**Application for the post of Vice Chancellor, ASTU**



(Applicants are requested to type the information in the following format. They can add more lines in the format wherever required)

**1. General Information of Applicant**

|  |  |
| --- | --- |
| Name  (In Capital Letters) | BOLIN KUMAR KONWAR |
| Date of Birth  (Day/Month/Year) | 01.08.1958 |
| Age as on 1st January 2022 | 63 years 5 months |
| Correspondence  Address | Dept of Mol Biol & Biotechnology  Tezpur University (Central)  Napaam, Tezpur-784028  Dist. Sonitpur, Assam, India |
| Phone No. | Mobile No.: 9957516231  Landline No. : x |
| Email | bkkon@tezu.ernet.in |

2. **Present Position**

|  |  |  |
| --- | --- | --- |
| a. | Designation | Senior Professor |
| b. | Organization | Tezpur University (Central) |
| c. | Pay Scale | 2,24,100 + DA = (3,14,466) |
| d. | Date of Appointment in the present post | 13.11.2018 |
| e. | Total Experience (In years and Months) | 36 years |

**3. Educational Qualification (In chronological order from latest to Graduation level)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sl. No. | Qualification/ Degree | University | Year | Subject(s)/Topic(s) | % / Grade  achieved | Distinctions etc. |
| 01 | B Sc (Agri) | Assam Agril Univ, Jorhat | 1981 | Basic Science and Ari Sci subjects | 3.34 in 4.0 scale | Gold Medal  Merit I |
| 02 | M Sc (Agri) | -do- | 1983 | Plant Breeding & Genetics | 3.79 in 4.0 scale | Distinction  (> 80%) |
| **M Sc (Agri) thesis** – “Phenotypic stability for yield and morphophysiological traits of soybean  [*Glycine max* (L) Merrill]” | | | | | | |
| 03 | Ph D (Plant Biotech) | Univ of London | 1992 | Plant Biotech | - | - |
| **Ph D thesis** – “*In vitro* culture and genetic transformation of sugarbeet (*Beta* *vulgaris* L.)” | | | | | | |
| 04 | DIC (Microb | Imp Col Sci, Tech Med., UL | 1992 | Microbial Genetics | - | - |

4. **Details of experience possessed as per eligibility criteria**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sl. No. | Post held | Pay Scale (Rs) | Organization | Nature of Duties | Experience (in yrs & Months) |
| 01 | Management Trainee | 500 pm lumpsum | Towkok TE  Sonari | Management of tea garden and factory | 4 months |
| 02 | Lecturer | 700-1,400pm | Assam Agri Univ, Jorhat | Farmers’ field expts, teaching UG/PG courses | 1 yr 8 months |
| 03 | Asstt Prof | 700-2,100 pm | -do- | Teaching UG/PG courses and research | 8 yr 8 months |
| 04 | Assoc Prof | 900-3,500 pm | -do- | Teaching UG/PG Agril Biotech and PBG courses, Res in BGA | 1yr 7months |
| 05 | Biotechnologist  Bot & Biotech | 4,500- 150 – 5,700  (4,650) & 16,850 | Tocklai Expt Station, TRA, Jorhat | Research in tea tissue & Cell cult, genet trans formation, Microbial degradation | 2 yr 8 months |
| 06 | Head, Bot & Biot | 4,500- 150 – 5,700  (4,650) & 16,850 | Tocklai Expt Station, TRA, Jorhat | -do- & dept administration | 5 yr 3 months |
| 07 | Professor& HoD, HoD Cent of Petro leum Biotech | 16,400-450  (17,300) | Tezpur Univ  Napaam | Teaching M Sc & Ph D, res on Petroleum Biotech, genomics & biochem of Med Plants | 6 yr 1 month |
| 08 | Professor & Dean, Sci & Tech | 37,400 – 67,000  (1,12,396) | Tezpur univ  Napaam | Same as above and School Manag. (5 depts) | 3 yr 5 months |
| 09 | Vice Chancellor | 75,000 +5,000 pm  (1,54,000) | Nagaland University (Central) | Academics, Admin, Exam, Finance and: const Schools of Engg and Tech, Management, Agril Sci & RD, Arts & Hum and Sci | 1 full term of 5 yrs |
| 10 | Professor | 37,400 – 67,000  (2,38,000) | Tezpur univ  Napaam | Teaching & Research of M Sc & Ph D students, res on Petroleum Biotech, metagenomics, microbial infection, industrial enzymes | 2 yr 3 months |
| 11 | Senior Professor | Basic  2,24,100 + DA  (3,14,466) | Tezpur univ  Napaam | Adv role in Dept, School, & Univ; Teaching & Research of M Sc & Ph D students, res on Petrol. Biotech, metagenomeics, microbial infection, industrial enzymes | 3 yr 1 month |

5. **Administrative Experience/Post(s) & responsibilities held [Annexure I]**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sl. No. | Post | Organization / University | Duration | | Experience (In years and Months) |
| From (Date) | To (Date) |
| 1 | Vice-Chancellor or equivalent | Nagaland University (Central) | 08.09.2011 | 07.09.2016 | 5 years |
| 2 | Director, IQAC | Tezpur Univ | 2005 | 2010 | 5 years |
| 3 | Registrar/Controller of Examinations or equivalent |  |  |  |  |
| 4 | Head of the Department or equivalent | Head, Dept of Bot & Biotech, TES, TRA, Jorhat | 01.12.1997 | 31.03.2002 | 4 yr 3months |
| Dept of Mol Biol Biotech, Tezpur Univ | 21.03.2002 | 31.03.2008 | 6 yr 1 month |
| 5 | Dean or equivalent | Dean, School of Sci & Tech, TU | 01.04.2008 | 31.032011 | 3 years |
| 6 | Others | Head, Centre for Petroleum Biotech | 21.03.2002 | 31.03.2008 | 10yr 4months |
| Coordinator, DBT Biotech (M Sc) | 21.03.2002 | 31.03.2008 | 10yr 4months |
| Coordinator, DBT Bioinformatics | 01.04.2005 | 31.03.2008 | 4 years |

6.(a) **Academic/Teaching Experience & responsibilities (In chronological order from latest to**

**oldest)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sl. No | Post held | Organizatio/ University | Duration | | Experience (In years and Months) |
| From (Date) | To (Date) |
| 01 | Senior Professor | Tezpur Univ | 13.11.2018 | Till date | 3 yr 2 months |
| 02 | Professor | TU | 21.03.2002 | 12.11.2018 | 16 yr 8months |
| 03 | Biotechnologist & Sr Scientist | Bot & Biotec  TES, TRA | 02.09.1995 | 20.03.2002 | 7 yr 7 months |
| 04 | Assoc Professor | Assam Agril Univ | 28.02.1994 | 01.09.1995 | 1 yr 7 months |
| 05 | Asstt Prof | AAU | 01.01.1986 | 27.02.1994 | 8 yr 2 month |
| 06 | Lecturer | AAU | 13.04.1984 | 31.12.1985 | 1 yr 8 months |

(b) **Participation and contribution in relevant areas in higher education**

|  |  |  |
| --- | --- | --- |
| Particulars | Organization | Area of Specialization |
| Visiting Professor | **-** | **-** |
| Resource Person 1 | CSIR-NEIST, Jorhat | Genetic Engineering & biotech |
| 2 | Dibrugarh Univ, Dibrugarh | Biotechnology, Higher Edn |
| 3 | Rastrapati Bhavan, ND (participated) | Higher education assessment |
| 4 | Nagaland University, Lumami | Higher Educational need of the country |
| 5 | NAAC workshops, Kohima Sci College | Academic exchange, Research based teaching & res in HE Institutes |
| 6 | St Joseph College, Zaphu | Biodiversity |
| 7 | SARD, NU, Medziphema | Agril Improvement, Univ  education |
| 8 | Patkai Christian Coll, | Higher Education and research,  Quality higher education, |
| 9 | IITG | Biotechnology and Biodiversity |
| Others (Specify) 1 | Site Selection Com for CMERTI, CSB, GoI | Member |
| 2 | Res Com of NRC (Yak), Dirang, AP | Member, Res Rev & advisement |
| 3 | Syllabus Prep. Committee and Course  Review Committee, Agri Biotech  Academic Council, AAU | Member |
| 4 | Planning Board, RG Univ, Itanagar, AP | Member |
| 5 | DAC, Dept of Animal Biotech, AAU, | Expert Member |
| 6 | DAC, Dept of Life Sci & Bioinfor-  matics, NEHU, Shillong | Expert Member |
| 7 | DAC, DRC, MBBT, TU  Planning Board, Research Council, Academic Council, BoM, TU | Member |
| 8 | Const. Monitoring Committee,  Quality Assurance Comm, Security Committee & Campus Beautification Comm, TU | Chairperson |
| 9 | Research Council, CMERTI | Member (6 years) |
| 10 | Research Council, CMERTI | Chairperson |
| 11 | Planning Board, Finance Comm, Research Council, Academic Council & Executive Council (Nag Univ) | Chairperson |
| 12 | Board of Governors, NIT, Nagaland | Governor |
| 13 | Executive Council, CU of Jharkhand | Nominated Expert Member |
| 14 | NAAC Peer Team visit to Univs- Coll in Rajasthan, Assam, and Nagaland | Chairperson, Member |
| 15 | Research Advisory Committee, CSIR –NEIST | Member |
| 16 | Adv Board, AG Office, Kohima | Nominated Member |

(c) **Involvement with formulation of academic/research programs**

|  |  |  |  |
| --- | --- | --- | --- |
| Sl. No | Nomenclature of innovative Academic Programs  formulated | Date of Approval by Acad Council | Year of Introd. |
| 1 | Agricultural Biotechnology at Assam Agril. Univ, Jorhat, | 1986 | 1987 |
| 2 | Review of Agril Biotech syllabus, AAU | 1993 | 1994 |
| 3 | Review of Mol Biol & Biotech syllabus at Tezpur Univ | 2004 | 2005 |
| 4 | Food Proce & Tech (FPT): Microbiology, Food Microbiol and Food Biotech (for establishing the Dept of FPT in TU) | 2006 | 2007 |
| 5 | Nanotechnology course (in part) | 2007 | 2008 |
| 6 | Fiveyear Integrated Biotech & Bioinformatics prog. syllabus | 2007 | 2008 |
| 7 | Preparation M Sc Mol Biol & Biotech syllabus in line with DBT national syllabus. | 2016 | 2016 |
| 8 | M Sc in Forest Sciences, Nagaland University, Lumami | 2014 | 2015 |
| 9 | M Sc in Environment Sciences, Nagaland Univ, Lumami | 2014 | 2015 |
| 10 | Biotechnology, Nagaland University, Lumami | 2013 | - |
| 11 | Centre for South-East Asian Study, Nagaland University | 2014 | 2015 |
| 12 | Integrated M Sc in Bioscience | 2018 | 2019 |

**(d) Important MoUs formulated/Signed for academic/research collaborations**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl.**  **No** | **MoUs formulated** | **Name of Agencies/ Depts Involved** | **Year of MoU** |
| 01 | Academic Exchange for teaching and research | Chiangmai Univ, Thailand and Nagaland Univ (NU) | 2015 in the presence **PMs** of India and Thailand |
| 02 | Research collaboration | Univ of Hyderabad (C) and NU | 2015 |
| 03 | Research | NEIST, Jorhat | 2014 |

**(e) Position of Chairs/ Important committee assignments**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl.**  **No** | **Name of Chair** | **Name of the Agencies/Depts involved** | **Period of holding the Chair** |
| 1 | Chairman, DAC and DRC | Dept of MBBT, TU (C) | 8 years |
| 2 | Chairman, RAC, AC and EC | Nagaland University (C) | 5 years |
| 3 | Chairman, Res Council | CMERTI, MoT, Jorhat | 3 years |
| 4 | Chairman, ADNAT Conference | ADNAT Int. Conf., IITG, TU, CMERTI, BTAD | 3 months |

