viruses and Bacteria. WO2008127416A2, MX2009004918A, JP2010509467A, MA30971B1, ZA200903951B, EP2084234A2, US20100136072A1, CN101627092A, BRPI0718860A2.

SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

2009-present 10 Postdocs/11 PhD/10 Project Assistant/11 Masters/1 PG-DMS/26 SRFP/8 POCE

PhD Theses:

Student	Year	Title of thesis
Yarlagadda Venkateswaralu	2015	Semi-synthetic Glycopeptide Antibiotics: Strategies to Combat Acquired and Intrinsic Bacterial Resistance
Divakara SS Murthy Uppu	2016	Bacterial Membrane-targeting Cationic-amphiphilic Polymers that Combat Antibiotic Resistance and Neutralize Endotoxins
Chandradhish Ghosh	2017	Development of L-Lysine-based Small Molecules as Broad-spectrum Antimicrobial Agents
Jiaul Hoque	2017	Charged Polymers and Hydrogels as Antimicrobial Materials for Prevention of Infections
Mohini Mohan Konai	2019	Amino Acid-Based Molecules to Combat Bacterial Infections and Resistance
Swagatam Barman	2021	Amino Acid Conjugated Small Molecular and Polymeric Antimicrobial Agents to Combat Infection and Inflammation
Paramita Sarkar	2021	Next-generation Glycopeptide Antibiotics: Designs to Overcome Inherited and Non-inherited Resistance and Insights into their Mechanisms of Action

Brinta Bhattacharjee	2022	Engineering Polymeric Biomaterials to Combat Microbial Infections
Sreyan Ghosh	2023	Development of Antimicrobial Biomaterials to Tackle Healthcare-Associated Infections
Rajib Dey	2023	Engineering Small Molecular Therapeutics and Multifunctional Biomaterials to Mitigate Topical Infections
Geetika Dhanda	2024	Multifaceted Antibiotic Adjuvants: Overcoming Bacterial Resistance and Investigation of Host-modulating Properties
	2024	Polymeric Biomaterials Alleviate Complicated Infections and associated hyper-inflammation

Master Theses:

Student	**Year**	**Title of thesis**
Mohini Mohan Konai	2014	Development of Nonspermidine-based Lipopeptide Mimics to Tackle Bacterial Infection
Paramita Sarkar	2016	Development of Cationic Lipophilic Vancomycin Analogues against Bacterial Biofilms and Intracellular Pathogens
Sreyan Ghosh	2018	Development of Antibacterial Biomaterials to Tackle Surface-Associated Infections
Geetika Dhanda	2019	Small Molecular Adjuvants to Repurpose and Rehabilitate Obsolete Antibiotics against Multidrug-Resistant Bacteria
Sudip Mukherjee	2020	Development of Cationic Macromolecules to tackle Drug-resistant Bacteria and Fungi
Dipanjana Patra	2022	Antimicrobial Polymer Nano-composite Coating to Combat Catheter-Associated Urinary Tract Infections (CAUTIs)
Sayan Chakravarty	2023	Development of Synthetic Small Molecules and Polymeric Delivery Platforms to Tackle Drug Resistant Infections

INVITED TALKS, LECTURES AT CONFERENCES AND ELSEWHERE

I have delivered the following lectures at various venues:

National Conferences:

1. Invited talk: "Application of Polymeric Materials in Infectious Diseases" at departmental symposium at Department of Materials Engineering, IISc, Bangalore on 21st January 2010.
2. Invited talk: "The Weapons of Chemistry to Battle Infectious Diseases" At a symposium on Recent Trends in Chemistry, at The American College, Madhurai, Tamil Nadu on 16th February 2010.

3. Invited talk: at One day National workshop on "Advances in Chemical and Biochemical Sciences" at Sheshadripuram College, Yelahanka New town, Bangalore, 13th March 2010.
4. Invited talk: "Engineering Novel Polymeric Biomaterials to Tackle Infectious Diseases" at Department of Mechanical Engineering, M S Ramaiah Institute of Technology, 18th March 2010.
5. Invited talk: "Nano-engineering of Polymeric Biomaterials to Tackle Infectious Diseases" in a symposium at Raja Lakhamagouda Science Institute, Belgaum, 26-27th November 2010.
6. Invited talk: "Engineering Novel Polymeric Biomaterials to Tackle Infections" in a symposium for celebrating the International Year of Chemistry-2011, at JNCASR on 10th January 2011.
7. Invited talk: "Nano-engineering of Polymeric Biomaterials to Tackle Infectious Diseases" at a symposium on "Nanotechnology for Enhancing Food Security", Tamil Nadu Agricultural University (TNAU), on 7-8th April 2011.
8. Invited Talk: "Engineering Novel Polymeric Biomaterials to Tackle Infectious Diseases" at IIT Madras, 7th October 2011.
9. Invited talk: "Infectious Diseases: the ways to tackle" at In-house symposium, at JNCASR on 14-15th November 2011.
10. Invited talk: "Engineering Novel Polymeric Biomaterials to Tackle Infectious Diseases" at the International Conference on "Water" at IIT Madras, on 14-16th September 2012.
11. Invited talk: "War against Microbes": Are Antibiotics the only Weapons?" at Eighth JNC Research Conference on "Chemistry of Materials", Kerala on 30th September- 2nd October 2012.
12. Invited talk: "War against Microbes": Are Antibiotics the only Weapons?" at Research Conference in Christ University, Bangalore, on 13th February 2013.
13. Project Talk: "Development of Novel Biodegradable Antimicrobial Surface Coatings for Biomedical Application" at DST-Fast Track project review meeting, at Delhi University, on 29th June 2013.
14. Invited talk: "Bacterial Infection: the ways to tackle" at In-house symposium, at JNCASR on 18-20th November 2013.
15. Invited lecture: in Indo-UK Conference, at The Institute of Mathematical Sciences, Chennai, on 24th-26th February 2014.
16. Invited talk: "Prevention is better than Cure: Strategies for Preventing Infections" at NCU Day Celebration, March 6th, 2015
17. Invited Talk: "The Future Antibiotics: From the 'Magic Bullet' to the 'Smart Bullet'" at Annual Faculty meeting, JNCASR, November 13, 2015
18. Invited talk: "Strategies to Combat Antimicrobial Resistance (AMR) and Infections" at FAO-ICAR/NIVEDI meeting on Laboratory based surveillance of AMR in health and veterinary sectors, 18-19th January, 2017.
19. Invited talk: "Combating Infections on Abiotic and Biotic Surfaces" at JNCASR-Amrita Institute Meeting, JNCASR 25th March, 2017.
20. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at the conference on Chemical Frontiers, Goa, 17-20th August 2017.
21. Project talk: "Injectable Sealant: New Technology to Prevent Surgical Site Infection" at TRC-JNC meeting on 22 August, 2017.
22. Award lecture: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at CSIR 75th Foundation Day Celebrations & CDRI Award Orations, 22nd September 2017.
23. Invited lecture: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at Biotech Innovation Ignition School (BIIS), BIRAC-SRISTI, Ahmedabad, 28th December 2017.
24. Award Lecture: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" An

