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## Education

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- Ph.D, Bioprocess Engineering/Industrial Biotechnology & Biofuels, IIT Kharagpur, India.
- M.Tech, Biotechnology, Andhra University, India.
- B.Pharm, Pharmaceutical Sciences, Osmania University, India.

## Appointments

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- ❖ March 1, 2021 – Till date, Associate Professor, Dept. of Biotechnology & Bioinformatics, Jaypee University of Information Technology, India
- ❖ September 30, 2016 – February 28, 2021, Assistant Professor (Senior Grade), Dept. of Biotechnology & Bioinformatics, Jaypee University of Information Technology, India
- ❖ November 1, 2013 – September 30, 2016, Asst. Professor (Grade-II), Dept. of Biotechnology & Bioinformatics, JUIT, HP, India.
- ❖ October 8, 2013 – October 31, 2016, Asst. Professor (Grade-I), Dept. of Biotechnology & Bioinformatics, JUIT, HP, India.
- ❖ October 6, 2011–October 5, 2013, A4U Postdoctoral Researcher, Dept'de Enginyeria Quimica, Universitat Autònoma de Barcelona, Spain.
- ❖ August 31, 2010- September 21, 2011 Assistant Professor (Grade-I), Dept. of Biotechnology & Bioinformatics, JUIT, HP, India
- ❖ Jan 6, 2006- July 31, 2010, Institute Research Fellow, Microbial Biotechnology & DSP Laboratory, IIT Khargpur, India.
- ❖ June 28, 2005-December 24, 2005, Lecturer, Dept. of Biotechnology, MIC College of technology, India
- ❖ Dec 1, 2003 –April 11, 2005, Lecturer, Dept. of Biotechnology, Bapatla Engineering college, India
- ❖ November 18, 2000–November 25, 2001, Assistant Manufacturing Chemist, DOMAGK Pharmaceuticals Pvt., Ltd., India.

## Research expertise

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- **Fermentation technology:** Production of industrial enzymes through solid state and submerged fermentations & its scale up studies.
- **Downstream processing:** Purification and characterization of industrial enzymes
- **Immobilization Technology:** Immobilization of enzymes by adsorption, cross linking, covalent, entrapment techniques & its characterization
- **Biocatalysis:** Lipase mediated synthesis of flavor esters
- **Biofuels:** Lipase mediated transesterification of edible, non-edible, waste oils to fatty acid methyl esters (Biodiesel) & its characterization
- **Microalgal Technology:** Production of therapeutic enzymes and nutraceuticals
- **Microbial Fuel Cells:** Studies on utilization of complex carbon sources such as Methanol and Lignocellulosics for MFC's
- **Biodetergents:** Usage of lipase and proteases in Biodetergent formulation
- **Environmental Biotechnology:** Algal-mediated bioremediation, Biotechnological approaches for E-waste utilization
- **Food Biotechnology:** Microbial production of pectinolytic enzymes and its usage in debittering and clarification of fruit juices
- **Enhanced Biological Phosphorus Removal:** Pilot plant studies on Modeling of PAO-GAO competition for phosphorus removal using EBPR
- **Statistical packages:** MINITAB, STATISTICA and DESIGN EXPERT
- **Soft computing skills:** Genetic algorithm, Differential evolution, Particle Swarm and Artificial Bee Colony optimization approaches.

## Honours & Fellowships

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- ✓ 2022 & 2021, Listed in "AD Scientific index: World Scientist and University Rankings".
- ✓ 2021 & 2020, Listed in Top 2% World's Scientists (2020, Table\_1\_Authors\_Singleyr\_2020) and (2019, Table S7) by Stanford University Rankings, USA.
- ✓ Serving as an International Advisory Panel Member, Elsevier
- ✓ Serving as an "Associate Editor" in "Frontiers in Energy Research (IF: 4.008)"
- ✓ Serving as a "Review Editor" in "Frontiers in Bioengineering and Biotechnology (IF:5.890)" and "Frontiers in Catalysis"
- ✓ Editorial Board Member in "Bioengineered (IF:3.269)", "BMC Biotechnology (IF:2.563)" and "Journal of Chemistry (IF:2.506)".
- ✓ Serving as a "Reviewer" for Science Direct, Frontiers, RSC and Springer Journals.
- ✓ SERB-ITS Travel Grant, 2017
- ✓ A4U Postdoctoral Fellowship, Spain, 2011 -2013
- ✓ Institute Research Fellowship, IIT Kharagpur, 2006-2010
- ✓ GATE - MHRD Fellowship, 2002-2003