7. **International academic Exposure, if any**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Sl No** | **Post/ Assignment** | **Organization/ University** | | **Area of Assignment** | **Duration** | | **In Years &Months** |
| **From** | **To** |
| 1 | Higher Study | | Imp Coll., Univ of Lond | Plant Biotech | 1988 | 1992 | 4 years |
| 2 | Int Conference | | Speaker, Netherlands | Plant Biotech | 1990 | 1990 | 5 days |
| 3 | Int Conference | | Speaker, New York | Plant Tissue Cult | 1991 | 1991 | 2 days |
| 4 | Int Conference | | Speaker, Malayaia | Bioresources | 2012 | 2012 | 4 days |
| 5 | Academic disc | | Invited Speaker, Chian -gmai Univ, Thailand | Exchange prog | 214 | 2014 | 7 days |

8. **Scholarly achievements**

**A. Contribution to journals and Books**

|  |  |
| --- | --- |
| **Particulars** | **Details** |
| Books Authored | 7 (Med Plants 1, Biodiv 1, Metagenomics 1, Bact Bio- surfactant 1, Bact Biopolyme 1, Assamese 2 books) |
| Editor | 1 book (Prospects of Microbe and medicinal plant resources, Educationist Press, New Delhi) |
| Referee/ Editorships | 2 (Indian J Genet & Pl Breed, 6 Int Journals/  Executive Editor, International J. of Crop Science |
| Book Chapters published | 21 on own and supervised Ph D works |
| English Scientific articles | 23 on Education, Agril Science, social issues etc |
| Proceed of Nat/International Conferences | 71 on research works |
| Abstracts in Regional/Nat/Int Conf | 91 on research works |
| Research Papers published in Int high Imp factor-peer reviewed journals | 144 on research works  Av Imp Fac 2-7 & Cit Index 24-26 |
| Peer Reviewer for | More than 5 Journals (J of Genet & Plant Breed, Afr. J. of Envt. Sci. & Tech. Colloids and Surfaces B: Biointerfaces, J. of Hazard. Mat., Biores Tech and Chemosphere) |
| Member of International Advisory Board | 1 (ADNAT Int Conf on “Bioverse”, Jan-March, 2018) |
| Others (Specify) Foreign Expert | King Fahd University of Petroleum and Minerals  University of Tunkur Abdul Rahman, Malaysia |

**B. Publication**

B.I **Kindly provide list of scholarly publications in recognized professional and/or academic journals**

**Total Publications: 235 (entire career), 52 (in the last 5 years) [list in Annexure III]**

**Details of 10 important publications:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sl No** | **Date** | **Tile** | **Name of the Journal** | **Referred J.l or Not** | **No of Citations** |
| 1 | 2011 | [Microalgae Chlorella as a potential bio-energy feedstock](javascript:void(0)) | Applied Energy | Referred | 224 |
| 2 | 2008 | [Microbial surfactant-enhanced enhanced mineral oil recovery under lab conditions](javascript:void(0)) | Colloids and surfaces B: Biointerfaces | Referred | 174 |
| 3 | 2009 | [Bacterial biosurfactant in enhancing solubility and metabolism of petro -leum hydrocarbons](javascript:void(0)) | Journal of Hazardous Materials | Referred | 127 |
| 4 | 2010 | [Nickel oxide nanoparticles: a novel antioxidant](javascript:void(0)) | Coll and surf B: Bioint | Referred | 86 |
| 5 | 2009 | [Antioxidant activity and haemolysis prevention efficiency of polyaniline nanofibers](javascript:void(0)) | Nanotechnology | Referred | 67 |
| 6 | 2009 | [Biocompatible epoxy modified bio-based polyurethane nanocomposites: mechanical property, cytotoxicity and biodegradation](javascript:void(0)) | Bioresource technology | Referred | 59 |
| 7 | 2010 | [Biocompatible novel starch/polyaniline composites: characterization, anti-cytotoxicity and antioxidant activity](javascript:void(0)) | Coll and surf B: Bioint | Referred | 57 |
| 8 | 2012 | [Synthesis, spectral characterization and biological activity of zinc (II) complexes with 3-substituted phenyl-4-amino-5-hydrazino-1, 2, 4-triazole Schiff bases](javascript:void(0)) | Spectrochimica Acta Part A: Mol and Biomol Spectroscopy | Referred | 56 |
| 9 | 2013 | [Bio-degradable vegetable oil based hyperbranched poly (ester amide) as an advanced surface coating material](javascript:void(0)) | Prog in Organic Coatings | Referred | 53 |
| 10 | 2011 | [Crude biosurfactant from thermophilic Alcaligen- faecalis: feasibility in petro-spill Bioremediation](javascript:void(0)) | Int Biodeterio-ration & Biod- egradation | Referred | 53 |

**DNA Sequence deposited in National Gene Bank**: 11

B.II **List of articles in Magazines or Newspapers (in the last 5 years)**

**Total Articles:** 30 (Assamese and English) **Overall total articles in Assamese and English**: 270

**List only 10 important articles with details as below:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl No** | **Date** | **Title** | **Name of Magazine/ Newspaper** |
| 1  2  3  4  5  6  7  8  9  10 | 2012  2012  2012  2013  2013  2013  2014  2014  2016  2017 | Higher Education in Nagaland  Empowering Knowledge Institutions for Quality Enhancement  Landholding pattern and farming in Nagaland with reference to Small and Marginal Land holders  Slash and Burn Shifting/Jhum cultivation  Ethnicity and Identity in the context of Naga Folk Tales and Oral literatures  Research perspectives in Institutions of Higher Learning  Economic sustainability of the Himalayan ecosystem  Indian Higher Education and Ranking Standard  Premar Baigyanik Bislekhan, Part I. and Part II  Love: neurotransmission effect of hormones | Yojana  Univ News, AIU  ICAR Bulletin  Yojana  Univ News, AIU  Univ News, AIU  Yojana  Univ News, AIU  Bijnan Jeuti  Dream |

C. **Participation and scholarly presentations in conferences**

C. Participation and scholarly presentations in conferences: 122

C.I National: 110

**In the last 5 years:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl No** | **Date** | **Title of Conference/ Institution** | **Title/ Subject of Presentation (If made)** |
| 01 | 26.2.2016 | ‘Inventory, Sustainable Utilization and Conservation of Bioresources’ | Bioresources, Threats and Research Needs |
| 02 | 22.3.2016 | 40th Foundation day of IGRMS, Bhopal | Nagaland: A Treasure-trove and Potentiality |
| 03 | 4.2.2016 | Foundation Talk, Rajiv Gandhi University, Itanagar | Research on Resources of North Eastern India for Knowledge Generation and Socio-economic Development |
| 04 | 26.8.2016 | Human Resource and Economic Development in India: Prospects, Challenges and Strategies | Human Resource and Economic Development of North East India |
| 05 | 2.9.2016 | Advance Biology | Metagenome-based lipase gene and the enzyme |
| 06 | 12.8.2016 | MOFPI & ASSOCHAM Sponsored Conf. on ‘Linking Prospective Food Entrepreneurs with Government Schemes and Markets’ | Agro-horticultural Food Entrepreneurs and Industrialization in North East India |
| 07 | 21.9.2016 | Orientation talk, Department of Biotechnology, University of Sci & Tech | Biology, Advance Biology and Biotechnology |
| 08 | 7.12.2016 | Brain Storming Meeting “Doable Solutions to the Problems in Growth of Agro-processing in North East India” | Agro-processing Sector: Finding a Doable Answer |
| 09 | 7.1.2017 | Multidisciplinary Refresher Course, Dept of Cultural Studies | Quality higher education in India |
| 10 | 18.2.2017 | North East General Counselling 17, UST, Meghalaya | Teachers as Motivators & Counselors |
| 11 | 22.2.2017 | Special Lecture, CSIR-NEIST, Jorhat | Alk gene-derived enzyme from metagen DNA & appl of bioinf. |
| 12 | 19.6.2017 | Symposium on ‘Omics Technology’ IITG | Metagenomic Alkane Hydroxylase Gene |
| 13 | 6.8.2017 | Freedom fighter Chabilal Upadhaya ‘Oikya and Sapriti’ lecture, Tezpur | Ahomor rajatwakalat bibhinna jati-jana gusthir samanay sadhan |
| 14 | 27.1.2018 | ADNAT International Sympo- sium ‘Biodiverse-2018, IITG | Cellulase enzyme through metagenomics |
| 15 | 12.3.2018 | SeriBioEcon, 2018, CMER&TI, Jorhat | Status, problems and prospects of Silkworm cultivation in Assam and adjoining states. |
| 16 | 21.10.2019 | Nat Lecture Workshop, DU | Chemistry in multi-& inter-disciplinary  science research |
| 17 | 26.9.2019 | Appl of Nanotech; Biotechnol in day to day life | Biotechnology - Nanobiotechnolgy Research in the development of lives, |
| 18 | 30.1.2019 | NAAC Sponsored Quality Higher Educ, Dibrugarh Coll, Assam | Digital Initiatives for Quality Enhancement of Higher Education |
| 19 | 2.2.2019 | Golden Jubilee, Gogamukh College, Lakhimpur, Assam | Aspirations of Youth in the Age of Globalization |
| 20 | 1.8.2020 | Academic Quality in HE, Webinar at Tezpur Law College | Quality parameters towards academic excellence Webinar at Tezpur Law College, dtd 21st August 2020 |

**C.II International: 12**

**Important ones:**

|  |  |  |  |
| --- | --- | --- | --- |
| Sl N | Date | Title of Conference/ Institution | Title/ Subject of Presentation (If made) |
| 1 | 27.1.2018 | ADNAT International Symposium ‘Biodiverse’, IITG | Cellulase enzyme through metagenomics |
| 2 | 1.2.2018 | Workshop on Wildlife Ecology and Seribioresources, ADNAT Kokrajhar | Forest Ecology |
| 3 | 18.11.2008 | Microbial biotechnology: diversity, genomics and meta-genomics, Luknow | Microbial degradation of *Mesua ferra* L. seed oil |
| 4 | 20.2.2007 | 76Annual meeting of Society of Biochemist, Tirupati. | Comparative digestibility of some edible aroids of North East India |
| 5 | 9.10.2009 | Emerging Trends in Polymer Science and Tech., Kolkata | Biopolymer from crude oil scavenging bacteria |

9. **Research Projects (in the last 5 years)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl No** | **Client/Organi**  **zation’s name** | **Nature of Project** | **Duration of Project** | **Amount of Grant (Rupees in lakh)** |
| 1 | ONGC | Bioremediation of crude oil contaminated soil | 5 | 70.03 |

10. **Consulting experience (in the last 5 years)**

**List key consultancy assignments undertaken**

|  |  |  |  |
| --- | --- | --- | --- |
| Sl. No. | Client/  Organization’s | Nature of assignment | Duration of assignment |
| 01 | ONGC | Bioremediation of petroleum contaminated soils | 2002 - 2014 |
| 02 | Tea Companies | Problems of tea gardens and of planting materials | 1996 - 2001 |

