

## Dr. Debajit Borah

### Associate Professor

- B.Sc. (Bangalore University), M.Sc. (HNB Garhwal University), Ph.D. (Dibrugarh University)
- Research interest: Environmental Microbiology, Aerobiology, Microbial Bioremediation, Nanobiotechnology

### Experience:

- **Associate Professor**, Department of Biotechnology, The Assam Royal Global University-781035, India [2022-02 till date]
- **Assistant Professor**, Department of Biotechnology, The Assam Royal Global University-781035, India [2019-08 to 2022-01]
- **Assistant Professor**, Centre for Biotechnology and Bioinformatics, Dibrugarh University-786004, India [2011-09 to 2019-07]
- **Visiting Scientist**, National Engineering School of Sfax (ENIS-Ecole Nationale D'ingénieurs De Sfax), Tunisia [2018-03 to 2018-04]

### List of additional duties and responsibilities:

1. Deputy Exam Superintendent, RGU (04/12/2020 to 18/11/2021).
2. Assistant Exam Superintendent, RGU (19/11/2021 till date).
3. Coordinator, Institutional Patent Filing Committee, RGU (23/09/2021 till date).
4. Member of the academic review committee of School of Biosciences, Institute of Management Studies (IMS), Ghaziabad.

### List of Research Scholars pursuing Doctoral Degree:

Sl. No.	Date of admission	Reference No.	Title of Ph.D. of work	Status
1	07/02/2020	RGU/ACA/Ph.D./URC /2020-21/86, Dated: 22.06.2022	<i>Biosurfactant mediated green synthesis of metal nanoparticles for enhancing seed germination and antimicrobial applications</i>	Ongoing
2	15/09/2021	RGU/ACA/Ph.D./URC /2022-23/118, Dated: 12.08.2022	<i>Isolation and characterization of azo-dye degrading indigenous soil microbes and exploring its bioremediation potential</i>	Ongoing

### List of Granted Patents:

1. A method for production of rice beer. **Indian Patent no. 383241 (Date of grant: 30/11/2021)**. Application: 201731032460, Dated: 13/09/2017. Published: 27/10/17. Inventors: Pradip Kumar Gogoi, Debajit Borah, and Priyanku Bordoloi. No. of pages: 25, No. of claims: 1, international classification: C12C11/00.
2. Cost effective household procedure of the production and packaging of dry fish with good odour and improved flavour and longer shelf life, **Indian Patent no. 386880 (Date of grant: 19/01/2022)**.

Application: 409/KOL/2015 A, Published: 04/03/2016, filed: 10/04/2015, Inventors: Pradip Kumar Gogoi, and Debajit Borah, No. of pages: 12, Claims: 2, International classification: A23L17/10.

### **List of Patents filed**

1. Formulation of a novel Biopesticide. Inventors: Pradip Kumar Gogoi, Debajit Borah, Dhiren Phukan, Abhijit Saikia. Application: 201631028309. Published: 04/11/2016, filed: 19/08/2016, No. of pages: 6, Claims: 3, International classification: A01N63/00. (**Reply Filed/ Application in amended examination**)
2. Novel eco-friendly formulations for the preparation of termite and fungus proof wood and bamboo with higher tensile strength and longer functional life. Inventors: Pradip Kumar Gogoi, Juthika Sonowal, Debajit Borah. Application: 201631028310. Published: 04/11/2016, filed: 19/08/2016, No. of pages: 15, Claims: 7, International classification: A01N63/00.

### **International visits:**

1. Visited Pattaya, **Thailand** for presenting paper in the "25th International Conferences on Engineering and Natural Sciences" on 31st January, 2016.
2. Visited Dubai, **UAE** for presenting paper entitled "Molecular Characterization of biosurfactant producing stress tolerant *Bacillus cereus* DRDU1 isolated from an automobile engine" in the "International Conference on Environment and Bioscience (ICEB-18)" held on 24th March, 2018.
3. Visited Sfax, **Tunisia** as visiting scientist to National Engineering School of Sfax (ENIS), Tunisia under DST funded Indo-Tunisian joint project, 2018 during 26th March to 2nd April, 2018.