CRSI Bronze Award talk at 23rd CRSI National Symposium in Chemistry, IISER Bhopal, 13-15th July 2018.

25. Invited talk: "New Generation of Antibiotics to Combat Antimicrobial Resistance" at the Bangalore Healthcare Summit, 25-26th September 2018.
26. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at the conference on Frontiers in Chemical Sciences, Department of Chemistry, Indian Institute of Technology Guwahati, 6-8th December, 2018.
27. Invited talk: "Cationic Antimicrobial Polymers for the Prevention and Treatment of Bacterial Infections" at the conference, 15th International Conference on Polymer Science and Technology, SPSI-MACRO, IISER Pune, 19-22nd December 2018.
28. Invited talk: "Engineering Biomaterials and Antibacterials in the era of Drug Resistance" at the 22nd ADNAT Convention: International Symposium on Antibiotic Resistance–One Health Perspective March 5–8, 2019, IIT Roorkee.
29. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at PESCP 6th International Conference on "Strategies to Tackle Antimicrobial Resistance" PES University, Bangalore, 18th-19th October-2019.
30. Invited talk: "Engineering Biomaterials in the Era of Antimicrobial Resistance" at INYAS-2nd National Frontiers of Science Meeting, Jaipur, 6-8 November, 2019.
31. Talk: "Engineering Biomaterials in the Era of Antimicrobial Resistance" at JNCASR-Shiv Nadar University Symposium, JNCASR, Bangalore, India, 8-9th November 2019.
32. Invited talk: "Escape the clutches of Eskape!" at Annual Faculty Meeting & Inhouse Symposium, JNCASR, 13-14th November 2019.
33. Invited talk: "Biomaterials for tackling infection– Objectives, obstacles and opportunities!" at Second SAMat Annual Retreat- 17th to 19th November, 2019.
34. Invited talk: "The battle with Hospital Acquired Infections–bypassing the highway to hell!" at International Winter School on Frontiers in Materials Science –JNCASR, 2nd-6th December, 2019.
35. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at Winter School on Advanced Techniques in Nano Science and Technology, INST, Mohali, 2nd-7th December, 2019.
36. Invited talk: at a conference on Water Challenges during and post Covid-19, International Centre for Clean Water (ICCW) webinar series, IIT-Madras, 7th May, 2020.
37. Invited talk: at World Antimicrobial Awareness Week, NSS, IIT Roorkee, 21st November 2020.
38. Invited talk: at SERB Webinar Series on COVID-19 Emerging Research (SERB-COVER), 17th December 2020.
39. Invited talk: at BIRAC SITARE BIIS Webinar, 8th February 2021.
40. Invited talk: at AMRITA BIOCREST 2021-Indian Innovation Pavilion, International Symposium on "Man vs Microbe: AMR—The Race of the Century" 25th February 2021.
41. Invited talk: "Polymeric biomaterials for tackling bacterial, fungal and viral infections– Objectives, obstacles and opportunities!"; at The Society of Polymer Science India-Mumbai Chapter, April 10, 2021.
42. Invited Talk: "Outwitting antibiotic resistance: A perpetual battle"; at MedChem-2021 on Emerging Infectious Diseases & therapeutic Strategies, Department of Chemistry, IIT Madras 1-3 December 2021.
43. Invited talk: "Outwitting antibiotic resistance: A perpetual battle"; at 58th Annual Convention of Chemists and International Conference on Recent Trends in Chemical Sciences, Indian Chemical Society (Physical Chemistry Section, University of Calcutta) 22 December 2021.
44. Invited Lecture: "Functional Biomaterials for Tackling Antimicrobial Resistance and Infection"

at Biomaterial Conclave, University of Madras, 7-14th March 2022.

45. Invited talk: "Pursuit of next-generation glycopeptides – Our journey with vancomycin" at National Organic Symposium Trust (NOST), XXII Organic Chemistry Conference, Aurangabad, 17-20th February 2023.
46. Invited talk: "Outwitting antibiotic resistance: A perpetual battle"; at Chemistry Meet: Kindling in Kaziranga, India, 16-18th March 2023.
47. Invited talk: "Outwitting antibiotic resistance: A perpetual battle"; at Kaleidoscope: A Discussion Meeting in Chemistry, Udaipur, India, 6-9th July 2023.
48. Award Lecture: "Functional Biomaterials for Tackling Antimicrobial Resistance and Infection" at 34th Annual General Meeting of MRSI and 5th Indian Materials Conclave at IIT BHU, Varanasi, India, 12-15th December 2023.
49. Invited talk: "Outwitting antibiotic resistance: A perpetual battle" at 4th Frontiers Symposium in Chemistry, School of Chemistry, IISER Thiruvananthapuram, Kerala, 19-21st January 2024.