11. **Honours/Awards & Fellowships for Outstanding Work**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl No** | **Name of Award/ Fellowship etc** | **Elected/ Hon Fellow** | **Awarded by** | **Year of Award** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1 | LPL Stipend Exam. | Selected | State Govt of Assam | 1969 |
| 2 | Towkok TE, Jayashree Tea Co. fund support | Selected | Jayshree Tea Co | 1975 |
| 3 | Govt of India Natl. Scholarship | Selected | Govt of India | 1975 |
| 4 | ICAR, GoI scholarship | Selected | ICAR, Govt of India | 1975 |
| 5 | Dept of Education, Govt of Assam scholarship | Selected | Govt of Assam | 1975 |
| 6 | Indian Tea Assoc. scholarship | Selected | Tea Res Association | 1978 |
| 7 | Gold Medal for B Sc (Agri) | Honourary | Assam Agril Univ | 1981 |
| 8 | AAU Merit Gr I scholarship | Selected | Assam Agril Univ | 1982 |
| 9 | Distinction in M Sc (Agri) | Honourary | Assam Agril Univ | 1984 |
| 9 | State Overseas Scholarship, GoI | Selected | State Govt., Govt of India | 1988 |
| 10 | St Gregory Fund support | Honourary | Imperial College, Univ of London | 1990 |
| 11 | Citizens’ recognition | Honourary | Cheraideo Sub Divn, Assam | 1993 |
| 12 | Young scientist | Selected | Marquis World’s | 1998 |
| 13 | Pioneers of Genomics Edn, | Honourary | Ocimum, Biosol. & Gene Logics | 2010 |
| 14 | DBT-Post Doc study | Selected | DBT, Govt of India | 2011 |
| 15 | Teacher award | Honourary | DMSBM | 2012 |
| 16 | Teacher award | Honourary | DMSBM | 2013 |
| 17 | Sadbhavana Medal | Honourary | GEPRA | 2013 |
| 18 | Life Time Achievement Award | Honourary | Soc for Recent Dev in agric | 2015 |

12. **No. of Research Scholars successfully guided (towards doctoral degree)**

|  |  |  |
| --- | --- | --- |
| **Name of Program** | |  | | --- | | **Awarded No.** | |
| Ph D (Plat Breed & Genet), AAU, Jorhat  Ph D (Mol Biology & Biotech), Tezpur University, Napaaam | 1  14 |
| M Sc (Agri Biotech), Assam Agril University, Jorhat  M Sc (Mol Biology & Biotech), Tezpur University, Napaam | 5  38 |

13. **Future work plan for Assam Science and Technology University (ASTU) (up to 300 words)**

|  |
| --- |
| ASTU since establishment in 2009 completed 12 years; it has the potential to become the economic engine of the state with innovation and entrepreneurship. In partnership with government and business; academic research and technologies [help to drive an array of vital industries](https://books.google.com/books/about/The_Triple_Helix.html?id=hs2SAgAAQBAJ&printsec=frontcover&source=kp_read_button#v=onepage&q&f=false). It can change the face of the society with investors in the built in environment. It has to attract global talent and harbour international connections. It has to address the societal challenges with comprehensive assessments of issues ranging from production, processing, marketing and employment generation. It must foster creativity and open debate with boosting of [competitiveness](http://www.creativeclass.com/richard_florida/books/the_rise_of_the_creative_class). It shall strive to improve lives enhancing self-knowledge, employment opportunity and promoting civic participation. ASTU has to foster opportunities for collaboration, knowledge exchange and social empowerment.  The university with enabled academic programs shall cater to innovations in the areas of machineries, constructions, electronic and electrical appliances, material science and metallurgy, geology and minerology, non-conventional energy, computing and information technology, medical and health appliances, pharmaceutical and atmospheric science. Running of regular skilling and training programs for the country-specific farming and industrial requirements are expected to encourage economic growth of the region as well as of the nation.  Faculty, master’s degree and Ph D students shall pursue extra-mural research with strong scientific principles for addressing regional and national problems for helping the society at large. The university shall generate technologies towards climate resilience, equality towards the common goal of poverty alleviation, freedom from hunger and malnutrition. Inter- and multidisciplinary research groups need to be engaged to address problems like earthquake, typhoon, flood and land slide, pollution etc.  Clustering of colleges under the university shall be taken up based on their expertise and strength. Academic consortia need to be instituted with teaching by experts from industry, construction, designing etc with practical training. Each college shall have incubation and production centers, as well as technology transfer mechanisms for self-generation of fund. It shall create provisions for final year students under the various programs the scheme of ‘earn when you learn’. |

14. **Details of Referees, if any (Maximum 3)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sl. No | Name of the Reference | Post held by referee | Email | Phone No | Mobile |
| 1 | Prof Mrinal Miri | Former VC,  NEHU | [mrinal.miri@ sansad](mailto:mrinal.miri@%20sansad).nic.in | 011-24623890 | 9910481706 |
| 2 | Prof D N Buragohain | Ex Director,IITG & Chancellor, NU | dnburagohain@ yahoo.com | 0361-2583333,  2585333 (R) | 9619553622 |
| 3 | Shri P B Acharya | Chief Rector of NU & Governor of Nagaland | rajbhavankohima@nic.in | +91-370-2242881 | Annexure II  (Enclosed) |

15. **Additional Information, if any, and not covered above (Annexure I)**

**DECLARATION:**

I, hereby, declare that all the statements/particulars made/furnished in this application are true, complete and correct to the best of my knowledge and belief. I also declare and fully understand that in the event of any information furnished being found false or incorrect at any stage, my application/candidature is liable to be summarily rejected at any stage. The No Objection Certificate from my Employer is also enclosed.

Place :

Date : (Signature of the Applicant)

**Ref.:**

**Date:**

**NO OBJECTION CERTIFICATE**

This is to certify that Tezpur University, Napaam has no objection, if Prof. Bolin Kr Konwar, Designation Sr Professor, Dept. Molecular Biology & Biotechnology of this University applies for the position of Vice Chancellor at the Assam Science and Technology University.

**Head of the University/ Institute**

**Signature:**

**Name:**

**Designation:**

**Seal:**

**Annexure I**

**15. Additional Information**

**Achievements**

**Head, Bot and Biotech, TES, TRA, Jorhat**

1. Establishment of the Department in the New Building.

2. Division of research works ino Botany, Physiology, Breeding and Biotechnology.

3. Introduction of Daily Work Diary for all members and opinion of HoD.

4. Weekly research presentation and discussion.

**Head of Mol Biol & Biotech Dept, TU, Napaam**

On 25th March 2002, I joined as Professor in the Dept from the post of Sr Scientist and Head of Botany & Biotech of Tocklai Expt Station, TRA, Jorhat and took the responsibility of Headship of the Dept on 5th April.

**Faculty members**

During the time, the Dept had one Assoc Professor (Dr Nripender Singh), 4 Asstt Profs (Dr Ashish Mukherjee, Dr Suvenda Kr Roy, Dr Anand Ramteke and Dr (Ms) Sashi Baruah). During the period Drs Singh, Mukherjee and Roy provided all support to me and the Dept; however, after some time Ashish went for training in USA. Dr Sigh was terminated due to some untoward departmental complain and enquiry lodged in 1999. So, with few faculty members the master-degree program was run with help from Depts of Chem (Prof S K Dolui) and Maths.

**Head of CPBT**

On 30thApril the new HoD was also appointed as the Head, Centre for Petroleum Biotech.

**Establishment of Teaching and Research Labs**

After joining I found that a good number of equipment purchased with public money was lying for 3-4 years without being installed. The matter was taken up with the concerned suppliers to do the needful; even they were warned with legal proceedings. By 2003-04 the same were installed and demonstrated and accordingly we started practical class of students and research work of faculty members.

**M Sc project Research in the Dept**

In the final semester students were sent to various industries and institutes for 1-2 months to do project work; but most of the organizations declined for such short-term project work and training. During 2004-05, faculty members were persuaded to carry out M Sc project research in the improved laboratories under their supervision. The objective was to strengthen laboratories for Ph D and faculty research.

**DBT/CSIR/ICMR/UGC JRF coaching**: With the assistance of Prof S K Roy, we stared a coaching course on Saturday and Sunday for the 3rd and 4th Sem students with the preparation of a large Question Bank.

**Shifting of Dept**

In 2005 the Dept was shifted from the old-dilapidated Assam type building to the GF, Academic Building I, in the new space area-wise well demarcated laboratories for student project work, Ph D and faculty research were created. Students and scholars took part in the transfer process so carefully that not even a single test tube was broken.

In 2006-07, the University constructed various new buildings including DBT/UGC funded MBBT building alongside the Envt Sci building. By the end of 2007, the dept was shifted to the present building with full participation of students and scholars.

**Coordinator, DBT and BIF**

On 1st Jan 2003 the new HoD assumed the Coordinatorship, DBT-MSc program. In 2006 we submitted a proposal to DBT to establish a Bioinformatics Infrastructure Facility, accepting our proposal they sanctioned a sum of Rs 10 lakh for the creation of infrastructure.

**National acclaim of the Dept**

In 2007 DBT-Biospectrum with nationwide survey for the sponsored M Sc program adjudged TU (MBBT) as the 17th best. In the next year survey, we were adjudged to be the 5th best in the country.

**Special funding by DBT**

Based on our national level performance in the early part of 2007, DBT sanctioned a special assistance of Rs 3.1 crore for the creation of improved teaching and research facilities.

**FIST, DST**

By the end of 2006, we became successful in getting DST FIST level I with the grant of Rs 3 crore.

**SAP by UGC**

In 2008 early part the dept successfully obtained UGC SAP I.

**Research projects**

1. Petroleum Biotechnology ONGC 1998-2002-09 189.00

2. Medicinal plants of NE India NMPB 2005-2008 10.00

3. Bioremediation of crude oil contaminated soil ONGC 2009-2014 70.03

**Students**

DBT-sponsored Master-degree program with all India students selected through Combined Biotech Entrance Exam (CBEE) and reserved category NE domicile students selected by the Dept (Univ) were admitted for the 4 semester M Sc program.

In the CBEE, the successful students were admitted as per their preference, but no student preferred TU. Every year I sat down for CBEE result at JNU, New Delhi; but at the end, the balance of low rank students was pushed to TU; making me to pray ‘Oh! Mother earth please opens up so that I could hide’. All students admitted in DBT sponsored M Sc program including NE domiciles were provided monthly stipend.

In Feb, 2006 DBT notified to discontinue the NE Domicile Quota. Some students and parents demanded for its continuity. They were advised to write to the Prime Minister of India. After about 15 days I got a late-night call from the DBT saying that the PMO advised them to continue the NE domicile seats, so they requested me to start the process. In the next day we discussed in the dept and took the permission for the NE domicile quota notification, interview and admission along with the CBEE students. Within 10 days we successfully completed the process.

Though TU MBBT dept admitted the low ranked CBEE candidates, with few faculty members of the dept and of assisting depts we could produce some the best students, every year 40-50% students were successful in UGC/DBT/ICMR JRF and GATE. Majority of passed out students were admitted in some of the best National and international institutes.

**Centre for Petroleum Biotechnology**

In 1998 the ONGC under the Chairmanship of Mr Bikash Bora approached Guwahati and Dibrugarh University with a sum of Rs 189 lakh for conducting research on petroleum contamination, bioprospecting, and additional crude oil recovery for five years. Due to lack of skilled faculty members the said Univs refrained from taking up the project. At that time, the MBBT dept was in the formative stage, as such TU accepted the five-year project and started the Centre for Petroleum Biotechnology in the new Dept with a MoU with ONGC. Three research fellows were appointed, but due to lack of guidance no progress could be made. The Dept purchased the sophisticated equipment but left uninstalled. Even the Executive Committee Meeting of CPBT could not be organized till 2002. In the year the newly appointed Professor was given the Headship of the project and the department. On the progress of research and technologies generated on biosurfactant and biopolymer since 2003-2008, the ONGC provided support of Rs 1 crore through a new MoU to make the Centre on permanent basis, and separately Rs 70 lakh was sanctioned to the Professor.

**(i) Bioremediation of crude oil contamination**: Based on research progress from 2003 the CPBT, MBBT, TU was successful in transferring the bacterial consortium (BC I) comprising of *Microbacterium* (G35-I), *B subtilis* (R38-I), *P fluorescens* (L490-II), *B licheniformis* (MTCC 8166), *P aeruginosa* (MTCC 8165) and *B circulans* (MTCC 8167) was handed over to ONGC, India.

**(ii) Biosurfactant**: Bacterial biosurfactant having stability at pH 2-11 and temp up to 100°C from was isolated from five *Pseudomonas aeruginosa* strains. The biosurfactant was much superior to the commercial surfactant SDS and could be used effectively in the recovery of residual crude oil from the petroleum sludge.

