



***Curriculum vitae* of Alak K Buragohain**

NAME

ALAK KUMAR BURAGOHAIN

Website: <http://www.professoralakkumarburagohain.com>

BIRTH

In Shillong, Meghalaya (INDIA) on First March Nineteen Hundred Fifty Six (01.03.1956)

PARENTS

Mrs. Pratima Gohain and Late Basanta Kumar Gohain

EDUCATION

North Eastern Hill University

B.Sc. in Botany (Honors), 1975 First
Class First

Gauhati University

M.Sc. in Botany (Specialization in Cytogenetics and Plant Breeding), 1977 First
Class Second

University of London

Ph.D. in Plant Molecular Biology, 1993

Imperial College of Science, Technology and Medicine, London

DIC in Plant Virology (Microbiology), 1994

CURRENT POSITION

**Chairperson(Academics),
The Assam Royal Global University,
Betkuchi Opp. Tirupati Balaji Temple NH 37, Guwahati-781035.**

POSITIONS HELD

Administrative experience / post(s) and responsibilities A.

- **Vice-Chancellor, Dibrugarh University** from 10 June, 2013 to 18 July, 2018.
 - **Registrar, Tezpur Central University** from 2008 -2013.
 - **Founder Head and Professor, Department of Molecular Biology and Biotechnology, Tezpur University, Tezpur, A Central University, Assam.**
 - **Associate Professor, Division of Life Science, Institute of Advance Studies in Science and Technology (IASST)** (A Department of Science and Technology Institution, Government of India Institute), Guwahati, Assam, India.
 - **Head, Department of Botany and Biotechnology, Tocklai Experimental Station, Tea Research Association, Jorhat, Assam, India** during 2002-2003.
 - **Founder Head, ONGC Centre for Petroleum Biotechnology** at Tezpur University.
 - **Chairperson of the Students Welfare Committee (equivalent to Dean, Students Welfare)** at **Tezpur Central University** for more than two terms.
 - **Reader, Department of Botany, Gauhati University, Assam, India.**
- Chairpersons and Members in many Committees, Board of Studies of Central Universities of the North East and the UGC.

B

- **Independent Director** on the Board of Directors of Brahmaputra Valley Fertilizer Corporation (BVFCL), Namrup, Assam.
- **Member, Research Advisory Council, Aaranyak**, an Internationally reputed NGO on Wildlife Conservation and Management.
- **Life Member** of Indian Society of Translational Research, New Delhi.

Academic Governance

- Founder Head of the Department, Molecular Biology and Biotechnology, Tezpur Central University, Assam.
- Established the Centre for Petroleum Biotechnology at Tezpur Central University. This is the first such Centre in any Indian University.
- Contributed towards revamping the administration of Dibrugarh University, the second oldest State University of Assam through-
 - a). Creation of a number of important legislations relating to Student discipline, reorganization of the Academic Departments and Centre for Studies into Schools of Studies.
 - b). Establishment of a Directorate of International Affairs towards attracting International Students to the Campus and for promoting International Academic and Research Collaboration.
 - c). Establishment of the Centre for Innovation and Technology Incubation, Centre for Skill and Entrepreneurship Development and Intellectual Property Rights Cell.
 - d). Formulated several Policy documents for the University with respect to Consultancy and Contract Research, IPR, Environment, etc.
- Completely revamped the Sports Infrastructure of the University.
- Created a forum for the Research Scholars of the University.
- Put in place several Digitalization Platforms for financial, general management and academic governance.
- Enabled setting up of two Alumni Start-Ups.
- Ushered in a new dimension on Industry Academia Interfacing through multiple MoUs with the Tea, Coal and Oil Industry. Awarded for Exemplary Industry Academia Partnership at the National Level.
- Ushered in extensive extension activities through Associated Villages involving students and Faculty Members.
- Conducting extensive work under the *Swacch Bharat Mission (Gramin)*, only University in the Country to have entered into an MoU with the *Swacchh Bharat Mission*.
- Launched a Masters Programme in communication for Health Hygiene and Sanitation with an objective to create quality Human Resource for effective implementation of the *Swacch Bharat Mission (Gramin)*, the flagship program of the Government of India.

