



CURRICULUM VITAE OF PROFESSOR BOLIN KUMAR KONWAR

Name : Prof. Bolin Kumar Konwar **Designation** : Vice Chancellor (from 07.09.2011)

Present address: Nagaland University (Central), Lumami-798627, Dist.Zunheboto, Nagaland
 (Mol. Biology & Biotechnology, School of Science & Technology
 Tezpur University, Napaam, Tezpur-784028, Dist-Sonitpur, Assam)
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Date of birth : 01.09.1958

Marital status : Married with two children

Educational qualification

Institute	Place	Examination	Year	Div/Class & Marks/OGPA	Prize/ Scholarship
BPBMHS School	Sonari	HSLC	1975	Ist Divn, 68.63%	National/ICAR/ITA Scholarship
Assam Agril University	Jorhat	B Sc (Agri)	1981	Ist Class, OGPA 3.34 in 4.0 scale (71.6%)	Gold Medel & Gr I Merit Scholarship
Assam Agril University	Jorhat	M Sc (Agri) in Plant Breed. & Genetics	1984	Ist Class, OGPA 3.79 in 4.0 scale (85.8%)	DISTINCTION (above 80% marks)
M Sc (Agri) thesis – “Phenotypic stability for yield and morphophysiological traits of soybean [<i>Glycine max</i> (L) Merrill]”					
Imperial College of Sci, Tech & Medicine	London	DIC (Microb)	1992	-	Certificate
Imperial College, Univ. of London	London	Ph D (Plant Biotech)	1992	-	Certificate

Ph D thesis – “*In vitro* culture and genetic transformation of sugarbeet (*Beta vulgaris* L.)”

Experience

Institute	Place	Job	Duration	Nature of work
Towkok Gr of T Es	Sonari	Management trainee	June–Sept,1980	Tea garden & factory management
Assam Agril Univ	Jorhat	SRA /Lecturer	April,84-Dec,85	Farmers field expts, Teaching UG & PG courses, Res on pulse crops &mutation breed
Assam Agril Univ	Jorhat	Asstt. Prof	Jan,86-Aug,94	As above
Assam Agril Univ	Jorhat	Assoc Prof	Aug,94-April,95	Teaching UG & PG in Agril Biotech, Genet& Plant Breed, Res on blue green algae
Tocklai Expt Station Tea Res Association	Jorhat	Biotechnologist	April,95-Dec,97	Tea tissue & Proto-plast cult, genome analysis, genet transformation, Microb degradation of tea litters etc to value added compost
Tocklai Expt Station	Johat	Dept Incharge	Dec,97-Aug,2K	Same as above
Tocklai Expt Station	Jorhat	Head of Dept	Sept, 2000 – March,02	As above
Tezpur University	Tezpur	Professor & Head of Mol Biol & Biotech	March 02- April08	Teaching M Sc & Ph D Res on Petroleum Biotech, genomics & biochem of Medicinal Plants; yeast genomics. Dept managing
Tezpur University	Tezpur	Professor & Dean of Sci & Tech	April 08-Sept 2011	Same as above and School Management
Nagaland University	Lumami	Vice Chancellor	7th Sept,– till date 2011	Academic, administrative & Fin Management of the University

Present position with the pay scale

Vice Chancellor of Nagaland University (Central), basic pay Rs 75,000 + 5,000/-pm

Research Projects carried out as Principal Investigator

Project title	Funding agency	Duration (yrs)	No of sci./ associates	Fund (Rs in lakh)
1. Collection, evaluation and improvement of <i>Azolla-Anabaena</i> symbiosis	ICAR	3 (1994-97)	1 RA	3.70 (completed)

2. Embryo rescue and haploidy for cold tolerant rice improvement	AAU	5 (1993-98)	PG student	2.00
3. Breeding tomato for fruit size and resistance/tolerance to late blight	AAU	5 (1993-98)	1 Scientist (left)	
4. Advanced work on Plant Biotechnology	Tea Board	5 (1995-00)	PG student	1.20
5. A study on the utilisation of improved planting materials by the tea industry of NE India	Tea Board	1 (1999-00)	1 Scientist (left)	
6. Recycling of tea and other organic wastes to value added compost	DBT	2 (1999-01)	RFs 2	130.00
7. Collection, conservation and evaluation of tea germplasm	Tea Board	5 (1999-04)	2 Scis. (completed)	
8. Characterisation and improvement of tea through biotechnological tools	DBT	3 (2001-04)	Sci. 1	1.80 (completed)
9. Studies on functional genomics of tea, mentha and ashwagandha (New Millenium Techno Initiative: NMITLI)	CSIR	3 (2001-04)		
10. Petroleum Biotechnology	ONGCL	9 (1998-07)	RFs 2	14.30
11. Medicinal plants of NE India	NMPB	3 (2005-08)	Sci. 1 (Completed)	
12. Bioremediation of crude oil contaminated soil.	ONGC	5 (2009-14)	Scis. 3	40.40
			RFs 2	38.20 (left completed)
			RFs 3	42.00 (left completed)
			SRFs 2	189.00 (Completed)
			PF 1	10.00 (Completed)
			RF 4	70.03 (Completed)

Research achievements

1. Isolation and cloning of GUS gene into the pBin 19 plasmid; construction of the vector pBI 121 having the marker NPT II and reporter B-glucuronidase (GUS) genes.
 2. Mobilisation of plasmid into *Eschericia coli* and *Agrobacterium tumefaciens* using electrical pulse.
 3. *Agrobacterium tumefaciens*-mediated genetic transformation of sugar beet with NPT II and GUS genes.
 4. Electroporation-mediated transient expression of GUS gene in sugar beet protoplasts.
 5. Histochemical assaying of GUS gene expression.
 6. Polyacrylamide gel electrophoretic determination of GUS protein.
 7. Gene copy number determination.
 8. Associated with the development of green gram varieties AAU 34 and AAU 39.
 9. Standardised the rapid *in vitro* culture technique of sugar beet.
 10. Standardised the tissue culture technique of tea with *in vitro* rooting, hardening, acclimatisation and establishment of plants in the field.
 11. Isolation and culture of tea protoplasts.
 12. Genetic transformation of tea with *Agrobacterium rhizogenes* carrying the Ri plasmid for hairy root development.
 13. Isolation and multiplication of 12 strains each of anaerobic bacteria and fungi involved in the degradation of tea pruning litters and tea garden weeds.
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14. Fifteen TV clones were nationally registered at the NBPGR, New Delhi with detailed characterisation including RAPD-based genetic fingerprinting.
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15. Developed a bacterial consortium which can degrade crude oil contaminant in 180 days.
 16. Isolated bacterial bio-surfactant was found to be much superior (55% recovery) to commercial surfactant SDS in the recovery of crude oil from the saturated sand pack column. The bio-surfactant was found to be stable at 100°C and also in a wide range of pH from 4 – 12.
 17. The plant *E. linguiformis* is a tetraploid with the chromosome number $2n=48$, where $x=12$. The flavoury compound anethole (86%) is present in the entire plant, more specifically in the rhizome. The chemical can potentially be used as food and medicine additives. The rhizome also contains 5.7% methyl chavicol. Thus, the plant can be a better source for anethole against the present one of anise seed (82%) and funnel seed (75%). The chemical structure of anethole is determined to be 1-methoxy-4-(1-propenyl)-benzene.
 18. The crude protein content in the fruit of *Spondias pinnata* is 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 has antimicrobial activity against *Staphylococcus aureus* and *Bacillus subtilis*.
 19. Leaf of *Streblus asper* is rich in protein and fat with 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. There is a high content of crude fibre (17.08 mg g⁻¹).
 20. Leaf of *Streblus asper* also contains lupeol [i.e. Lup-20(29)-en-3 β-ol'] 0.05%. The chemical possesses antimicrobial activity against *Bacillus subtilis* and *Staphylococcus aureus*.
 21. The genome size of *Streblus asper* and *Spondias pinnata* are 3.93 pg and 2.36 pg, respectively.
 22. Chromosome number of the plants *Zanthoxylum oxyphyllum* $2n = 2x = 36$ (diploid), *Rubus alceifolius* $2n = 4x = 28$ (tetraploid) and *Meyna spinosa* $2n = 4x = 44$ (tetraploid).
 23. Tender shoots and leaves of *Z. oxyphyllum* and *R. alceifolius* contain antimicrobial compound 2-methylheptyl isonicotinate against *B. subtilis*, *E. coli*, *K. pneumoniae*, *S. aureus* and yeast *C. albicans*, whereas the mature fruits of *M. spinosa* contain oleanolic acid and oleanol. The isolated compounds are potential as antibacterial and antifungal agents
 24. The genome size of the medicinal plant *Zanthoxylum oxyphyllum* is 3.79 (3.70 x 10⁹), *Rubus alceifolius* 2.84 (2.77 x 10⁹) and *Meyna spinosa* 3.93 (3.84 x 10⁹).
 25. Aroid *Colocasia. esculenta* is the most promising as food. Chromosome number of *Xanthosoma caracu* is $2n=2x=26$, *X. sagittifolium* $2n=2x=26$ and *Amorphophallus paeoniifolius* ($2n=2x=28$) species and are diploid, whereas the *C. esculenta* with $2n=4x=28$ is tetraploid. The genome size of this tetraploid species is 14.1 pg (C-value).
 26. Dendrogram generated on RAPD data revealed *X. caracu* and *X. sagittifolium* to be 100% similar to each other. *A. paeoniifolius* has similarity 67% with *Xanthosoma* species. *C. esculenta* has a similarity of 11% with *Xanthosoma* and *Amorphophallus* clusters.
 27. Total phenolic and flavonoid content is high in *A. paeoniifolius* water extract. The DPPH free radical scavenging property is the highest in *X. caracu* and blood coagulation enhancing property is high in *X. sagittifolium*.
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28. Based on HPLC, a total of 14 compounds were isolated from the aroid species and their NMR and FTIR-based characterization identified 5 different polyphenolic compounds viz 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. The compounds have antibacterial activity. Protocatechuic acid has high antibiotic activity against *E. coli* and coumaric acid against *S. aureus*. Caffeic acid has antioxidant activity as proved by induced haemolysis prevention test.
 29. *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.
 30. 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.
 31. 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 for food coating.
 32. Designing of iron and silver nanobiopolymer particles as drug delivery agent.
 33. Extraction and energy characterization of biodiesel from microalgae.
 34. RAPD-PCR based grouping of yeast isolates at the molecular level could not corroborate the morphological groupings, but ITS-PCR profiles could.
 35. PCR-RFLP profile study and comparison of yeast isolates with that of the reference strains allowed to identify the yeast strains belonging to four different species.
 36. Four yeast *S. cerevisiae* strains were found to be potential ethanol producer while used on various locally available raw materials.
 37. Three different PHA producing bacterial isolates were recovered from the crude oil contaminated soil site of Assam. One isolate was identified to be *Bacillus circulans* MTCC8167.
 38. 16s rDNA gene sequence data were deposited in NCBI GenBank and named as *Pseudomonas aeruginosa* JQ796859 and *Pseudomonas aeruginosa* JQ866912 respectively.
 39. The optimum conditions of the bacterial strains for the growth and production of PHA was found to be pH 7, temperature 37°C and 72 h culture period. Biopolymers possessed high degree of thermal as well as melting stability.
 40. The waste glycerol byproduct of kitchen chimney dump lard (KCDL) was found to be good carbon source for the highest PHA accumulation in the bacterial strains.
 41. Based on FTIR, GCMS and ¹H and ¹³C NMR, their characterization lead to identification of the biopolymers isolated from *P. aeruginosa* JQ796859, *B. circulans* MTCC8167 and *P. aeruginosa* JQ866912 to be poly (3-hydroxyvalerate) co- (5-hydroxydecanoate) (P-3HV-5-HDE), poly-3-hydroxybutyrate-co-3-hydroxyvalerate (P-3HB-3HV) and poly-3-hydroxyvalerate-co-5-hydroxydecanoate-co-3-hydroxyoctadecenoate(P-3HV-5HDE-3HODE), respectively.
 42. The average (number) molecular weight 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.
 43. XRD data revealed that the polymers are crystalline in nature having large crystal size. The polymers possess luminescence property and are biodegradable by microbial action.
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44. 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.
45. 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 proposed method has distinct advantage over other existing methods regarding sensitivity, selectivity, time saving and minimum detectability.
46. 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.
47. The genome size of the medicinal plants *Eclipta alba* and *Aloe barbadensis* are 4.27×10^9 bp (4.36 pg) and 4.42×10^9 bp (4.52 pg), respectively.
48. The compound eclalbasaponin with the chemical formula $C_{32}H_{62}O_8$, and another aliphatic compound with the chemical structure $C_{15}H_{28}N_2O_2$ are present in *E. alba*. Eclalbasaponin possesses high degree of antibacterial and antifungal activity.
49. Two compounds with the chemical structures $C_{13}H_{18}O_4$ and $C_{14}H_{14}O_5$ are found to be present in *A. barbadens*. The second compound is similar to aloenin.
50. On the basis of DPPH scavenging assay, the compounds eclalbasaponin and aloenin are found to possess strong radical scavenging property as compared to the standard gallic acid and quercetin.
51. The isolated phyto-compounds possess no cytotoxicity on murine macrophage cell line (RAW264.7) up to the concentration of 100 mg/ml. They are also non-irritant on rabbit skin even after 72 hours of exposure.
52. Warfarin at 1.7mg/kg for 60 days induces alopecia in wistar albino rats. The initial area of patchy hair fall leads to total body hair loss. Both eclalbasaponin and aloenin possess air follicle regenerating ability in the case of warfarin induced alopecia in the animal models as compared to the standard drug minoxidil. The regeneration time of hair follicles as well as the time of completion of hair growth are much less in the case of eclalbasaponin treated animals, in comparison to aloenin and minoxidil treated ones.
53. The length and weight of hair after treatment with eclalbasaponin has increased as compared to aloenin and minoxidil. Rate of elongation is 0.16 cm/day and increment of hair weight 0.27 mg/day. No adverse effect is observed up to 15 days in the case of animals treated topically with eclalbasaponin and aloenin.
54. Skin histological study has confirmed the initiation of hair follicle regeneration on 4th day, 6th day and 9th day in the case of eclalbasaponin, aloenin and minoxidil treated animals, respectively.