## Patents / Research publications / Book Chapters / Conference papers

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### Patents (Granted)

- Prof. Banerjee R, Kumari A, Mahapatra P and **Garlapati VK**, “Enzymatic transesterification of Jatropha Oil” (IPA No. 1728/KOL/2007/ dated 2007-12-26). (National) (**Patent Number: 291288**)
- Prof. Banerjee R, **Garlapati VK**, Kumari A, Mahapatra P, Kant R and Prof. Das P, “Enzymatic transesterification of simarouba Oil” (IPA No. 1431/KOL/2008 dated 2008-08-22). (National) (**Status: In order for Grant under Section 43, awaiting NBA approval**)

### Patents (Filed)

- Prof. Banerjee R, Kumari A, Mahapatra P and **Garlapati VK**, “Enzymatic transesterification of Jatropha Oil” (2011, yet to receive PCT No). (International)

### Selected Research Publications in Peer-Reviewed Journals

- Wu P, Chen J, **Garlapati VK**, Zhang XX, Jenario FWV, Li X, Liu W, Chen C, Aminabhavi TM, Zhang X (2022) Chemical Engineering Journal:136534 (Accepted, In Press) (**IF:13.273**) ([DOI:10.1016/j.cej.2022.136534](https://doi.org/10.1016/j.cej.2022.136534))
- **Garlapati VK**, Parashar SK, Klykov S, Vundavilli PR, Sevda S, Shrivastava SK, Taherzadeh MJ (2022) Bioresource Technology 344 (B): 126254 (**IF: 9.642**).
- Chauhan M, Dutt S, Manjul AS, Singh B, **Garlapati VK** (2022) Chemosphere 299: 134429. (**IF:7.086**)
- Hemdan B\*, **Garlapati VK\***, Sharma S, Bhadra S, Maddirala S, Varsha K M, Motru V, Goswami P, Sevda S, aminabhavi T (2022) Environmental Research 204 (D), 112346. (**IF:6.498**)
- Ruschoni UCM, Mera AEM, Zamudio LHB, Kumar V, Taherzadeh MJ, **Garlapati VK**, Chandel AK (2022) Bioengineered 13(4): 9645–9661. (**IF:3.269**)
- Sharma S, Singh A, Sharma S, Kant A, Sevda S, Taherzadeh MJ, **Garlapati VK** (2021) Functional foods as a formulation ingredients in beverages: technological advancements and constraints. Bioengineered 12(2):11055-11075. (**IF:3.269**)
- Chintagunta AD, Zuccaro G, Kumar M, Jeevan Kumar SP, **Garlapati VK**, Postemsky PD, Kumar NSS, Chandel AK, Simal-Gandara J (2021) Frontiers in Microbiology 12:2080 (**IF: 5.640**)
- Kumar SPJ, **Garlapati VK**, Banerjee R, (2021) Biomass Conversion and Biorefinery (Accepted, In Press) (**IF: 4.987**). ([DOI: 10.1007/s13399-021-01799-x](https://doi.org/10.1007/s13399-021-01799-x))
- Sharma S and **Garlapati VK** (2021) Environmental Pollution 268 (A): 115837 (**IF: 8.071**).
- **Garlapati VK**, Mohapatra SB, Mohanty RC, Das P (2021) Tribology International 153: 106653 (**IF: 4.872**).
- Omidi M, Mashkour M, Biswas JK, **Garlapati VK**, Singh L, Rahimnejad M, Pant (2021) Topics in Catalysis (Accepted, In Press)( **IF: 2.91**) ([DOI: 10.1007/s11244-021-01503-3](https://doi.org/10.1007/s11244-021-01503-3))
- Sharma S and **Garlapati VK** (2020) International Journal of Environmental Science and Technology (Online) ([DOI: 10.1007/s13762-020-03006-2](https://doi.org/10.1007/s13762-020-03006-2))( **IF:2.860**)
- **Garlapati VK**, Chandel AK, Kumar SPJ, Sharma S, Sevda S, Ingle AP, Pant D (2020) Renewable and Sustainable Energy Reviews 130: 109977 (**IF: 14.982**).

