

CURRICULUM VITAE

Debajit Kalita, FAELS.

Present address

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SAGANet profile : <http://saganet.org/profile/DebajitKalita>

SGAC profile : <https://spacegeneration.org/user/3377>



Academic Qualification

- Ph.D. (December, 2014 – Thesis submitted; waiting for final degree declaration) – Microbiology laboratory, North – Eastern Hill University (NEHU), India.
- B.Sc. (Botany) (January, 2005- June, 2008)– Gauhati University, India
- M.Sc.(Microbiology) (June, 2008-June, 2010) - Bangalore University, India.
- International diploma in Astrobiology (January, 2015 to March, 2015) – Indian Astrobiology Research Centre (IARC), Mumbai, India.
- Course on Radiation Emergencies (August, 2017-September, 2017) – Li Ka Shing Faculty of Medicine, Hong Kong University.
- Certificate in Basic German Language (A1 Level) (January, 2014 - June 2014) - English and Foreign Language University, India.
- Managing Safety and Health in the Science Laboratory (January, 2017- April, 2017) – Health and Safety Authority, Ireland.

Selected research publication (Citations 25)

1. **Kalita D.** and Joshi S.R. (2017) Study on bioremediation of Lead by exopolysaccharide producing metallophilic bacteria isolated from extreme habitat. *Biotechnology reports*, 16 : 48-57. (<https://www.ncbi.nlm.nih.gov/pubmed/29167759>)
2. Lyngwi N., Nangkhlow M., **Kalita D.**, Joshi S.R. (2016) Bioprospecting of Plant growth promoting bacilli and related genera prevalent in soils of pristine sacred groves: Biochemical and molecular approach. *PLoS ONE*, 11(4):e0152951. Doi: 10.1371/journal.pone.0152951. (IF.- 3.23). (<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0152951>)
3. **Kalita D.** and Dr. Baruah, P.K.(2013) “Isolation and characterization of PCP degrading bacterial strains of paper mill effluent of Morigaon district, Assam.” *Res. J. of Contemporary Concern*, Vol.8, pp.- 82-87, India.
4. M.M. Phukan, R.S. Chutia, R.Kumar, **Kalita D.**, B.K. Konwar and R. Katakai (2013) “Assessment of antimicrobial activity of bio-oil from *Pongamia glabra* VENT (Koroch), *Mesua ferrea* L. (Nahar) and *Parachlorella* spp deoiled cake”, *Int. J. of Pharm. and Biol. Sc. (USA)*, Vol. 4(4): 910 - 918.(IF.- 0.67). (<https://www.cabdirect.org/cabdirect/abstract/20143080333>)
5. Pathak MJ, Verma TK, **Kalita D.** Sankari D. (2012), Antimicrobial properties of marine bacteria isolated from the Bay of Bengal and their pharmaceutical prospects as antibiotics against multi-

Patent filed (Application number is "201731043111")

1. A method of production of Lead removing bacterial bioflocculant from *Arthrobacter nicotinovorans* and using it to treat wastewater.

Abstract/Proceeding Publications(National/International Conferences)

1. **Kalita D.** and Joshi S.R.(2016), "Adherence profile of a metallophilic extremophile *Providencia* species isolated from sediments of sulfur rich Hot Water Springs of Assam" 57th Annual conference cum international symposium of Association of Microbiologists of India (AMI), on "Microbes and Biosphere; What's New What's Next" in Gauhati University, Assam, India. Abstract No. EM-22.
2. **Kalita D.** and Joshi S.R.(2014), "Lead(Pb) tolerance by aerobic bacteria isolated from Uranium(U) rich subsurface soils of Domiasiat, Meghalaya." national seminar on "Recent trends in Science and technology", Department of science, Union Christian College(UCC), Shillong, Meghalaya.
3. **Kalita D.**, Sarma B. and Joshi S.R.(2014), "Lead (Pb) tolerant bacterial strains from uranium rich soil of Domiasiat in Meghalaya.", national seminar on "Conservation of biodiversity, national perspective and sustainable development", proceedings, ISBN: 978-93-84679-05-7, Deptt. of Botany, Morigaon College, Assam, India.
4. **Kalita, D** and Saikia, J.(2012) "Screening and development of biocontrol agent of some bacterial isolates against plant pathogenic fungi *Helminthosporium solani*", An international conference on "Anthropogenic Impact on Environment and Conservation Strategy", NEA, Ranchi, Jharkhand, India.

