

## *Curriculum vitae*

### **Dr. Ranjan Dutta Kalita**

#### **Associate Professor & Head of Dept.**

Department of Biotechnology  
School Coordinator, Royal School of Biosciences  
Assam Royal Global University  
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#### **Educational Qualifications**

Sl No	Name of Exam	Year	School/College Board/University	Subjects
1	PhD Mentor: Prof Alak Kumar Buragohain	2013	Tezpur University	Molecular Biology and Biotechnology
2	MSc	2006	Tezpur University	Molecular Biology and Biotechnology
3	BSc	2004	B Borooh College, Guwahati	Zoology (Hons), Botany, Chemistry, English
4	HSSLC	2001	B Borooh College, Guwahati	Physics, Chemistry, Mathematics, Biology, English, Alternative English
5	HSLC	1999	Don Bosco School, Panbazar, Guwahati	Maths, Science, Social Std, Assamese <sup>4</sup> , English <sup>3</sup> , General English, Computer Science

**NET/ SLET Qualification:** UGC-SLET (NE Region) Qualified, November 2014

**Recent Occupation:**

1. **Head of Department, Dept of Biotechnology, Assam Royal Global University, Guwahati, Assam (Sine January 1<sup>st</sup>, 2022)**
  2. **Coordinator, Royal School of Biosciences, Assam Royal Global University, Guwahati, Assam (Since September, 2018)**
  3. **Assistant Professor, Department of Biotechnology, Royal School of Biosciences, Assam Royal Global University, Guwahati, Assam (Since 1<sup>st</sup> August, 2018)**
  4. **Head of Department, Department of Applied Biology, University of Science and Technology, Meghalaya (March2017-31<sup>st</sup> July 2018)**
  5. **Assistant Professor, Department of Applied Biology, University of Scienceand Technology, Meghalaya (19/08/2015-31/07/2018)**
  6. **Research Associate, Department of Biotechnology, Gauhati University working in a DBT funded research project entitled “Nephroprotective therapeutic validation of ethnomedicinal plants of NE India against cisplatin induced chemotherapeutic toxicity”(09/01/2014-18/08/2015)**
  7. **Guest Faculty in the Department of Bioengineering and Technology, Gauhati University (January 2014- June2014).**
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**Specialization:**

**Plant Biotechnology (M.Sc.), Microbiology and Natural Product Chemistry (Ph.D.)**

**Research Experience:**

1. Research Associate, DBT Sponsored Project at GauhatiUniversity.
2. Short Term Visit at Visvabharati, Santiniketan for carrying out research on plant derived compounds against cancer celllines.

**Research Interest:**

- Drug Discovery from naturalproducts
- Cellulose and Its derivatives in preparation ofbiocomposites
- Novel drug delivery methods using polysaccharide andstarch
- Food NutritionAnalysis
- Development of pain relief, wound healing and anti-microbial herbalointments

### Honors/ Awards

1. Invited to deliver online lecture in ATAL-FDP programme organized by CIPET-Guwahati on 08/02/2022.
2. Invited as “**Speaker**” in **International Symposium under Advance DNA Technology "Technological Intervention in Microbial Resource (TIMR)"**, organized by Department of Molecular biology and Biotechnology, Tezpur University, 04-05 Feb2018
3. Invited as “**Speaker**” in the **Indo-Japan Bilateral Symposium on Future Perspective of Bioresource Utilization In North - Eastern Region**, held at IIT Guwahati, Jointly organized by IIT Guwahati and GIFU University, Japan, February, 1- 4<sup>th</sup>,2018.
4. **Best Performer Faculty-USTM 2016-17 (Rank- 09 out of 30 facultiesawarded)**
5. **Best Performer Faculty-USTM 2015-16 (Only new faculty to be awarded amongtop 20 faculties) (Rank- 20 out of 20 facultiesawarded)**
6. **UGC-SLET (NE Region) for Lectureship,2014.**
7. **CSIR-SRF Fellow** (Council of Scientific and Industrial Research- SeniorResearch Fellow) (2011-2013)
8. **Institutional Scholarship from Tezpur University for pursuing Ph.D. research** (2007-2010)
9. **Academic Scholarship from the Department of Biotechnology**, Ministry of Science and Technology, New Delhi, India during M.Sc. in Molecular Biology and Biotechnology. (2004-2006).
10. Called for Interview of Commonwealth Split PhD Programme(2009).
11. Invited as external examiner in Biotechnology to Assam Down Town University.