- L, Bachheti RK, **Garlapati VK**, Chandel AK (2020) Biomass Conversion and Biorefinery (Online First) (DOI: 10.1007/s13399-020-00843-6) (IF: 4.987).
- Chandel AK, **Garlapati VK**, Kumar SPJ, Singh AK, Hans M, Kumar S (2020) Biofuels, Bioproducts and Biorefining 14:830–844 (IF: 4.102)
- Gour RS, **Garlapati VK**, Kant A (2020) Current Microbiology 77(5): 779-785 (IF: 2.188)
- Sevda S, **Garlapati VK**, Naha S, Sharma M, Ray SG, Sreekrishnan TR, Goswami P (2020) Journal of Bioscience and Bioengineering 129 (6): 647 -656. (IF:2.894).
- Banerjee R, Kumar SPJ, Mehendale N, Sevda S, **Garlapati VK\*** (2019) Renewable and sustainable Energy Reviews 101: 548-558 (IF: 14.982)
- Chandel AK, **Garlapati VK**, Singh AK, Antunes FAF, Silva SSD (2018) Bioresource Technology 264:370-381.( IF:.9.642).
- Parashar SK, Srivastava SK, Dutta NN, **Garlapati VK\***(2018) Engineering in Life Sciences 18:308-316. (IF:2.678)
- Gour RS, Bairagi M, **Garlapati VK**, Kant A (2018) Bioengineered 9(1): 98-107. (IF: 3.269)
- Samudrala PJK, **Garlapati VK**, Dash A, Banerjee R, Scholz P (01-2017) Algal Research 21: 138-147.( IF:4.401)
- Jha D, Jain V, Sharma B, Garlapati VK (2017) ChemBioEng Reviews 4(4):257-272. (IF:2.927)
- **Garlapati VK\*** (2016) E-waste in India and Developed countries: Management, Recycling, Business and Biotechnological Initiatives. Renewable and Sustainable Energy Reviews 54:874-881.( IF: 14.982)
- Chauhan M, Yennamalli RM, **Garlapati VK\*** (05-2016) Engineering in Life Sciences 16(8): 762-768 (IF:2.687)
- **Garlapati VK<sup>#</sup>**, Sharma D<sup>#</sup>, Goel G (2016) Bioengineered 7(2): 88-97. (IF:3.269)
- Montpart N, Ribot-Llobet E, **Garlapati VK**, Rago L, Baeza JA, Guisasola A (2014) International Journal of Hydrogen Energy 39 (2): 770-777. (IF:5.816)
- Chauhan M and **Garlapati VK\*** (2014) Industrial & Engineering Chemistry Research 53(2): 514-520. (IF:3.573)
- Chauhan M, Chauhan RS, **Garlapati VK\*** (2013) BioMed Research International, vol. 2013, Article ID 374967, 6 pages, 2013. (IF:3.411)
- Chauhan M and **Garlapati VK\*** (2013) Applied Biochemistry and Biotechnology 171(6): 1429-1443. (IF:2.926)
- Tayà C, **Garlapati VK**, Guisasola A, Baeza JA (2013) Chemosphere 93(4):612-618. (IF:7.086)
- **Garlapati VK<sup>#</sup>**, Kumari A<sup>#</sup>, Mahapatra P and Banerjee R (2013) Journal of Chemistry. Article ID 451652, 9 pages, 2013. (IF:2.506)
- Bhattacharya SS, **Garlapati VK** and Banerjee R (2011) New Biotechnology 28 (1):31-39. (IF:5.079)
- Mahapatra P, Kumari A, **Garlapati VK**, Banerjee R and Nag A (2010) Indian Journal of Microbiology 50(4): 396-403. (IF:2.461)
- **Garlapati VK**, Vundavilli PR and Banerjee R (2010) Applied Biochemistry and Biotechnology 162: 1350-1361. (IF:2.926)
- **Garlapati VK** and Banerjee R (2010) Engineering in Life Sciences 10(3):1-9. (IF:2.687)