**(iii) Biopolymer**: Biopolymer possessing high thermal and melting stability was successfully isolated from bacteria *P aeruginosa* and *Bacillus circulans*. The biopolymers were biodegradable and could be used in secondary oil recovery.

**(iv) Bio-nanocomposites:** BacterialPHA was used in enhancing the stabilization of colloidal solution of SNP. Nanocomposites could be used for application as sensor. A sensitive PHA/AuNPs/HRP/ITO biosensor-based nanocomposite probe was developed for direct determination of *artemisinin* in bulk and spiked human serum.

Stable iron oxide nanocrystal (IONRL) and silver nanoparticles (SNPRL) were synthesized in biosurfactant of *P aeruginosa.*

**(v) Biofuel:** The fuel properties of microalgal biodiesel such as density, calorific value and cetane number were within ASTM ranges, its de-oiled cake could be directly used as a feedstock for bio-oil production. The bio-oil

**Dean, School of Sci & Tech, TU, Napaam**

01. Encouragement for interdisciplinary research and publication.

02. Monthly interdepartmental faculty and scholar seminar of the school.

03. Establishment of Central Instrumentation Facility.

**Overall Developmental Activities in TU**

01. House Allotment Guidelines and allotment

02. School conveyance of campus children

03. Formation of Pragati Women Association

04. Training and Placement

05. Formation of Tezpur University Entrance Examination

06. Construction Monitoring of the University

07. Quality Assurance of University facilities, equipment and furnitures

08. Site Selection for the School of Engineering

09. University Campus Beautification

10. Creation of Roadside bus stops, road widening, placement of speed breakers

11. Creation of Dedicated Power line

12. Creation of University Roads from NHW, Dolabari and Parowa Chariali

13. Establishment of SBI Branch and Post Office

14. Establishment of Kendriya Vidyalaya and University Market Complex

15. Establishment of New University Health Center

16. Development of Natural Waterbodies for Recreation

17. Establishment of Centre for Petroleum Biotechnology

**As Vice Chancellor of Nagaland University**

**(a) Academics**

01. 82% faculty and 96% staff positions are filled up. Student strength increased from 1240 (in 2012) to 2500 in 2016; and No. of affiliated colleges from 54 to 66.

02. Five new Departments, Anthropology, Psychology, Mathematics, Physics and Linguistics were established in 2012-13; under 12th 5year plan depts of Forest Sci and Environmental Sci; 2 Centres: South-East Asian Studies and Naga Tribal Language Studies were established in 2014-15. The M. Ed program and Dept of Social works were started in affiliated colleges from 2014; one Nursing institute with diploma program was started in 2013-14.

03. Encouraged and assisted faculty members to obtain externally funded (GBPIHED, DST, DBT, CSIR, UGC, MHRD, ICAR, ICHR, MOEF, and NUEPA) research projects with the financial outlay of *ca*. Rs. 22 crores. Prior to 2011, there were only a limited no of research projects.

04. Two B. Voc programs (Nursery Manag Tech & Plant Propag Techniques) and community college program (Repair & Maintenance of Electronic-Electrical equipment) were started. Univ. also offered community related training programs.

05. Assisted Depts of Geology and Zoology to obtain DST-FIST level I program in 2013-14; Dept of Botany SAP II from UGC in 2015.

06. The School of Management Sci was shifted to Meriema campus, Kohima from Dimapur in 2015.

07. Introduced semester system in all affiliated colleges since 2012-13.

08. Regular faculty, official and staff improvement since 2012 through refresher/orientation courses, seminars/workshops, and various trainings in and outside the State.

09. Procured sophisticated equipment like PCR, GC-MS, High Speed Refrigerated Centrifuge, Gel

Doc system, XRD, FTIR, AAS, CHN Analyser etc were procured for teaching and research.

10. Framed guidelines for ‘Research Fellows’ and ‘Externally Funded Research Projects.

11. NU Research Journal was revived and published from 2013.

12. Krishi Vigyan Kendra (KVK) at Lumami (Zunheboto) was made operational in 2013.

13. Signed MoU with University of Hyderabad; CSIR-NEIST, Jorhat; ICAR Station and Mithun Breeding Station, Jharnapani during 2014-15 for taking up collaborative research. On invitation of Her Royal Highness Princes Mahachakri Sirindhorn visited Chiangmai University, Thailand in 2016 to establish Academic Collaboration, the MoU was signed on 17th July 2016 in New Delhi (Hyderabad House) in the presence Honb’le Prime Ministers of India and Thailand.

14. Farmers’ Fare (Naga Kheti Mela) in Nagaland was organized for the first time at SASRD in 2013 and continued; adopted 12 villages at Lumami and Medziphema for trainings and demonstrations.

15. The University since 1994 could organize only 2 Convocations; 3rd and 4th were held in 2013 and 2015 with EC approved 2years gap; in the 3rd Pranab Mukherjee, Hon’ble President and Visitor acted as the Chief Guest and in the 4th the Governor and Chief Rector.

**(b) Infrastructure creation**

(01) Eight hostels for students (3 for boys and 5 for girls) and scholars; residential quarters 54 for faculty members, officers, and staffs; 2 library buildings, new offices 6, new dept buildings 4 and modification of 9 Office and Residential quarters for KVK; repaired 86 old (more than 35-40 years) quarters, constructed new retention walls and pucca roads *ca*. 20 km.

(02) Augmentation of water supply with installation of 17 km long second pipeline along with water tanks. A dedicated power line to HQ campus was arranged from the state power dept at cost over Rs 2.0 crore. Procured and installed 250, 50 and 25 KVA Generators with extension of LT lines Enlarged and constructed 4 playgrounds by cutting large hills.

(03) Constructed Children Park, Landscaping and flower gardening at HQ: Lumami, Meriema and Medziphema campuses; Gymnasium and Shooting rage; Volleyball, badminton, basketball courts; more than 20 galvanised approach roads; Instrumentation rooms in depts of Chemistry, Zoology, Botany, Physics, Anthropology and Mathematics; new Canteen buildings 4; enlargement of buildings of Sociology, Botany, Pol Sci, Economics, Tynidae dept and faculty common room.

(04) Established Dr T. Ao Sports Complex, started the construction of Multi-Gymnasium Hall. Installation of Bioinformatics lab with 2 Servers and 20 clients, 2 video conference rooms.

(06) With special permission of MHRD and Ministry of Commerce, GoI purchased 3 ambulances, 4 buses and 8 small vehicles.

**(C) Examination**

01. Strengthening of the CoE office with appointment of Controller, Dy Controller and necessary staffs; as well as provision of computing and online facility.

02. Examination, evaluation, and timely result declaration of affiliated colleges (UG) has been refined and improved with online-softwares. Prior to 2011, it was a very difficult proposition for the university.

03. The university outsourced the conduct of UG exam, evaluation, and result declaration by appointing Bangalore based Online Company Mindlogix since 2008 with 5year contract. But the Company miserably failed in the task with more delays and defective results. In 2013, Mindlogix was removed tactfully following legal provisions.

04. Construction of new multistory Examination building.

**(D) Administration**

01. The university followed the Ordinance of NEHU till 2012; NU ordinance was framed and approved by the Visitor the President of India in 2014.

02. Appointed Pro VCs in Kohima (Meriema) and Medziphema (SASRD), created and appointed Dean (Res., Dev. & Consultancy) in 2013 to strengthen Research and Consultancy activities.

03. Faculty strength increased to 242 against the sanctioned strength of 267. Almost all (95%) vacant posts of Officers and Staffs were filled up. Prepared and implemented NU Service Rule for Non-Teaching Staff.

04. Decentralization and distribution of Powers and Responsibilities to all controlling officers in 2013-14.

05. Formed (a) NU Alumni Association, (b) University-Village Coordination Committees for all campuses; (c) Day care centre; (d) Self Help Group to make quality food products, (e) ‘Inspired Teachers’ Forum, (f) Training and Placement Cell and conducted placement trainings by various organizations, (g) Innovators Club and organized several exhibitions by grass root innovators, and (h) NU Education Technology Cell.

06. Established Planning Cell; made IQAC operational, University was reaccredited with ‘B+’ grade in August 2014.

07. Almost all court cases were addressed during 2013-16.

**(E) Finance**

01. Separate allocation of fund for all four campuses of the university.

02. Instituted a NU Corpus Fund using annual savings.

03. All Audit Paras since 2006-07 were settled with the guidance of Auditor General, Kohima.

04. University adopted clearance of retirement benefit to employees within 10-20 days.

**Annexure II**

Reference of Chief Recto, Nagaland University/Governor of Nagaland



**Annexure III**

**Detailed Publications of Prof Bolin Kumar Konwar**

**UGC Bidwan Score:** 9.7 out of 10 scale

**Books: 07**

01. Prof B K Konwar and Dr. Kalpana Sagar (2017). Lipase: an Industrial Enzyme through Metagenomics, Apple Academic Press, Inc., New Jersy, USA and Ontario, Canada.

02. Dr Bolin Kumar Konwar (2015). Prospects of Microbe and Medicinal Pant Resources (Ed), Educationist Press, a Divn of Write and Print Pub, New Delhi-110015, ISBN No. 978-93-84649-23-4.

03. Prof B K Konwar (2013). Medicinal Plant Repertoire: A Perspective of Biogeographical Gateway of India. Labanya Prakashan, Amingaon, Guwahati-781032, Assam, ISBN No. 978-81759-6902-5.

04. Prof B K Konwar. Bacterial Biosurfactant (in Press). Apple Academic Press, Inc., New Jersy, USA and Ontario, Canada (Online now).

05. Prof B K Konwar. Bacterial Bipolymer (in Review). Apple Academic Press, Inc., New Jersy, USA and Ontario, Canada.

06. Bolin Kumar Konwar (2018). Joimati – Gadapani: Ek Amar Dampatya Premgatha, Papyrus, Jasuwanta Rd, Panbazar, Guwahati-781001, ISBN No. 978-93-81287-97-2.

07. B K Konwar (2001). Deshapremi Pariyal: Barbaruah Barphukan (History: Assamese), Banalata, Dibrugarh.

**Booklets 3**

**Book Chapters**: 21

01. Mayur M Phukan and **B K Konwar** (2012). Microalgae Chlorella and Scenedesmus as a potential bioenergy source. In: Renewable energy and sustainable development (Eds: R Kataki and A C Borah), EBH Pub. (India), pp 3 – 12, ISBN No. 978-93-80261-78-2.

02. **B. K. Konwar** (2013). Wetland: Potential and Prospects. In: Frontiers of Wetlands Fishers and Aqueous Research (Eds. Devashish Kar and Anjam Hussain Barbhuiya), Manglam Publications, New Delhi, pp 33-50, ISBN No. 978-93-81142-99-8.

03. Mayur M Phukan and **B K Konwar** (2014). Isolation and characterization of fresh water microalgae Scenedesmus from contaminated field samples for bioenergy generation. In: Recent Advances in Bioenergy Vol. III (Eds. Sachin Kumar, A K Sarma, S K Tyagi and Y K Yadav), Published as a book chapter by National Institute of Renewable Energy, ISBN No. 978-81-927097-2-7.

04. **B. K. Konwar** (2015). Morphological, nutraceutical, biochemical and genomic characters of some important medicinal plants of North East India. Prospects of Microbe and medicinal plant resources, Bolin Kumar Konwar (Ed), Educationist Press, Divn. of Write and Print Pub, New Delhi-110015, **ISBN No. 978-93-84649-23-4**, pp 1-9.

05. D. Chowdhury, S. Maibongsa and **B. K, Konwar** (2015). Biodiversity: global scenario and Indian perspective for conservation. Prospects of Microbe and medicinal plant resources, Bolin Kumar Konwar (Ed), Educationist Press, Divn. of Write and Print Pub, New Delhi-110015, **ISBN No. 978-93-84649-23-4**, pp 16-25.