Research management

Tocklai Expt Station, TRA: The institute was in great turmoil when I joined as the Biotechnologist (Sr. Scientist) in 1995 due to prolonged agitation by the employees.

The situation called for our full time effort to get the support of all members to bring back the work culture, regular attendance and punctuality. Clone improvement work which was almost abandoned was brought back to the right track with the preparation for the release of clones TV31 and TV32. The result-less tea biotechnology (tissue culture) work of 12 years was given a sound footing with the planting and cultivation of tissue culture-derived plants in the

field. Prior to moving out of the institute, we could manage to get three mega research projects from Tea Board, DBT and DST.

Tezpur University: At the time of my joining in the department of Molecular Biology & Biotechnology as the lone Professor in March 2002, there were three Lecturers, joined before me in Feb – March 2002. The Reader and HoD left the University; another Reader was removed owing to some legal verdict, the lone Reader left for the USA for Post-doctoral research. It was indeed very difficult period to carry out teaching and research with fresh three lecturers. We were fortunate to garner support from departments like Chemical Sciences and Mathematics to impart teaching alongside our Lecturers to DBT-sponsored students. We could get full support and cooperation from our students admitted through CEEB. All throughout, scholars and students helped us to manage laboratories.

For gearing up the departmental laboratories, M Sc research project was successfully introduced in 2004, long before DBT's decision. At the time of joining, most of the equipment were out of order and few sophisticated ones were lying uninstalled. Necessary repairing and installations were done with full support of the University administration.

The Centre for Petroleum Biotechnology established for five years in 1999 with ONGC's funding lacked progress. With the support of all concerned, bioremediation of contaminant petroleum (microbial consortium) and enhanced oil recovery (bacterial biosurfactant) technologies were subsequently transferred to the funding agency.

From 2005-08, a total of eight scholars obtained Ph D degree from the department. Over sixty research papers so far were published and almost equal numbers presented by faculties in national/international journals and seminars. Almost all our students (95%) have been appointed and pursuing Ph D/Post Doc research in national and international institutes of the country and abroad.

The department succeeded in getting FIST level-I support. A BIF was established in the department with funding of the DBT. We were also assured of providing sizable funding for research and teaching by the DBT. The 11th plan visiting team highly appreciated the activities of the department. The department was assessed to be the 16th best in the country in biotechnology teaching.

Nagaland University, Lumai (HQ), Meriema, Medziphema, Dimapur

Nagaland University (Act No. 35, 1989 of the House of Parliament) is about to complete 20 years as per announcement of its establishment on 6th September 1994. In 1997, Kohima campus of the North Eastern Hill University (Shillong, Meghalaya) was declared as its interim HQ. In the same year, two campuses of NEHU in Nagaland: Kohima and School of Agril. Sci. and Rural Dev. (SASRD), Medziphema were transferred to this New University. In 2010, the HQ was shifted to a remote and interior village Lumami, Dist. Zunheboto having very limited infrastructure facility. In the same year the Kohima campus of NU was shifted to the village Meriema about 7 km from the capital Kohima. Since inception the University remained almost protracted owing to frequent and repetitive internal and external problems.

During the last 3 - 4 years, all stakeholders have been putting effort for the all-round development of the University in respect of academics, infrastructure, and administration.

(a) Academics

01. Against MHRD/UGC's sanctioned faculty strength of 253, the University till date filled up 243 [Professor Regular 13, CAS 29 and Visiting 2; Assoc Prof. Regular 46 and CAS 8; Asstt.

- Prof. Regular 126, Contractual 3 and Guest 16]. Vacancies old 66 [47 + new 19, 12th Plan] will be filled up by the last part of the current year.
02. The University has filled up all sanctioned 1,359 posts of officers and staffs (Group A, B and C) except 12 and the same are going to be filled up by the end of the current year.
 03. Number of students in the University increased from *ca.* 1240 in 2011 to over 2200 till the last year.
 04. Number of affiliated colleges under the University increased from 54 in 2011-12 to 65 till date.
 05. Number of Autonomous colleges has become 2 in the last 3 years, and 2 more are in the process or the autonomous status.
 06. Five new Departments, Anthropology, Psychology, Mathematics, Physics and Linguistics were established with approval of UGC/MHRD in 2013-14.
 07. Departments are running externally funded research projects (from GBPIHED, DST, DBT, CSIR, UGC, MHRD, ICAR, ICHR, MOEF, and NUEPA) with the financial outlay of *ca.* Rs. 30.0 crore.
 08. UGC has sanctioned 2 B. Voc programs: Nursery Management Technology and Plant Propagation Techniques; will be started from 2015/16.
 09. UGC also sanctioned Community College program on 'Repairing and Maintenance of Electronic and Electrical equipment' which will be started from 2015/16. The University has been offering Community related training programs on (i) Basic computing, (ii) Bee keeping, (iii) Mushroom cultivation, (iv) Soya milk preparation, (v) Piggery, (vi) Poultry farming and (v) compost making.
 10. Department of Geology obtained DST-FIST level I program in 2013-14.
 11. Department of History and Archeology secured Centre of Excellence on 'Archeological study on Human Settlements in Nagaland' from MHRD/UGC (Rs 8.0 crore).
 12. Department of Botany secured SAP II from UGC in 2015.
 13. Introduction of semester system in all affiliated colleges of the University since 2012.
 14. Examination, evaluation and result declaration specifically of the affiliated colleges (undergraduates) have been refined and improved upon with online-software facilities.
 15. Regular deputation of faculty members, officials and staff members for the refresher and orientation courses, seminars/workshops and various training programs in and outside the State.
 16. Sophisticated equipment like PCR, GC-MS, High Speed Refrigerated Centrifuge, Gel Electrophoresis systems, XRD, FTIR, Gel Doc system, AAS, C H N Analyser etc have been procured for teaching and research.
 17. Framed guidelines for 'Research Fellows' and 'Externally Funded Research Projects'
 18. Started five new academic departments of Linguistics, Mathematics, Anthropology, Psychology and Physics
 19. NU Research Journal has been revived and published from 2013.
 20. Initiated M. Ed program in one of the affiliated colleges from 2014, also to start shortly in the University.
 21. The Krishi Vigyan Kendra (KVK) at Lumami (Zunheboto) has been made functional with filling up of all positions of SMS and Technical Staffs.
 22. Signed MoU with CSIR-NEIST, Jorhat; ICAR and Mithun Breeding Station, Jhornapani for taking up collaborative research.
 23. The first Farmers' Fare (Naga Kheti Mela) was organized at SASRD in 2013 and initiated to organize it every year. Also participated in the organization of the North East Agri Expo.

24. As per UGC's sanction under the 12th plan, 2 new Departments; Forest Science and Environmental Sciences; 2 Centres: South-East Asian Studies and Naga Tribal Language Studies with total 15 faculty positions are to start from 2015-16.

(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 5, new departmental buildings 4 and modification 9, Office and Residential quarters for KVK; repaired 86 old (more than 35-40 years) quarters, constructed new retention walls 18, pucca roads 18 with a total distance of *ca.* 30 km.
- (02) Renovated/redesigned the auditorium with audio, video and soundproofing; named in honour of the local Chief Land Donor at Lumami
- (03) Shifted the Health Centre at the HQ: Lumami to a repaired but bigger building.
- (04) Augmentation of water supply with installation of 17 km long second pipeline along with water tanks.
- (05) Construction and enlargement of 4 play grounds by cutting large hills.
- (06) A dedicated power line to HQ campus was provided at cost over Rs 2.0 crore for the round the clock service.
- (07) Procurement and installation of 250, 50 and 25 KVA Generators with extension of LT lines
- (08) Construction of Children Park, Landscaping and flower gardening at HQ: Lumami, Meriema and Medziphema campuses. Constructed more than 20 galvanised approach roads,
- (08) Construction of Instrumentation rooms in the Depts of Zoology and Botany; new Canteen buildings 4; renovation of laboratories of Chemistry dept.
- (09) Installation of Bioinformatics laboratory with High and Medium End Servers, and 20 computer terminals.
- (10) The University secured UGC grant (Rs. 1.2 crore) for a multi-gymnasium facility at HQ: Lumami.

(C) Administration

01. Nagaland University Ordinance is finalized and submitted for approval.
02. Conducted Executive Council meetings - 12, Academic Council meetings -6, Finance Committee meetings - 6, and Building Committee meetings – 6.
03. Appointed Pro Vice-chancellors with delegation of powers in Kohima Campus and SASRD, Medziphema Campus.
04. Creation and appointment of Dean (Res., Dev. & Consultancy) in 2013 to strengthen Research and Consultancy activities in the University.
05. With due inquiry terminated the Ex Registrar, one Dy Registrar and one Asstt Professor.
06. Faculty strength increased to 242 with new appointments/promotions against the sanctioned strength of 253.
07. A total of 88 vacant officers and staff positions were filled up.
08. Prepared and implemented Service Rules for Non-Teaching Staff.
09. 3rd Convocation was held wherein apart from other degrees, 2 Honoris Causa Degrees awarded by the Chief Guest, Shri Pranab Mukherjee the President of India. The 4th Convocation is planned in November 2015 with the Hon'ble Prime Minister as the Chief Guest.

10. Procured 3 ambulances, 1 Scorpio and a Mini truck for the University; proposed for 3 buses and 4 cars.
11. 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 ; and (e) 'Inspired Teachers' Forum.
12. Established Planning Cell; and operational zed IQAC. The University was reaccredited with 'B' grade in August 2014.
13. Established (a) Training and Placement Cell and conducted placement trainings by various organizations, (b) Innovators Club and organized the first exhibition during 3rd Convocation, and (c) NU Education Technology Cell.
14. Submitted proposals to establish: (a) Academic Staff College, (b) Kendriya Vidyalaya, and (c) Department of Biotechnology.

Acted as Resource Person in

1. DBT sponsored popular lecture series for college and university students.
2. DBT sponsored national training and demonstration on tissue culture and genetic engineering
3. ICAR sponsored national training and demonstration on crop germplasm conservation and crop breeding.
4. Summer Institute of Central School, College and University teachers
5. TRA sponsored training of Sr. and Jr. Executives of the tea industry
6. TRA sponsored field management courses.
7. To train state Government officials of Nagaland in tea cultivation and processing.
8. In refreshers/training courses of Assam University, Defense Research Laboratory, Assam Agril. University, Regional Research Laboratory etc.

Acted as Referee/Expert/Member in National bodies/research projects/journals

1. Expert member, Assessment Committee, All India Co-ordinated project on *Albizia* species operated by the Indian Forest Research Institute.
2. Referee-Indian Journal of Genetics and Plant Breeding, IARI, New Delhi
3. UGC-Refresher Course Centre-Resource Person on Life Sciences in Assam University, Silchar.
4. Expert Member, Research Committee, National Research Centre on Yak, ICAR, Dirang, Arunachal Pradesh.
5. Organizing Secretary, National Seminar on 'Hydrocarbon degrading microbes", 22nd- 23rd Dec., 2003.
6. Member, Organizing Committee of the National Workshop on 'Science & Technology for regional development: case for North east India'. Feb. 3rd – 6th, 2004, Indian Institute of Technology, Guwahati.
7. Expert, nominated by the Director General, ICAR, New Delhi to the DPC for the promotion of ARS scientists.
8. Chairman, Selection Committee for the appointment of Project Assistants/Fellows and Research Associates in RRL, CSIR, Jorhat in 2003, 2004 & 2005
9. External Expert for the appointment and promotion of scientists and others in National Research Institute on Rain Forests and Deciduous Trees, ICFR, Jorhat.