### Members of Scientific Bodies

1. Society for Ethnopharmacology, India, Membership No: SFE/14/1-299 (Affiliated to The International Society for Ethnopharmacology,UK)

### Projects Carried Out

Sl No	Name of Project	Implementing Agency	Total Fund Allocation	Tenure	Status: Completed/Ongoing
1	“ <b>Development of a water purifying filter based on cellulose andits derivatives</b> ”	New Gen IEDC, NSTEDB, DST	2, 50, 000/-	01 Year (2017-18)	Completed

### Members:

1. Coordinator, Committee for Preparation of Documents for Central Instrumentation Facility, IQAC, RGU.
2. Member, Committee for Waste Management, IQAC, RGU.
3. Member, Board of Management, Assam Royal Global University, Guwahati, Assam.
4. Member, Academic Council, Assam Royal Global University, Guwahati, Assam.
5. External member, Departmental Research Committee, Department of Botany, RSLSC, RGU
6. External member, Departmental Research Committee, Department of Zoology, RSLSC, RGU
7. Member, Royal Centre for Research, Publications, Projects and Patents, Assam Royal Global University, Guwahati, Assam.

8. Member, Board of Studies, Royal School of Biosciences, Assam Royal Global University, Guwahati, Assam.
9. Ex-Vice Chairman, Library Management Committee, Maulana Azad Central Library, University of Science and Technology, Meghalaya.
10. Ex-Member of Core Committee, Event Management Forum, University of Science and Technology, Meghalaya(2016-17).
11. Ex-Member, Departmental Committee, Department of Applied Biology, USTM
12. Ex-Member, Departmental Committee, Department of Physiotherapy, USTM
13. Ex-Member, Board of Studies, Department of Applied Biology, USTM

### **Conferences/ Seminars/ Workshops Organized**

1. **Convener**, 7 Days, E- Faculty Development Program on Importance of Cross Disciplinary Research in the Post Covid-19 Scenario: Social Perspectives, held from 16<sup>th</sup> -23<sup>rd</sup> June, 2020 and organized by RSBSC, RSLSC and Dept. of Social Work, Assam Royal Global University, Guwahati, Assam.
2. **Organizing Secretary**, National Conference on Drug Discovery from Natural Products and Their Traditional Uses, sponsored by Indian Council of Medical Research (ICMR), March 23-24<sup>th</sup>, 2018, University of Science and Technology, Meghalaya.
3. **Convener**, National Workshop cum Training in Microbiology and Immunology, January 4-10<sup>th</sup>, 2018, University of Science and Technology, Meghalaya.
4. **Organizing Secretary**, National Symposium and Workshop cum Training on Molecular Biology and Bioinformatics (NSWTMBB), January 5-11<sup>th</sup>, 2017, University of Science and Technology, Meghalaya.
5. **Organizing Secretary**, Northeastern Regional Conference and Exhibition on Promotion And Protection of Traditional Health Care Remedy (Translational Approaches for Novel Drugs and Drug Intermediates), March 24-26<sup>th</sup>, 2017, Gauhati University in collaboration with University of Science and Technology, Meghalaya, Indian Institute of Technology Guwahati, Institute of Advanced Study in Science and Technology and North East Biotechnology Association. Sponsored by CSIR, DBT, DST
6. **Organizing Committee Member**, Molecular Intricacies of Plant Associated Microorganisms (MIPAM), An Interactive Meet of MPMIWG, November 18-20<sup>th</sup>, 2016, Tezpur University in collaboration with University of Science and Technology, Meghalaya.
7. **Co-Organizing Secretary**, National Workshop and Training in Frontier Areas of Food Science for Entrepreneurship Development among Unemployed Youths, Students and Housewives, 7-9<sup>th</sup> February, 2017, held at University of Science and Technology, Meghalaya.

### **Reviewer:**

1. Journal of Pharmaceutical Biology (Informa Health Care Publication)

### **Official Duty Performed:**

1. As paper setter for different subject papers for regular/back/repeat/improvement exams
2. As Invigilator during exams.
3. As External Examiner of Assam down town University for conducting practical exams.
4. As Judge, National Science Day, Assam Jatiya Vidyalaya.

