

Dr. Neel Sarovar Bhavesh

Current Position

Group Leader (Equivalent to Professor), International Centre for Genetic Engineering and Biotechnology (ICGEB), New Delhi, India 110067.

Honorary Positions

Adjunct Professor, Department of Chemistry, Indian Institute of Science Education and Research (IISER) Bhopal, Madhya Pradesh India 462066

Adjunct Professor, Special Centre for System Medicine (SCSM), School for Sanskrit and Indic Studies (SSIS), Jawaharlal Nehru University (JNU), New Delhi, India 110067.

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Personal Data

Born May 24, 1975, in Patna, India. Indian citizen. Married.

Education and Positions held

2024–	Group Leader (Equivalent to Senior Professor) , International Centre for Genetic Engineering and Biotechnology (ICGEB), New Delhi: India.
2016–2023	Group Leader (Equivalent to Professor) , International Centre for Genetic Engineering and Biotechnology (ICGEB), New Delhi: India.
2008–2015	Staff Research Scientist , International Centre for Genetic Engineering and Biotechnology (ICGEB), New Delhi: India.
2004–2008	Postdoctoral Fellow , ETH Zürich, Zürich, Switzerland (Mentor: <i>Prof. Kurt Wüthrich</i> , Nobel Laureate).
2003–2004	Visiting Fellow , Department of Chemical Sciences, Tata Institute of Fundamental Research (TIFR), Mumbai, India (Mentor: <i>Prof. Ramakrishna V. Hosur</i>).
1998–2003	Ph.D. (Physical Chemistry) . Department of Chemical Sciences, Tata Institute of Fundamental Research (TIFR), Mumbai, India; (Mentor: <i>Prof. Ramakrishna V. Hosur</i>).
1996–1998	M.Sc. (Biotechnology) , Goa University, Goa, India.
1993–1996	B.Sc. (H) in Chemistry (Hons.), Physics and Mathematics, Patna University, Patna, India.

Major Research Interests

Structure, function, and dynamics of proteins and nucleic acid complexes; development of nuclear magnetic resonance (NMR) techniques for studying biomacromolecular complexes; Protein folding, metabolomics.

Major Administrative Responsibilities

External

- Member, Advisory Committee of Govt. of Odisha to recommend institutes for Biotechnology incubation centre and centre of excellence in Biotechnology. (2022)
- Member, Institutional Bio-Safety Committee (IBSC), Indian Institute of Technology (IIT) Delhi. (2022-)
- Chairperson, Institutional Ethics Committee (IEC), Bennett University, Noida, UP (2022-2025).
- Member, UGC expert committee for the assessment of a deemed to be university (2022)

- Member, Institutional Bio-Safety Committee (IBSC), Atal Incubation Centre, JNU, New Delhi. (Since 2021)
- Expert Member, Selection Committee for recruitment of Professors and Associate Professor, Jawaharlal Nehru University (JNU), New Delhi. (2020)
- Member (Basic Medical Scientist), Institutional Ethics Committee (IEC), Jawaharlal Nehru University (JNU), New Delhi. (2020-till date)
- Member, Management Advisory Committee (MAC), NMR facility, Tata Institute of Fundamental Research (TIFR), Mumbai. (Since 2018)

Internal (ICGEB New Delhi)

- Member, Institutional Bio-Safety Committee (IBSC), ICGEB, New Delhi. (Since 2019)
- Convenor, Academic cum admission committee (2015-2023)
- Radiation Safety Officer (2014-2017)
- Chairperson, Instrument Maintenance Committee (Since 2015)
- Chairperson, Sports Committee (2015-2023)
- In-charge, Biophysics Instrumentation facility (since 2014)
- Member, Equipment Purchase Committee (2013-2023)