- **Garlapati VK** and Banerjee R (2010) *Biotechnology and Bioprocess Engineering* 15(2):254-260. (IF:2.836)
- Mahapatra P, Kumari A, **Garlapati VK**, Banerjee R and Nag A (2009) *Journal of Molecular Catalysis B: Enzymatic* 60:57–63.( IF:5.062)
- Mahapatra P, Kumari A, **Garlapati VK**, Banerjee R and Nag A (2009) *Biocatalysis and Biotransformation* 27(2): 124-130. (IF:2.181)
- Kumari A, Mahapatra P, **Garlapati VK** and Banerjee R (2009) *Biotechnology for Biofuels* 2:1(IF:6.040)
- Kumari A, Mahapatra P, **Garlapati VK**, Banerjee R and Dasgupta S (2009) *Food Technology and Biotechnology* 47 (1): 13–18. (IF:3.918)
- Kumari A, Mahapatra P, **Garlapati VK** and Banerjee R (2008) *Bioprocess and Biosystems Engineering* 31:291–298. (IF:3.210)

## Books

- Banerjee R, **Garlapati VK**, Samudrala PJK (2019) *OMICS-based Approaches for Plant Biotechnology*. Wiley-Scrivener Publishing House, Austin. USA. (ISBN:9781119509936) (<https://www.wiley.com/en-us/OMICS+Based+Approaches+in+Plant+Biotechnology-p-9781119509936>)

## Selected Book Chapters

- Kumar SPJ, **Garlapati VK**, Gujjala LKS, Banerjee R (2021) Technologies for oil extraction from oilseeds and oleaginous microbes. In: *Three Phase Partitioning :Applications in Separation and Purification of Biological Molecules and Natural Products*. (MN Gupta and Ipsita Roy, Editors), Elsevier, pp.243-266. (ISBN: 978-0-12-824418-0) (<https://doi.org/10.1016/C2020-0-01235-1>)
- **Garlapati VK**, Sevda S, Sharma S (2021) Photosynthetic biogas upgrading - An attractive biological technology for biogas upgrading. In: *Emerging Technologies and biological systems for biogas upgrading* (Aryal N, Ottosen LDM, Kofoed MVW and Pant D, Eds). Elsevier, USA, 383-409 (ISBN: 9780128228081)
- Kumar SPJ, Gujjala LKS, **Garlapati VK**, Banerjee R (2021) Technologies for oil extraction from oilseeds and oleaginous microbes: A comprehensive review. In: *Recent Trends in Oil Extraction* (MN Gupta and Ipsita Roy, Editor), Part –II, Elsevier , USA (Accepted, In Press)
- Sevda S and **Garlapati VK**, Sharma S, Sreekrishnan TR (2021) Potential of High Energy Compounds: Hythane Production. In: *Delivering Low-Carbon Biofuels with Bioproduct Recovery* (Dr Lakhveer Singh & Dr. Durga Madhab Mahapatra, Eds), Elsevier, USA (Accepted, In Press) (ISBN: 9780128218419)
- **Garlapati VK**, Naha S, Sharma S, Goswami P, Sevda S (2020) Electro-active biofilms (EAB): Role in a Bioelectrochemical System for waste water treatment and Bioelectricity generation. In: *Microbial Biofilms: Properties and Applications in the Environment, Agriculture, and Medicine* (Abdul Bakrudeen Ali Ahmed, Ed), Taylor and Francis, CRC Press , USA. pp.207-226 (ISBN: 9780367415068)