### **Awards and achievements:**

1. Institutional recognition award for the research activities carried out in the year 2020 from The Assam Royal Global University, Guwahati.
2. Winner of "Idea Exposition Award" on "Innovations in Agriculture and Sustainability" with an exposure grant of Rs. 50,000/- (fifty thousand only) organized by DBT-BIRAC Regional Innovation Centre (BRIC) in collaboration with Idea Knowledge Park, Hyderabad and Guwahati Biotech Park, Guwahati during July 16-17, 2020.
3. 2<sup>nd</sup> Prize along with a cheque of Rs. 25,000/- (twenty five thousand only) in the "Assam Biotech Conclave 2017 (Jan 5-6, 2017)" organized by IIT-Guwahati Biotech Park in connection with "Talent Search Contest on Innovative Research Ideas Leading to Entrepreneurial Venture in Biotechnology and Allied Area".
4. Institutional recognition for the research activities carried out in the year 2017 from Dibrugarh University, Dibrugarh on 26<sup>th</sup> Jan 2017.
5. Received CICS (Centre for International Co-Operation in Science, Govt. of India) International Travel Fellowship for attending International Conference in Pattaya, Thailand 2016.
6. "The IRES Excellent Paper award" for oral presentation in the "25th International Conferences on Engineering and Natural Sciences" held in Pattaya, Thailand on 31st January, 2016.
7. Budding Researcher Award for oral presentation in the 1<sup>st</sup> International Conference on "New Horizons in Pharmaceutical and Biomedical Sciences" (Jan 12-13, 2013), organised by Sheetal Life Sciences (P) Ltd., Dehradun and sponsored by the Govt. of Uttarakhand.
8. Invited as a panel expert in a panel discussion on "How to write an effective introduction and review of literature for a research paper" by Garden City University Bangalore, held on 7<sup>th</sup> May 2021.
9. Invited lecture on "Microbial isolation, characterization and molecular identification" in the National Webinar on "Microbial isolation, characterization and identification" organized by Depat. Of Zoology

and Eco Club, Sibsagar Girls' College in association with Library and Information Science Professional Association (LISPA), Assam on 30<sup>th</sup> July 2020.

10. Invited as Sessional Chairman and Invited Speaker in PharmaNanotech 2018 (DST-SERB sponsored national seminar on Emerging Global Trends in Pharmaceutical Nanotechnology) organized by Department of Pharmaceutical Sciences, Dibrugarh University during November 23-24, 2018.
11. Invited as resource person in DBT Sponsored Workshop on Introduction to Biotechnological Tools & Techniques, at Dibru College, Dibrugarh, 2013.
12. Invited as resource person in DBT Sponsored Workshop on Microbial Isolation, Characterization & its Application in Biotechnology, at Dibru College, Dibrugarh, 31<sup>st</sup> October, 2013.
13. Invited as resource person in DBT Sponsored Workshop on Microbial Isolation, Characterization & the Role of Databases and Search Engines in Research, at Dibru College, Dibrugarh, 8<sup>th</sup> November, 2013.
14. Invited as resource person in DBT Sponsored Workshop on Molecular Biology Techniques Involved in Present Day Degree Level Curriculum, at Dibru College, Dibrugarh, November 25-27, 2014.
15. Invited as resource person in DBT Sponsored Workshop on Basic Technical Applications in Bioinformatics and Molecular Biology, at Moran College, January 23-25, 2015.
16. Invited as resource person in DBT BLiSS Sponsored Workshop on Scope and Aspect of Biotechnology, at Moran Higher Secondary School, Moran, Nov 14, 2015.