### Lectures Delivered

1. **IPR- Dreams in pursuit through Innovation**, Lecture delivered as Guest of Honour, during World IPR Day Celebration organized by Department of Library Science, University of Science and Technology, Meghalaya

### Responsibilities:

1. **Coordinator, Journal Helix+**, Journal of the School of Biological Sciences, University of Science and Technology, Meghalaya
2. Invited as **Lead Guest Editor**, Journal of Controlled Drug Release, Hindawi Publications
3. **Associate Editor**, Exotic Northeast Journal (ISSN No-2445-2135).
4. **Student member, IQAC cell**, Appointed by the Hon'ble Vice Chancellor, Tezpur University (for 03 years).
5. **Student member, Disciplinary Committee**, Appointed by the Dean of Students Welfare, Tezpur University (for 03 years).
6. **Student member, Central Library Committee**, Appointed by the Dean of Students Welfare, Tezpur University (for 03 years).
7. **Student Assistant, Computer Centre**, Tezpur University, Appointed by the Registrar, Tezpur University.
8. Philately and Numismatics, **Mentor Founder of Tezpur University Philately and Numismatics Club.**

### Published Manuscripts in Journals/ as Book Chapters/

#### Proceedings Journals

1. Ishita Chakraborty, Sintu Rongpipi, Indira Govindaraju, Rakesh B, Sib Sankar Mal, Esther W. Gomez, Enrique D. Gomez, **Ranjan Dutta Kalita**, Yuthika Nath, Nirmal Mazumder, An insight into microscopy and analytical techniques for morphological, structural, chemical, and thermal characterization of cellulose, *Microscopy Research and Technique*. 2022; 85 (5), 1990–2015.
2. **Ranjan Dutta Kalita**, Iftikar Hussain, Ramesh C Deka and Alak Kumar Buragohain, Antimycobacterial Activity Of Essential Oil Linoleic acid and Oleic acid obtained from the Hexane Extract Of The Seeds of *Mesua ferrea* Linn and their in silico investigation, *Indian Journal of Natural Products and Resources*, 2018, 9 (2), 132-142.
3. Somik Banerjee, **Ranjan Dutta Kalita**, Ashok Kumar, Alak Kumar Buragohain, Polyaniline nanofiber reinforced PVA-Starch Nanocomposites: Biodegradable electrically conducting polymers (BECP) for potential biomedical applications, *International Journal of Engineering Science and Technology*, 2018, 10 (2), 251-261.
4. Anindita Talukdar, **Ranjan Dutta Kalita**, Nilakshi Gohain, Kandarpa Saikia, Mohan Chandra Kalita, Nephroprotective activity of the Ethnomedicinal plants *Caesalpinia bonduc* and *Momordica dioica* from North East India against cisplatin induced chemotherapeutic toxicity, *International Journal of Pharmacy and Pharmaceutical Sciences*, 2018, 10(6), 96-103.
5. Dhritimoni Das and **Ranjan Dutta Kalita**, Biochemical characterization and antimicrobial potential of edible mushroom species, *Helix<sup>+</sup> Journal*, 2017, 1, 41-46.