- E. Mier-Alba, Sánchez-Muñoz S, Gonçalves F, **Garlapati VK**, Balagurusamy N, Silva SS, Chandel AK (2020) Comparative Analysis of Biogas with Renewable Fuels and Energy: Physico-Chemical Properties, and Carbon Footprints. In: Biogas Production Technologies (AK Chandel and Nagamani, Eds) Springer Verlag, Germany (Accepted, In Press)
- Mehendale N, Kumar SPJ, Mani NK, Sevda S, Naha S, Sharma S, **Garlapati VK** (2020) Microfluidics in Lipid Extraction. In: Handbook on Miniaturization in Analytical Chemistry (Hussain MC, Editor) Elsevier, USA. pp.21-34. (ISBN: 9780128197639)
- Singhal SR, Mani NK, Kodgi A, Mehendale N, Sharma S, **Garlapati VK** (2020) Miniatured Microfluidics Heuristics towards the detection of polluting molecules in the environment. In: Handbook on Miniaturization in Analytical Chemistry (Hussain MC, Editor) Elsevier, USA. pp.221-235 (ISBN: 9780128197639)
- Sevda S, **Garlapati VK**, Sharma S, Bhattacharjee U, Pandey L, Sreekrishnan TR (2020) Oil and petrochemical industries wastewater treatment in bioelectrochemical systems. In: Integrated Microbial Fuel Cells for Wastewater Treatment (Abbassi R, Khan F, Yadav A and , Garaniya V, (Eds.). Elsevier, USA, pp. 157-173 (ISBN: 9780128174937)
- Bhatia L, **Garlapati VK**, Chandel AK (2019) Scalable Technologies for Lignocellulosic Biomass Processing into Cellulosic Ethanol. In: Horizons in Bioprocess Engineering (Eds. RavindraPogaku), Springer Nature, Switzerland AG, pp.73-90. (ISBN:9783030290689).
- Sharma S, Gyeltshen T, Sevda S, **Garlapati VK** (2019) Microalgae in Bioelectrochemical Systems: Technological Interventions. In: Biovalorisation of Wastes to Renewable Chemicals and Biofuels (R. NavaniethaKrishnaraj and Rajesh Sani (Eds.). Elsevier, USA, pp.361-371. (ISBN: 9780128179512)
- **Garlapati VK**, Tewari S, Ganguly R(2019) LCA of First-, Second- generation, and MicroalgaeBiofuels. In: MajidHosseini (Ed.),*Advances in Feedstock Conversion Technologies for Alternative Fuels and Bioproducts*. Elsevier, Imprint: Woodhead Publishing., USA, pp. 355-371. (ISBN: 9780128179376)(DOI: 10.1016/B978-0-12-817937-6.00019-9)
- Parihar NS, **Garlapati VK**, Ganguly R (2018)Stabilization of black cotton soil using waste glass. In: ChaudheryMustansar Hussain (Editor), *Handbook On Environmental Materials Management*, Springer International Publishing AG, Switzerland, pp. 1-16 (ISBN: 978-3-319-73645-7)
- Ganguly R and **Garlapati VK** (2017) Comparative account on carbon footprints of burning gasoline and ethanol. In: AnujChandel and Marcos Henrique Luciano Silveira (Eds.), *Sugarcane bio-refinery: Technologies, commercialization, policy issues and paradigm shift*. Elsevier Science Publishing Co Inc., USA, pp. 241-252 (ISBN: 9780128045343)
- Anuj K. Chandel , Latika Bhatia, Vijay Kumar Garlapati, Lakshmeshri Roy, Anju Arora (2017). Biofuel Policy in Indian Perspective: Socioeconomic Indicators and Sustainable Rural Development. In Anuj K. Chandel and Rajeev K. Sukumaran (Eds.), *Sustainable Biofuels Development in India*, Springer International Publishing AG, Switzerland, pp.459-488. (ISBN:9783319502175).