10. External expert for the appointment and promotion of scientists and others in DRL, DRDO, Jorhat.
11. Organizing Secretary, DNA double helix Golden Jubilee National Seminar-cum-Exhibition, Tezpur University (Central), Napaam on 31st October, 2003.
12. Member, National Organizing Committee, First National Symposium on “Muga Silkworm Biochem., Mol. Biol. & Biotech. to improve silk production”, RRL, Jorhat on 11 – 12th Nov., 2004.
13. Expert Member of the Research Council of the Yak Research Centre, ICAR, Dirang, Arunachal Pradesh
14. Member, Board of PG Studies of North East Hill University, Shillong.
15. Member, Planning Board, Rajiv Gandhi University (Central), Itanagar, Arunachal P.
16. Executive Editor, *International J. of Crop Science*, India (2007-08)
17. Advisory Board Member, Institute of Biotech. and Allied Sci. Training, Sikar, Rajasthan
18. Reviewer of *J of Genet & Plant Breed*, *Afr. J. of Envnt. Sci. & Tech.* (Permanent), *Colloids and Surfaces B: Biointerfaces*, *J. of Hazard. Mat. and Chemosphere*.
19. Project Evaluator, IGOU, New Delhi.
20. Planning board member of Rajib Gandhi University (Central University)
21. Member of Board of Post Graduate study, Biotechnology and Bioinformatics, NEHU, Shillong.
22. Guwahati Neurological Research Centre: Especially invited talk on Molecular Genetics (2008).
23. Invited talk on CEP on Biomass: Technology intervention for sustainable management (8-12th November, 2010) in Defense Research Laboratory, Tezpur.
24. Acted as an Organizing Secretary of the National Seminar on “Medicinal Plant and Microbe Diversity and their Pharmaceuticals, Dept of Mol Biol & Biotech, Tezpur University.
25. Chairman in Session IV of NATPAS, School of Sci. & Tech. 2011.
26. Member of Nomination Council, Infosys Awards.
27. Expert members of University of Tunkur Abdul Rahman, Malaysia; Dibrugarh University, Gauhati University, Agric. University of Raipur and Calcutta University.
28. Member of the Research Advisory Committee, Central Muga and Endi Research & Training Institute, Central Silk Board, Ministry of Textile, Lahdoigarh, Jorhat, Assam, 20 – 2011 - 2013.
29. Member, Research Committee, North East Institute of Science & Technology (CSIR), Jorhat, Assam.
30. Member, Board of Directors, National Institute of Technology, Dimapur, Nagaland.
31. Member, Executive Council, Central University of Jharkhand, Ranchi.
32. Chairman of the Research Advisory Committee, Central Muga and Eri Research & Training Institute, Central Silk Board, Ministry of Textile, Lahdoigarh, Jorhat, Assam, 2014 - 2017.
33. Member of Research Council of CSIR-North East Institute of Science and Technology, Jorhat 2014 – 2016.

Administrative Experience

1. Member, Board of Studies, Faculty of Agriculture, Assam Agricultural University, Jorhat from August, 1994 to April, 1995.
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2. Incharge, Botany Department, Tocklai Experimental Station, TRA, Jorhat from Dec.,1997 to August, 2000.
 3. Head, Botany Department, Tocklai Experimental Station, TRA, Jorhat from Sept., 2000 to March, 2002.
 4. Member, Scientific Advisory Committee, Tocklai Expt. Station, TRA, Jorhat from Dec., 1997 to March, 2002.
 5. Member, Agricultural Sub-Committee, Tocklai Expt. Station, TRA, Jorhat from Dec., 1997 to March, 2002.
 6. Head, Deptt, of Mol. Biology & Biotechnology, Tezpur University (Central), Napaam, Tezpur from April, 2002 to till date.
 7. Member, Research Committee, Tezpur University (Central), Napaam, Tezpur from April, 2002 to 2004.
 8. Chairman, Board of Studies, Deptt. of Mol. Biol. & Biotechnology, Tezpur University(Central), Napaam, Tezpur from April, 2002 to till date.
 9. Chairman, Departmental Research Committee, Deptt. of Mol. Biol. & Biotechnology, Tezpur University(Central), Napaam, Tezpur from April, 2002 to till date.
 10. Chairman, Training & Placement Committee, Tezpur University (Central), Napaam, Tezpur from 2003 to 2004.
 11. Chairman, Quality Control Committee, Tezpur University (Central), Napaam, Tezpur from 2003 to till date.
 12. Member, Security Committee, Tezpur University (Central), Napaam, Tezpur from 2003 to till date.
 13. Chairman, Quarter Allotment Committee, Tezpur University (Central), Napaam, Tezpur from 2008 till date
 14. Member, Review Committee, Act, Statutes and Ordnances of the Tezpur University (Central) in 2003.
 15. Member, Library Committee, Tezpur University (Central), Napaam, Tezpur from April, 2002 to till date.
 16. Presenting Officer, Tezpur University (Central), Napaam, Tezpur twice in 2003 and in 2004.
 17. Member, Space Allotment Committee, Tezpur University (Central), Napaam, Tezpur for the year 2004-05.
 18. Member, Insurance Investment Committee, Tezpur University (Central), Napaam, Tezpur from 2003 to till date.
 19. Member, Purchase Improvement Committee, Tezpur University (Central), Napaam, Tezpur, 2003.
 20. Head, ONGC-sponsored Centre for Petroleum Biotechnology, Tezpur University (Central), Napaam, Tezpur from April, 2002 to till date.
 21. Secretary, Executive Committee, Centre for Petroleum Biotechnology, Tezpur University (Central), Napaam, Tezpur from April, 2002 to till date.
 22. Chairman, Construction Monitoring Team, Tezpur University, Napaam from 2007.
 23. Member, Panning and Academic Committee, TU, Napaam from 2002 - 06.
 24. Member, Academic Council, Tezpur University, Napaam, from 2006.
 25. Member, Board of Management, Tezpur University, Napaam from 2005 – 07 & 2010-11.
 26. Dean, School of Science & Technology, TU, Napaam, Tezpur-784028, Assam from 200811.
 27. Chairman, Grievance Redressal Committee, TU, Napaam.
 28. Chairman, Campus Beautification Committee, TU, Napaam.
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29. Coordinator cum Director, IQAC (NAAC), TU, Napaam (May 2005-2010).
 30. Remained In-charge VC Office thrice during the station leave of the Permanent VC.
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Experience of working with NAAC

Since May 2005, in the formative stage I worked as the Coordinator and Director of IQAC (NAAC), Tezpur University. During the period I organized the NAAC Peer Teams visit to the University for reaccreditation. I got chance to act as the Chairman of NAAC Peer Team twice for accreditation. Recently, with the same responsibility, I visited Moridhal College, Dhemaji, Assam.

Industrial Research

1. Tocklai Experimental Station, Tea Research Association, Jorhat is the premier organization carrying out research exclusively on the Indian Tea Industry. I had the experience of working as a senior scientist and Head of the Botany Deptt. of the Organization for 7 years.
2. In Tezpur University, Napaam, Tezpur, Assam Headed the ONGC sponsored Centre for Petroleum Biotechnology for the last 8 years.
3. Establishment of the Centre for Petroleum Biotechnology as a permanent one from 2010 with ONGC and Tezpur University funding.
4. Secured an industry (ONGC) project as the PI with Rs 70.03 lakh in 2009 for five years.

Syllabus prepared

1. Agricultural Biotechnology at Assam Agril. University, Jorhat, Assam
2. Molecular Biology & Biotechnology in Tezpur University, Tezpur, Assam
3. *Part of Food Processing & Technology (FPT): Microbiology, Food Microbiology and Food Biotechnology (for establishing the Dept of FPT in TU, Tezpur)*
4. Nanotechnology course (in part)
5. Five year Integrated Biotechnology programme course syllabus.
6. Preparation M Sc Mol Biol & Biotech syllabus in line with DBT national syllabus.
7. M Sc in Forest Sciences, Nagaland University, Lumami
8. M Sc in Environment Sciences, Nagaland University, Lumami
9. Biotechnology, Nagaland University, Lumami
10. Centre for Earth Science, Nagaland University, Lumami
11. Centre of Advance Biosciences, Nagaland University, Lumami

Courses taught

Genetics and Cytogenetics, Cytology, Plant Breeding (General and Advanced-Ph D), Genetic Engineering (M Sc and Ph D), Plant Tissue and Cell Culture, Plant Biotechnology (M Sc and Ph D), Management and Legal Issues in Biotechnology (IPR and Patenting), Nanotechnology, Bioelectronics (Biology part), *Food Microbiology, Food Biotechnology (teaching since the establishment of the Dept of FPT in TU in 2005)*. Basic Biology and Environment Biotechnology.

Departmental achievements during Headship and Deanship at Tezpur University

1. The Department of Mol Biol & Biotechnology, Tezpur University was adjudged to be the 16th best in the country in a nation-wide survey conducted by IIM on behalf of the DBT,

Govt of India. In fact it is the best in East and North-East and 9th in North, East and NE India.

2. The Department was provided special assistance of Rs. 10.0 lakh by the UGC for limited infrastructure creation.
3. The Department was granted FIST-level 1 grant (*ca.* Rs. 2.0 crore) by the Department of Science & Technology, Govt. of India.
4. The Department was sanctioned an amount of Rs 3.00 crore by the Department of Biotechnology for infrastructure development under a special assistance program.
5. During the last seven years the Department generated about Rs. 4.50 crore external funding through various research projects granted by DBT, NMPB, DRL and the oil industry ONGC.
6. Faculties of the Department published about 50 research papers in good impact factor bearing national and international journals.
7. About 85% of the passed out students are pursuing higher studies securing various fellowships in some of the best national (CCMB, IISc, JNU, BARC, IITG etc) and international institutes in Germany, USA, Singapore etc; 12% in jobs in University, College and Industry.
8. Obtained the SAP programme of UGC.
9. More than 40 of 100 students cleared UGC/CSIR NET-JRF, DBT-JRF, ICMR-JRF, GAT during the period from 2002-2008.
10. On the basis of research progress and achievements on Petroleum Biotechnology, the permanent “Centre for Petroleum Biotechnology” was established in Dept of Mol Biol & Biotech, TU during 2009 - 10 with over Rs. 2.0 crore fund support from the ONGC.

Experience in Campus Development and Laboratory building layouts

Tocklai Expt. Station, TRA, Jorhat – Designed the floor area and labs in the new Botany & Biotechnology (1,600 sq m) building, shifted the entire 90 year old dept to the new building in 1999.

Tezpur University, Tezpur, Assam – The Dept of Mol Biol & Biotech was shifted to the allotted administrative building from a temporary shed in 2004. The big halls were modified as per requirement of laboratories with glass walls.

Construction of New Biotech building and shifting of the Dept in to it.

As Chairman of Tezpur University Construction Committee, the entire campus development work in respect of Academic, Administrative, and Residential Buildings, Roads, Bus stands, Flower gardens and parks, Tree plantations were executed and supervised for quality.

Supervision of Students/Scholars

Completed:	M. Sc. research project supervision	- 40 nos.
	Ph D research	- 12
On-going:	Ph. D. research project supervision	- 02

Ph D Scholars and title of thesis (completed)

1. Naba Bordoloi: Biochemical and molecular characterization of certain bacteria for application in bioremediation of petroleum contaminated soil.
2. Dhiren Chowdhury: Floral biology, karyotype, biochemical and genomic study of

Etilingera species – A medicinal and aromatic plant.

3. Ranjan Kandali: Structural elucidation of major bioactive compounds and genome analysis of *Spondias pinnata* Kurz and *Streblus asper* Lour.
Associate Professor, Bishwanath College of Agriculture
4. Jitu Buragohain: Assessment on biodiversity of medicinal plants: cytological, biochemical and molecular characterization of a few major plants.
5. Khanindra Ratna Barman: Biochemical and molecular genetic assessment of yeast strains used by certain tribal communities of Assam in alcohol production”.
6. Dr. Jyoti Prasad Saikia: Molecular and Biochemical characterization of four Araceae species.
7. Pinkee Phukan: Biochemical and molecular genetic assessment of bacterial biopolymer.
8. Pranjal Bharali: Bioremediation of Crude oil contaminated soil (viva-voce awaited)
9. Anggana Roy: Phytopharmaceuticals for Hair Growth (viva-voce awaited)
10. Mayur Mousum Phukon: Biomass and biofuel characterization of some microalgal species of Assam, India
11. Kalpana Sagar: Metagenomic gene for the production of industrially important enzyme.
12. Krishna Gogoi: Isolation of medicinal compound and use of waste for alcohol production.