#### **List of extramural funded projects:**

1. **Title of the project:** Production of commercial grade banana fruit beer and assessment of its nutritional values. Total cost: INR 8,51,000/-, Funding agency: DBT-ALSBT Hub (Assam), DBT, Govt. of India under the scheme "DBT-ALSBT Hub (Assam) Micro-grants to Young Scientists of NER for Innovative Research". Duration: 2 years, Status: Ongoing, Role: PI (Memo No. 99/DRV/341/2022-23/Microgrants/5032-40, Dated: 31/10/2022).
2. **Title of the project:** Characterization of Biological aerosols in North-East India reference to the overall atmospheric environment and possible impact on microclimate and human health. Total cost: INR 43,93,200/-, Funding agency: Science and Engineering Research Board (SERB) (FILENO. ECR/2016/00132, Dated: 21/03/2017), Duration: 3 years, Status: Ongoing, Role: Co-PI.
3. **Title of the project:** Characterization of oil field water to mitigate a major environmental hazard with recovery of usable water. Total cost: INR 13,30,000/-, Funding agency: DST-Govt. of India and Ministry of Higher Education & Scientific Research, Tunisia (File no. DST/INT/TUNISIA/P-02/2017, Dated: 20/06/2017), Duration: 2 years, Status: Completed, Role: Co-PI.
4. **Title of the project:** Novel EOR technique for the depleted oil reservoirs of upper Assam Basin with simultaneous CO<sub>2</sub> Capture and Sequestration. Project partner: University of Edinburgh, United Kingdom. Total cost: INR 13,29,500/-, Funding agency: University Grant Commission (UGC) (File no. 184-1/2018(IC), Dated: 01/03/2018), Duration: 2 years, Status: Ongoing, Role: Co-PI.

#### **List of Publications (Total citations: 600+; H-index: 13, \*Corresponding author):**

1. Das I, Sonowal A, Gogoi B, Sharma B, Patowary K, and **Borah D\*** (2023): *Citrus maxima* (Burm.) Merr. fruit juice and peel extract mediated synthesis of silver nanoparticles (Ag NPs) and their applications as antimicrobial agents and plant growth enhancers; Kuwait Journal of Science; 50(1B): 1-13 (**Impact factor: 0.948**) (<https://doi.org/10.48129/kjs.19889>)
2. Das I, Gogoi B, Sharma B, **Borah D\*** (2022): Role of metal-nanoparticles in farming practices: an insight; 3Biotech. 12:294. <https://doi.org/10.1007/s13205-022-03361-6> (**Impact factor: 2.893**)
3. Pathak, B., Khataniar, A., Das, B., Upadhyaya, S., Medhi, A., Bhuyan, P.K., Buragohain, A.K., and **Borah, D.\*** (2022): Spatio-temporal diversity of biological aerosols over Northeast India: a metagenomic approach. Environmental Science and Pollution Research. <https://doi.org/10.1007/s11356-022-20323-w> (**Impact factor: 5.19**).
4. Puzari A, **Borah D**, Das P (2022): Binuclear Pd(II) complexes with multidentate Schiff base ligands: synthesis, catalysis, and antibacterial properties; Monatshefte für Chemie- Chemical Monthly. <https://doi.org/10.1007/s00706-022-02929-5> (**Impact factor: 1.613**)
5. Gogoi, B., Das, I., Gogoi, M., Charingia, D., Bandyopadhyay, T., and **Borah, D.\*** (2022): Bioremediation of motor oil-contaminated soil and water by a novel indigenous *Pseudomonas otitidis* strain DU13 and characterization of its biosurfactant; 3Biotech. 12:68 <https://doi.org/10.1007/s13205-022-03133-2> (**Impact factor: 2.893**).
6. Kumar, R., Rai, A.K., Phukan, M.M., Hussain, A., **Borah, D.**, Gogoi, B., Chakraborty, P., and Buragohain, A.K. (2021): Accumulating impact of smoking and co-morbidities on severity and mortality of COVID-19 infection: a systematic review and meta-analysis; Current Genomics. 22(5): 339 – 352 (**Impact factor: 2.689**).
7. Mahanta S., Chowdhury P., Gogoi N., Goswami N., **Borah D.**, Kumar R., Chetia D., Borah P., Buragohain A.K., and Gogoi B. (2021): Potential anti-viral activity of approved repurposed drug against main protease of SARS-CoV-2: an *in-silico* based approach; Journal of Biomolecular Structure and Dynamics. 39(10): 3802-3811 <https://doi.org/10.1080/07391102.2020.1768902> (**Impact factor: 5.235**).
8. Garg, A., **Borah, D.**, Trivedi, P., Chaturvedi, V., Gogoi, D., Chaliha, A.K., Ali, A.Z., Chetia, D., and Sarma, D. (2020): A simple work-up free, solvent free approach to novel aminoacid linked 1,4-disubstituted 1,2,3-triazoles as potent anti-TB agents; ACS Omega. 5(46): 29830–29837 (**Impact factor: 4.132**).
9. Hazarika M., Kalita G.D., Pramanik S., **Borah D.**, and Das P. (2020): Bio-functionalized anisotropic gold nanoparticles as efficient catalyst for nitrile hydration and hydrogenation of nitrophenol; Current Research in Green and Sustainable Chemistry 3: 10008 <https://doi.org/10.1016/j.crgsc.2020.100018>
10. Gogoi B., Kumar R., Upadhyay J., and **Borah D\*** (2020): Facile biogenic synthesis of silver nanoparticles (Ag NPs) by *Citrus grandis* (L.) Osbeck fruit extract with excellent antimicrobial potential against plant pathogens; SN Applied Sciences 2:1723 <https://doi.org/10.1007/s42452-020-03529-w>
11. Basumatary M., Das S., Gogoi M., Das I., Charingia D., and **Borah D\*** (2020): Evaluation of pilot scale in-vitro and *ex-situ* hydrocarbon bioremediation potential of two novel indigenous strains of *Bacillus vallismortis*; Bioremediation Journal. 24(2-3):190-203 (**Impact factor: 2.14**)
12. Pathak, B., **Borah, D.\***, Khataniar, A., Bhuyan, P.K., and Buragohain, A.K. (2020): Characterization of bioaerosols in Northeast India in terms of culturable biological entities along with inhalable, thoracic and alveolar particles; Journal of Earth System Science: 129: 141. (**Impact factor: 1.912**)
13. Kumar, R., Gogoi, B., and **Borah, D\*** (2019): Peptide Nucleic Acid (PNA): Can it be the future substitute for antibiotics? Current Science. 117(11): 1766-1767 (**Impact factor: 1.169**)