International Conferences:

1. Invited participant: at Gordon Research Conference on "New Antibacterial Discovery and Development" in Ventura, California, on 16th -21st March 2014.
2. Invited talk: "War against Microbes: Are Antibiotics the only Weapons?" at City College of New York, Department of Chemistry, 24th March 2014.
3. Invited talk: "War against Microbes: Are Antibiotics the only Weapons?" at Medical School at University of Rutgers, New Jersey, 27th March 2014.
4. Invited Talk: "Bacterial Cell Membrane: Targeting the Achilles' heel to Combat Drug-Resistance and Infections" at the conference on Chemical Frontiers, Goa, 16th-19th August 2014.
5. Invited talk: "Bacterial Cell Membrane- Targeting the Achilles' heel to Combat Drug-resistance and Infections" at International Symposium on Recent Advances in Medicinal Chemistry (ISRAM-2014), NIPER, Chandigarh, on 8-10th September, 2014.
6. Invited talk: "Strategies to tackle Drug Resistance and Infection" at the meeting on UK-India Partnerships in mitigating antimicrobial resistance and controlling Infectious Diseases, Bangalore, on 11-12th September, 2014.
7. Project Proposal Talk: "Development of Cleavable Gemini Surfactants and Study Their Micellar Aggregation Properties in Aqueous Solution" at UGC-DAE, BARC, Mumbai on 14th October 2014.
8. Invited participant: at "Review on Antimicrobial Resistance: India's Role in tackling the global Crisis" by Public Health Foundation of India (PHFI), New Delhi, 5th March 2015.
9. Invited talk: "Strategies to Tackle Drug Resistance and Infections" at Ramanujan Fellowship Meeting, IIT-Bombay, 16th March 2015.
10. Invited talk: "Bacterial Cell Membrane: Targeting the Achilles' heel to Combat Drug-Resistance and Infections" at University of Granada-Spain on 20th April 2015.
11. Invited talk: "Bacterial Cell Membrane: Targeting the Achilles' heel to Combat Drug-Resistance and Infections" at University of Porto, Portugal on 23rd April 2015.
12. Talk: "Development of New Class of Glycopeptide Antibiotics for Tackling Drug Resistant Bacterial Infections"at Project meeting at BIRAC on 22nd June 2015.
13. Invited talk: "Strategies to Combat Bacterial Resistance: Towards Development of Future Antibacterial Drugs" at CRSI Meeting- NIT Trichy, 23-25th July 2015.
14. Invited talk: "Strategies to Combat Bacterial Resistance: Towards Development of Future Antibacterial Drugs" at the conference of 'World Congress and Exhibition on Antibiotics', Las Vegas, USA during 14th-16th September 2015
15. Invited talk: "Bacterial Cell Membrane: Targeting the Achilles' heel to Combat Drug-Resistance and

Infections" at Department of Chemistry & Chemical Biology, Rutgers University, September 18, 2015.

16. Invited talk: "Bacterial Cell Membrane: Targeting the Achilles' heel to Combat Drug-Resistance and Infections" at New York Medical College, Valhalla, USA on 21st September 2015.
17. Invited lecture: "Strategies to Combat Antimicrobial Resistance (AMR)" at AMR & Longitude Prize Meeting, Bangalore, October 14, 2015
18. Invited lecture: "The Future Antibiotics: From the 'Magic Bullet' to the 'Smart Bullet'" at Annual Faculty Meeting-JNCASR, November 13, 2015.
19. Invited talk: "Strategies to Combat Bacterial Resistance: Towards Development of Future Antibacterial Drug" at the conference MICROCON-JIPMER, November 27-29, 2015.
20. Invited talk: "Prevention Is Better Than Cure: Strategies for Combating Antimicrobial Resistance and Preventing Infections" at International Conference on Biomolecular Engineering, Singapore during 5-7th January 2016.
21. Invited talk: "Bacterial Cell Membrane: Targeting the Achilles' heel to Combat Drug-Resistance and Infections" at Singapore-MIT Alliance for Research and Technology (SMART), Singapore 6th January 2016.
22. Invited talk: "Bacterial Cell Membrane: Targeting the Achilles' heel to Combat Drug-Resistance and Infections" at School of Chemical & Biomedical Engineering, NTU, Singapore, on 8th January 2016.
23. Invited talk: "Strategies for Combating Antimicrobial Resistance and Preventing Infections" at JNCASR and Mechanobiology Institute-NUS Joint Discussion Meeting, February 5, 2016.
24. Invited talk: "Bacterial Cell Membrane: Targeting the Achilles' heel to Combat Drug-Resistance and Infections" at University of Padova, Italy on 21st March 2016.
25. Invited talk: "Bacterial Cell Membrane: Targeting the Achilles' heel to Combat Drug-Resistance and Infections" at University of Parma, Italy on 23rd March 2016.
26. Invited talk: "Bacterial Cell Membrane: Targeting the Achilles' heel to Combat Drug-Resistance and Infections" at University of Rome, Tor Vergata, Italy 25th March 2016.
27. Invited talk: "Tackling Antimicrobial Resistance" at XI Joint Annual Conference of Indian Society of Malaria and Other Communicable Diseases and Indian Association of Epidemiologists', Bangalore, June 10-12, 2016.
28. Invited talk: "Antimicrobial Polymers for the Prevention and Treatment of Bacterial Infections" at Institute for Drug Delivery and Biomedical Research (IDBR), Bangalore, July 16, 2016.
29. Invited talk: "New Class of Glycopeptide Antibiotics: Strategies to Combat Acquired and Intrinsic Bacterial Resistance" at the conference on Drug Discovery India (DDI), Bangalore, 29-30th September, 2016.
30. Invited talk: "Bacterial Cell Membrane: Targeting the Achilles' heel to Combat Drug-Resistance and Infections" at the Indo-German Meeting on Supramolecular & Bioactive Compounds: Theory, Design and Regulation, Khajuraho, November 10-13, 2016.
31. Invited talk: at the International Conference on Polymer Science and Technology, Macro-2017, 8-11th January, Thiruvananthapuram, Kerala.
32. Invited talk: "New Chemical Approaches for the Development of Novel Antibiotics" at The UK-India Newton-Bhabha Fund Researcher Links Workshop (RGICD) on Antimicrobial Resistance, Bangalore, 14-18th December 2017.
33. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at an invited meeting on AMR at University of Sheffield, UK during 19-20 March 2018.
34. Invited talk: "Synthetic Mimics of Antimicrobial Peptides to Tackle Antimicrobial Resistance" at 16th Naples Workshop on Bioactive Peptides, Naples, Italy during 7-9th June 2018.