Ph.D. Scholars (Continue)/ Research Group

1. Yasir Basir: Metagenomics.
2. Salam Pradeep Singh: Metagenomics through bioinformatics tools

Patents filed: 03

DNA sequences deposited in Gene banks (total 10)

01. GenBank: JQ796859.1
Pseudomonas aeruginosa strain BP C1 16S ribosomal RNA gene, partial sequence
02. GenBank: JQ866912.1
Pseudomonas aeruginosa strain BP C2 16S ribosomal RNA gene, partial sequence
03. GenBank: JX843420
Pseudomonas aeruginosa strain BBK9 16S ribosomal RNA gene
04. GenBank: JX843421
Pseudomonas aeruginosa strain JBK7 16S ribosomal RNA gene
05. GenBank: JX843422
Pseudomonas aeruginosa strain JBK1 16S ribosomal RNA gene
06. GenBank: JX843423
Pseudomonas aeruginosa strain BBK1 16S ribosomal RNA gene
07. GenBank: KF743145.1
Uncultured bacterium clone KBS-plip1 lipase/esterase protein gene, complete cds
08. GenBank: KF279644.1
Scenedesmus sp. MPBK-2 internal transcribed spacer 1, partial sequence; 5.8S ribosomal RNA gene, complete sequence; and internal transcribed spacer 2, partial sequence
09. GenBank: KF163441.1
Parachlorella kessleri strain MMPBKK-1 5.8S ribosomal RNA gene, partial sequence; internal transcribed spacer 2, complete sequence; and 28S ribosomal RNA gene, partial sequence
10. GenBank: KF514428.1

Bacterium KBS-107 16S ribosomal RNA gene, partial sequence

Award and Recognitions

1. LPL Stipend Exam. 2nd topper of Sibsagar dist.
2. Towkok TE, Jayashree Tea Co. monthly stipend on HSLC result.
3. Selected for Post Metric National/ICAR/State Merit scholarship.
4. Selected for ITA/TBI scholarship.
5. Gold medal in B Sc (Argi)
6. Merit Grade I Scholarship from AAU, Jorhat for M Sc (Agri) degree
7. State Overseas Scholarship, Govt of India to Imperial College, London, UK.
8. St Gregory Fund support to visit Netherland
9. Citizens recognition of Cheraideo Sub-division, Sibsagar dist, Assam, India.
10. Marquis World's Who's Who young scientist
11. Dept. of Biotechnology, Govt of India: Biotechnology Associate ship (Foreign Country).
12. Distinguished Teacher Award , 2012 -2013 by DMSBM.
13. Indira Gandhi Sadbhavana Gold Medal Award 2013 by GEPR
14. Life Time Achievement Award – 2014, International Conference TIAS-2014, Society for Recent Development in Agriculture, 17-19th Feb, 2015 at CIH, Dimapur, Nagaland.

Publications of Prof. Bolin Kumar Konwar

Books/Book Chapters: 08

1. **Prof. B. K. Konwar** (2013). Medicinal Plant Repertoire: A Perspective of Biogeographical Gateway of India. ISBN No. 978-81759-6902-5.
2. **Dr B K Konwar** (2001). Deshapremi Pariyal: Barbaruah Barphukan (Assamese), Banalata, Dibrugarh.
3. 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 Katakai and A C Borah), EBH Pub. (India), pp 3 – 12, ISBN No. 978-93-80261-78-2.
4. **Prof. B. K. Konwar** (2013). *Wetland: Potential and Prospects*. In: *Frontiers of Wetlands Fishers and Aquaculture Research* (Eds. Devashish Kar and Anjam Hussain Barbhuiya), Manglam Publications, New Delhi, pp 33-50, ISBN No. 978-93-81142-99-8.
5. 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), ISBN No. 978-81-927097-2-7.
6. 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*, Accepted ISBN no. 978-93-83230-06-8.
7. MM Phukan, BK. Konwar (2014). Microalgae Chlorella and Scenedesmus as a potential bioenergy source. *Renewable Energy and Sustainable Development*, Published as a book chapter, EBH Publishers, ISBN: 9789380261782.
8. MM Phukan, **BK. Konwar** (2014). Isolation and characterization of freshwater microalgae Scenedesmus from contaminated field samples for bio-energy generation. *National Institute of Renewable Energy*, Published as a book chapter, ISBN: 978-81-927097-2-7.

Articles on Science topics - English 30 Assamese – 70 Booklets: 03

Popular articles (Assamese): 62

Project reports: 20 Scientific reports: 12

Topics of popular articles

- Wrote extensively on (i) Science and scientific thinking to popularize science education
(ii) Great leaders and achievers of Assam History
(iii) River water of Assam as economic enterprise and resource for the Country
(iv) Cost of sustaining democracy and financial loss due to loss of working hours of the Parliament
(v) Agriculture, biotechnology and environment

List of Research Publications/Presentations– 261 (a: 116 + b: 63 + c: 82)

(a) Publications in National/International journals (Cit index 790 on 16.08.15, Av. 7.9)

01. Environmental influence on the estimates of genetic parameters in soybean. **Konwar, B. K.** and Talukdar, P., *J. Res* 5 (2): 135-142, 1984.
02. Phenotypic stability of soybean genotypes for field germination. Talukdar, P. and **Konwar, B. K.**, *Soybean Genetics Newsletter*, Iowa State University, USA 11: 38-41, 1984.
03. Stability analysis of yield and its components in soybean. **Konwar, B. K.** and Talukdar, P., *Crop Improvement* 13 (1): 172-175, 1986.
04. Environmental sensitiveness of genetic association of yield and yield attributing characters in soybean (*Glycine max* L. Merrill.). **Konwar, B. K.** and Talukdar, P., *J. Res.* 5 (2): 9-14, 1987.
05. Genetic variability in pigeon pea. **Konwar, B. K.** and Hazarika, M. H. *Crop Improvement* 15 (1): 100-104, 1988.
06. Environmental impact on different characteristics of soybean (*Glycine max* L Merrill.). **Konwar, B. K.** and Talukdar, P., *Soybean Genetics Newsletter*, Iowa State University, USA12: 28-32, 1988.
07. Pattern of genetic variability in soybean. **Konwar, B. K.**, *J.Res.* 11 (1): 20-25, AAU, Jorhat, Assam, 1991.
08. Isolation and culture of leaf mesophyll protoplasts of sugar beet. **Konwar, B. K.**, *Crop Improvement* 20 (1):69-77, 1993.
09. Plant regeneration in three genotypes of sugar beet. **Konwar, B. K.**, *Crop Improvement*, 20 (1): 88-97, 1993
10. *Agrobacterium tumefaciens*-mediated genetic transformation of sugar beet (*Beta vulgaris* L.), **Konwar, B. K.**, *Plant Biochem. & Biotech.* 3: 37-41, 1994.
11. Genetic engineering in tea: I. molecular genetic markers. Bera, B., **Konwar, B. K.** and Singh, I. D. *Two and a Bud*, 42(1): 2-6, 1995.
12. Genetic engineering in tea: II. gene transfer. **Konwar, B. K.** *Two and a Bud*, 42(2):13-20, 1995.
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.
14. Patenting and its application for the legal protection of crop plants including tea. **Konwar, B. K.**, *Two and a Bud* 45 (1): 5-7, 1998.

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., *Two and a Bud* 45 (2): 21-22, 1998.
16. Female fertility in clones KP 6/25 and Mornoi 30, Ahmed, N. and **Konwar, B. K.**, *Two and a Bud* 46 (2): 37-39, 1999.
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., *Two and a Bud* 46 (2): 26-32, 1999.
18. Biodiversity of tea in North East India and their conservation at Tocklai. **Konwar, B. K.**, *Two and a Bud* 46 (2): 7-12, 2001.
19. Transient expression of B-glucuronidase activity in electroporated sugar beet protoplasts. **Konwar, B. K.**, *JASS* 10(1):14-18, 2001.
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.
21. Morphophenology and karyotype study of *Patidoi* (*Schumannianthus dichotomus* (Roxb.) Gagnep. synonym *Clinogyne dichotoma* Salisb.) – a traditional plant of Assam. Dhiren Chowdhuri and **Bolin Kr. Konwar** (2006). *Curr. Sci*, Vol. 91 (5): 648.
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.
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.
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 Biochem and Biotech* 17 (1): 103-105.
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, Imp Fac. 4.29.
26. Genome size determination of *Zanthoxylum 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.
27. Bacterial biosurfactant in enhancing solubility of petroleum hydrocarbons. **B. K. Konwar** and N. K. Bordoloi (2008). *Journal of Petrotech Society* V: 45-52.
28. Genome size determination of *Zanthoxylum oxyphyllum* and *Meyna spinosa* by flow cytometry: a preliminary study. Buragohain, J. and **Konwar, B. K.** (2008). *Journal of Cell and Tissue Culture* 8: 1249-1252.
29. Bacterial biosurfactant in enhancing solubility and metabolism of petroleum hydrocarbons. N. K. Bordoloi and **B. K. Konwar** (2009). *Journal of Hazardous Materials* 170: 495-505.
30. Investigation of antioxidant property of iron oxide particles by 1¹-1¹ diphenylpicryl-hydrazyle (DPPH) method. S. Paul, J. P. Saikia, S. K Samdarshi and **B. K. Konwar** (2009). *Journal of Magnetizm and Magnetic Materials*, 321 (21): 3621-3623.
31. Biocompatible epoxy modified bio-based polyurethane nanocomposites: mechanical property, cytotoxicity and biodegradation. S. Dutta, N. Karak, J. P. Saikia and **B. K. Konwar** (2009). *Bioresource Technology*, 100 (24): 6391-6397, Imp Fac. 5.03.
32. Antioxidant activity and haemolysis prevention efficiency of polyaniline nanofibers. Somik Banerjee, Jyoti P. saikia, A. Kumar, **B. K. Konwar** (2010). *Nanotechnology* 21 (4): 045101 (8pp), Imp Fac. 5.20.

33. Antibacterial property of medicinal plants used in Assamese traditional medicine for the treatment of dysentery and diarrhea. Luna Barooah and **B. K. Konwar** (2010), *Journal of Eco-friendly Agriculture* 5 (1):40-42:2010.
34. Swift heavy ion irradiation induced enhancement in the antioxidant activity and biocompatibility of polyaniline nanofibers. A Kumar, Somik Banerjee, Jyoti P saikia and **B K Konwar** (2010), *Nanotechnology* 21 (17): 175102 (8pp, cited by **Nature India**), Imp Fac. 5.20.
35. Nickel oxide nanoparticles: A novel antioxidant. Jyoti Prasad Saikia, Samrat Paul, **Bolin Kumar Konwar**, Sanjoy Kumar Samdarshi (2010), *Colloids and Surfaces B: Biointerfaces* 78: 146 -148, Imp Fac. 4.29.
36. Biodegradation of Epoxy/ MF Modified Polyurethane Films Derived From a Sustainable Resource. Suvangshu Dutta, Niranjana Karak, Jyoti Prasad Saikia and **Bolin Kumar Konwar**. (2010), *Journal of Polymer and the Environment*, 18 (3): 167 – 176 (Springer Netherlands).
37. Ultrasonication : enhances the antioxidant activity of metal oxide nanoparticles. Jyoti Prasad Saikia, Samrat Paul, **Bolin K Konwar** and Sanjoy K Samdarshi (2010). *Colloids and Surfaces B: Biointerfaces* 79: 521-523 (Elsevier), Imp Fac. 4.29..
38. Nickel oxide nanoparticles: A novel antioxidant. Jyoti Prasad Saikia, Samrat Paul, **Bolin K Konwar** and Sanjoy K Samdarshi (2010). *Colloids and Surfaces B: Biointerfaces* 78: 146–148 (Elsevier), Imp Fac. 4.29.
39. Biocompatible novel starch/polyaniline composites: characterization, anti-cytotoxicity and antioxidant activity. Jyoti Prasad Saikia, Somik Banerjee, Bolin Kumar Konwar, Ashok Kumar. *Colloids and Surfaces B: Biointerfaces* 81 (2010): 158 – 64, Imp Fac. 4.29.
40. Biochemical composition and bioactivity of four edible aroids. J. P. Saikia and B. K. Konwar (2010). *Journal of Root Crops* 01/2010; <http://www.isrc.in/ojs/files/journals/5/articles/161/submission/review/161-384-1-RV.doc>.
41. Physico Chemical Analysis of An Edible *Colocasia esculenta* var. ghee kochu Starch. Jyoti Prasad Saikia, Bolin Kumar Konwar, Ashok Kumar (2010). *Journal of Root Crops* 01/2010.
42. ‘Poly (ethyl glycol)- magnetic nanoparticles - curcumin’ trio: directed morphogenesis and synergistic free radical scavenging. R. Konwar, J. P. Saikia, N. Karak, **B. K. Konwar** (2010). *Colloids and surfaces B: Biointerface* 81 (2): 578-586, Imp Fac. 4.29..
43. Determination of Genome Size of Bhim Kol (*Musa balbisiana*). M Zaman, **B K Konwar** (2010). *Research Journal of Biotechnology* Vol 5 : 2.
44. Genome size determination and RAPD analysis of four edible aroids of North East India. Jyoti Prasad Saikia and **Bolin Kumar Konwar** (2010). *IIOAB Journal* 1 (3): 25-30.
45. Physico-chemical analysis of an edible *Colocasia esculenta* var. ghee kachu starch. Jyoti Prasad Saikia and **Bolin Kumar Konwar** (2010). *Journal of Root Crops*, (<http://docs.exdat.com/docs/index-95391.html>), IC rating: 4.0.
46. Physicochemical analysis of *Colocasia esculenta* starch. J. P. Saikia, **B. K. Konwar** and Ashok Kumar (2011), *Journal of Root Crops*, Vol 37 (1): 77 – 85. NAAS rating 4.0.
47. Synthesis of silver – polystyrene nanocomposite particles using water in supercritical carbon dioxide medium and its antimicrobial activity. I.R. Kamrupi, P.Phukon, **B. K. Konwar** and S. K. Dolui (2011). *The Journal of Supercritical Fluids* 55 (3): 1089-1094.