6. **Ranjan D Kalita**, Yutika Nath, Martins E Ochubiojo, Alak Kumar Buragohain, 2013, Extraction and Characterization of Microcrystalline Cellulose from fodder grass;*Setaria glauca* (L) P. Beauv, and its potential as a drug delivery vehicle for isoniazid, a first line antituberculosis drug, *Colloids and Surfaces B: Biointerfaces*, 2013, 108, 85-89. (**Impact Factor-3.887**)
7. Gautam Das, **Ranjan Dutta Kalita**, Harekrishna Deka, Alak Kumar Buragohain, Niranjan Karak, Antibacterial activities of copper nanoparticle-decorated organically modified montmorillonite/epoxy nanocomposites, *Applied Clay Science*, 2014, 90, 18-26 (**Impact Factor: 3.101**)
8. Mukul Kalita, Prasanta Gogoi, Pranjit Barman, Bipul Sarma, Alak K. Buragohain, **Ranjan D. Kalita**, A new series of Ni(II), Cu(II), Co(II) and Pd(II) complexes with an ONS donor Schiff base: Synthesis, crystal structure, catalytic properties and bioactivities, *Polyhedron*, 2014, 74, 93-98. (**Impact factor-1.926**)
9. M. Kalita, T. Bhattacharjee, P. Gogoi, P. Barman, **R.D. Kalita**, B. Sarma and S. Karmakar, Synthesis, characterization, crystal structure and bioactivities of a new potential tridentate (ONS) Schiff base ligand N-[2-(benzylthio)phenyl] salicylaldehyde and its Ni (II), Cu (II) and Co (II) complexes, *Polyhedron*, 2013, 60, 47-53. (**Impact Factor-1.926**)
10. Tirtha Bhattacharjee, Pranjit Barman, Tapan Thakuria, Rupam Sarma, **Ranjan Dutta Kalita** and Bipul Sarma, Antimicrobial Investigation and Structural Study of 4'-Methylazobenzene-2-sulfonyl Thiocyanate by X-Ray Diffraction, DFT, and Ab Initio HF Calculations, *Heteroatom Chemistry*, 2013, 24(6), 502-509 (**Impact Factor-1.221**)
11. G. Das, **R.D. Kalita**, H. Deka, A. K. Buragohain, N. Karak, Biodegradation, cytocompatibility and performance studies of vegetable oil based hyperbranched polyurethane modified biocompatible sulfonated epoxy resin/clay nanocomposites, *Progress in Organic Coatings*, 2013, 76 (7/8), 1103-1111. (**Impact Factor-2.858**)
12. Emeje M., **Kalita R.**, Isimi C., Buragohain A., Kunle O., Ofoefule S., Synthesis, physicochemical characterization, and functional properties of an esterified starch from an underutilized source in Nigeria, *African Journal of Food, Agriculture, Nutrition and Development (AJFAND Online)*, 2012, 12(7).
13. Harekrishna Deka, Niranjan Karak, **Ranjan Dutta Kalita**, Alak Kumar Buragohain, Biocompatible hyperbranched polyurethane/multi-walled carbon nanotube composites as shape memory materials, *Carbon*, 2010, 48(7) :2013-2022. (**Impact Factor-6.337**)
14. Harekrishna Deka, Niranjan Karak, **Ranjan D. Kalita**, Alak K. Buragohain, Bio-based thermostable, biodegradable and biocompatible hyperbranched polyurethane/Ag nanocomposites with antimicrobial activity, *Polymer Degradation and Stability*, 2010, 95(9):1509-1517. (**Impact Factor-3.386**)
15. Nirmal Mazumder, A. Gogoi, **Ranjan Dutta Kalita**, Gazi A Ahmed, Alak K Buragohain and Amarjyoti Choudhury, Luminescence studies of fresh water diatom frustules, *Indian Journal of Physics*, 2010, 84(6), 665-669. (**Impact Factor-0.988**)

## **Book Chapters**

1. Ranjan Dutta Kalita, Characterization of natural product compounds using FT-IR (Fourier Transform Infra Red) spectroscopy, Laboratory Techniques in Biological Sciences, by Dr. Manash Pratim Sarma and Dr. Minakshi Bhattacharjee; 2020, 75-81.
2. Gazi A Ahmed, Alak K Buragohain, Partha P Nath, Ankur Gogoi, Nirmal Mazumdar, **Ranjan D Kalita**, Amarjyoti Choudhury. **FTIR and luminescence studies of nanoporous diatom frustules**, Photonics and Nanostructures, Editors: G A Ahmed and D. Mahanta, Narosa Publications, New Delhi, 2012, 83-89.

## **Proceedings**

1. I. Chakraborty, **R. D. Kalita**, P. Singh, S. Banik, I. Govindaraju, S. S. Mal, G. Zhuo, K. K. Mahato, and N. Mazumder, "Advanced Microscopic Visualization for Structural Characterization of Cellulose Extracted from Saccharum Spontaneum (Kohua Bon) of Assam, India," in Frontiers in Optics + Laser Science 2021, C. Mazzali, T. (T.-C.) Poon, R. Averitt, and R. Kaindl, eds., Technical Digest Series (Optical Society of America, 2021), paper JW7A.72.
2. Esther Jamir, Yutika Nath, Alak Kumar Buragohain and **Ranjan Dutta Kalita**, Investigation into the Antioxidant, Biochemical and Antimicrobial properties of Rhus chinensis, an important traditional medicinal plant of North East India, Published in the Proceedings of UGC-Sponsored-National Seminar on Recent Advances on Medicinal Plant Research of North East India, held at ADP College, Nagaon, 11-12<sup>th</sup> November, 2016, Editor- Dr Mousmi Saikia, ISBN: 978-93-84679-63-7, pp 179-183.
3. Sahanaj Begum, Rinku Kr. Barman, Pranjal Rajbangshi and **Ranjan Dutta Kalita**, A study on the pharmacological and antioxidant properties of four different medicinal plants used in the traditional system of medicine of North East India, Published in the Proceedings of UGC-Sponsored-National Seminar on Recent Advances on Medicinal Plant Research of North East India, held at ADP College, Nagaon, 11-12<sup>th</sup> November, 2016, Editor- Dr Mousmi Saikia, ISBN: 978-93-84679-63-7, pp 179-183.