35. Invited talk: “Engineering polymeric biomaterials in the era of antimicrobial resistance” at ACS Spring National Meeting in Orlando, FL, March 31-April 4, 2019.
36. Invited talk: “Engineering Biomaterials and Antibacterials in the Era of Drug Resistance” at UK-India Meet on Emerging Innovations in AMR, 7th June 2019.
37. Invited talk: “Engineering Biomaterials and Antibacterials in the Era of Drug Resistance” at L V Prasad Eye Institute-Hyderabad & University of Sheffield-UK, 18th January, 2020.
38. Invited lecture: “Engineering Antimicrobial Biomaterials—The Fight against Bacteria, Fungi and Viruses”; at the Virtual MRS Spring Meeting of the Materials Research Society, USA, 19th April, 2021.
39. Invited talk: “Polymeric Biomaterials for Tackling Antimicrobial Resistance and Infection”; at the International e-Conference on Biopolymers, APA Bioforum, 14th -16th July, 2022.
40. Virtual talk on “Innovative Chemical Strategies for Tackling Antimicrobial Resistance and Infection” at the Indo-Belgian Networking Meeting, 9th November 2022.
41. Invited talk: “Functional Biomaterials for Tackling Antimicrobial Resistance and Infection”; International Conference on Biomaterials, Regenerative Medicine and Devices, Bio-Remedi-2022, IIT Guwahati, India. 15th–18th December, 2022.
42. Invited talk: “Outwitting antibiotic resistance: A perpetual battle”; at Amrita Pharmacon-2023, International Conference on Innovation in Antimicrobial Therapeutics, India, 23rd March 2023.
43. Invited Talk: “Development of new approaches to overcome MBL-related resistance in bacteria” at BRICS STI-FP Conference on Biomedical Sciences and Technologies, 25th-26th May 2023.
44. Invited Talk: “Chemical Strategies to Tackle Antimicrobial Resistance and Infection” at The 5th Antimicrobial Science and Technology Forum (ASTF 2023), Shenyang, China, 11th August 2023.
45. Invited Talk: “Chitin and Chitosan: Unleashing the Potential of Glucosamines against Drug-Resistant Microbes” at EUCHIS 2023 Conference in Siglufjörður, Iceland, September 11-14th 2023.
46. Invited Talk: “Outwitting antibiotic resistance: A perpetual battle”; at An Interactive International Conference on Convergence of Scientific Disciplines to Advance Biotechnology, IISER Berhampur, India, 23-24th November 2023.
47. Invited Talk: “Outwitting antibiotic resistance: A perpetual battle”; at Asia Pacific Conclave on Engineering, Healthcare-Bridging Innovation and Wellness, ACS International Student Chapter-IISc Bangalore, Mysuru, India, 29-31st January 2024.
48. Attending Gordon Research Conference on Microbial Toxins and Pathogenicity, in, New Hampshire, USA on July 14th -19th, 2024

National Institutes/Universities:

1. Invited talk: “Engineering Novel Polymeric Biomaterials to Tackle Infectious Diseases”at Department of Mechanical Engineering, M S Ramaiah Institute of Technology, Bangalore, on 18th March 2010.
2. Invited talk: “Engineering Novel Polymeric Biomaterials to Tackle Infectious Diseases” at the Department of Chemistry, IIT Madras, on 7th October 2011.
3. Invited talk: “Bacterial Cell Membrane- Targeting the Achilles’ heel to Combat Drug-resistance and Infections” at IIT Ropar on 9th September, 2014.
4. Invited talk: “Development of New Generation of Glycopeptide Antibiotics to Overcome Acquired and Inherent Drug Resistance” at Bugworks Research Inc, Centre for Cellular and Molecular Platforms, NCBS, Bangalore, on 17th September 2014.
5. Invited talk: “Bacterial Cell Membrane- Targeting the Achilles’ heel to Combat Drug-resistance and Infections” at Jawaharlal Institute of Postgraduate and Medical Education and Research (JIPMER), Pondicherry, on 28th November 2014.
6. Invited talk: “Bacterial Cell Membrane: Targeting the Achilles' heel to Combat Drug-Resistance

and Infections" at CDRI, Lucknow, 8th November, 2016.

7. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at IICT-Hyderabad, 26th May, 2017.
8. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at Department of Chemistry, IIT-Bombay, 27th July, 2017.
9. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at TIFR Bombay 28th July, 2017.
10. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at CSIR-CSMCRI, Bhavnagar, 26th December 2017.
11. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at IACS, Kolkata, 18th April 2018.
12. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at IISER Kolkata,19th April 2018.
13. Invited talk: "New Generation of Antibiotics to Combat Antimicrobial Resistance" at IIT (ISM) Dhanbad, 6th Feb 2019.
14. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at Garden City University, Bangalore 26th March 2019.
15. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at NCL, Pune, 16th July 2019.
16. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at IISER, Pune, 17th July 2019.
17. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at IIT-Madras, Chennai, 4th September 2019.
18. Invited talk: "Outwitting antibiotic resistance: A perpetual battle"; at 1st Annual Meeting of Chemical Biology, Institute of Nano Science and Technology, 24-25th September 2021.
19. Invited talk: "Polymeric biomaterials for tackling bacterial, fungal and viral infections– Objectives, obstacles and opportunities!"; Department of Chemistry, BITS Pilani, Hyderabad, November 27, 2021.
20. Invited talk: "Functional Biomaterials for Tackling Antimicrobial Resistance and Infection" at DBEB Departmental Seminar Series at IIT Delhi, 29th September 2022.
21. Invited talk: "Pursuit of next-generation glycopeptides – Our journey with vancomycin" on New Chemistry Day at New Chemistry Unit, JNCASR on 18th October 2022.
22. Invited talk: "Biomaterial interventions to tackle bleeding and infection" at in-house SAMAT Meet, 1st February 2023.
23. Invited talk: "Outwitting antibiotic resistance: A perpetual battle" at NCBS, Bangalore, 1st March 2023.
24. Invited Talk: "Smart biomaterials for tackling antimicrobial resistance and infection" at Collins Aerospace-JNCASR meet, 28th April 2023.
25. Invited Talk: "Conquering Antibiotic Resistance: An Endless Struggle", at Frontiers in Chemical Biology and Organic Materials and Felicitation of Professors Santanu Bhattacharya and Uday Maitra, Organic Chemistry, IISc, 21st July 2023.

International Institutes/Universities:

1. Talk: "Development of New Generation of Glycopeptide Antibiotics to Overcome Acquired and Inherent Drug Resistance" at NIH, 8th August 2014.
2. Invited talk: "Bacterial Cell Membrane: Targeting the Achiles' heel to Combat Drug-Resistance and Infections" at University of Granada, Spain 20th April 2015.
3. Invited talk: "Bacterial Cell Membrane: Targeting the Achiles' heel to Combat Drug-Resistance

and Infections" at University of Porto, Portugal, 23rd April 2015.

4. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at East China University of Science and Technology (ECUST), Shanghai, China on 3rd July 2017.
5. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at Donghua University, Shanghai, China 4th July 2017.
6. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at Tongji University, Shanghai, China 5th July 2017.
7. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at Public Health of England, Porton Down, UK on 26th March 2018.
8. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at King's College London, UK on 22nd March 2018.
9. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at University of Granada, Spain 13th June 2018.
10. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at University of South Florida, 3rd April 2019.
11. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at The City College of New York, 9th April 2019.
12. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at Rutgers University, New Jersey, 10th April 2019.
13. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at Ruhr University, Bochum, 18th June 2019.
14. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at Technische Universität, Dortmund, 19th June 2019.
15. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at Max Planck Institute of Colloids and Interfaces, Potsdam, 20th June 2019.
16. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at Université de Strasbourg, France, 25th June 2019.
17. RSC Medicinal Chemistry lecture: "Tackling emergent (bacterial) infections: A chemical perspective to drug design and development"; November 2, 2020.
18. Invited talk: "Outwitting antibiotic resistance: A perpetual battle" at University of Strasbourg, France, 18th September 2023.
19. Invited talk: "Outwitting antibiotic resistance: A perpetual battle" at Chemical Biology/Chemistry Seminar at Stanford University, USA, 5th January 2024.
20. Invited talk: "Outwitting antibiotic resistance: A perpetual battle" at Seminar Series, Skaggs School of Pharmacy and Pharmaceutical Science, University of California, San Diego, USA, 8th January 2024.

Industry/Company:

1. Invited talk: "Engineering Biomaterials to Tackle Infectious Diseases" at Unilever, Bangalore on 19th June 2013.
2. Invited talk: ""War against Microbes": Are Antibiotics the only Weapons?" at MitraBiotech, Bangalore on 22nd October 2013.
3. Invited talk: "Strategies to tackle Infectious Diseases" at Scyton Diagnostic Pvt. Ltd., Bangalore, on 27th June 2014.
4. Invited talk: "Bacterial Cell Membrane: Targeting the Achilles' heel to Combat Drug-Resistance

and Infections" at Anthem Biosciences, Bangalore, on 17th November 2014.

5. Invited talk: "Towards a Healthy World: Innovative Strategies for Combating Antimicrobial Resistance and Preventing Infections" at JNCASR-Industry Meet, JNCASR, March 8, 2016.
6. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at the conference on Application of Supramolecular Chemistry in Water Treatment, Tata Steel Limited, Dimna, Jamshedpur, Feb 4-5, 2019.
7. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at Colgate New Jersey, 10th April 2019.
8. Invited talk: "Innovative biomaterials and therapeutic interventions for tackling antimicrobial resistance and infection" at TATA Steel-JNCASR meet, 15th February 2023.
9. Invited Talk: "Innovative functional biomaterials for tackling antimicrobial resistance and infection" at Becton-Dickinson Biosciences, Bengaluru, 19th April 2023.
10. Invited Talk: "Discovery of Semi-synthetic Antibiotics and Adjuvants"; at GARD-P and BSAC Antimicrobial Chemotherapy Conference (ACC) 2024, 6-7th February 2024.