RESEARCH INTERESTS

Drug discovery

Evolutionary Genomics.

About 100 publications in International and National peer reviewed Journals and several book chapters.

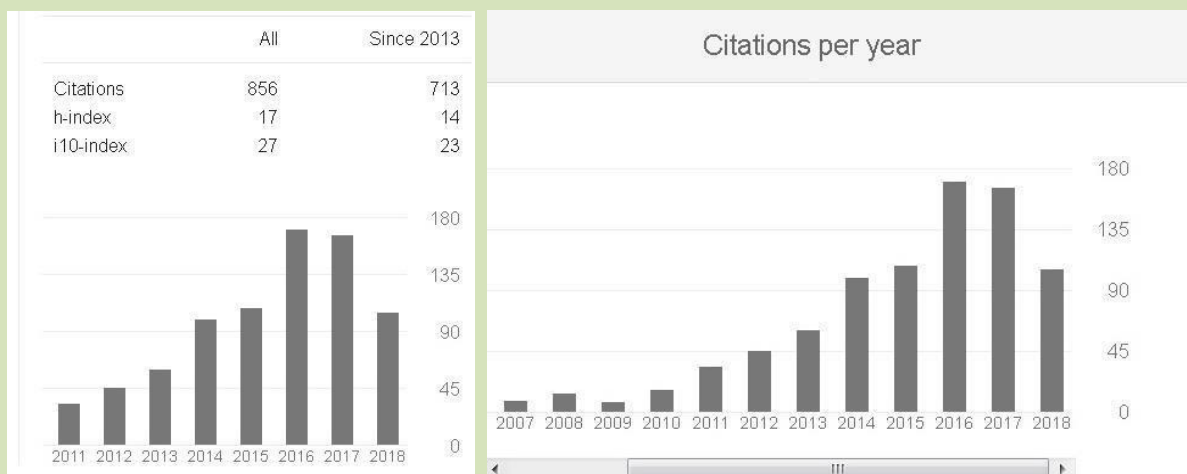
Involved in Peoples' Science Movement for popularization of Science and Rational thinking.

LECTURES & SPEECHES AVAILABLE IN YOUTUBE

1. <https://youtu.be/4k6wWHD64SM>
2. <https://youtu.be/5PVhn0HXt6k>
3. <https://youtu.be/rCvXodCB9Dg>

Google Scholar Citations

<https://scholar.google.co.in/citations?user=dA-UpZAAAAAJ&hl=en>



PUBLICATIONS IN JOURNALS

2018

1. Antimycobacterial activity of linoleic acid and oleic acid obtained from the hexane extract of the seeds of *Mesua ferrea* L. and their in silico investigation published on **Indian Journal of Natural Products and Resources Vol. 9(2), June 2018, pp. 132-142**

Authors: Ranjan Dutta Kalita 1,3 ,Iftikar Hussain² ,Ramesh C Deka² and **Alak Kumar Buragohain^{1*}**

- 1 Department of Molecular Biology and Biotechnology,
- 2 Department of Chemical Sciences, Tezpur University, Napaam, Tezpur-784028, Assam, India
- 3 Department of Biotechnology, Royal School of Biosciences, Royal Global University, Betkuchi, Guwahati-781035, Assam, India

2. Essential role of the ESX-3 associated *eccD3* locus in maintaining the cell wall integrity of *Mycobacterium smegmatis*. Yutika Nath^a Suvendra Kumar Ray^a **Alak Kumar Buragohain^{ab}**
International Journal of Medical Microbiology Available online 28 June 2018.