06. R. Kandali, R. K. Goswami and **B. K. Konwar** (2015). Medicinal plant diversity conservation in North East India: An overview. Prospects of Microbe and medicinal plant resources, Bolin Kumar Konwar (Ed), Educationist Press, Divn. of Write and Print Pub, New Delhi-110015, **ISBN No. 978-93-84649-23-4**, pp 35-42.

07. R. Kandali and **B. K. Konwar** (2015). Nutraceutical potentiality of fruits of Spondias pinnata Kurz.: An important medicinal plant of Assam. Prospects of Microbe and medicinal plant resources, Bolin Kumar Konwar (Ed), Educationist Press, Divn. of Write and Print Pub, New Delhi-110015, **ISBN No. 978-93-84649-23-4**, pp 92-94.

08. **B. K. Konwar**, D. Chowdhury and D. Gogoi (2015). Chemical composition of the aromatic essential oil from Karphul [Etlingers linguiformis (Roxb.) Smith] rhizome and its antimicrobial property. Prospects of Microbe and medicinal plant resources, Bolin Kumar Konwar (Ed), Educationist Press, Divn. of Write and Print Pub, New Delhi-110015, **ISBN No. 978-93-84649-23-4**, pp 95-107.

09. P Bharali, A Ray, B K Konwar (2015). Ethnobotanical based Phyto-medicines for different hair ailments used in North-Eastern Region of India. Biotic: A collection of Research articles on Biodiversity and Sustainability, ISBN no. 978-93-83230-06-8.

10. P. Bharali, S. Y. Bashir & **B. K. Konwar**. Microbial Surfactants and their Industrial Applications. Microbes in Action. 105-134. 2015. Nova Science Publishers, Inc., USA.

11. A. Roy and **B. K. Konwar** (2015). Antioxidant activity in traditionally prescribed medicinal plants for hair growth. Prospects of Microbe and medicinal plant resources, Bolin Kumar Konwar (Ed), Educationist Press, Divn. of Write and Print Pub, New Delhi-110015, ISBN No. 978-93-84649-23-4, pp 108-116.

12. B. K. Konwar (2015). Bio-resources for economic growth of North East India: An apprisal. Prospects of Microbe and medicinal plant resources, Bolin Kumar Konwar (Ed), Educationist Press, Divn. of Write and Print Pub, New Delhi-110015, ISBN No. 978-93-84649-23-4, pp 175-187.

13. K. Gogoi and B. K. Konwar (2015). Polyphenol estimation and in vitro assessment of antioxidant activity of aqueous and alcoholic extracts of Musa balbisiana pseudostem. Prospects of Microbe and medicinal plant resources, Bolin Kumar Konwar (Ed), Educationist Press, Divn. of Write and Print Pub, New Delhi-110015, ISBN No. 978-93-84649-23-4, pp 117-126.

14. K. Sagar and B. K. Konwar (2015). Metagenomics for industrially important enzymes. Prospects of Microbe and medicinal plant resources, Bolin Kumar Konwar (Ed), Educationist Press, Divn. of Write and Print Pub, New Delhi-110015, ISBN No. 978-93-84649-23-4, pp 158-168.

15. B. K. Konwar (2015). Prospects of value addition to bioresources through biotechnology. Prospects of Microbe and medicinal plant resources, Bolin Kumar Konwar (Ed), Educationist Press, Divn. of Write and Print Pub, New Delhi-110015, ISBN No. 978-93-84649-23-4, pp 188-201.

16. B. K. Konwar and M. M. Phukan (2015). Biotechnological intervention and value addition to Biomass management. Prospects of Microbe and medicinal plant resources, Bolin Kumar Konwar (Ed), Educationist Press, Divn. of Write and Print Pub, New Delhi-110015, ISBN No. 978-93-84649-23-4, pp 202-210.

17. B. K. Konwar and J. Buragohain (2015). The microbial antimicrobial compound 2-methylheptyl isonicotinate from Zanthoxylum oxyphyllum Edgew.: A traditional medicinal plant of Assam. Prospects of Microbe and medicinal plant resources, Bolin Kumar Konwar (Ed), Educationist Press, Divn. of Write and Print Pub, New Delhi-110015, ISBN No. 978-93-84649-23-4, pp 211-219.

18. B. K. Konwar (2015). Biodiversity and intellectual property right for the best of mankind! Prospects of Microbe and medicinal plant resources, Bolin Kumar Konwar (Ed), Educationist Press, Divn. of Write and Print Pub, New Delhi-110015, ISBN No. 978-93-84649-23-4, pp 220-231.

19. Mayur Mausoom Phukan, Plaban Bora, Krishna Gogoi and Bolin Kumar Konwar (2019). Biodiesel from Saccharomyces cerevisiae: Fuel property analysis and comparative economics. SN Applied Sciences 1: 153, DOI: (https://doi.org/10.1007/s42452-019-0159-3) [SpringerNature]

20. Mayur Mausoom Phukan and **Bolin Kumar Konwar (2013)**. A short perspective on the biotechnological potential of microalgae. Published in Accelerating Science, pp188- 191, Anahita Imprints, ISBN: 93-82661-24-7)

21. **Bolin Kumar Konwar** and Mayur Mausoom Phukan (2015) Biotechnological intervention and value addition to biomass management. Published in Prospects of microbe and medicinal plant resources, pp 188-201, Write & Print Publications, New Delhi, ISBN 973-93-84649-23- 4)

**Articles on Science topics: English 32 Assamese 70 Booklets 03**

**Popular articles (Assamese): 232, Project reports: 20, Scientific reports: 12**

**List of Total Research Publications/Presentations– 335 (A: 143 + B: 21 + C: 80+ D: 91)**

**A) Publications in National/International journals (**2021 30**, T 2773+1,630=4,403** Av**>16)**

01. Stability analysis of yield and its components in soybean. Konwar, B K and Talukdar, P (1986). *Crop Improvement* 13 (1): 172-175, ISSN.1054-2116.

02. Environmental sensitiveness of genetic association of yield and yield attributing characters in soybean (Glycine max L. Merrill.). Konwar, B. K. and Talukdar, P. (1987). *J. Res*. 5 (2): 9-14, ISSN 0743-0167 HI 66921.

03. Genetic variability in pigeon pea. Konwar, B K and Hazarika, M H (1988). *Crop Improvement* 15 (1): 100-104, ISSN: 0256-0933.

04. Environmental impact on different characteristics of soybean (*Glycine max* L Merrill.). Konwar, B K and Talukdar, P. (1988). *Soybean Genetics Newsletter*, Iowa State University, USA12: 28-32, ISSN. 1054-2116.

05. Pattern of genetic variability in soybean. Konwar, B K (1991) *J Res* 11 (1): 20-25, AAU, ISSN 0743-0167.

06. Isolation and culture of leaf mesophyll protoplasts of sugar beet. Konwar, B K. (1993). *Crop Improvement* 20 (1):69-77, ISSN: 0256-0933.

07. Plant regeneration in three genotypes of sugar beet. Konwar, B. K. (1993). *Crop Improvement*, 20 (1): 88-97, ISSN: 0256-0933.

08. Agrobacterium tumefaciens-mediated genetic transformation of sugar beet (*Beta vulgaris* L.), Konwar, B K (1994). *Plant Biochem. & Biotech*. 3: 37-41, ISSN: 0971-7811, IF 1.352.

09. Environmental influence on the estimates of genetic parameters in soybean. Konwar, B K and Talukdar, P (1994). *J Res* 5 (2): 135-142, ISSN 0743-0167.

10. Phenotypic stability of soybean genotypes for field germination. Talukdar, P and Konwar, B K (1994). *Soybean Genetics Newsletter*, Iowa State University, USA 11: 38-41, ISSN. 1054-2116.

11. Genetic engineering in tea: I. molecular genetic markers. Bera, B, Konwar, B K and Singh, I D (1995). *Two and a Bud*, 42(1): 2-6, ISSN. 0496-6201.

12. Genetic engineering in tea: II. gene transfer. Konwar, B. K. (1995). *Two and a Bud*, 42(2):13-20, ISSN. 0496-6201.

13. Japonica x indica rice hybrids through embryo rescue technique. Sarma, D, Konwar, B K and Deka, P. C. (1996). *Rice Biotechnology Quaterly* Vol. 25, RBQ 9, ISSN 0014-2336.

14. Patenting and its application for the legal protection of crop plants including tea. Konwar, B. K. (1998). *Two and a Bud* 45 (1): 5-7, ISSN. 0496-6201.

15. Hairy root development in tea through Agrobacterium rhizogenes-mediated genetic transformation. Konwar, B. K., Das, S. C., Bordoloi, B. J. and Dutta, R. K. (1998). *Two and a Bud* 45 (2): 21-22, ISSN. 0496-6201.

16. Female fertility in clones KP 6/25 and Mornoi 30, Ahmed, N and Konwar, B K (1999). *Two and a Bud* 46 (2): 37-39, ISSN. 0496-6201.

17. Rooting of in vitro shoots and field establishment of tissue culture-derived tea plants in the field. Konwar, B K, Bordoloi, B J, Dutta, R K and Das, S C (1999). *Two and a Bud* 46 (2): 26-32, ISSN. 0496-6201.

18. Biodiversity of tea in North East India and their conservation at Tocklai. Konwar, B K (2001). *Two and a Bud 46* (2): 7-12, ISSN. 0496-6201.

19. Transient expression of B-glucuronidase activity in electroporated sugar beet protoplasts. Konwar, B K (2001). *JASS* 10(1):14-18, ISSN 0743-0167.

20. Biodiversity and molecular characterization of tea genetic resources using DNA markers. Bera, B; Konwar, B K, Saikia, H. and Mazumder, S. C. (2005). Two and a Bud 49: 30–37. ISSN 0496-6201.

21. Morphophenology and karyotype study of Patidoi (*Schumannianthus dichotomus* (Roxb.) Gagnep. synonym Clinogyne dichotoma Salisb.) – a traditional plant of Assam. Dhiren Chowdhuri and Bolin K Konwar (2006). *Curr. Sci,* Vol. 91 (5): 648, ISSN 0011-3891, IF 0.756.

22. A new less expensive method for genome size determination of plants. B K Konwar, D Chowdhury, J Buragohain & R Kandali (2007). *Asian J. Plant Sci*. 6 (3): 565 – 567, ISSN 0971-5444.

23. Ethnomedicinal plants used in skin diseases by some Indo-Mongoloid communities of Assam. Jitu Buragohain and B K Konwar (2007). *Asian J Expt Sci* 21 (2): 283- 290, ISSN 2249-7412.

24. An efficient and reliable method of DNA extraction from Meyna spinosa: a traditional medicinal plant from North East India. Jitu Buragohain and B K Konwar (2008). *J of Plant Biochem and Biotech* 17 (1): 103-105, ISSN 0971-7811, IF 1.352.

25. Microbial surfactant-enhanced mineral oil recovery under laboratory conditions. Bordoloi, N K and Konwar, B K (2008). *Colloids and Surfaces B: Biointerfaces* 63: 73 – 82, ISSN 0927-7765, IF 3.09.

26. Genome size determination of Zanthozylum oxyphyllum and Meyna spinosa by flow cytometry: A preliminary study. Jitu Buragohain and B K Konwar (2008). *J Cell Tissue Research* 8(1): 1249-1252, ISSN 1432-0878, IF 4.07.

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**a Department of Molecular Biology and Biotechnology, Tezpur University, Tezpur 784028, Sonitpur, Assam, India**

* **b DBT Nodal Cell, Tezpur University, Tezpur 784028, Sonitpur, Assam, India**
* **c Nagalang University, Lumami 798 627, Zunheboto, Nagaland, India**

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36. Agriculture and allied education for economic growth, (Chief Guest Talk) B K Konwar (2013). Seminar Education (Agriculture) Day, 3rd Sept, NRC-Pig, Rani, Assam.