Science Promotion:

1. Invited talk: "The Weapons of Chemistry to Battle Infectious Diseases" on the occasion of National Science Day, at JNCASR, 25th February 2010.
2. Invited talk: "The Weapons of Chemistry to Battle Infectious Diseases" at Sheshadripuram College, 13th March 2010.
3. Invited talk: "Prevention of Infectious Diseases" at Science Voyage, at JNCASR, on 25th May 2010.
4. Invited talk: "The Weapons of Chemistry to Battle Infectious Diseases" at POCE, JNCASR, 25th February 2010.
5. Invited talk: "Glycopeptide antibiotic- Drug of last resort" at JNCASR-Foundation for Capacity Building in Science (FCBS) Workshop for College Chemistry Students and Teachers 15-17th November 2013.
6. Invited talk: "Antimicrobial Peptides: Evolution into Future Antibiotics" at JNCASR-Foundation for Capacity Building in science (FCBS) workshop for College Chemistry students and Teachers, Trivandrum, Kerala on 31st Oct-2nd Nov, 2014.
7. Invited talk: "The Folklore of Infection- Origin to History to Decline and Advent" for School Children at Prof. CNR Rao Hall of Science, JNCASR, Bangalore on 12th November 2014.
8. Invited talk: "Bacterial Cell Membrane: Targeting the Achilles' heel to Combat Drug-Resistance and Infections" at CMR College, Bangalore, March 5, 2016.
9. Popular lecture: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at INSPIRE Science Camp, Indian Academy Degree College, Bangalore, 10th January 2019.
10. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at Ramaiah College of Arts, Science & Commerce, 19th September 2019.
11. Invited talk: "Engineering Biomaterials and Antibacterials in the Era of Drug Resistance" at Adamas University, Kolkata, 14th January, 2020.
12. Invited talk: "The battle with Hospital Acquired Infections-bypassing the highway to hell" at Indian Academy Degree College, Bangalore, 10th February 2020.
13. Invited talk: "Mitigating surface-assisted spread of infections in the times of a pandemic" at JNCASR-FCBS workshop for college chemistry students and teachers, IISER & CSIR-NIIST, Thiruvananthapuram, 15th December 2020.
14. Invited talk: "Mitigating surface-assisted spread of infections in the times of a pandemic" at BIRAC SITARE BIIS Webinar, 8th February 2021.
15. Guest Lecture on "Innovative Functional Biomaterials for Tackling Antimicrobial Resistance and

Infection" at the R. N. Tagore University, Bhopal 23rd July 2022.

16. Invited talk: "Smart biomaterials for tackling infection" at M V J College of Engineering, Bangalore, 3rd March 2023.
17. Invited talk: "Pursuit of next-generation glycopeptides- A journey with vancomycin" at the celebration of National Chemistry Week, ACS Webinar, American Chemical Society, 18th October 2023.

OUTLICENCED INVENTIONS

Our inventions on glycopeptide derivatives and antimicrobial coatings have been outlicensed to Vipragen Biosciences, India. Two of our small molecular inventions were outlicenced to Public Health of England (PHE), UK.

MEDIA COVERAGE OF RESESRCH WORK

A. Antimicrobial Research

The contribution of Dr. Haldar Lab on antimicrobial research been recognized and displayed at the National Science Museums, touring in various cities in India as part of an exhibition "Superbugs – The end of Antibiotics?" The exhibition was organised in collaboration with National Council of Science Museums-NCSM & Science Museum London (https://www.superbugs.in/index.php).

B. Small molecular antimicrobial peptide mimicking drug-candidates

1. ACS Chemistry for Life, American Chemical Society, "Fighting MRSA with new membrane-busting compound", (15th March, 2017) https://www.acs.org/content/acs/en/pressroom/presspacs/2017/acs-presspac-march-15-2017/fighting-mrsa-with-new-membrane-busting-compound.html
2. EurekAlert! The Global Source for Science News, "Fighting MRSA with new membrane-busting compounds" (15th March, 2017) https://www.eurekalert.org/pub_releases/2017-03/acs-fmw031517.php
3. NEWS MEDICAL LIFE SCIENCES, "New class of membrane-busting compounds can combat MRSA skin infections in mice", (15th March, 2017) http://www.news-medical.net/news/20170315/New-class-of-membrane-busting-compoundsc2a0can-combat-MRSA-skin-infections-in-mice.aspx
4. PHY.ORG, "Fighting MRSA with new membrane-busting compounds" (15th March, 2017) https://phys.org/news/2017-03-mrsa-membrane-busting-compounds.html
5. DOLPHNSIX, "Fighting MRSA with new membrane-busting compounds", (15th March, 2017) http://www.dolphnsix.com/news/3144095/fighting-mrsa-with-membrane-busting-compounds
6. UPI, "New membrane-busting compounds effective at fighting MRSA", (15th March, 2017) http://www.upi.com/Health_News/2017/03/15/New-membrane-busting-compounds-effective-at-fighting-MRSA/1931489603050/
7. Medicalnewser.com, "New elegance of membrane-busting compounds can fight MRSA pores and skin infections in mice", (15th March, 2017) https://www.medicalnewser.com/2017/03/15/new-class-of-membrane-busting-compounds-can-combat-mrsa-skin-infections-in-mice.html
8. MNT, "Fighting MRSA with new membrane-busting compound", (15th March, 2017) http://www.medicalnewstoday.com/releases/316435.php?nfid=96103
9. Outbreak News Today "Fighting MRSA with new membrane-busting compounds", (15th March, 2017) http://outbreaknewstoday.com/fighting-mrsa-new-membrane-busting-compounds-19658/