14. Chaubey, A., and **Borah, D.\*** (2019): *Naegleria fowleri* (a brain eating amoeba): are we aware of this? *Current Science*. 117(7): 1125 (**Impact factor: 1.169**)
15. Das, M., **Borah, D.**, Patowary, K., Borah, M., Khataniar, A., and Kakoti, B.B. (2019): Antimicrobial activity of Silver nanoparticles synthesized by using microbial biosurfactant produced by a newly isolated *Bacillus vallismortis* MDU6 strain; *IET-Nanobiotechnology*.13 (9): 967-973 (**Impact factor: 2.05**).
16. **Borah, D\***, Agarwal, K., Khataniar, A., Konwar, D., Gogoi, S.B., and Kallel, M. (2019): A newly isolated strain of *Serratia sp.* from an oil spillage site of Assam shows excellent bioremediation potential; *3Biotech*. 9(7):283. <https://doi.org/10.1007/s13205-019-1820-7> (**Impact factor: 2.893**).
17. Borah, T., Gogoi, B., Khataniar, A., Gogoi, M., Das, A., and **Borah, D\*** (2019): Probiotic characterization of indigenous *Bacillus velezensis* strain DU14 isolated from Apong, a traditionally fermented rice beer of Assam; *Biocatalysis and Agricultural Biotechnology*. 18: DOI: <https://doi.org/10.1016/j.bcab.2019.01.046>
18. **Borah, D\***, Gogoi, P., Agarwal, D., and Khataniar, A. (2018): Characterization of a newly isolated probiotic strain from *Oecophylla smaragdina*, an Edible insect popular among the indigenous communities of northeast India; *Indian Journal of Microbiology*. 59(1): 39-50. <https://doi.org/10.1007/s12088-018-0758-5> (**Impact factor: 2.461**)
19. **Borah, D\***, and Yadav, RNS (2018): Molecular characterization of biosurfactant producing *Bacillus cereus* strain DRDU1 for its potential application in bioremediation and further EOR studies; *Petroleum Science and Technology*. 36(19): 1605-1612. DOI: 10.1080/10916466.2018.1496104; (**Impact factor: 1.695**).
20. **Borah, D.**, Hazarika, M., Tailor, P., Silva, A.R., Chetia, B., Singaravelu, G., and Das, P. (2018): Starch-templated bio-synthesis of gold nanoflowers for in vitro antimicrobial and anticancer activities; *Applied Nanoscience*; 8(3):241-253. <https://doi.org/10.1007/s13204-018-0793-x> (**Impact Factor: 3.869**).
21. Hazarika, M., **Borah, D.**, Bora, P., Silva, A.R., and Das, P. (2017): Biogenic synthesis of palladium nanoparticles and their applications as catalyst and antimicrobial agent; *PLoS ONE*. 12(9): e0184936 (**Impact Factor: 3.752**).
22. **Borah, D\***, Gogoi, O., Adhikari, C., and Kakoti, B.B. (2016): Isolation and characterization of the new indigenous *Staphylococcus sp.* DBOCP06 as a probiotic bacterium from traditionally fermented fish and meat products of Assam state; *Egyptian Journal of Basic and Applied Sciences (Elsevier)*. 3(3): 232-240.
23. **Borah, D.\***, Yadav, RNS (2016): Bioremediation of petroleum based contaminants with biosurfactant produced by a newly isolated petroleum oil degrading bacterial strain; *Egyptian Journal of Petroleum* 26(1): 181-188.
24. **Borah, D.\***, Singh, V., Rahman, A., Gogoi, B., and Hazarika, M. (2016): Prevalence of Multidrug Resistant (MDR) Novel *Enterococcus faecium* Strain VDR03 in Broiler Chicken Meat Samples Collected from Dibrugarh Town, Assam (India); *Research Journal of Microbiology*. DOI: 10.3923/jm.2016.
25. **Borah, D\***, and Yadav, A.K. (2015): A Novel 'Green' Synthesis of Antimicrobial Silver Nanoparticles (AgNPs) by using *Garcinia morella* (Gaertn) Desr. Fruit Extract; *Nanoscience and Nanotechnology Asia*, 5(3): 25-31.
26. **Borah, D\***, and Yadav, RNS (2015): Plasmid Curing of a Novel Hydrocarbon Degrading *Bacillus cereus* Strain DRDU1 Revealed its Involvement in Petroleum Oil Degradation; *J Pet Environ Biotechnol* 6 (3):220. doi: 10.4172/2157-7463.1000220.