48. Microalgae *Chlorella* as a potential bioenergy feed stock. M. M. Phukon, R. S. Chutia, **B. K. Konwar** and R. Kataki (2011). *Applied Energy* **88** (10): 3307 – 3312 [Imp Fac. 4.78, Elsevier (Cited 100 times as per Google scholar)].
49. Crude biosurfactant from thermophilic *Alcaligenes faecalis* : Feasibility in petro-spill bioremediation. P. Bharali, S. Das, **B. K. Konwar** and A. J. Thakur (2011). *Int J Biodeterioration & Biodegradation* **65** (5): 682-69 (Imp Fac. 2.24).
50. Bio-plastic (P-3HB-co-3HV) from *Bacillus circulans* (MTCC 8167) and its biodegradation. Pinkee Phukan, J. P.Saikia and **B. K. Konwar** (2011). *Colloids and Surfaces B: Biointerfaces* **92** (2012) 30– 34, IF: 2.939.
51. Enhancing the stability of colloidal silver nanoparticles using polyhydroxyalkanoates (PHA) from *Bacillus circulans* (MTCC 8167) isolated from crude oil contaminated soil. Pinkee Phukan, J. P.Saikia and **B. K. Konwar** (2011). *Colloids and Surfaces B: Biointerfaces* **86**:314-318, IF: 2.939.
52. Isolation and Characterization of Active Compound from Fruits of Medic Plant *Spondias pinnata* Kurz. R. Kandali and **B. K. Konwar** (2011). *Indian Journal of Agril. Biochem* **24**(1): 29-33 (NAAS rating 4.2).
53. Production and Physico-chemical characterization of a biosurfactant produced by *Pseudomonas aeruginosa* OBPI isolated from petroleum sludge. Pranjali Bharali and **Bolin K. Konwar** (2011). *Appl Biochem Biotechnol*, **164** (8):1444–1460 (Imp Fac. 1.74).
54. Physicochemical properties of starch from aroids of north east India. Jyoti Prasad Saikia, **B K Konwar** (2012), *International Journal of Food Properties*, **15**: 1247 – 1261.
55. In silico structure assessment analysis of core domain of six protein data bank entries of HIV - 1 Integrase. Salam Pradeep Singh and **B. K. Konwar** (2012). *Journal of Computational Biology and Bioinformatics Research* **4** (1): 01-07.
56. Molecular docking studies on analogues of quercetin with D-alanine: D-alanine ligase of *Helicobacter pylori*. Salam Pradeep Singh, Rocktotpal Konwar, **Bolin Kumar Konwar** and Niranjana Karak (2012). *Medicinal Chemistry Research*, DOI 10.1007/s00044-012-0207-7.
57. Synthesis, characterization and properties of a castor oil modified biodegradable poly(esteramide) resin. Sujata Pramanika, Kalpana Sagar, **Bolin Kumar Konwar**, Niranjana Karak (2012). *Progress in Organic Coatings* **75** (4): 569-578.
58. Biosynthesis and characterization of a new copolymer, poly (3-hydroxyvalerate-co-5-hydroxydecanoate), from *Pseudomonas aeruginosa*. Pinkee Phukan, Binod Pokhrel, **B. K. Konwar** and S. K. Dolui (2012). *Biotechnol Lett*. DOI 10.1007/s10529-012-1119-9.
59. Molecular docking studies of quercetin and its analogues against human inducible nitric oxide synthase. Salam Pradeep Singh and **Bolin Kumar Konwar** (2012). *SpringerPlus* **1**: 69 10.1186/2193-1801-1-69.
60. Possible protection of silver nanoparticles against salt by using rhamnolipid. Jyoti Prasad Saikia, Pranjali Bharali, Bolin Kumar Konwar (2012). *Colloids and surfaces B: Biointerfaces* **11/2012** (Imp Fac. 4.29).
61. Computational Insights in to the Competitive Inhibition of Acetyl Coenzyme A and Succinyl Coenzyme A of the First Step of Citric Acid Cycle. SP Singh, BK Konwar (2012). *Bioenergetics* **2** (109): 2.
62. Colloidal silver nanoparticles/rhamnolipid (SNPRL) composite as novel chemotactic antibacterial agent P Bharali, JP Saikia, S Paul, BK Konwar (2013). *Int. J. Biol. Macromolecules* **61**: 238-242 (Elsevier, Imp Fac. 3.10).

63. Silver-embedded modified hyperbranched epoxy/clay nanocomposites as antibacterial materials. Buddhadeb Roy, Pranjali Bharali, **B. K. Konwar** and Niranjana Karak (2013). *Bioresource Technology* 127C: 175–180 (Imp Fac. 5.04).
64. Modified Hyperbranched Epoxy/Clay Nanocomposites: Anti-fungal, Thermal and Biodegradation Study. Buddhadeb Roy, Pranjali Bharali, **B.K. Konwar** and Niranjana Karak (2013). *Colloids and Surfaces B: Biointerfaces* 102: 450-456, Imp Fac. 4.29.
65. Mode of antibacterial activity of eclalbasaponin isolated from *Eclipta alba*. A Ray, P Bharali & **BK Konwar** (2013). *Appl. Biochem. & Biotech.* 171 (8): 2003-2019 (Springer, Imp Fac. 1.74).
66. Assessment of five soil DNA extraction methods and a rapid laboratory-developed method for quality soil DNA extraction for 16S rDNA-based amplification and library construction. Sagar, K., S.P. Singh, K.K. Goutam and **B.K. Konwar** (2013). *J. Microb. Methods*, (In Press). 10.1016/j.mimet.2013.11.008.
67. Carbon Nanotube Assisted Drug Delivery of the Anti-Malarial Drug Artemisinin and Its Derivatives - A Theoretical Nanotechnology Approach. S P Singh, **B K Konwar** (2013) *Journal of Bionanoscience* 7: 1-7.
68. Strong and conductive reduced graphene oxide/ polyester resin composite films with improved mechanical strength, thermal stability and its antibacterial activity. C. Bora, P Bharali, S Baglari, SK Dolui, **BK Konwar** (2013). *Composites Science and Technology* 87: 1-7 (Elsevier, Imp. Fac. 3.63).
69. Organic Reactions in “Green Surfactant”: An Avenue to Bisuracil Derivative. S Das, SJ Kalita, P Bharali, **BK Konwar**, B Das & AJ Thakur (2013). *ACS Sustainable Chem. & Engg.* 1 (12):1530-1536 (American Chemical Society, Imp Fac. 4.642)
70. Production and statistical optimization of biodiesel from kitchen chimney dump lard Mayur Mausoom Phukan, Salam Pradeep Singh, Pinki Phukon, Tapanjit Borah, **Bolin Kumar Konwar**, Nipum Dutta (2013). *Sustainable Chemical Processes* 1 (1): 12-20. [Chemistry Central (BMC)]
71. Homology modelling and molecular docking studies of nitric oxide synthase (inducible) of *Gallus gallus*. S. P Singh, B. Gogoi, **B.K. Konwar** and A. Ramteke (2013). *J. Pharmacy Res.*, 7: 443-447.
72. Bio-degradable vegetable oil based hyperbranched poly (ester amide) as an advanced surface coating material. S Pramanik, R Konwarh, K Sagar, **B K Konwar**, N Karak. (2013). *Progress in Organic Coatings* 76 (4), 689-697
73. Biosynthesis and characterization of a new copolymer, poly (3-hydroxyvalerate-co-5-hydroxydecanoate), from *Pseudomonas aeruginosa*. P Phukon, B Pokhrel, **BK Konwar**, SK Dolui (2013). *Biotechnology letters*, 1-5.
74. Synergistic effect of nano TiO₂ and nanoclay on mechanical, flame retardancy, UV stability, and antibacterial properties of wood polymer composites. R R Devi, K Gogoi, **BK Konwar**, TK Maji. (2013). *Polymer Bulletin*, 1-17.
75. Molecular Docking, DFT and ADME-Toxicity Studies on Analogues of Epigallocatechin Gallate as SARS Coronavirus 3CL Protease Inhibitors. SP Singh, **BK Konwar** (2013). *J Bioinf Inte Control* 2 (1), 1-10.
76. *In silico* Proteomics and Genomics Studies on ThyX of Mycobacterium Tuberculosis. SP Singh, **BK Konwar**. (2013). *J Bioinformatics and Intelligent Control* 2 (1), 11-18.

77. Study on the Effect of pH, Temperature and Aeration on the Cellular Growth and Xanthan Production by *Xanthomonas campestris* Using Waste Residual Molasses. P Mudoi, P Bharali, **B K Konwar** (2013). *J Bioprocess Biotech* 3 (135): 2-9 (OMICS).
78. Molecular docking and in silico studies on analogues of 2-methylheptyl isonicotinate with DHDPS enzyme of *Mycobacterium tuberculosis*. S. P. Singh, **B. K. Konwar**, R. L. Bezbaruah and T.C. Bora (2013). *Med. Chem. Res.*, 22: 4755-4765.
79. Strategy in metagenomic DNA isolation and computational studies of humic acid. S. P. Singh, K. Sagar and **B.K. Konwar** (2013). *Curr. Res. Microbiol. Biotechnol.* 1: 9-11.
80. Optimization of nutrient requirements and culture conditions for the production of rhamnolipid from *Pseudomonas aeruginosa* (MTCC 7815) using *Mesua ferrea* seed oil. Singh, S.P., P. Bharali and **B.K. Konwar** (2013). *Indian J. Microbiol.*, 53: 467-476 (Elsevier, Imp Fac. 0.83).
81. Molecular docking studies on analogues of quercetin with D-alanine: D-alanine ligase of *Helicobacter pylori*. Singh, S.P., R. Konwarh, **B.K. Konwar** and N. Karak (2013). *Med. Chem. Res.*, 22: 2139-2150.
82. Isolation and immobilization of Aroid polyphenol on magnetic nano-particles : Enhancement of potency on surface immobilization. JP Saikia, R Konwarh, **BK Konwar**, N Karak (2013). *Colloids and Surfaces B: Biointerfaces* 102, 450-456, Imp Fac. 4.29.
83. Immobilizing silver nanoparticles (SNP) on *Musa balbisiana* cellulose. Krishna Gogoi, Jyoti Prasad Saikia and Bolin Kumar Konwar (2013). *Colloids and Surfaces B: Biointerfaces* 102: 136-138.
84. Production and optimization of extracellular lipases by *Bacillus species* KB-S102 isolated from domestic-waste contaminated soil. Kalpana Sagar and **Bolin K Konwar** (2013). *Biochemistry and Bioinformatics*, 13, 19-23.
85. Exploitation of *Pongamia glabra* deoiled cake for alternate energy : Physico-chemical characterization and Thermogravimetric studies. Rahul. S. Chutia, Mayur. M. Phukan, R. Kataki, T. Bhaskar, **B. K. Konwar** (2013). *Energy Sources, Part A: Recovery, Utilization and Environmental Effects* (Accepted) (Imp factor 0.72).
86. Strategy in metagenomic DNA isolation and computational studies of humic acid. Salam Pradeep Singh, Kalpana Sagar and **Bolin Kumar Konwar** (2013). *Curr Res Microbiol Biotechnol* 1(1): 9-11.
87. Isolation of Lipolytic Bacteria from waste contaminated soil: A study with regard to process optimization for lipase. Kalpana Sagar, Y Bashir, M M Phukan, **B K Konwar** (2013). *Int J Sci & Tech Res* 2 (10): 214-218.
88. Phytochemical screening, polyphenolic estimation and *in vitro* assessment of antioxidant activity of aqueous and alcoholic extracts of *Musa balbisiana* inflorescence. K. Gogoi and **B. K. Konwar** (2013). *Intl J Pharmaceutical Res.*, 5.
89. Rhamnolipid (RL) from *Pseudomonas aeruginosa* OBP1: A novel chemotaxis and antibacterial agent. P Bharali, J P Saikia, A Ray & **B K Konwar** (2013). *Colloid and surface B: Biointerfaces*, 103: 502-509 (Imp Fac. 4.29).
90. Isolation of Lipolytic Bacteria from waste contaminated soil: A study with regard to process optimization for lipase. Kalpana Sagar, Y Bashir, M M Phukan, **B K Konwar** (2013). *Int J Sci & Tech Res.* 2 (10): 214-218.
91. Modified hyperbranched epoxy/clay nanocomposites: A study on thermal, antimicrobial and biodegradation properties. B Roy, P Bharali, **BK Konwar** & N Karak (2014). *Int J Materials Research* 105 (3): 296-307 (Carl Hanser Verlag, Imp Fac. 0.68).