10. Wn.COM, “Fighting MRSA with new membrane-busting compounds”, (15th March, 2017) https://article.wn.com/view/2017/03/15/Fighting_MRSA_with_new_membranebusting_compounds/
11. GLOBAL NEWS BLOG, “NEW MEMBRANE-BUSTING COMPOUNDS EFFECTIVE DURING FIGHTING MRSA” (16th March, 2017) http://orangeryknoxville.pw/blog/2017/03/16/new-membrane-busting-compounds-effective-at-fighting-mrsa/
12. Science Newsline Medicine, “Fighting MRSA with New Membrane-busting Compounds” (16th March, 2017) http://www.sciencenewsline.com/news/2017031613060004.html
13. LABline, “Fighting MRSA with new membrane-busting compounds”, (16th March, 2017) https://www.mlo-online.com/Labline/201703/16/toc.htm#Two2
14. JAB NEWS, “New membrane-busting compounds efficient at preventing MRSA” (16th March, 2017) http://jabnews.com/new-membrane-busting-compounds-efficient-at-preventing-mrsa/
15. ALN, “Fighting MRSA with New Membrane-Busting Compounds”, (17th March, 2017) https://www.alnmag.com/news/2017/03/fighting-mrsa-new-membrane-busting-compounds?et_cid=%%jobid%%&et_rid=%%subscriberid%%&location=top
16. MedicalNewsToday, “Fighting MRSA with new membrane-busting compound”, (17th March, 2017) http://www.medicalnewstoday.com/releases/316435.php
17. INVERSE SCIENCE, “New Drug Could Treat Superbugs Without Fostering Resistance” (18th March, 2017) https://www.inverse.com/article/29238-mrsa-mice-hospital-superbug-resistance
18. azcentral, “Fighting MRSA with new membrane-busting compound” (18th March, 2017) http://www.azcentral.com/story/news/2017/03/19/discoveries-making-vanilla-flavoring-less-pollution/99302050/
19. FirstWord PHARMA, “Fighting MRSA with new membrane-busting compounds”, (19th March, 2017) https://www.firstwordpharma.com/node/1457267
20. Standard-Times, “Fighting MRSA with new membrane-busting compound”, (19th March, 2017) http://www.gosanangelo.com/story/news/2017/03/19/discoveries-making-vanilla-flavoring-less-pollution/99302050/
21. HiTechDays.com, “FIGHTING MRSA WITH NEW MEMBRANE-BUSTING COMPOUNDS” (19th March, 2017) http://www.hitechdays.com/news/191658/fighting-mrsa-with-new-membrane-busting-compounds/
22. NORTH SHORE NOW, “Fighting MRSA with new membrane-busting compound” (19th March, 2017) http://www.mynorthshorenow.com/story/news/2017/03/19/discoveries-making-vanilla-flavoring-less-pollution/99302050/
23. MDLinx, Top News in Dermatology, “Fighting MRSA with new membrane-busting compound” (22nd March, 2017) https://www.mdlinx.com/dermatology/top-medical-news/article/2017/03/22/7096416
24. India Science Wire “New weapon to fight drug resistant superbugs found”, (23rd March, 2017) http://www.vigyanprasar.gov.in/whats_new/isn/New-weapon-to-fight-drug-resistant-superbugs-found.pdf
25. Canada Free Press, “ Fighting MRSA with new membrane-busting compound”, (25th March, 2017) http://canadafreepress.com/article/fighting-mrsa-with-new-membrane-busting-compound
26. The Hindu (3th September, 2017), “Novel compounds destroy biofilm-forming bacteria” http://www.thehindu.com/sci-tech/science/novel-compounds-destroy-biofilm-forming-bacteria/article19610343.ece

C. Antibiotic adjuvants

1. The Hindu (3rd September, 2017) - https://www.thehindu.com/sci-tech/science/novel-compounds-destroy-biofilm-forming-bacteria/article19610343.ece
2. Atlas of Science (6th February, 2020) “The difference of an amide to ester in polymers does the magic” - https://atlasofscience.org/the-difference-of-an-amide-to-ester-in-polymers-does-the-magic/

3. Chemistry World- https://www.chemistryworld.com/news/antibiotic-adjuvant-designed-to-subvert-bacterial-defence-mechanisms/4018589.article (4th December, 2023)

D. Anti-Ebola small-molecular peptidomimetic agents

1. The Telegraph, "Ebola drug hope in Bengali Chemist lab" (Dec 21, 2014) http://www.telegraphindia.com/1141222/jsp/nation/story_4699.jsp#.VJgIgl4ABl
2. The Times of India, "Drugs for Ebola likely to have an Indian connection" (Dec 20, 2014) http://timesofindia.indiatimes.com/india/Drugs-for-Ebola-likely-to-have-an-Indian-connection/articleshow/45580346.cms
3. The Hindu, "City-based scientists develop compounds that may make Ebola curable" (Dec 20, 2014) http://www.thehindu.com/todays-paper/tp-national/tp-karnataka/citybased-scientists-develop-compounds-that-may-make-ebola-curable/article6710106.ece
4. The New Indian Express, "UK Ebola Project Picks up Two Drugs Developed in City" (Dec 20, 2014) http://www.newindianexpress.com/states/karnataka/UK-Ebola-Project-Picks-up-Two-Drugs-Developed-in-City/2014/12/20/article2580329.ece
5. The Asian Age, Potential Ebola drugs under test (Dec 20, 2014) http://www.asianage.com/india/potential-ebola-drugs-under-test-594
6. The Economic Times, "Drugs for Ebola likely to have an Indian connection" (Dec 20, 2014) http://health.economictimes.indiatimes.com/news/pharma/drugs-for-ebola-likely-to-have-an-indian-connection/45585995