27. **Borah, D\***, Gogoi, D., Yadav, A.K., and Gogoi, M. (2015): Improper handling of harmful chemicals by small tea growers of Assam: Challenge to health and local environment; Journal of Commercial Biotechnology. 21(2):8-9. DOI: 10.5912/jcb702.
28. **Borah, D\***, Singh, V., Chaliha, A.K., Gogoi, D., and Mohamedkassm, N. (2014): New Ebola vaccine trial starts in humans – but how safe is it? Current science 01/2015; 108(1):10 (**Impact factor: 1.169**)
29. **Borah, D\***, Gogoi, B., and Gogoi, D. (2014): NASA Honors Indian Village entrepreneur and Inventor Udhab Bharali with 98 innovations; Current Science. 107(5):941 (**Impact factor: 1.169**)
30. **Borah, D\***, Gogoi, D., and Yadav, RNS (2015): Computer aided Screening, Docking and ADME study of Mushroom derived Compounds as Mdm2 inhibitor, a novel approach; National Academy Science Letters; 38(6): 469-473 (**Impact factor: 0.788**).
31. **Borah, D\***, and Yadav, R.N.S. (2014): Optimization of BH medium for Efficient Biodegradation of diesel, crude oil, and used engine oil by a newly isolated *Bacillus cereus* strain DRDU1 from an automobile engine; Biotechnology. 13(5): 181-185. DOI 10.3923/biotech2014.181.185.
32. **Borah, D\***, Chaliha, A.K., Gogoi, D., and Yadav, RNS (2014): GM tea: the need of the hour to reclaim India's leading position in the global tea market; Journal of Commercial Biotechnology. 20(3): 9-11.
33. Shah, S., **Borah, D**, and Yadav, RNS (2014): Extraction and Characterization of Peroxidase from *Camellia sinensis*. Proceeding of National Academy of Science (B-Biological Sciences). 84 (2):343-348. DOI 10.1007/s40011-013-0211-9. Published by Springer, USA. (Impact Factor: 0.396)
34. **Borah, D\***, Shivasharanappa, K., Hanchinalmath, J.V., Sundeeep, Y.S., and Talluri, V.S.S.L.P. (2014): Optimization and production of Alkaline Proteases from Agro byproducts using a novel *Trichoderma viridiae* strain VPG 12, isolated from agro soil; International Letters of Natural Sciences. 9:78-84.
35. **Borah, D\***, Gogoi, D., and Yadav, RNS (2014): Man of Honour: Jadav Payeng; The Forest Man of India; Current Science. Vol. 106(4):499 (**Impact factor: 1.169**)
36. Kardong, D., Verma, AK., Upadhyaya, S., and **Borah, D\*** (2013): Phytochemical and cytotoxic properties of wild *Sarchoclamyaspul cherrima* Goud from Assam, North Eastern India; International journal of pharmacy and pharmaceutical sciences. 5(4): 394-397.
37. **Borah, D\***, Deka, P., Bhattacharjee, P., Changmai, A., and Yadav, RNS (2013): *Ocimum sanctum* mediated silver nano particles showed better antimicrobial activities compared to citrate stabilized silver nano particles against multidrug resistant bacteria. Journal of Pharmacy Research. 7(6): 478-482. DOI: 10.1016/j.jopr.2013.06.018.
38. **Borah, D\***, More, S., and Yadav, RNS (2013): Construction of double chambered microbial fuel cell (MFC) using household materials and bacillus megaterium isolate from tea garden soil. The Journal of Microbiology, Biotechnology and Food Sciences. 3(1): 84-86. Published by Faculty of Biotechnology and Food Sciences, Nitra, Slovakia.
39. Iraqui, P., **Borah, D**, Kardong, D., and Yadav, RNS (2013): Qualitative and Quantitative screening of Phytochemicals of *Meliosomma pinnata* (Dermi), a forest based vegetable plant traditionally used by Mising community of Assam, India. International journal of pharmacy and pharmaceutical sciences. 5(2):200-203.
40. **Borah, D\***, Kumar, T., and Mishra, V (2012): Process optimization, partial purification and characterization of protease enzyme from *Bacillus altitudinis* (MCCB-0014). International journal of pharmacy and pharmaceutical sciences. 4(3):483-89.
41. **Borah, D\***, Yadav, RNS, Sangra, A., Shahin, L., Chaubey, AK (2012): Production, purification and characterization of nattokinase from *Bacillus subtilis*, isolated from tea garden soil samples of Dibrugarh, Assam; Asian journal of pharmaceutical and clinical research. 5(3):124-25, 2012.