92. Virtual screening and molecular descriptor analysis on dietary phytochemicals against Heat shock protein 90 enzyme. SP Singh, **BK Konwar**. (2014). *Letters in Drug Design and Discovery*, 97: 68-73 (doi: 10.1016/j.mimet.2013.11.008), Imp Fac. 0.68.
93. Polyhydroxyalkanoate production by indigenously isolated *Pseudomonas aeruginosa* using glycerol by-product of KCDL biodiesel as an inexpensive carbon source. P. Phukan, M.M. Phukan, S. Phukan, **BK Konwar** (2014). *Annals of Microbiology* (in Press): 1-8.
94. Antimicrobial hyperbranched poly (ester amide)/polyaniline nanofiber modified montmorillonite nanocomposites. S Pramanik, P Bharali, **BK Konwar** & N Karak (2014). *Materials Science and Engineering C* 35: 61-69 (Elsevier, Imp Fac. 3.09).
95. Natural polyhydroxyalkanoate – gold nanocomposite based biosensor for detection of antimalarial drug artemisinin. P. Phukan, K. Radhapyari, **B. K. Konwar** and R. Khan (2014). *Materials Science and Engineering C* 37: 314–320 (Elsevier, Imp Fac. 3.09).
96. Assessment of five soil DNA extraction methods and a rapid laboratory - developed method for quality soil DNA extraction for 16S rDNA-based amplification and library construction. Kalpana Sagar, Salam Pradeep Singh, Kapil Kumar Goutam, **Bolin Kumar Konwar** (2014). *Journal of Microbiological Methods* 97: 68–7394.
97. *In silico* studies on the molecular interaction analysis of dietary flavonols as a potent inhibitor of heat shock protein 90 enzyme in fighting against cancer. S. P. Singh, C R Dev, S U Ahmed, Y Saratchandra, **B. K. Konwar** (2014). *J Biomedical Res* (accepted).
98. A convenient synthesis of novel 5-aryl-pyrido [2, 3-d] pyrimidines and screening of their preliminary antibacterial properties. L Saikia, B Das, P Bharali, **B K Konwar** & AJ Thakur (2014). *Tetrahedron Letters* 55 (10): 1796-180 (Elsevier Imp Fac. 2.39).
99. Exploitation of *Pongamia glabra* deoiled cake for alternate energy: physico chemical characterization and thermogravimetric studies. Rahul S. Chutia, Mayur M. Phukan, R. Katak, T. Bhaskar and B. K. Konwar (2014). *Energy sources part A: Recovery, utilization and environmental effects*. DOI:10.1080/15567036.2012.744117. [Taylor & Francis].
100. Assessment of antimicrobial activity of bio-oil from *Pongamia glabra*, *Mesua ferea* and *Parachlorella* sp.deoiled cake. Mayur M. Phukan, Rahul S. Chutia, Rahul Kumar, D. Kalita, **B. K. Konwar** and R. Katak (2013). *Int J Pharm Bio Sci.*, 4 (4): 910 – 918.
101. Microalgae *Chlorella* and *Scenedesmus* as a potential bioenergy source. Mayur M. Phukan and **B. K. Konwar**. (Published as a book chapter in Renewable Energy and Sustainable Development, EBH Publishers, ISBN: 9789380261782).
102. Hyperbranched epoxy and MW/CNT-CuO-nystatin nanocomposite as a high performance biocompatible, antimicrobial material. Shaswat Barua, Pronobesh Chattopadhyay, Maur Mausoom Phukan, **Bolin Kumar Konwar** and Niranjana Karak (2014). *Material Research Express* 1, 045402, DOI: 10.1088/2053-1591/1/4/045402. [IOP Science], Imp Fac. 2.74.
103. Isolation and characterization of freshwater microalgae *Scenedesmus* from contaminated field samples for bio-energy generation. Mayur M. Phukan and **B. K. Konwar** (Published as a book chapter by National Institute of Renewable Energy, ISBN: 978-81-927097-2-7).
104. Biodiesel derived waste glycerol as an economic substrate for biosurfactant production using indigenous *Pseudomonas aeruginosa*. P Bharali, SP Singh, N Dutta, S Gogoi, LC Bora, P Debnath & **BK Konwar** (2014). *RSC Advances*: 4 (73): 38698-38706 (Royal Soc. Chem., Imp Fac. 3.71).
105. Metagenomics: An application based perspective. Yasir Bashir, Salam Pardeep Singh, **Bolin Kumar Konwar** (2014). *Chinese J Biology* (Accepted) [Hindawi Publishers].

106. Biocompatible hyperbranched epoxy/silver-reduced graphene oxide immobilized curcumin nanocomposite as an advanced antifouling material. Shaswat Barua, Pronobesh Chattopadhyay, Mayur M. Phukan, **Bolin K. Konwar** and Niranjan Karak. *RSC Advances* 4 (88): 47797-805, Imp Fac: 3.84 [**Royal Society of Chemistry**].
107. Hybrid biofuels from non-edible oils: a comparative standpoint with corresponding biodiesel, Plaban Bora, Lakhya Jyoti Konwar, Mayur M. Phukan, **Bolin K. Konwar**, Dhanapati Deka (2014). *Applied Energy* 135: 450 - 460 [Imp. Fac. 5.23, Elsevier].
108. Valorization and miscellaneous prospects of waste *Musa balbisiana* colla pseudostem. Krishna Gogoi, Mayur M. Phukan, Nipu Dutta, Salam Pradeep Singh, Pitambar Sedai, **Bolin Kumar Konwar** and T. Maji. *Journal of Waste Management, Journal of Waste Management*. <http://dx.doi.org/10.1155/2014/412156>. (Accepted) [Hindawi Publishers].
109. Microemulsion based hybrid biofuels from Thevetia peruviana seed oil structural and dynamic investigations. Plaban Bora, Lakhya Jyoti Konwar, Mayur Mausoom Phukan, Dhanapati Deka and **B. K. Konwar** (2015). *Fuel*, Manuscript ID: JFUE-D-14-02547 [Elsevier, Imp factor 3.41].
110. Anti-Alopecic Activity of a Novel Compound from *Aloe barbadensis* Miller. A Ray, P Chattopadhyay, **B K Konwar** (2015). *J Pharmacol Clin Toxicol* 3 (2): 1048.
111. Ethnobotanical based Phyto-medicines for different Hair Ailments used in North-Eastern Region of India. P. Bharali, A. Ray, **B. K. Konwar** (2015). *Biotic: A collection of Research articles on Biodiversity and Sustainability*, Accepted ISBN no. 978-93-83230-06-8.
112. *In vitro* evaluation of cellulolytic *Bacillus amyloliquefaciens* AMS1 isolated from traditional fermented soybean (Churpi) as an animal probiotic. AK Manhar, D Saikia, Y Bashir, RK Mech, D Nath, **BK Konwar**, M Mandal (2015). *Research in veterinary science* 99: 149-156 [Imp Fac: 1.4] .
113. Hyperbranched epoxy/MWCNT-CuO-nystatin nanocomposite as a high performance, biocompatible, antimicrobial material. S Barua, P Chattopadhyay, MM Phukan, **BK Konwar**, N Karak (2014). *Materials Research Express* 1 (4): 045402.
114. Polyhydroxyalkanoate production by indigenously isolated *Pseudomonas aeruginosa* using glycerol by-product of KCDL biodiesel as an inexpensive carbon source. P Phukan, MM Phukan, S Phukan, **BK Konwar** (2014). *Annals of Microbiology* 64 (4): 1567-1574 [Imp Fac: 0.99].
- 115 Density Functional Theory Studies on Non-Steroidal Anti-Inflammatory Drugs Acetic Acid Derivatives of Cyclooxygenase Inhibitor. S P Singh, C R Deb, S U Ahmed, Y S Chandra, **BK Konwar** (2014). *Journal of Bionanoscience* 8 (5), 328-334.
116. Genome size determination of *Eclipta alba* and *Aloe barbadensis*. Ray A, Bashir Y, Rather IA, **Konwar B K** (2015). *Bangladesh J Pharmacol.* 10: 697-702 [ISSN: 1991-0088].

(b) Papers published in Proceedings/Souvenirs of national/international seminars

1. N₂-fixing ability and genetic variability in *Azolla-Anabaena* symbiosis. Borgohain, R; Hazarika, M. H. and **Konwar, B. K.**, *Proc. on Recent Advances in Sciences*, National Sem., Dibrugarh University, 1994, pp 101-108.
2. Collection, evaluation of azollae of NE India and its application to rice crop. Borah, R. C.; Barthakur, D. and **Konwar, B. K.**, *Proc. Int. Symp. on Rainfed Rice Prod. Strategy for 21st Century*, AAU, Jorhat, 25-27th Nov., 1997.

3. Plant transformation through *Agrobacterium tumefaciens*. **Konwar, B. K.** Course Manual on *Tissue Culture and Biochemical Techniques for Crop Improvement with special reference to citrus and tea*. Nov., 1995, Agril. Biotech, AAU and Tocklai Expt. Station, TRA, Sponsored by DBT, Govt. of India, New Delhi, pp 66-75.
4. *Agrobacterium*-mediated 'leaf disc' transformation. **Konwar, B. K.** Course Manual on *Tissue Culture and Biochemical Techniques for Crop Improvement with special reference to citrus and tea*. Nov., 1995, Agril. Biotech, AAU and Tocklai Expt. Station, TRA, Sponsored by DBT, Govt. of India, New Delhi, pp 180-182.
5. Embryo rescue in japonica X indica hybrid rice (*Oryza sativa* L). Sarma, D, and **Konwar, B. K.**, *Proc. on Recent Advances in life sciences*, National Seminar, Dibrugarh University, 1994 pp 95-100.
6. Electroporation and genetic transformation in plants. **Konwar, B. K.**, *Lect. series organised by Tocklai Expt. Station, TRA, Jorhat; Sponsored by the DBT, New Delhi 1997* (booklet).
7. Gene transfer in plants. **Konwar, B. K.** *Research booklet on DIC & Ph D work, Published by the Agril. Biotech. Prog., AAU, Jorhat; sponsored by DBT, New Delhi, 1992.*
8. Rapid regeneration of sugar beet (*Beta vulgaris* L) from in vitro cultures. **Konwar, B. K.** and Coutts, R. H. A., *Proc. VII Int. Conf. on Plant Cell and Tissue culture*, Amsterdam, The Netherlands, 1990.
9. Contribution of the North Eastern region for the enrichment of citrus wealth in India. **Konwar, B. K.**, *Proc VI National Citrus Seminar, AAU, Jorhat, 1997.*
10. Plant tissue culture. Das, S. C. and **Konwar, B. K.** Presented in the lecture series organised at the Tocklai Expt. Station, TRA, Jorhat and sponsored by the DBT, New Delhi, Govt of India, New Delhi, 12th Sept., 1997 (booklet).
11. Karyotype study and polyploidy inducibility in tea (*Camellia sinensis* L. O. Kuntze). Matharoo, A. K. and **Konwar, B. K.**, *Proc of Seminar on Agric. Sci. Soc. of NE India*, AAU, Jorhat, Assam, Nov 27-28, 1997, pp 64-68.
12. Segregating lines from embryo rescued japonica x indica rice (*Oryza sativa* L.) crosses for cold tolerance. Sarma, D. and **Konwar, B. K.** *Proc of Seminar on Agric. Sci. Soc. of NE India*, AAU, Jorhat, Assam, Nov 27-28, 1997, pp 58-63.
13. Innovative approaches in tea breeding and fertility maintenance by microbes. **Konwar, B. K.**, *Hand book of the field management course*, Tocklai Expt. Station, TRA, Jorhat, Assam, July 30th 1997.
14. Sustained assessment and improvement of medicinal plant wealth of North East India. **Konwar, B. K.**; Buragohain, J. and Chaudhary, D. *Proce. National Workshop on 'Science & Technology for regional development: case for North East India'*. Feb. 3rd – 6th, 2004, Indian Institute of Technology, Guwahati, pp 105-115.
15. Morphological and floral biology of karphul – a promising aromatic and medicinal plant of North East India. **Konwar, B. K.** and Chaudhary, D. *Proce. National Workshop on 'Science & Technology for regional development: case for North East India'*. Feb. 3rd – 6th, 2004, Indian Institute of Technology, Guwahati, pp 99-104.
16. Science and Technology in the development of the North Eastern region. **Konwar, B. K.** In: *Souvenir, National Workshop on Science & Technology for Regional Development: Case for North-East India*, Feb 3 – 6, 2004, IIT, Guwahati, pp 8-12.