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48. Quality Aspects of Higher Education, (Chief Guest talk), B. K. Konwar (2015). NAAC sponsored Workshop for Quality Improvement in Higher Education, March 26-27th, SASRD, Medziphema, Nagaland. 49. Globalization and issues of food security, (Keynote talk), B K Konwar (2015). National Seminar on ‘Globalization, Development and Environment with special reference North East Region’, 19th March, Nagaland University, Lumami, Zunheboto, Nagaland.

50. Biotechnology and biotechnology research for microbial, plant and animal improvement. (Inaugural talk), B K Konwar (2015). Presentation on the occasion of Science Day, 227th Feb, 20015, Dept. of Botany, NU, Lumami, Zunheboto, Nagaland

51. Biodiesel and other Secondary Metabolites from Algae. (Invited talk) B K Konwar (2015). DBT Workshop, BSS on marine bio-energy, nutraceuticals and bio-prospecting, including secondary metabolites and by-products from micro- and macro-algae on 9th July, 2015 at NIIST, Trivandrum, Kerala

52. Nagaland A Way Forward (Key Note Speaker), B. K. Konwar (2015). Inaugural Session, Seminar entitled “Nagaland A Way Forward”, organized by Assam Rifles, Kohima, 21st January.

53. Bioresources, Threats and Research Needs, (Chief Guest Inaugural talk), Prof. B. K. Konwar (2016). National Seminar on ‘Inventory, Sustainable Utilization and Conservation of Bioresources’, Feb. 26-27, 2016, Nagaland University, Lumami.

54. Nagaland: A Treasure-trove and Potentiality (Chief Guest Inaugural Talk), Prof. B. K. Konwar (2016). 40th Foundation of Indira Gandhi Rastriya Manab Sangrahalaya (IGRMS), Bhopal, March 22nd, 2016.

55. Research on Resources of North Eastern India for Knowledge Generation and Socio-economic Development, Prof. B. K. Konwar (2016). (Foundation Talk), Rajiv Gandhi University, Itanagar, 04th February 2016 (11 am to 1-30 pm).

56. Human Resource and Economic Development of North East India. (Key Note Speaker) B. K. Konwar (2016). National Seminar on “Human Resource and Economic Development in India: Prospects, Challenges and Strategies”, St Joseph’s College, Jakhama, Kohima, 26th August.

57. Metagenome-based lipase gene and the enzyme (Chief Guest Inaugural talk), B. K. Konwar (2016) Lecture Series on Advance Biology, Bioinformatics Infrastructure Facility, Nagaland University, Lumami, 2nd Sept 2016.

58. Agro-horticultural Food Entrepreneurs and Industrialization in North East India (Inaugural Talk), B. K. Konwar (2016). MOFPI & ASSOCHAM Sponsored Conf. on ‘Linking Prospective Food Entrepreneurs with Government Schemes and Markets’, Nagaland University, Medziphema, Nagaland August 12th 2016.Dated August 12th 2016.

59. Biology, Advance Biology and Biotechnology. B K Konwar (2016). Orientation talk, Department of Biotechnology, University of Science and Technology Meghalaya (USTM), 21st September, 2016.

60. Agro-processing Sector: Finding a Doable Answer, Concept Paper by Prof. B K Konwar (2016). Brain Storming Meeting “Doable Solutions to the Problems in Growth of Agro-processing (Sector) in North East India”, December 7th, Indian Institute of Crop Processing Technology (IICPT), MoFPI, Govt. of India, Guwahati.

61. Quality higher education in India. B. K. Konwar (2017). Multidisciplinery Refresher Course, Dept of Cultural Studies, Tezpur university, Napaam, Tezpur -784 028, Assam (02.01 to 22.01.2017) dtd. 07.01.2017, 11am – 1 pm.

62. Ahomor rajatwakalat bibhinna jati-janagusthir samanay sadhan, B. K. Konwar (2017). Freedom fighter Chabilal Upadhaya ‘Oikya and Sapriti’ Lecture, organized by Assomiya Club, Tezpur (Estb in 1915), Dist. Sonitpur, Assam, India on August 6th 2017.

63. Biotechnology - Nanobiotechnolgy Research in the development of lives, 2019, (Plenary Lecture), **Konwar, B** K, *National Conf on ‘Appl of Nanotech &amp; Biotechy in day life’*, Sibsagar College, Jaysagar, Assam, 26-28.09.2019.

64. Chemistry in multi- and inter-disciplinary science research, 2019, **Konwar, B K**, *Inaugural Lecture in the Nat Lecture Workshop*, Dept of Chemistry, Dibrugarh University, Assam, 21-22 October 2019.

65. Characterization and assessment of biosurfactant producing indigenous hydro- carbonoclastic bacteria: Potential application in bioremediation. Pranjal Bharali, Salam Pradeep Singh, Yasir Bashir, Nipu Dutta, **Bolin Kumar Konwar**, Chingakham Brajakishor Singh (2018). *Nova Biotechnologica et Chimica*. Accepted on 20th August 2018 for publication in December 2018.

66. Cellulase enzyme through metagenomics. **B K Konwar** (2018). ADNAT International Symposium ‘Biodiverse-2018, IIT Guwahati, 27-29th January 2018 (Chaired one Tech Ses).

67. Forest Ecology. **B K Konwar** (2018), “Workshop on Wildlife Ecology and Seribioresources (BIOCONVERSE 2018)”, Directorate of Sericulture, Bodoland Territorial Council (BTC) and College of Veterinary Science (AAU), Khanapara in association with IITG and ADNAT at Manas National Park 30.01.18-01.02.2018 (Chaired the Opening and Technical Sessions).

68. Potential bioremediating enzyme of Metagenomics AlkB gene. **B K Konwar** (2018). Satellite International Symposium ‘Technological Intervention in Microbial Resource’ at Tezpur University, Napaam as a part of “Advance DNA Technology (ADNAT)” Symposium organised in collaboration with IIT Guwahati, 4-5.02.2018 (Chaired the Opening Session).

69. Status, problems and prospects of Silkworm cultivation in Assam and adjoining states. **B K Konwar** (2018). National Workshop “SeriBioEcon, 2018”, CMER&TI, Lahdoigarh, Jorhat 12-13.03.2018 (Chaired the Inaugural and one Technical Session).

70. Biodiesel from *Saccharomyces cerevisiae*:fuel property analysis and comparative economics.Mayur Mausoom Phukan, Plaban Bora, Krishna Gogoiand, **Bolin K Konwar** (2019). Spinger Nature Applied Sciences (2019) 1:153, <https://doi.org/10.1007/s42452-019-015>, Received on 2 September 2018, Accepted on 2 January 2019.

71. Quality parameters towards academic excellence, **Prof B K Konwar**, Webinar at Tezpur Law College, dtd 21st August 2020, 3-30 – 5 pm.

**D) Papers presented in National/International Seminars/Conferences**

01. Selection value of the period from flowering to maturity and its relation with seed yield over environment in soybean (Glycine max L. Merrill). **Konwar, B. K**. and Talukdar, P. (1985). 31st Annual Conf. of Assam Sci. Society, AAU, Jorhat, Assam, 1985.

02. Transient expression of the B-glucuronidase gene in electroporated leaf mesophyll protoplasts of sugar beet (Beta vulgaris L.). **Konwar, B. K**. and Coutts, R. H. A., presented in the World Cong. on Cell & Tissue Culture, Anaheim, California, USA, 1991.

03. Genetic transformation in plant. **Konwar, B. K**. (1992). Seminar talk at the Dept. of Applied Bot. & Biotech., Gauhati University.

04. Agrobacterium-mediated genetic transformation in sugar beet (Beta vulgaris L.). Konwar, B. K. (1992). 1st National Symp. on Plant Biotechnology, IARI, New Delhi.

05. Genetic transformation: model plant sugar beet (Beta vulgaris L.). **Konwar, B. K**. (1992). Seminar organized by the Indian Soc of Biochem & Biotech, AAU, Jorhat.

06. Biotechnology and tea improvement. **Konwar, B. K**. (1995). Seminar in Tocklai Expt. Station, TRA, Jorhat, Assam, July 12th.

07. Tea improvement: conventional Vs innovative approaches. **Konwar, B. K**. (1995). Seminar in Tocklai Expt. Station, TRA, Jorhat, Assam, July 31st.

08. Haploid regeneration from embryo rescued japonica x indica rice (Oryza sativa L) hybrids. **Konwar, B. K**., Sarma, D. and Pathak, M. (1996). paper presented in the Golden Jubelee Int Symp on “Rainfed rice for sustainable food security”, Sept. 23-25, CRRI, Cuttack.

09. Production of haploids from embryo rescued plants of japonica x indica rice hybrids. Pathak, M. and **Konwar, B. K**. (1996). paper presented in the poster session II of the Golden Jubilee Int. sym. on ‘Rainfed rice for sustainable food security’, 23-25th Sept, Cuttack.

10. Classification of plants, its identification and collection of specimen. **Konwar, B. K**, Workshop on Environment and Nature Conservation, 17 – 25th Nov, 1997, Jorhat.

11. Plant Biodiversity. **Konwar, B. K**. (1997). workshop on Environment and Nature conservation, 17-25th Nov, Jorhat.

12. Indian tea: present position and future prospects. **Konwar, B. K**. (1999). concept paper presented in the Brain Storming session on ‘Improvement of tea through biotechnological tools, December 1st, DBT, New Delhi.

13. An appraisal on the popularity of Tocklai released clones and biclonal seed stocks in the North Eastern region. **Konwar, B. K**. and Neog, N. J. (2001), presented in the poster session of the 33rd Tocklai Conference, 11th-13th Feb.

14. Promising clones for the coming decade. **Konwar, B. K**., Bordoloi, S. C. and Bordoloi, R.K. (2001). Presented in the oral Technical session IV: Genetic modification and tea improvement- the new dimension, 33rd Tocklai Conference, 11th-13th Feb..

15. Biodiversity and molecular characterisation of tea (Camellia sinensis (L.) O. Kuntze) cultivars using DNA markers. Bera, **B., Konwar, B. K**., Saikia, H. and Mazumder, C. S. (2001). Presented in the oral Technical session IV: Genetic modification and tea improvement-the new dimension, 33rd Tocklai Conference, 11th-13th Feb.

16. Recycling of tea garden weeds and pruning litters. **Konwar, B. K**., Das, M. and Das, J. (2001), presented in the poster session of the 33rd Tocklai Conference, 11th-13th Feb.

17. Studies on stomata in TV and generative clones with particular reference to drought tolerance. Handique, A. C., Barman, T. S. and **Konwar, B. K**. (2001). Presented in the poster session of the 33rd Tocklai Conference, 11th-13th Feb.

18. Somaclonal variation through tissue culture of tea. Das, S. C., **Konwar, B. K**., Bordoloi, B. J. and Dutta, R. K. (2001) presented in the poster session of the 33rd Tocklai Conference, 11th-13th Feb.

19. Human genome. **Konwar, B. K**. Scientific Seminar (Oral Presentation), 18th Sept., 2002, Zoological Society of Assam, Tezpur.

20. The self forming biomaterial DNA, its characterization and contribution. **Konwar, B. K**. (2003). National Workshop on ‘Advanced Materials: processing and characterization (Oral Presentation), Oct. 29th – 30th, Deptt of Physics, Tezpur University, Napaam, Tezpur.

21. Biotechnology. **Konwar, B. K**. (2003). Science Week Key Note Seminar Talk, The Assam Valley School, Balipara, Sonitpur, Assam. dtd. March 1st.

22. DNA: the molecule of life and its voyage beyond the realm. **Konwar, B. K**. (2003). (Key note Address, Commemoration of 50th Anniversary of DNA Discovery, Defense Research Laboratory, DRDO, Tezpur, Assam. Dtd. 28th Feb.

23. Biosurfactant induced enhanced oil recovery. Bordoloi, N. K. and **Konwar, B. K**. (2003). National Seminar on ‘Hydrocarbon degrading microbes’. 22nd – 23rd Dec., Tezpur University, Napaam.