Book Chapter

1. S.R. Joshi, **Debajit Kalita**, Macmillan Nongkhaw, Pynskhem Swer and Rakshak Kumar (2014) "Metal-microbe interaction and bioremediation", DOI 10.1007/978-3-319-07665-2_12, ed. Radionuclide Contamination and Remediation Through Plants, Dr. Dharmendra Kumar Gupta and Clemens Walther, ISBN 978-3-319-07664-5, Springer, Switzerland, Pg.- 235-251. (https://link.springer.com/chapter/10.1007/978-3-319-07665-2_12)
2. S.R. Joshi and Debajit Kalita (2017) "Biological, chemical and nanosorption approaches in remediation of metal wastes". Remediation Measures for Radioactively Contaminated Areas. (Ed: Dharmendra Kumar Gupta and Anna Voronina, Springer, Switzerland (Accepted).

Special technical skills (Microbiology, Molecular Biology)

- Isolation and characterization (morphological, biochemical and 16Sr RNA) of extremotolerant (Metallophiles).
- Isolation and characterization of exopolysaccharide and their components analysis through Fluorescence microscopy, FACS, Eliza Reader, FTIR, GC-MS, LC-MS, SEM, TEM-EDX from of metallophiles.
- Bioinformatics Tools: Database search (GenBank-NCBI, EzTaxon, Ribosomal Database Project), Alignment Tools (NCBI-BLAST, CLUSTAL –W, MEGA, BioEdit) PCR (gradient and hot start techniques) identification of Pbr, Ars, PIB operon, RND operon system.

Achievement/Award/Prize

1. FEMS Early Career Scientist Award for 2017-2018.
2. CSIR International Travel Grant (ITG) 2017.
3. Senior Research Fellow (SRF) of DST, India (2015-2017).
4. Junior Research Fellow (JRF) of DST, India (2014-2015).
5. Project Fellow (PF) of DBT, India (2011-2014).

Invited Reviewer of International Journals

1. American Journal of Microbiology and Biotechnology (USA).
2. Journal of Microbiology Research (USA)
3. American Journal of Molecular Biology (USA)
4. African Journal of Microbiological Research (S.A.).

International and national workshop/seminar/conference attended

1. National workshop on “**Hands-on training on Techniques used in Biotechnological Research**” organized by Department of Biotechnology and Bioinformatics, NEHU, Shillong, India.
2. National workshop on “**Advances Applied Microbiology and Bioprocess Engineering**”, organized by department of Molecular Biology and Biotechnology (MBBT), Tezpur Central University, Assam, India.
3. Workshop on “**Capturing innovations for IPR protection in Tezpur Central University**”, organized by IPR Cell, Tezpur University, Assam, India.
4. GE healthcare sponsored hand on workshop on “**Tools of Proteomics**”, organized by Molecular Toxinology Laboratory, Deptt. of Molecular Biology and Biotechnology (MBBT), Tezpur Central University, Assam, India.

Area of Interest

- Astrobiology: Molecular evolution of **extremophiles, Archea** and their genetic adaptation to the extreme environments and proteomics study analogous to planetary analogue field study.
- Planetary habitability: Space habitability, experimental habitability studies, EPS mediated bacterial biofilm studies.

Membership of Professional Societies/Organization.

Honorary Fellow Member

1. Academy for Environment and Life Sciences (AELS) (Membership ID: **FAELS-159.2015**).

Member (Life and Annual)

1. Society for Biotechnologist, India. (Life Membership no. **L659**).
2. International Society of Exposure Science (ISES, America. Membership no.- ISES 74550)
3. SGAC Space Exploration Project Group (SEPG) (<http://spacegeneration.org/social/profile.html>)
4. Spanish Planetology and Astrobiology Network (REDESPA) (<http://www.icog.es/redespa/index.php/members/>)
5. European Low Gravity Research Association (ELGRA).
6. Astrobiology Society of Britain (ASB).
7. Astronomical Society of the Pacific.
8. The International Society for Subsurface Microbiology (ISSM), USA.

Personal Memorandum

Name : Debajit Kalita.
Father's Name : Bhagi Ram Kalita
Date of birth: : 01/01/1985.
Sex : Male
Nationality : Indian.
Religion : Hindu
Languages known: English, Hindi, Assamese, Bengali, German (Basic A1).
Marital status : Unmarried.
Hobbies : Science popularization writing, river rafting, waterfall rappelling, exploring.

Personal Strengths

- Profound ability to work individually and in a team to pursue research.
- Sincerity, self confidence and positive attitude with communication skill.
- Believing in honesty, hard & quality work.
- Active, patient & punctual, risk taking & innovative.

References.

1. S. R. Joshi, Ph.D
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Declaration

I do hereby declare that the information furnished above is true to the best of my information and belief.

Place: Shillong
Dated. – 19/02/2018


(Debajit Kalita)