17. Naturally occurring microbes for the control of human diseases. **Konwar, B. K.**, Key note address presented in the inaugural session of the 'Continuing Education Programme', Defense Research Lab., DRDO, Tezpur, 11th Oct., 2004.
18. Biodiversity and intellectual property rights. **Konwar, B. K.** *Proce. National Seminar on Intellectual Property Rights*, 6-8 Oct., 2004, St. Anthony's College, Shillong, pp134-138.
19. Patenting of plants in India. **Konwar, B. K.** *Proce. National Seminar on Intellectual Property Rights*, 6-8 Oct., 2004, St. Anthony's College, Shillong, pp 139-142.
20. Application of recombinant DNA technology for control of human diseases, **Konwar, B. K.**, paper presented in the Technical session I of the 'Continuing Education Programme', Defense Research Lab., DRDO, Tezpur, 11th Oct., 2004.
21. Intellectual property right in relation to biodiversity and biotechnology. **Konwar, B. K.**, *Proce. National Workshop on Intellectual Property Right (IPR)*, Nov. 5th, 2004, Tezpur University, Napaam, pp 1-15.
22. Isolation of the flavoury compound 1-methoxy-4-(1-propenyl)-benzene from a threatened medicinal plant of North Eastern India. Chaudhury D. and **Konwar, B. K.** *Proc. Nat. Seminar on Medicinal Plants of North Eastern India*, Oct. 7 – 10, 2004, Guwahati.
23. An overview on microbes. **Konwar, B. K.**, Key Note Address, *Continuing Education Programme: Naturally occurring microbes for the control of human diseases*. (Lecture Notes), 11-15th October 2004, pp 6-15.
24. Application of recombinant DNA technology for control of human diseases. **Konwar, B. K.**, *Continuing Education Programme: Naturally occurring microbes for the control of human diseases*, Technical Session I. (Lecture Notes), 11-15th October 2004, pp 15-17.
25. Prospects of value addition to bio-resources through biotechnology. **Konwar, B. K.**, Full keynote paper, *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 2006, pp15 – 31.
26. The age of bioinformatics. **B. K. Konwar** (2008). *Bioinformatics Training Manual*, 15th – 28th December, BIF, Tezpur University, pp 9-12.
27. Nucleotide base pairs in deoxyribonucleic acid and its sequence determination. **B. K. Konwar** (2008). *Bioinformatics Training Manual*, 15th – 28th December, BIF, Tezpur University, pp 13-16.
28. Hydrogen: the future fuel from biological agents. M. Mandal and **B. K. Konwar** (2008). Shakti, Workshop on Renewable energy Resource Assessment: Present status and future strategy, 16th Oct., pp25-27.
29. Value addition to Bio-resources. **B. K. Konwar** (2009), *Souvenir-cum-Proce National Seminar on Bioresources of North East India: industrial potentials and intellectual property rights issues* (Keynote Lecture), 2nd and 3rd January, pp 17-34, Nawgaon College, Nagaon.
30. Removable of crude oil from contaminated soil. **B. K. Konwar** (2009), Fortnightly Faculty Seminar (Friday), School of Science & Technology, Tezpur University, Napaam, 14th August.
31. Antibacterial activity of crude banana (*Musa balbisiana*) pseudostem sap. Indian National Science Academy Platinum Jubilee International Symposium on Research in Molecular Medicine Based on Natural Resources and Traditional Knowledge, K. Gogoi and **B. K. Konwar** (2009). National Chemical Laboratory, Pune, India, November 21-23, 2009.
32. Polyphenol estimation and *in vitro* assessment of antioxidant activity of aqueous and alcoholic extracts of *Musa balbisiana* pseudostem. K. Gogoi and **B. K. Konwar** (2010).

- National Seminar on Medicinal Plant and Microbe Diversity and their Pharmaceuticals, Dept. of Mo. Biology and Biotechnology, Tezpur University, December 19-21, 2010.
33. Microalga *Chlorella* and *Scenedesmus* as a potential bioenergy source. M. M. Phukan and **B. K. Konwar** (2010), *Proce. National Conf on Renewable energy for Development of Underdeveloped Areas with Special Reference to North East India*, 23rd – 25th March.
 34. Creative structure and leadership. **B. K. Konwar** (2010), Seminar on Creativity in Education, Tezpur University, Napaam, 6th April (oral presentation).
 35. Bioresources as economic growth of North East India: An appraisal. **B. K. Konwar** (2011). *Proce. National Seminar on “Biochemical and Biotechnological Research Approaches for Bioresource Management of North East India towards Sustainable Rural Development (DBT Sponsored)”*, 11 – 12th November, 2011: XVI – XX, Biswanath College of Agriculture, Biswanath Chariali, Sonitpur, Assam.
 36. Biopolymer-based nanocomposite in drug delivery. **B. K. Konwar** (2012). Lecture in the workshop on ‘Faculty training, motivation and adoption of Schools and Colleges by CSIR Laboratories’, 14 – 15th Feb. 2012, NEIST, CSIR, Jorhat, Assam.
 37. Biotechnology and sustainable development. **B. K. Konwar** (2012). Invited lecture I, DBT Sopsnored National Seminar on “Biotechnology Research and Sustainable Development”, 27 – 28 Feb. 2012, Dibrugarh University, Dibrugarh, Assam.
 38. Naga Society, Culture and Development. **B. K. Konwar** (2012). National Seminar on “Society, Culture and Development: Emerging Issues in Nagaland”, Kohima Science College, Kohima and Asiatic Society, Kolkata, 14 – 15th March 2012.
 39. Wetland: Potential and Prospects, **B. K. Konwar** (2012). *Proce. National Seminar on ‘Wet lands’*, Assam University, Silchar 10-13th November 2012.
 40. Quality Higher Education in India, **B. K. Konwar**. NAAC-sponsored State Level Workshop on “Higher Education in India”, Garhgaon College, Nazira, Sibsagar, Assam, 24th – 25th November 2012.
 41. Empowering Knowledge Institutions for Quality Enhancement, **B. K. Konwar** (2012), *University News*, AIU, New Delhi
 42. Landholding pattern and farming in Nagaland with reference to Small and Marginal Land holders, **B. K. Konwar**, B. Kilangla Jamir and S. Das (2012). ICAR New Delhi publication.
 43. Higher Education in Nagaland, **B. K. Konwar** (2012), *Yojana* December 2012, pp 5 – 9.
 44. Slash and Bum Shifting/Jhum cultivation, **B. K. Konwar**, *Yojana* April 2013, pp 54 – 59.
 45. Ethnicity and Identity in the context of Naga Folk Tales and Oral Literatures. Konwar, Juri Gogoi and **Bolin Kumar Konwar** (2013). *University News* 51, no. 05 (February): 54-59.
 46. Agriculture and allied education for economic growth, Presentation by the Chief Guest **B K Konwar** (2013). Seminar Education (Agriculture) Day, 3rd Sept, NRC-Pig, Rani, Kamrup (Urban), Assam.
 47. Quality improvement of research and teaching in North Eastern States, Presentation by B K Konwar (2013). Seminar 27th Oct., NEHU, Shillong.
 48. Economic sustainability of the Himalayan ecosystem. **B. K. Konwar** (2014). *Yojana*, January 2014, pp 52 – 56.
 49. Indian Higher Education and Ranking Standard. **B. K. Konwar** (2014). *University News* 52, no. 49 (December 2014): 18 - 24.

50. Bioinformatics and research needs, Inaugural talk presentation by the Chief Guest **B. K. Konwar** (2014). 7th NEBI-NET (DBT, S&T, GoI, New Delhi), 11th Nov., Lumami, Nagaland.
51. Harnessing biotechnological approaches for enhancing horticultural crop production. **B. K. Konwar** (2015). Souvenir, National Seminar on “Sustainable Horticulture vis-à-vis Changing Environment”, Feb. 26 – 28, Medziphema, Nagaland.
52. Education and sustainable development. **B K Konwar** (2013). Nagaland University Foundation Day Talk by Chief Guest **B K Konwar** (2013). 6th September, Lumami, Zunheboto, Nagaland.
53. Quality Education. **B K Konwar** (2013). Convocation (2nd) Address of the Chief Guest, Sept., Patkai Christian College (Autonomous), Chumukdema, Nagaland.
54. Agriculture related common issues of the North Eastern region. **B K Konwar** (2015). ICAR Regional Committee Meeting, May 22-23, Agartala, Tripura.
55. Capacity building of human resources of the North Eastern states. **B K Konwar** (2014). Workshop organised by VV Giri National Labour Institute, New Delhi, 30th July.
56. Promotion and improvement of higher education in North Eastern States of India. **B. K Konwar** (2015). 2nd North East Teachers Congress-2014, National Seminar on “Changing Scenario in Academic Performance & Audit”, organised by University of Science and Technology, Baridua, Meghalay, 4th January.
57. Higher Education at a Cross Road. **B K Konwar** (2015). Convocation (3rd) Address of the Chief Guest, 27th June, Patkai Christian College (Autonomous), Chumukdema, Nagaland.
58. Research in Nanobiotechnology in North East India. **B K Konwar** (2014). Chief Guest’s presentation, Workshop on Biotechniques, DBT-AAU Biotechnology Centre, Assam Agril University, Jorhat, Sept., 2014.
59. Biotechnology research in North East India. **B K Konwar** (2014). National Seminar, Dept of Mol Biol & Biotech, Tezpur University, Napaam, Tezpur, Assam.
60. Quality Aspects of Higher Education. **B. K. Konwar** (2015). Chief Guest presentation, NAAC sponsored Workshop for Quality Improvement in Higher Education, March 26-27th, SASRD, Medziphema, Nagaland.
61. Globalization and issues of food security. **B K Konwar** (2015). Keynote presentation National Seminar on ‘Globalization, Development and Environment with special reference North East Region’, 19th March, Nagaland University, Lumami, Zunheboto, Nagaland.
62. Biotechnology and biotechnology research for microbial, plant and animal improvement. **B K Konwar** (2015). Presentation on the occasion of Science Day, 227th Feb, 20015, Dept. of Botany, NU, Lumami, Zunheboto, Nagaland.
63. Biodiesel and other Secondary Metabolites from Algae. **B K Konwar** (1995). 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

(c) Papers presented in National/International Seminars/Conferences

1. 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.