24. Bioremediation of petroleum hydrocarbons by microbial consortia. Bordoloi, N. K. and **Konwar, B. K**. (2003). National Seminar on ‘Hydrocarbon degrading microbes’. 22nd – 23rd Dec., Tezpur University, Napaam.

25. Lectin typing of Pseudomonas isolates from petroleum rich soils of Assam. B. Tanti, A. K. Buragohain, S. K. Ray and **B. K. Konwar** (2003). National Seminar on Hydrocarbon Degrading Microbes (Oral Presentation), Tezpur University 22-23 Dec.

26. Potential application of biosurfactant produced by thermophilic Pseudomonas sp. DM-02 strain in microbial enhanced oil recovery (MEOR) and Bioremediation. Das K., Mukherjee, A.K. & **Konwar, B.K**. (2003) National Seminar on Hydrocarbon Degrading Microbes (Oral), Tezpur Univ 22-23 Dec.

27. Degradation of crude oil by bacterial consortia. Bordoloi, N. K. and **Konwar, B. K.** (2004). National Workshop on ‘Science & Technology for regional development: case for North East India’. (Oral Presentation), Feb. 3rd – 6th, Indian Institute of Technology, Guwahati.

28. Evaluation of nutraceutical potentiality of a minor fruit of Assam – Spondias pinnata Kurz. Kandali, R. and **Konwar, B. K**. (2006). Souvenir cum Abstract: Value addition to bioresources of NE India, Post harvest technology and Cold chain, National Seminar (Oral Presentation), Gauhati University, Guwahati, Assam, 19-21 May, pp 99.

29. Antimicrobial activity of the fruits of Meyna spinosa Roxb. Ex Link: a potential medicinal plant of North East India. Buragohain, J. and **Konwar, B. K**. (2006). Souvenir cum Abstract: Value addition to bioresources of NE India, Post harvest technology and Cold chain, National Seminar, Gauhati University, Guwahati, Assam, 19 – 21 May, pp 113.

30. Microbial consortium in bioremediation of contaminant hydrocarbon. Bordoloi, N. K. and **Konwar, B. K**. (2006). Souvenir cum Abstract: Value addition to bioresources of NE India, Post harvest technology and Cold chain, National Seminar, Gauhati University, Guwahati, Assam, 19–21 May, pp 121.

31. Studies on the microflora of fermentation starter culture used by the Ahom community of Asom. Barman, K. R. and **Konwar, B. K.** (2006). Souvenir cum Abstract: Value addition to bioresources of NE India, Post harvest technology and Cold chain (Oral Presentation), National Seminar, Gauhati University, Guwahati, Assam, 19–21 May, pp 123.

32. Morphophenologyl and karyotype study of Patidoi (Schuannianthus dichotmus (Roxb) Gagnrep. Synonym Clinogyne dichotoma Salisb) – a traditional plant of Assam. Chowdhury, D. and **Konwar, B. K**. (2006). Souvenir cum Abstract: Value addition to bioresources of NE India, Post harvest technology and Cold chain, National Seminar (Oral Presentation), Gauhati University, Guwahati, Assam, 19 – 21 May: pp 124.

33. Biodiversity of medicinal plants of Assam. L. Barooah & **B.K. Konwar** (2006). National Seminar on Biodiversity & Indigenous Knowledge System, Itanagar Oct, pp 37.

34. Morpho-phenological and leaf nutritional characteristics of Streblus asper Lour.: an important medicinal plant of Assam. R. Kandali & **B.K. Konwar** (2006) National Seminar on Biodiversity & Indigenous Knowledge System (Oral Presentation). Itanagar Oct 2006: pp 72.

35. Isolation of genomic DNA from Zanthoxylum oxyphyllum for assessment of genetic diversity. J. Buragohain & **B.K. Konwar** (2006) National Seminar on Biodiversity & Indigenous Knowledge System, Itanagar Oct 2006: pp 73.

36. Petroleum biotechnology research. **B. K. Konwar** (2007). Petrotech Society Seminar on R&D-Round Table Conference (Oral Presentation), March 20th 2007, New Delhi.

37. Morphophenological, nutraceutical, biochemical and genomic characters of some important medicinal plants of North East India. **B. K. Konwar** (2007). National Seminar-cum-workshop on potential growth and development of medicinal and aromatic plants to provide alternative employment opportunities for the rural poor and youth (Oral Presentation)., National Rural Development Institute – North East Regional Centre, Khanapara, Guwahati, 23rd – 24th March.

38. Biosurfactant and its catalytic activity in increasing crude oil mobility. N.K.Bordoloi and **B.K. Konwar** (2007). Catalysis for future fuels, 18th National Symposium & Indo-US seminar on catalysis (Oral Presentation), 16-18th April, Indian Institute of Petroleum, Dehradun, Uttrakhand, India.

39. Comparative digestibility of some edible aroids of North East India. Jyoti Prasad Saikia and **B. K. Konwar** (2007). 76th Annual meeting of Society of Biochemist (India), Tirupati.

40. Microbial degradation of Mesua ferra L. seed oil-based polyurethane film. J. P. Saikia, S. Dutta, **B. K. Konwar** and N. Karak (2008). International Symposium on microbial biotechnology: diversity, genomics and meta-genomics, 49th Annual Conference, Association of Microbiologists of India (Oral Presentation), November 18th – 20th.

41. Crude oil-contaminated soil, its bioremediation and cultivation of rice (Oryza sativa L.). **B. K. Konwar** (2009), Invited Lecture, Environment Science Section, 96th Indian Science Congress, Shillong, Meghalaya, 3rd - 7th January.

42. Role of biosurfactant in reducing surface tension and its biodegradation. Pranjal Bharali and **B. K. Konwar** (2009), Poster presentation in Environment Science Section, 96th Indian Science Congress, Shillong, Meghalaya, 3rd - 7th January.

43. Biopolymer producing bacteria isolated from oil well sites of Assam. Pinkee Phukan and **B. K. Konwar** (2009), Poster presentation in Environment Science Section, 96th Indian Science Congress, Shillong, Meghalaya, 3rd - 7th January.

44. Biochemical and morphological study of four edible aroids of Assam. J. P. Saikia and **B. K. Konwar** (2009), Poster presentation in Plant Science Section, 96th Indian Science Congress, Shillong, Meghalaya, 3rd - 7th January.

45. Isolation and characterization of active compound from Spondius pinnata Kurz fruits. R. Kandali and **B. K. Konwar** (2009) (Oral Presentation). Abstract of Papers, Technical Session of 54th Annual Session of Assam Science Society, Tezpur University, February 4th, pp 64.

46. Removable of crude oil from contaminated soil. **B. K. Konwar** (2009), Fortnightly Faculty Seminar (Friday), School of Science & Technology, Tezpur University, Napaam, 14th August.

47. Leaf nutritional characteristics of Streblus asper Lour as green fodder. R. Kandali and **B. K. Konwar** (2009) (Oral Presentation), Abstract of Papers, Technical Session of 54th Annual Session of Assam Science Society, Tezpur University, February 4th, pp 75.

48. Biopolymer from crude oil scavenging bacteria. Pinkee Phukan and **B. K. Konwar** (2009). National Seminar on Emerging Trends in Polymer Science and Technology (Poly-2009) (Oral Presentation). October 8-10.

49. Bioactivity of four edible aroids of north east India. J. P. Saikia and **B. K. Konwar** (2009). Indian National Science Academy (INSA), NCL, Pune, November 21-23.

50. Polyaniline nanofiber: Potential antioxidant for biomedical and Industrial application. S. Baneerjee, A. Kumar, J. P. Saikia and **B. K. Konwar** (2009). International Conference on Advanced Nanomaterials and Nanotechnology, IIT Guwahati, December 9-11.

51. Investigation of antioxidant property of zinc oxide particles by 1'-1'diphenylpicryl-hydrazyle (DPPH) method. B. K. Konwar, S. Banerjee, J. P. Saikia and A. Kumar (2009). 4th Global Summit on Medicinal and Aromatic Plants, Sarawak, Malaysia (Borneo Island), Dec.:1-5.

52. The microbial antimicrobial compound 2-methylheptyl isonicotinate from Zanthoxylum oxyphyllum edgew, a traditional medicinal plant of Assam. **B. K. Konwar** and J. Buragohain (2009). 4th Global Summit on Medicinal and Aromatic Plants (Oral Presentation). Kuching, Sarawak, Malaysia.

53. Plant- Based active compounds for Hair Regeneration. A. Ray and **B. K. Konwar**. (2009). Indian National Science Congress (INSC), NCL, Pune, Nov. 21-23.

54. Antibacterial activity of crude banana (Musa balbisiana) pseudostem. K. Gogoi and **B. K. Konwar**. (2009). Indian National Science Congress (INSC), NCL, Pune, Nov. 21-23.

55. Bioactivity of four edible aroids of north east India. J. P. Saikia and **B. K. Konwar** (2009). Indian National Science Academy (INSA), NCL, Pune, November 21-23.

55. Biopolymer Isolated from Bacteria available in Oil well sites of Assam. Pinkee Phukon, B. K. Konwar (2009). Indian Science Congress, 2009, NEHU, Shillong.

56. Solubilization of non-mulberry eri (Philosamia ricini) and muga (Antheraea assamica) coccon silk fibers and comparison of protein content. R. K. Sanjukta and B. K. Konwar (2010). (Oral Presentation). Int. Conf. on Climate Change & Bioresource, Bharathidasan Univ., 09-12 Feb.

57. Creative structure and leadership. B. K. Konwar (2010), Seminar on Creativity in Education, Tezpur University, Napaam, 6th April (oral presentation).

58. Bacterial gene(s) through metagenomic study to obtain industrial enzymes. Kalpana Sagar and B. K. Konwar (2010). (Oral Presentation). Int. Conf. on Climate Change & Bioresource, Bharathidasan Univ., 09-12 Feb.

59. Bioethanol production from banana (Musa balbisiana) pseudostem. K. Gogoi and B. K. Konwar (2010). (Oral Presentation). Int. Conf. on Climate Change & Bioresource, Bharathidasan Univ., 09-12 Feb.

60. Isolation of rhamnolipid from bacterial strains isolated from crude oil contaminated soil near by the drilling sites of Assam. Pranjal Bharali and B. K. Konwar (2010). (Oral Presentation). Int. Conf. on Climate Change & Bioresource, Bharathidasan Univ., 09-12 Feb.

61. Plant-based active compounds for hair regeneration. Anggana Ray and B. K. Konwar (2010). (Oral Presentation). Int. Conf. on Climate Change & Bioresource, Bharathidasan Univ., 09-12 Feb.

62. Physiochemical and functional properties of high-grade alpha and microcrystalline cellulose obtained from an abundant agricultural waste in North-East India. Emeje, M.O.; Gogoi. K.; Konwar, B.K.; Isimi,C.Y.; Kunle,O.O. and Ofoefule, S.I. (2010). National Conference of the Nigerian Association of Pharmacists in Academia; Faculty of Pharmaceutical Sciences, Nnamdi Azikiwe University, Agulu Campus, Nigeria; Oct.

63. Phytochemical screening, in vitro antioxidant and haemolysis prevention activity of aqueous extract of Musa balbisiana inflorescence. K. Gogoi and B. K. Konwar (2011). Proce. National Seminar on Biochemical and Biotechnological research approaches for bioresource management of North East Inia towards sustainable rural development. 11-12th November: pp14.

64. Patidoi (Schumanniantus dichotomus (Roxb.) Gagnep. Synonym Clinogyne dichotoma Salisb.) – a traditional economically important plant of Assam and its karyotype study. Dhiren Chowdhury and B. K. Konwar (2011). Proce. National Seminar on Biochemical and Biotechnological research approaches for bioresource management of North East India towards sustainable rural development. 11-12th November: pp20.

65. Biochemical studies of yeast strains isolated from traditional starter cultures used by Karbi and Mising communities of Assam, India. K. R. Barman and B. K. Konwar (2011). Proce. National Seminar on Biochemical and Biotechnological research approaches for bioresource management of North East Inia towards sustainable rural development. 11-12th November: pp49.