Major Academic Responsibilities

- Member, Scientific Advisory Group (Basic Sciences and Fundamental Research), Central Council for Research in Ayurvedic Sciences (CCRAS), Ministry of AYUSH. (2022-2025).
- Member, Board of Studies, Central University of Rajasthan, Ajmer, Rajasthan (2022-2024).
- Expert member of Research Degree Committee (Biotechnology), Guru Nanak Dev University, Amritsar. (2022-2024)
- Member, Expert Committee for the award of AYUSH post-doctoral fellowship (2022)
- Member, All India Council for Technical Education (AICTE) committee to develop model curricula of the Biotechnology course for UG in engineering technology in India. (2019-2020)
- Member, AICTE Working Group to suggest UG courses/specialization areas in Non-Computer Science / IT areas. (2019-2020)
- Member, Special Committee, School of Biotechnology (SBT), Jawaharlal Nehru University (JNU), New Delhi. (2020-2023)
- Member, Advisory Committee, BSL-3 facility of the Atal Incubation Centre-Jawaharlal Nehru University Foundation for Innovation. (2020)
- Member, Research Advisory Board, KIIT Technology Business Incubator (KIIT-TBI), Bhubaneswar (2020-2022)
- Member, JNU-NIPGR Academic Committee. (2020-2022) (2022-2024)
- Member, Special Committee, Special Centre for Molecular Medicine (SCMM), Jawaharlal Nehru University (JNU), New Delhi. (2019-2022)
- Member, Academic Council, Jawaharlal Nehru University (JNU), New Delhi. (2018-2020, 2020-2022, 2022-2024)
- Member, Research Advisory Committee, Patna University, Patna. (2018-2021, 2021-2024)
- Editorial board member, Nature Scientific Reports. (2015-till date)
- Member, Advisory Committee, Advanced Instrument Research Facility (AIRF), Jawaharlal Nehru University (JNU), New Delhi. (2011-2013)
- Organizer, 'National Florescence Workshop-Spectroscopy and Microscopy in Biology and Chemistry' at ICGEB, New Delhi, and JNU, New Delhi. (Nov 14-18, 2011)
- Organizer, ICGEB International workshop on 'Application of structural and computational biology in biomedical research at ICGEB, New Delhi. (Oct 5-15, 2009)

Major Awards and Recognitions

- Prof. S. Subramaniam's 60th Birthday Lecture Award from the National Magnetic Resonance Society (NMRS), India (2017)
- Prof. Uma Kant Sinha Memorial Award from Indian Science Congress, India. (2012)
- Young scientist platinum jubilee award from National Academy of Sciences, India. (2009)
- Associate, Indian Academy of Sciences, India. (2009)

- TAA-Zita Lobo Memorial Award for the Best Ph.D. Thesis in Biological and Chemical Sciences by Tata Institute of Fundamental Research (TIFR), Mumbai. (2004)
- Honorable Mention for International Union for Pure and Applied Chemistry (IUPAC) Prize for Young Chemist. (2004)
- CSIR-UGC NET and GATE (All India Rank 85) qualified

Academies and Honorary Memberships in Societies

- Member, Executive Committee, National Magnetic Resonance Society (NMRS), India. (2016-2019)
- Treasurer, Protein Society, India. (2015-2021)
- Life member, National Magnetic Resonance Society (NMRS), India. (2000)
- Life member, Indian Biophysical Society (IBS). (1999)

Research supervision

12 Ph.D. students completed (10 as supervisor and 2 as co-supervisor). 5 Ph.D. students currently working. 5 Post-doctoral fellows completed. 3 Post-doctoral fellows working

- Course coordinator graduate course ICGEB Ph.D. graduate course (2014-till date)
- Recognized as a supervisor for Ph.D. students by Indian Institute of technology (IIT), Delhi, Jawaharlal Nehru University (JNU), New Delhi, Jamia Hamdard University, New Delhi, Delhi Technological University (DTU), New Delhi, and Patna University, Patna
- Convenor, ICGEB Ph.D. admission committee of ICGEB, New Delhi (2012-Till date).

Publications *h-index*=29. Citation and complete publication list link: <http://goo.gl/a11v7>

Total: 85 (74 in peer-reviewed international journals, 1 national journal, 4 reviews, 1 book edited and 5 book chapters).