42. **Borah, D\***, Yadav, RNS, Sangra, A., Shahin, L., Chaubey, AK (2012): Production, Purification and Process optimization of Asparaginase (an anticancer enzyme) from *E. coli*, isolated from sewage water; International journal of pharmacy and pharmaceutical sciences. 4(4):560-63.
43. **Borah, D\***, Buragohain, P., Saikia, A., and Yadav, RNS (2012): Synthesis and Evaluation of Antimicrobial Silver Nanoparticles on Multidrug-Resistant Bacterial Isolates from Urine Samples of Diabetic Patients and Infected Human Soft Tissues; BioNanoScience. 2(4):322-328. DOI 10.1007/s12668-012-0053-6 (Springer, USA).
44. **Borah, D\***, Parida, P., and Kumar, T (2012): Paper Currencies, a potential carrier of pathogenic microorganisms; International Journal of Applied Biology and Pharmaceutical Research 3(1):23-25.
45. **Borah, D\*** (2011): Isolation and molecular characterization of hydrocarbon degrading microorganisms isolated from automobile engines; Developmental Microbiology and Molecular Biology. 2(1):23-28.
46. **Borah, D\***, Chaudhary, VK (2011): Isolation and molecular characterization of hydrocarbon degrading microorganisms from tannery effluent; International Journal of Plant, Animal and Environmental Sciences. 1(2):110-14.
47. **Borah, D\***, Solanki, V., and Mishra, V (2011): Protein and molecular characterization of Clostridium spp. isolated from contaminated food and soil samples; International Journal of Applied Biology and Pharmaceutical Research. 2(3):189-93.
48. **Borah, D\***, and Mishra, V (2011): Phytochemical and antimicrobial effects of some indigenous medicinal plants; International Journal of Plant, Animal and Environmental Sciences. 1(1):71-73.
49. **Borah, D\***, and Mishra, V (2011): Production of Biofuel from fruit wastes; International Journal of Advanced Biotechnology Research 1(1):71-74.