E. Novel class of Glycopeptide antibiotics

1. The Economic Times News (4th April, 2015), "Three weapons to slow down bacteria spread in hospitals" http://economictimes.indiatimes.com/news/science/three-weapons-to-slow-down-bacteria-spread-in-hospitals/articleshow/46801855.cms
2. The Times of India News (10th July, 2014), "Bangalore scientists break bacteria's resistance to antibiotics" http://timesofindia.indiatimes.com/home/science/Bangalore-scientists-break-bacterias-resistance-to-antibiotics/articleshow/38102494.cms
3. World of Chemicals (10th July, 2014), "New method to kill antibiotic resistant bacteria" http://www.worldofchemicals.com/media/academy/new-method-to-kill-antibiotic-resistant-bacteria/7343.html
4. Pakistan Defence (12th July, 2014), "Bangalore scientists break bacteria's resistance to antibiotics" http://defence.pk/threads/bangalore-scientists-break-bacterias-resistance-to-antibiotics.323631/
5. The New Indian Express (13th July 2014), "City Scientists Develop Drug to Kill Resistant Bacteria" http://www.newindianexpress.com/cities/bangalore/City-Scientists-Develop-Drug-to-Kill-Resistant-Bacteria/2014/07/13/article2328104.ece
6. Health City (13th July 2014), "City Scientists Develop Drug to Kill Resistant Bacteria" http://health-city.com/city-scientists-develop-drug-to-kill-resistant-bacteria/
7. Scroll.in (18th July 2014), "How a discovery by a team of Bangalore scientists could solve India's antibiotics crisis" http://scroll.in/article/670608/How-a-discovery-by-a-team-of-Bangalore-scientists-could-solve-India's-antibiotics-crisis
8. Rajya Sabha TV, Science monitor and Gyan Vigyan programme (2nd August 2014)
9. DD India TV, Science this week programme (3rd August 2014)
10. Nature India, (November 17, 2015), http://www.natureasia.com/en/nindia/article/10.1038/nindia.2015.151

E. Anti-A. baumanni macromolecular agents

1. Featured in The Hindu (14th December, 2019), https://www.thehindu.com/sci-tech/science/tackling-drug-resistant-a baumannii/article30306773.ece

F. Antibacterial, antifungal, antiviral coating

1. Ministry of science and technology website, 2020 "Coating developed by JNCASR may prevent transmission of infection" https://dst.gov.in/coating-developed-jncasr-may-prevent-transmission-infection
2. Vigyanprasar website, 06th April, 2020 "JNCASR develops versatile coating to stop spread of viruses like influenza and COVID 19" https://vigyanprasar.gov.in/wp-content/uploads/Coating-developed-by-JNCASR-may-prevent-transmission-of-infection-apr2020.pdf
3. Democratic accent, 01st April, 2020, "COVID-19: JNCASR develops coating to prevent transmission of infection" https://www.democraticaccent.com/covid-19-jncasr-develops-coating-to-prevent-transmission-of-infection/
4. Press information bureau, 01st April, 2020, "Coating developed by JNCASR may prevent transmission of infection" https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1609970
5. The Tribune, 25th August, 2020, "Indian researchers develop coating that kills Covid" https://www.tribuneindia.com/news/nation/indian-researchers-develop-coating-that-kills-covid-64274
6. The Daily Star, 02nd April, 2020, "India claims to have developed anti-microbial coating that could kill Covid-19" https://www.thedailystar.net/india-claims-have-developed-anti-microbial-coating-could-kill-covid-19-1888786
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8. The Times of India, 29th March, 2020, "Covid-19: Scientists offer special 'coating' to contain virus" https://timesofindia.indiatimes.com/india/covid-19-scientists-offer-special-coating-to-contain-virus/articleshow/74875492.cms
9. Indian Chemical News, 02nd April, 2020, "JNCASR coating may prevent COVID-19 transmission" http://www.indianchemicalnews.com/petro-chemical/jncasr-coating-may-prevent-covid-19-transmission-4744
10. Freshers Live, 07th April, 2020, "JNCASR develops a coating that may prevent transmission of infection" https://www.fresherslive.com/current-affairs/articles/jncasr-develops-a-coating-that-may-prevent-transmission-of-infection-25221
11. Navodaya Times, 03rd April, 2020, "JNCASR ने बनाई एंटी-कोरोना कोटिंग, कपड़ों और प्लास्टिक पर लगाने से मरेंगे कोरोना वायरस!" https://www.navodayatimes.in/news/khabre/jncasr-created-anti-corona-coating-applying-on-clothes-and-plastic-prsgnt/141477/
12. SSBPrep website, 01st April, 2020, "Coating developed by JNCASR may prevent transmission of infection" https://ssbprep.com/coating-developed-by-jncasr-may-prevent-transmission-of-infection/
13. NDTV, 06th April, 2020, "JNCASR Develops Versatile Coating To Stop Spread Of Viruses" https://www.ndtv.com/education/covid-19-jncasr-develops-versatile-coating-to-stop-spread-of-viruses-2207185

G. Antibacterial and antiviral paints

2. Scientific American - http://www.scientificamerican.com/article/paint-on-polymer-kills-fl/ (13th November, 2006)
3. Chemical Engineering News, ACS - http://pubs.acs.org/cen/news/84/i47/8447notw1.html (20th November, 2006, Vol. 84, 17)
4. MIT TechTalk - http://chemistry.mit.edu/mits-anti-microbial-paint-kills-flu-bacteria (6th December, 2006)
5. BBC News (29th December 2006)

H. Bacterial resistance sensors

1. Deccan Herald- https://www.deccanherald.com/science/iisc-jncasr-pitch-platform-to-detect-antibiotic-resistant-bacteria-2896206 (15 February 2024)
2. Times of India- https://timesofindia.indiatimes.com/home/science/rapid-test-to-detect-antibiotic-resistance-developed-indian-news/articleshow/107726142.cms (15 February 2024)

3. India Today- https://www.indiatoday.in/science/story/indian-researchers-find-new-way-to-catch-antibiotic-resistant-bacteria-2502506-2024-02-15 (15 February 2024)
4. The Hindu- https://www.thehindu.com/sci-tech/science/bengaluru-researchers-develop-paper-based-platform-for-rapid-detection-of-antibiotic-resistant-bacteria/article67848599.ece (15 February 2024)