## Selected Papers presented in Symposium / Conference

- Sharma S and **Garlapati VK**, “Microalgae-based Bioremediation of the radiographic waste solution” oral presentation at *International Conference on Application of Biotechnology in Industry and Society -2019 (ABIS-2019)*, November 14-16, 2019, NIT Jalandhar - 144011, Punjab, India.
- Sevda S, Sharma S, Garlapati VK, “Microfluidics in bioelectrochemical system: Technological considerations and future prospects” Poster Presentation at *Research Conclave 2019*, March 14-17,2019, IIT Guwahati -781039, India.
- **Garlapati VK**, Vundavilli PR and Banerjee R., “Optimization of Flavour Ester Production Through Artificial Bee Colony Algorithm” *Oral presentation at IEEE International Conference on Image Information Processing (ICIIP 2017)*, December 21-23, 2017, Jaypee University of Information Technology (JUIT), Wagnaghat, HP- 173234, India.
- **Garlapati VK**, Shahi NV, Sharma R., “Evaluation of lipase for its formulation additive in bio-based toothpaste and contact lens solution” Oral presentation at *"The 13th Asian Congress on Biotechnology (ACB 2017) " Bioinnovation and Bioeconomy"*, July 23-27, 2017, KhonKaen, Thailand.
- Montpart N, Ribot E, **Garlapati VK**, Rago L, Baeza JA, Guisasola A.,” Systematic development of anodic syntrophic consortia for bioelectrochemical hydrogen production from a wider range of carbon sources” Oral presentation at *4<sup>th</sup> International Microbial Fuel Cells Conference*, 1-4 September 2013, Cairns, Queensland, Australia
- Chauhan M and **Garlapati VK.**, “Production of a novel Halo – Thermo - Solvent-Detergent tolerant Lipase by a newly isolated halophilic *Staphylococcus arlettae* in Submerged fermentation” poster presentation at *International Conference of Industrial Biotechnology, IX Convention of BRSI (ICIB -2012)*, November 21 – 23, 2012, Punjabi University, Patiala, India.
- **Garlapati VK** and Banerjee R., “*Solvent-free Synthesis of Octyl Acetate by Transesterification Catalyzed by Immobilized Lipase*”, Oral presentation at *BioMicroWorld2011 - IV International Conference on Environmental, Industrial and Applied Microbiology*, September 14-16, 2011, Torremolinos (Malaga), Spain.
- **Garlapati VK**, Vundavilli PR and Banerjee R., “*Integration of RSM Model for Optimization of Immobilized Lipase Mediated Solvent-free Synthesis of Flavour Ester by Genetic Algorithm*” Poster presentation at *IEEE International Conference on Image Information Processing (ICIIP 2011)*, November 3-5, 2011, Jaypee University of Information Technology (JUIT), Wagnaghat, HP- 173234, India.
- **Garlapati VK** and Banerjee R., “*Solvent – free Synthesis of Methyl Butyrate by Transesterification Catalyzed by Immobilized Rhizopusoryzae NRRL 3562 Lipase*”, Oral presentation at *5th International Congress on Biocatalysis*, August 29- September 2, 2010, Hamburg, Germany.

## **Invited Talks**

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- Given invited talk on “Conversion of Waste to Biofuels, Bioproducts and Bioenergy”, in BECAR (Bioprocessing for Energy and Carbon from Agro Residues) 2018 work shop at School of Basic Sciences, Indian Institute of Technology, Mandi, HP-175005, India, from , Jan 23-Jan 24, 2018.
- Given invited talk on “Bioprocess Engineering aspects towards Biotechnological Products”, in ICAEBS (International Conference on Recent Trends in Agriculture, Environment & Bio Sciences) 2018 at Chandigarh, Punjab-160002, India, from , Feb 22-Feb 24, 2018.

## **Dissertation Guided**

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- PhD Dissertation - 3 (Completed in Bioprocess Engineering) + + 1 (On going)
- M.Tech /MSc/ DD Dissertation - 8 ; B.Tech Dissertation - 13 + 2 (On going)

## **Courses Taught /Teaching:**

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- Bioprocess Engineering Bioprocess Plant Design
- Bioprocess Engineering and Technology Traditional Bioprocesses and their upscaling
- Industrial Biotechnology Industrial Enzymes
- Food Biotechnology Manufacturing Processes and Industrial Products
- Bioenergy and Biofuels Sustainable Technologies for Waste Management
- Environmental Sciences

## **Membership in professional societies**

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- 🇮🇳 Life member in Biotech Research Society of India (BRSI) (LM 1121)
- 🇮🇳 Life member in Association of Microbiologists of India (AMI) (3142-2011)
- 🇮🇳 Member in World Bioenergy Association (WBA)
- 🇮🇳 Member in European Federation of Biotechnology (EFB)
- 🇮🇳 Member in Asian Federation of Biotechnology (AFOB)
- 🇮🇳 Member in American Chemical Society (ACS) (31174379)
- 🇮🇳 Member in Association of Biotechnology Led Enterprises (ABLE)