2. Genetic transformation in plant. **Konwar, B. K.**, *Seminar talk at the Dept. of Applied Bot. & Biotech.*, Gauhati University, 1992.
3. *Agrobacterium*-mediated genetic transformation in sugar beet (*Beta vulgaris* L.). **Konwar, B. K.**, *1st National Symp. on Plant Biotechnology*, IARI, New Delhi, 1992.
4. Hybrid rice: a future prospect. **Konwar, B. K.** and Hazarika, M. H., *33rd Annual Conf. of Assam Sci. Society*, AAU, Jorhat, Assam, 1987.
5. 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., *31st Annual Conf. of Assam Sci. Society*, AAU, Jorhat, Assam, 1985.
6. Haploid regeneration from embryo rescued japonica x indica rice (*Oryza sativa* L) hybrids. **Konwar, B. K.**, Sarma, D. and Pathak, M., paper presented in the *Golden Jubilee Int Symp on "Rainfed rice for sustainable food security"*, Sept. 23-25, 1996, CRRI, Cuttack.
7. Biotechnology and tea improvement. **Konwar, B. K.**, *Seminar in Tocklai Expt. Station*, TRA, Jorhat, Assam, July 12th, 1995.
8. Tea improvement: conventional Vs innovative approaches. **Konwar, B. K.**, *Seminar in Tocklai Expt. Station*, TRA, Jorhat, Assam, July 31st, 1995.
9. Production of haploids from embryo rescued plants of japonica x indica rice hybrids. Pathak, M. and **Konwar, B. K.**, paper presented in the poster session II of the Golden Jubilee Int. sym. on '*Rainfed rice for sustainable food security*', 23-25th Sept, 1996, 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.**, workshop on Environment and Nature conservation, 17-25th Nov, 1997, Jorhat.
12. Indian tea: present position and future prospects. **Konwar, B. K.**, concept paper presented in the Brain Storming session on '*Improvement of tea through biotechnological tools*, December 1st, 1999, DBT, New Delhi.
13. Genetic transformation: model plant sugar beet (*Beta vulgaris* L.). **Konwar, B. K.**, Seminar organized by the Indian Soc of Biochem & Biotech, AAU, Jorhat, 1992.
14. 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., presented in the *poster session of the 33rd Tocklai Conference*, 11th-13th Feb., 2001
15. Promising clones for the coming decade. **Konwar, B. K.**, Bordoloi, S. C. and Bordoloi, R. K., presented in the *oral Technical session IV: Genetic modification and tea improvement-the new dimension*, *33rd Tocklai Conference*, 11th-13th Feb., 2001.
16. 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., presented in the *oral Technical session IV: Genetic modification and tea improvement-the new dimension*, *33rd Tocklai Conference*, 11th-13th Feb., 2001.
17. Recycling of tea garden weeds and pruning litters. **Konwar, B. K.**, Das, M. and Das, J., presented in the *poster session of the 33rd Tocklai Conference*, 11th-13th Feb., 2001.
18. Studies on stomata in TV and generative clones with particular reference to drought tolerance. Handique, A. C., Barman, T. S. and **Konwar, B. K.**, presented in the *poster session of the 33rd Tocklai Conference*, 11th-13th Feb., 2001.
19. Somaclonal variation through tissue culture of tea. Das, S. C., **Konwar, B. K.**, Bordoloi, B. J. and Dutta, R. K., presented in the *poster session of the 33rd Tocklai Conference*, 11th-13th Feb., 2001.

20. Biotechnology. **Konwar, B. K.** *Science Week Key Note Seminar Talk, The Assam Valley School, Balipara, Sonitpur, Assam. dtd. March 1st, 2003.*
21. DNA: the molecule of life and its voyage beyond the realm. **Konwar, B. K.** Key note Address, *Commemoration of 50th Anniversary of DNA Discovery*, Defense Research Laboratory, DRDO, Tezpur, Assam. Dtd. 28th Feb., 2003.
22. The self forming biomaterial DNA, its characterization and contribution. **Konwar, B. K.** *National Workshop on 'Advanced Materials: processing and characterization (Oral Presentation)*, Oct. 29th – 30th, 2003, Deptt of Physics, Tezpur University, Napaam, Tezpur.
23. Human genome. **Konwar, B. K.** *Scientific Semina (Oral Presentation)*, 18th Sept., 2002, *Zoological Society of Assam*, Tezpur.
24. Biosurfactant induced enhanced oil recovery. Bordoloi, N. K. and **Konwar, B. K.** *National Seminar on 'Hydrocarbon degrading microbes'*. 22nd – 23rd Dec., 2003, Tezpur University, Napaam.
25. Bioremediation of petroleum hydrocarbons by microbial consortia. Bordoloi, N. K. and **Konwar, B. K.** *National Seminar on 'Hydrocarbon degrading microbes'*. 22nd – 23rd Dec., 2003, Tezpur University, Napaam.
26. Degradation of crude oil by bacterial consortia. Bordoloi, N. K. and **Konwar, B. K.** *National Workshop on 'Science & Technology for regional development: case for North East India'.* (Oral Presentation), Feb. 3rd – 6th, 2004, Indian Institute of Technology, Guwahati.
27. 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.
28. 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 Presentation)*, Tezpur University 22-23 Dec.
29. Evaluation of nutraceutical potentiality of a minor fruit of Assam – *Spondias pinnata* Kurz. Kandali, R. and **Konwar, B. K.** 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 2006, pp 99.
30. 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.**, 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 2006, pp 113.
31. Microbial consortium in bioremediation of contaminant hydrocarbon. Bordoloi, N. K. and **Konwar, B. K.**, 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 2006, pp 121.
32. Studies on the microflora of fermentation starter culture used by the Ahom community of Asom. Barman, K. R. and **Konwar, B. K.**, 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 2006, pp 123.
33. Morphophenology and karyotype study of Patidoi (*Schuannianthus dichotmus* (Roxb) Gagnrep. Synonym *Clinogyne dichotoma* Salisb) – a traditional plant of Assam. Chowdhury, D. and **Konwar, B. K.**, 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 2006, pp 124.
34. Biodiversity of medicinal plants of Assam. L. Barooah & **B.K. Konwar**, *National Seminar on Biodiversity & Indigenous Knowledge System*, Itanagar Oct 2006: pp 37.
 35. 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.
 36. 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.
 37. Petroleum biotechnology research. **B. K. Konwar** (2007). *Petrotech Society Seminar on R&D-Round Table Conference (Oral Presentation)*, March 20th 2007, New Delhi.
 38. 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 2007.
 39. 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 2007, Indian Institute of Petroleum, Dehradun, Uttarakhand, India.
 40. 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, 2007.
 41. 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.
 42. 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.
 43. 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.
 44. 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.
 45. 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.
 46. 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.

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**, National Seminar on Emerging Trends in Polymer Science and Technology (Poly-2009) (**Oral Presentation**). October 8 – 10, 2009.
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, 2009.
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, 2009.
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), December 1 – 5, 2009.
52. The microbial antimicrobial compound 2-methylheptyl isonicotinate from *Zanthoxylum oxyphyllum* edgew, a traditional medicinal plant of Assam. **B. K. Konwar** and J. Buragohain. 4th Global Summit on Medicinal and Aromatic Plants, 2009 (**Oral Presentation**). Kuching, Sarawak, Malaysia.
53. Plant- Based active compounds for Hair Regeneration. A. Ray and **B. K. Konwar**. Indian National Science Congress (INSC), NCL, Pune, Nov. 21-23, 2009.
54. Antibacterial activity of crude banana (*Musa balbisiana*) pseudostem. K. Gogoi and **B. K. Konwar**. Indian National Science Congress (INSC), NCL, Pune, Nov. 21-23, 2009.
55. Bioactivity of four edible aroids of north east India. J. P. Saikia and **B. K. Konwar** Indian National Science Academy (INSA), NCL, Pune, November 21-23, 2009.
56. Solubilization of non-mulberry eri (*Philosamia ricini*) and muga (*Antheraea assamica*) cocoon silk fibers and comparison of protein content. R. K. Sanjukta and **B. K. Konwar** (Oral Presentation). *Int. Conf. on Climate Change & Bioresource*, Bharathidasan Univ., 09-12 Feb 2010.
57. Bacterial gene(s) through metagenomic study to obtain industrial enzymes. Kalpana Sagar and **B. K. Konwar** (Oral Presentation). *Int. Conf. on Climate Change & Bioresource*, Bharathidasan Univ., 09-12 Feb 2010.
58. Bioethanol production from banana (*Musa balbisiana*) pseudostem. K. Gogoi and **B. K. Konwar** (Oral Presentation). *Int. Conf. on Climate Change & Bioresource*, Bharathidasan Univ., 09-12 Feb 2010.
59. 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** (Oral Presentation). *Int. Conf. on Climate Change & Bioresource*, Bharathidasan Univ., 09-12 Feb 2010.
60. Plant-based active compounds for hair regeneration. Anggana Ray and **B. K. Konwar** (Oral Presentation). *Int. Conf. on Climate Change & Bioresource*, Bharathidasan Univ., 09-12 Feb 2010.
61. Biopolymer Isolated from Bacteria available in Oil well sites of Assam. Pinkee Phukan, **B.K. Konwar** (2009). Indian Science Congress, 2009, NEHU, Shillong.
63. Immobilization of Polyphenolic Compound from *Colocasia esculanta* with Magnetic Nanoparticles and their Efficacy as Antioxidant and Antimicrobial Agent. J. P. Saikia, R.

- Konwar, **B. K. Konwar**, N. Karak and N. Bora National Seminar on “Medicinal Plant and Microbe Diversity and their Pharmaceuticals, Tezpur University.
64. Polyphenol estimation and in vitro assessment of antioxidant activity of aqueous and alcoholic extracts of *Musa balbisiana* pseudostem. Gogoi, K. and **Konwar, B.K.** (2010). National Seminar on Medicinal Plant and Microbe Diversity and their Pharmaceuticals; Tezpur University, Assam; Dec.2010.
 65. 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.2010.
 66. Morphophenological, Nutraceutical, Biochemical and Genomic Characters of Some Medicinal Plants of North East India. **Konwar, B.K.** (2010). National Seminar on Medicinal Plant and Microbe Diversity and their Pharmaceuticals; Tezpur University, Assam; Dec.2010.
 67. Biodiversity: Global Scenario and Indian Perspective for Conservation. Chowdhury, D.; Maibongsa, S. and **Konwar, B.K.** (2010). National Seminar on Medicinal Plant and Microbe Diversity and their Pharmaceuticals; Tezpur University, Assam; Dec.2010.
 68. Medicinal Plant Diversity Conservation in North East India-An Overview. Kandali, R.; Goswami, R.K. and **Konwar, B.K.** (2010). National Seminar on Medicinal Plant and Microbe Diversity and their Pharmaceuticals; Tezpur University, Assam; Dec.2010.
 69. Nutraceutical potentiality of fruits of *Spondias pinnata* Kurz.- an important medicinal plant of Assam. Kandali, R. and **Konwar, B.K.** (2010). National Seminar on Medicinal Plant and Microbe Diversity and their Pharmaceuticals; Tezpur University, Assam; Dec.2010.
 70. Antioxidant Activity in Traditionally Prescribed Medicinal Plants for Hair Growth. Ray, A. and **Konwar, B.K.** (2010). National Seminar on Medicinal Plant and Microbe Diversity and their Pharmaceuticals; Tezpur University, Assam; Dec.2010.
 71. Genes for Industrial Enzymes through Metagenomics. Sagar, K.; Roy, P. and **Konwar, B.K.** (2010). National Seminar on Medicinal Plant and Microbe Diversity and their Pharmaceuticals; Tezpur University, Assam; Dec.2010.
 72. 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 India towards sustainable rural development. 11-12th November, 2011: 14.
 73. 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, 2011: 20.
 74. 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 India towards sustainable rural development. 11-12th November, 2011: 49.

75. 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”, 05.07.2012, Kohima, Nagaland.
76. 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, 2012.
77. ITKS and farmers’ variety, Presidential address by B. K. Konwar. National Seminar-cum-Farmers’ Scientists Interaction on Progressive Agriculture (Friday, 16th November), North East Region Agri Expo 2012, 15th – 17th November.
78. From Oral Traditions to Literary Progression, B K Konwar (opening remarks), Hornbill literature fest 2012-12-05, 06.12.2012, Venue: Kisama Bamboo Heritage Hall, Kohima, Nagaland.
79. 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 Envnt. Biomedical and Biotechnology (ICEBB), Singapore 24 – 25th August.
80. 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.
81. 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’ by his wife on the day).
82. Nagaland A Way Forward (Key Note Address), **B. K. Konwar** (2015). Inaugural Session, Seminar entitled “Nagaland A Way Forward”, organized by Assam Rifles, Kohima, 21st January.

Any other information relating to bio-resource development and utilization programs:

1. Enriched the Tea Field Gene Bank to about 2,000 accessions from 1,000 at Tocklai Experimental Station, Tea Research Association, Jorhat by adding new genotypes. In fact, next to China with 2,500 accessions, this is the second largest collection of tea germplasms.

Declaration

I declare that the information presented above is true to the best of my knowledge and belief.

Place: Nagaland University (Central), HQ: Lumami
Date : 16.08.2015

(B. K. Konwar)