## **Seminar/Conference/Symposiums**

### **Oral Presentations**

1. **Ranjan Dutta Kalita\***, Yutika Nath, Lipika Aidew and Alak Kumar Buragohain, Oleic acid from Messua ferrea Linn as a source of Antimycobacterial agent, **International Conference** on Harnessing the Sub-Himalayan Plant Diversity for Human Welfare, Sponsored by DST, CSIR, DRDO and BRNS and organized by Dibrugarh University, Dibrugarh, March 11-13, 2015 (**Oral Presentation**).
2. M C Kalita\*, A K Talukdar, K K Saikia, Jayanta Talukdar, Rituparna Bora, Nilakshi Gohain, Anindita Talukdar, **Ranjan Dutta Kalita**, Jayashree Dutta and Nitumani Kalita, Biotechnological exploration of the traditional knowledge based phyto-pharmaceutical practices

of North-East India, The Macro Journals **International** Conference, held in Paris, France, December 19-20, 2014 (**OralPresentation**).

3. **Ranjan Dutta Kalita\***, Yutika Nath and Alak Kumar Buragohain, Microcrystalline cellulose obtained from *Setaria glauca* (L) P. Beauv as a source of drug delivery agent for isoniazid, a first line anti-TB drug, **National** Seminar on Emerging Bio-Inputs in Biotechnology for a Green Environment, sponsored by the Department of Biotechnology, Govt. of India and organized by the Department of Bioengineering and Technology, Gauhati University, Assam, India and North East Biotechnological Association, May 9-10, 2014 (**Oral Presentation**).

4. **Ranjan Dutta Kalita\***, Nilakshi Barua, Lipika Aidew and Alak Kumar Buragohain, Evaluation of the antimycobacterial potential of *Xanthium strumarium*, **National** Seminar on Medicinal Plant and Microbe Diversity and their Pharmaceuticals, Tezpur University, Tezpur, Assam, India, December 19-21, 2010 (**OralPresentation**).

5. Esther Jamir\*, Yutika Nath, Alak Kumar Buragohain and **Ranjan Dutta Kalita**, Investigation into the Antioxidant, Biochemical and Antimicrobial properties of *Rhus chinensis*, an important traditional medicinal plant of North East India, UGC-Sponsored-National Seminar on Recent Advances on Medicinal Plant Research of North East India, held at ADP College, Nagaon, 11-12<sup>th</sup> November, 2016 (Research Presentation made by M.Sc. Project Students)

6. Sahanaj Begum\*, Rinku Kr. Barman, Pranjal Rajbangshi and **Ranjan Dutta Kalita**, A study on the pharmacological and antioxidant properties of four different medicinal plants used in the traditional system of medicine of North East India, UGC-Sponsored-National Seminar on Recent Advances on Medicinal Plant Research of North East India, held at ADP College, Nagaon, 11-12<sup>th</sup> November, 2016 (Research Presentation made by M.Sc. Project Students)

**\*Paper Presenter**

### **Poster presentations**

7. **Ranjan Dutta Kalita\***, Nilakshi Barua, Lipika Aidew and Alak Kumar Buragohain, "Antimycobacterial activity of the methanol extract of latex from *Jatropha curcus*", Indian National Science Academy Platinum Jubilee **International** Symposium on Research in Molecular Medicine Based on Natural Resources and Traditional Knowledge, National Chemical Laboratory, Pune, India, November 21-23, 2009

8. **Ranjan Dutta Kalita\*** and Alak Kumar Buragohain, Gallic acid gallate from green tea as inhibitor of *Mycobacterium tuberculosis*: An insilico docking and ADME-TOX study, **National** Seminar on Recent Advances in Biotechnology Research in North East India: Challenges and Prospects, organized by Tezpur University, November 27-29, 2014.

**\*Paper Presenter**



**Participation in Seminar/Conference/Symposiums**

1. Participated in the “4<sup>th</sup>**International** Symposium on Recent Trends in Macromolecular Structure and Function” organized by the CAS in Crystallography and Biophysics, University of Madras and held at The Triple Helix Auditorium, CLRI, Adyar, Chennai, January 21-23, 2010 on personnel invitation of Prof Velmurugan Devadasan, Professor and Head, CAS Department of Crystallography and Biophysics, Madras University to learn and interact with scientist about Protein Crystallization.

**Workshops**

1. Attended and participated in a workshop on “Advanced techniques in Cellular and Molecular Biology” sponsored by Department of Biotechnology, Government of India, held at Indian Institute of Technology, Guwahati, November 15-19, 2010. (Instruments Demonstrated: Real Time PCR, Flow Cytometer and Surface Plasmon Resonance)