#### **Books authored:**

1. Gogoi B., Das I., Begum S., Dutta G., Kumar R., and Borah D\* (2021): Microbes and their genes involved in bioremediation of petroleum hydrocarbon. In Inamuddin (eds) Microbial Bioremediation. Bentham Sciences (UAE) (accepted and in press).
2. Borah D., Chaubey A., Sonowal A., Gogoi B., and Kumar R. (2021): Microbial biosurfactants: preparation, properties and applications. In Inamuddin (eds) Microbial biosurfactants and their potential applications: an overview. Springer Singapore LLC. DOI: [https://doi.org/10.1007/978-981-15-6607-3\\_5](https://doi.org/10.1007/978-981-15-6607-3_5)
3. Biotechnology Lab. Practices; Authorship: Debajit Borah. Global Vision Publishing House, New Delhi. ISBN-978-93-81695-18-0 (Paperback), ISBN-978-81-8220-509-3 (Hardbound).
4. Environmental Biotechnology: Theory and Lab Practices; Authorship: Debajit Borah. Global Vision Publishing House, New Delhi. ISBN-978-81-8220-584-0 (Hardbound).
5. Borah D. (2018): Microbial Bioremediation of Petroleum Hydrocarbon: An Overview. In: Kumar V., Kumar M., Prasad R. (eds) Microbial Action on Hydrocarbons. Springer, Singapore. DOI: [https://doi.org/10.1007/978-981-13-1840-5\\_13](https://doi.org/10.1007/978-981-13-1840-5_13).
6. Borah D., and Sood K. (2019): Role of Microbes in Solid Waste Management: An Insight View. In Ashok Kumar Rathor (eds) in Zero Waste. Taylor and Francis. DOI: <https://doi.org/10.1201/9780429059247>. ISBN: 9780429059247.

### **Membership of Professional / Scientific Societies:**

1. Senior member of Asia-Pacific Chemical, Biological & Environmental Engineering Society, Hong-Kong (APCBEES), Member No.: 100553.
2. Member of "European Federation of Biotechnology".

### **Editorial member of journals:**

1. Frontiers in Sustainable Cities (Scopus indexed), ISSN: 2624-9634 (Online), published by Frontiers, London (UK) (<https://www.frontiersin.org/journals/sustainable-cities>).
2. Inventum Biologicum, ISSN: 2453-1226 (Online) (<https://www.worldbiologica.com/ib>).
3. Acta Scientific Biotechnology (<https://actascientific.com/ASBT-EB.php>).

### **Oral/poster presentation:**

1. Oral presentation in the "25th International Conferences on Engineering and Natural Sciences" held in Pattaya, Thailand on 31<sup>st</sup> January, 2016.
2. Paper entitled "Production of Bio fuel from fruit wastes" was presented in the "International Conference on New Horizons in Microbial Biotechnology & Pharmaceutical Sciences", during April 24<sup>th</sup>-25<sup>th</sup>, 2011.
3. Paper entitled "Indian currency carries pathogenic microorganisms" was presented in the "UGC sponsored state level seminar on Solid waste management".
4. Poster entitled "Indian currency carries pathogenic microorganisms" was presented in the "Workshop on Microbial Technology & its Application" organized by Dolphin institute in collaboration with Forest Research Institute, Dehradun.
5. Poster entitled "PNA (Peptide Nucleic Acid)" was presented in the Lecture series on Biotechnology organized by BCAS in collaboration with ONGC & Govt. of Uttarakhand, Dehradun.
6. Seminar attended on Phytochemistry & Ayurveda, Dehradun.
7. Participated in the academic and interaction session during "4<sup>th</sup> INSPIRE Internship Program/Science Conclave: A Congregation of Nobel Laureates and Eminent Scientists", an MHRD-DST initiative at IIT-A during Nov. 26-Dec. 02, 2011.
8. Paper entitled "Stress tolerant hydrocarbon degrading microbes in automobile engines" was presented in the "DBT sponsored national seminar on Biotechnology and sustainable development" held during Feb. 27-28, 2012 at Dibrugarh University.
9. Oral presentation in the 1<sup>st</sup> International Conference on New Horizons in Pharmaceutical and Biomedical Sciences (Jan 12-13, 2013), organised by Sheetal Life Sciences (P) Ltd., Dehradun and sponsored by the Govt. of Uttarakhand.
10. Poster entitled "Synthesis and Characterization of *Garcinia morella* (Gaertn) Desr. fruit extract mediated antimicrobial silver nanoparticles (AgNPs)" was presented in the international conference on "Harnessing the sub-Himalayan Plant Diversity for Human Welfare" during 11-13 March, at Dibrugarh University.
11. Participated in 4<sup>th</sup> Indian National Conference of ANRAP Palnts in Diabetes: Prospects and Challenges, at Dibrugarh University on 13 March, 2015.