66. Research trends and scope in Nagaland. B. K. Konwar (2012). Keynote lecture in the Inaugural Session of the State Level Workshop on “Present Trend and Future Scope of Research in Nagaland”, 05th July, Kohima, Nagaland.

67. Biodiversity and Bioresources. B. K. Konwar (2012). Mission Conclave, NEPED, NEPeD, NBDA, NBRM and NBHM, Nagalandl Bamboo and Honey Bee Mission Complex, Six Mile, Dimapur, Nagaland, 20th July.

68. ITKS and farmers’ variety, Presidential address by B. K. Konwar (2012). National Seminar-cum-Farmers’ Scientists Interaction on Progressive Agriculture (Friday, 16th November), North East Region Agri Expo,15th – 17th November.

69. From Oral Traditions to Literary Progression, B K Konwar (2012). (Opening remarks, Hornbill literature fest May 06th, Venue: Kisama Bamboo Heritage Hall, Kohima, Nagaland.

70. Production and optimization of extracellular lipases by Bacillus species KB-S102 isolated From domestic-waste contaminated soil. Kalpana Sagar and Bolin Kumar Konwar (2013). Oral Presentation in the 3rd Int. Conf. on Envt. Biomedical and Biotechnology (ICEBB), Singapore 24 – 25th August.

71. Agriculture and allied Education for Economic Growth. Prof. B. K. Konwar (2013), Education Day talk at National Research Centre on Pig, Rani, Dist. Kamrup, Assam, dated 3rd Sept.

72. Foundation day Talk of Nagaland University, Prof. B. K. Konwar (2013). 20th Foundation Day, dated 6th September, HQ: Lumami (Named the Auditorium as ‘I. Ihose Kinnimi Hall’).

73. Rapid and simple DNA extraction protocol from goat rumen digesta for metaganomic studies. Yasir Basir and B K Konwar (2014). Nat. Sem. on Recent Adv. in Biotech. research in N E India: Challenges and Prospects. Dept. of MBBT, Tezpur University, Napaam, Nov 27-29th.

74. Construction and screening of metagenomic library derived from goat rumen digesta: a potential source for novel cellulases for efficient deconstruction of cellulosic biomass. Yasir Basir and B K Konwar (2015). Ist Int. Conf. on Recent Advances in Bioenergy research, SSS-NIRF, Kapurthala, Punjab, March 14-17, 2015.

75. DNA-coding strand derived mRNA to Ribosome and translation. B K Konwar (2017). Technical talk 1, Workshop cum Training Program on Ribosome and Translation, DBT and MBBT, Tezpur University, Nappam , 25-26th Nov 2017.

76. Metagenomic Alkane Hydroxylase Gene and Application of Bioinformatics. B K Konwar (2017). Symposium on ‘Omics Technology’, IIT Guwahati 19.06.2017 (also Chaired the Sesssion).

77. Cellulase enzyme through metagenomics. B K Konwar (2018). ADNAT International Symposium ‘Biodiverse-2018, IIT Guwahati, 27-29th January 2018 (Chaired one Technical Session).

78. Forest Ecology. B K Konwar (2018), “Workshop on Wildlife Ecology and Seribioresources (BIOCONVERSE 2018)”, Directorate of Sericulture, Bodoland Territorial Council (BTC) and College of Veterinary Science (AAU), Khanapara in association with IITG and ADNAT at Manas National Park 30.01.18-01.02.2018 (Chaired the Opening and Technical Sessions).

79. Potential bioremediating enzyme of Metagenomics AlkB gene. B K Konwar (2018). Satellite International Symposium ‘Technological Intervention in Microbial Resource’ at Tezpur University, Napaam as a part of “Advance DNA Technology (ADNAT)” Symposium organised in collaboration with IIT Guwahati, 4-5.02.2018 (Chaired the Opening Session).

80. Status, problems and prospects of Silkworm cultivation in Assam and adjoining states. B K Konwar (2018). National Workshop “SeriBioEcon, 2018”, CMER&TI, Lahdoigar, Jorhat 12-13.03.2018 (Chaired the Inaugural and one Technical Session).

**Major Research Findings of Prof Bolin Kumar Konwar**

1. *Agrobacterium tumefacien*-mediated genetic transformation of sugar beet with NPT II and GUS genes. Electroporation-mediated transient expression of GUS gene in sugar beet protoplasts. Standardised the rapid in vitro culture technique of sugar beet.

2. Developed green gram varieties AAU 34 and AAU 39.

3. Isolation and culture of tea protoplasts. Genetic trasformation of tea with *Agrobacterium rhizogenes* carrying the Ri plasmid. Isolated and multiplied 12 strains each of anaerobic bacteria and fungi involved in the degradation of tea pruning litters and tea garden weeds. TV 15 clones were nationally registered at the NBPGR, New Delhi with RAPD-based genetic fingerprinting.

4. Developed a bacterial consortium which can degrade crude oil contaminant in 180 days for soil reclamation. Isolated bacterial bio-surfactant 55% superior to SDS in crude oil recovery.

5. Chrom no. of *E. linguiformis* (tetraploid) 48. The plant (specially rhizome) was assessed to contain 86% flavoury compound anethole. The chemical can potentially be used as food and medicine as additive. The plant is thus a better source for anethole against anise seed (82%) and funnel seed (75%). The chemical structure of anethole is determined (1-methoxy-4-(1-propenyl)-benzene).

6. The crude protein content in the fruit of *Spondias pinnata* is determined to be 3.34%, reducing sugar 69.56 mg g-1, crude fibre 23.07 mg g-1, phosphorous 0.483 mg g-1, iron 0.043 mg g-1, calcium 5.97 mg g-1 and potassium 83.60 mg g-1. The fruit also contains 0.06% ‘3 β-hydroxyolea-12-en-28-oic acid’ commonly known as ‘oleanolic acid’. The acid is antimicrobial against Staphylococcus aureus and Bacillus subtilis.

7. Leaf of *Streblus asper* is assessed to contain protein and fat 16.73% and 1.029±0.029%, respectively. The ash content is 8.1 mg g-1, starch 12.05 mg g-1 and reducing sugar 1.15 mg g-1; as well as high content of crude fibre (17.08 mg g-1). Also lupeol [i.e. Lup-20(29)-en-3 β-ol’] 0.05%.

8. Chrom no of Zanthoxylum oxyphyllum 36 (diploid), Rubus alceifolius 28 (tetraploid) and Meyna spinosa 44 (tetraploid). Tender leaves of the plants contain antimicrobial compound 2-methylheptyl isonicotinate against *B. subtilis, E. coli, K. pneumoniae, S. aureus* and yeast *C. albicans*, whee as the mature fruits of *M. spinosa* contain oleanolic acid and oleanol. Genome size of *Zanthoxylum oxyphyllum* is 3.79 (3.70x109), *Rubus alceifolius* 2.84 (2.77x109) and *Meyna spinosa* 3.93 (3.84x109).

9. Chrom no of *Xanthosoma caracu* is 26, *X. sagittifolium* 26, *Amorphophallus paeoniifolius* 28: all diploid, but *Colocasia esculenta* with 28 is tetraploid. The genome size of the tetraploid species is 14.1 pg (C-value).

10. Total phenolic and flavonoid content is high in *A. paeoniifolius*. The DPPH free radical scavenging property is the highest in *X. caracu* and blood coagulation enhancing property high in *X. sagittifolium*. Five polyphenolic compounds, 3,4-dihydroxy benzoic acid, 3,4-dihydroxycinnamic acid, trans-in-hydroxycinnamic acid, 4-hydroxy-3-methoxycinnamic acid and 4-hydroxy-3,5-dimethoxybenzoic acid were isolated from Colocasia species.

11. *C. esculenta* possesses high amylase content with the smallest starch granule size. The biggest starch granule size and highest relative crystallinity are recorded in *A. paeoniifolius* starch. Due to small granule size *C. esculenta* starch is the most suitable for composite preparation with polyaniline. The starch-polyaniline composite has clear formation of three new types of composites having better antioxidant activity along with biocompatibility.

12. The small granule-sized starch of *C. esculenta* is suitable for baby food formulation as well as for making fine printing paper, plastic sheets as binder with orally active ingredients, and as carrier material in cosmetics. There is a potential of this starch in cosmetic, paper, textile and photographic industries. *C. esculenta* starch can be used in the synthesis of edible films.

13. Three different PHA producing bacterial isolates were recovered from the crude oil contaminated soil of Assam. One isolate was identified to be Bacillus circulans MTCC8167. The optimum growth and production of PHA was found to be pH 7, and 37ºC. Biopolymers possessed high degree of thermal as well as melting stability.

14. Biopolymers isolated from *P. aeruginosa* JQ796859, *B. circulans* MTCC8167 and *P. aeruginosa* JQ866912 were assessed to be poly (3-hydroxyvalerate) co- (5-hydroxydecenoate) (P-3HV-5-HDE), poly-3-hydroxybutyrate-co-3-hydroxyvalerate (P-3HB-3HV) & poly-3-hydroxyvalerate-co-5-hydroxydecenoate-co-3-hydroxyoctadeceno- ate (P-3HV-5HDE-3HODE), respectively. Mol wt of the biopolymers is in the range of 5.6 X 103 to 4.2 X 104 Da and the polydispersity index bears a narrow value in the range of 1.05 to 1.21. The polymers possess luminescence property and are biodegradable by microbial action.

15. The PHA of *B. circulans* MTCC8167 is useful in enhancing the stabilization of colloidal solution of SNP. Incorporating the metal oxide nanoparticles with biopolymer, the intensity of the emission peak could be increased. The resulting nanocomposites could be used for further application as sensors. A 540-bp PCR product proved the presence of mcl biosynthesis genes phaC1/C2 in the bacterial strains P. aeruginosa JQ796859 and P. aeruginosa JQ866912.

16. A selective and sensitive PHA/AuNPs/HRP/ITO biosensor-based nanocomposite probe was developed for direct determination of artemisinin in bulk and spiked human serum. The method possessed distinct advantage over other existing methods regarding sensitivity, selectivity, time saving and minimum detectability.

17. The compound eclalbasaponin (C32H62O8) and aliphatic compound C15H28N2O2 were isolated from *Eclipta alba*; C13H18O4 and C14H14O5 from in *Aloe barbadens*. DPPH-scavenging assay confirmed eclalbasaponin and aloenin to possess higher radical scavenging property than standard gallic acid and quercetin. These two compounds possessed regeneration ability in the case of warfarin induced alopecia (animals) as compared to the standard drug minoxidil. Hair folicle regeneration time and completion of hair growth is much faster due to eclalbasaponin treatment as compared to aloenin and minoxidil treated ones. No adverse effect is observed up to 15 days in the case of animals treated topically with eclalbasaponin and aloenin, hair follicle regeneration started on 4th, 6th and 9th day in the case of eclalbasaponin, aloenin and minoxidil treated animals, respectively.

18. High biomass yield, attractive biochemical profile and high energy content in the microalgal strains *Chlorella spp*. KJ499988, Scenedesmus spp. KF279644 and *Parachlorella kessleri* KF163441 offers strong candidature as bioenergy feedstocks. Mass culture of *P. kessleri* in permanently inundated water bodies is possible. *Chlorella spp*. KJ499988 biomass could be used as feedstock for bio and thermo-chemical conversions. *P. kessleri* KF163441 deoiled cake could be directly used as a feedstock for bio-oil production. However, biodiesel from yeast was found to be superior to microalgal biodiesel with regard to calorific value and cetane number.

19. Soil metagenomic DNA was successfully used to clone the lipase gene (KBS-plip1: 891 bp) into the expression vector pET-32a. The transformed E. coli cells having KBS-plip1 cloned pET-32a could produce lipase enzyme in tributyrin (1%) agar medium. The purified industrial enzyme was found to be stable in different solvents, temperature 37oC and pH 7.5.

Bolin Kumar Konwar