Selected 10 publications

1. Ray S, Pandey NK, Kushwaha GS, Das S, Ganguly AK, Vashi N, Kumar D, Suar M and **Bhavesh NS** (2022) Structural investigation on SPI-6 associated *Salmonella* Typhimurium VirG-like stress protein that promotes pathogen survival in macrophages. *Protein Sci.* **31**, 835-849. DOI: 10.1002/pro.4272 (**IF: 8.000**)
2. Sultan F, Basu R, Murthy D, Kochar M, Attri KS, Aggarwal A, Kumari P, Dnyane P, Tanwar J, Motiani RK, Singh A, Gadgil C, **Bhavesh NS**, Singh PK, Natarajan VT and Gokhale RS (2022) Temporal analysis of melanogenesis identifies fatty acid metabolism as key skin pigment regulator. *PLoS Biol.* **20**. e3001634. DOI: 10.1371/journal.pbio.3001634 (**IF: 9.593**)
3. Aggarwal P and **Bhavesh NS** (2021) Hinge like domain motion facilitates human RBMS1 protein binding to proto-oncogene *c-myc* promoter. *Nucleic Acids Res.* **49**, 5943-5955. DOI: 10.1093/nar/gkab363. (**IF: 16.600**)
4. Kumari P and **Bhavesh NS** (2021) Human DND1-RRM2 forms a non-canonical domain swapped dimer. *Protein Sci.* **30**, 1184-1195. DOI: 10.1002/pro.4083 (**IF: 8.000**)
5. Pandey NK, Verma G, Kushwaha GS, Suar M and **Bhavesh NS** (2020) Crystal structure of the usher chaperone YadV reveals a monomer with the proline lock in closed conformation suggestive of an intermediate state. *FEBS. Lett.* **594**, 3057-3066. DOI: 10.1002/1873-3468.13883. (**IF: 3.864**).
6. Bhatt H, Ganguly AK, Sharma S, Kushwaha GS, Khan MF, Sen S and **Bhavesh NS** (2020) Structure of an unfolding intermediate of an RRM domain of ETR-3 reveals its native-like fold. *Biophys. J.* **118**, 352-365. DOI: 10.1016/j.bpj.2019.11.3392 (**IF: 3.699**)
7. Ganguly AK, Verma G and **Bhavesh NS** (2019) The N-terminal RNA recognition motif of PfsR1 confers semi-specificity for pyrimidines during RNA recognition. *J. Mol. Biol.* **431**, 498-510. DOI: 10.1016/j.jmb.2018.11.020. (**IF: 6.151**)
8. Kashyap M, Ganguly AK and **Bhavesh NS** (2015) Structural delineation of stem-loop RNA binding by human TAF15 protein *Sci. Rep.* **5**, 17298 (1-14). DOI: 10.1038/srep17298 (**IF: 4.996**)
9. Anand A, Verma P, Singh AK, Kaushik S, Pandey R, Shi C, Kaur H, Chawla M, Elechalawar CK, Kumar D, Yang Y, **Bhavesh NS**, Banerjee R, Dash D, Singh A, Natarajan VT, Ojha AK, Aldrich CC and Gokhale

- RS (2015) Polyketide quinones are novel intermediate electron carriers during mycobacterial respiration in oxygen-deficient niches *Mol. Cell.* **60**, 637-650, DOI: 10.1016/j.molcel.2015.10.016 (**IF: 19.328**)
10. Honnappa S, Montenegro-Gouveia S, Weisbrich A, Damberger FF, **Bhavesh NS**, Jawhari H, Grigoriev I, van Rijssel FJA, Buey RM, Lawera A, Jelesarov I, Winkler FK, Wüthrich K, Akhmanova A and Steinmetz MO (2009) A universal EB1-binding motif acts as a microtubule tip localization signal *Cell* **138**, 366-376. DOI:10.1016/j.cell.2009.04.065. (**IF: 66.85**)

Research grants

Total: 12. From DBT, DST, AYUSH. Fund generated: ₹ 2137.74 lakhs

Book Edited

1. Suar M, Misra N and **Bhavesh NS** (Eds.) (2021) *Biomedical Imaging Instrumentation- Applications in Tissue, Cellular and Molecular Diagnostics*. 1st Edition. (Primers in Biomedical Imaging Devices and Systems Series). ISBN 978-0323-85650-8, 032-3856-500 Academic Press, Elsevier Science.

Media coverage

- ICGEB finds distinct biomarkers for dengue, chikungunya. *The Hindu*, 12 December 2016 (Page 2)
- Dengue or chikungunya: Solving doctors' dilemma. doi:10.1038/nindia.2015.160 Published in *Nature India* online 2 December 2016
- Chikungunya and dengue co-infection. *India Bioscience*. Published online 2 January 2017
- ALS progression mechanism unraveled. doi:10.1038/nindia.2015.159 Published in *Nature India* online 27 November 2015
- Study on RNA recognition by nucleic acid binding protein TAF15 reveals a unique binding mechanism. *India Bioscience*. Published online 29 December 2015
- Clue to Hawking disease emerges. *The Telegraph*, 30 November 2015 (Page 3)
- Desert fungus to help grow crops in saline soil. doi:10.1038/nindia.2013.142. Published in *Nature India* online 25 October 2013
- Silk protein for low back pain. doi:10.1038/nindia.2012.139. Published in *Nature India* online 25 September 2012