**Workshops attended:**

1. Attended Faculty Development Program on “Essentials for Good Research” organized by Assam down town University, Guwahati during 27<sup>th</sup> May to 2<sup>nd</sup> June, 2020.
2. Attended National Level Faculty Development Programme on "Physics of Materials" organized by Department of Physics, Kalasalingam Academy of Research and Education, Tamilnadu from 8<sup>th</sup> to 14<sup>th</sup> June 2020.
3. Attended Virtual Faculty Development Program on “Importance of cross-disciplinary research in the post COVID-19 scenario: social perspectives” organized by Assam Rural Global University, Guwahati during 16<sup>th</sup> to 23<sup>rd</sup> June, 2020.
4. Attended one week faculty development programme on “Moodle Learning Management System” organized by Assam Women’s University in association with Spoken Tutorial, IIT Bombay from 22<sup>nd</sup> June to 26<sup>th</sup> June, 2020.
5. Attended one week faculty development programme on “Waste to Bioenergy” organized by Sharda University, Noida from 28<sup>th</sup> June to 4<sup>th</sup> July, 2020.
6. Attended 12 days training course on “Gene cloning, protein Biochemistry, Structural Biology & Bioinformatic” at DBT Biotechnology/Bioinformatics Training Centre at TATA memorial Advanced Centre for Treatment, Research & Education in Cancer, Mumbai during July 4<sup>th</sup> to 15<sup>th</sup> 2016.
7. Attended workshop on “Statistics in Clinical Trial” held during Nov. 17-18, 2011 at Dibrugarh University.
8. Workshop on Gene Cloning Techniques at Institute of Biosciences and Molecular Biology, Bangalore during 10<sup>th</sup> September to 9<sup>th</sup> October, 2006.
9. Workshop on Medical Microbial Techniques at Institute of Biosciences and Molecular Biology, Bangalore during 30<sup>th</sup> January to 28<sup>th</sup> February, 2006.
10. One day workshop on Patent Search organised by the IPR Cell of Dibrugarh University, on 23<sup>rd</sup> November, 2015.

**Lists significant journals of repute where served as reviewer:**

Sl No.	Name of the journal	Publisher	Impact factor
1	Chemosphere	Elsevier	5.77
2	Current Research in Green and Sustainable Chemistry	Elsevier	-
3	International Journal of Food Microbiology	Elsevier	4.187
4	Journal of Molecular Graphics and Modeling	Elsevier	2.079
5	Journal of Photochemistry and Photobiology B: Biology	Elsevier	4.3
6	3Biotech	Springer	1.798
7	Proceeding of National Academy of Science B: Biological Science	Springer	-
8	National Academy Science Letters	Springer	0.535
9	Arabian Journal of Geosciences	Springer	1.327
10	Journal of Genetic Engineering and Biotechnology	Springer Open	-
11	Bioremediation Journal	Taylor and Francis	1.78
12	Journal of Applied Microbiology	Wiley	3.066
13	Proceedings of the Royal Society B: Biological Sciences	The Royal Society Publishing	4.6

14	Indian Journal of Biotechnology	NISCAIR, CSIR	0.411
15	Current Science	IISc, Bangalore	0.735
16	Current Nanoscience	Bentham Science	1.836
17	SN Applied Sciences	Springer	-
18	Micro and Nano Letters	IET-Wiley	0.975
19	International Biodeterioration and Biodegradation	Elsevier	4.074
20	Journal of Polymers and the Environment	Springer	4.7
21	Arabian Journal of Chemistry	Elsevier	6.212
22	International Journal of Peptide Research and Therapeutics	Springer	2.191
23	Phytochemical Analysis	Wiley	3.024