3. Inflammation induced mTORC2-Akt-mTORC1 signaling promotes macrophage foam cell formation. Dipanjan Banerjee, Archana Sinha, Sudeshna Saikia, Bhaskarjyoti Gogoi, Arvind K Rathore, Anindhya Sundar Das, Durba Pal, **Alak K Buragohain**, Suman Dasgupta. Publication date: 2018/6/6, Journal-Biochimie, Publisher-Elsevier

4. Anti-Proliferative Activities of Vasicinone on Lung Carcinoma Cells Mediated via Activation of Both Mitochondria-Dependent and Independent Pathways. Tapan Dey, Prachurjya Dutta, Prasenjit Manna, Jatin Kalita, Hari Prasanna Deka Boruah, AK Buragohain, B Unni. Publication date: 2018/1/9, Journal Biomolecules & therapeutics.

2017

1. Dey, Tapan, Prachurjya Dutta, Prasenjit Manna, Jatin Kalita, Hari Prasanna Deka Boruah, A. K. Buragohain, and B. Unni. "Anti-Proliferative Activities of Vasicinone on Lung Carcinoma Cells Mediated via Activation of Both Mitochondria-Dependent and Independent Pathways." *Biomolecules & therapeutics* (2018).

2. Gogoi, Dhruvajyoti, Chaliha, Amrita Kashyap, Sarma, Diganta, Kakoti, Bibhuti Bhusan and Buragohain, Alak Kumar (2017): Novel butyrylcholinesterase inhibitors through pharmacophore modeling, virtual screening and DFT-based approaches along-with design of bioisosterism-based analogues, *Biomedicine & Pharmacotherapy*, Volume 85, Pages-646-657, ISSN: 0753-3322, Impact Factor 2.326 (Thomson Reuters).

3. Gogoi, D., Baruah, V.J., Chaliha, A.K., Kakoti, B.B., Sarma, D. and Buragohain, A.K., 2017. Identification of novel human renin inhibitors through a combined approach of pharmacophore modelling, molecular DFT analysis and in silico screening. *Computational Biology and Chemistry*, 69, pp.28-40.

2016

1. Chaliha, A. K., Gogoi, D., Sarma, D., Chetia, P., Buragohain, A. K. (2015): An in Silico Approach for Identification of Potential Anti-Mycobacterial Targets of Vasicine and Related Chemical Compounds, *Combinatorial Chemistry & High Throughput Screening*, Bentham Science, 19 (1): 14-24.

2. Satapathy, S. S., Powdel, B. R., Buragohain, A. K. and Ray, S. K. (2016): Discrepancy among the synonymous codons with respect to their selection as optimal codon in bacteria, DNA Research, dsw027.
3. Das, S., Hussain, N., Gogoi, B., Buragohain, A. K. and Bhattacharya, S. S. (2016): Vermicompost and farm yard manure improves food quality, anti oxidant and anti bacterial potential of *Cajanus cajan*(L, Mill sp.) leaves. Journal of the science of Food and Agriculture, (wileyonlinelibrary.com) DOI 10.1002/jsfa.7820.
4. Shekhar, Shubhendu, Agrawal, Lalit, Mishra, Divya, Buragohain, Alak Kumar, Unnikrishnan, Mullath, Mohan, Chokkappan, Chakraborty, Subhra and Chakraborty, Niranjana (2016): Ectopic expression of amaranth seed storage albumin modulates photoassimilate transport and nutrient acquisition in sweetpotato, Scientific Reports 6, Article number: 25384 (2016); doi :10.1038/srep25384.
5. Shekhar, S., Mishra, D., Gayali, S., Buragohain, A. K., Chakraborty, S. and Chakraborty, N. (2016): Comparison of proteomic and metabolomic profiles of two contrasting ecotypes of sweet potato (*Ipomoea batata* L.), Journal of Proteomics, 143:306-17, doi: 10.1016/j.jprot.2016.03.028. Epub 2016 Mar 18.
6. Dey, Tapan, Dutta, Prachurjya, Manna, Prasenjit, Kalita, Jatin, Deka Boruah, Hari Prasanna, Buragohain, Alak Kumar, Unni, Balagopalan, Ozah, Dibyajyoti, Goswami, Mihir
7. Kumar and Kotokey, Ratan Kumar (2016): Cigarette smoke compounds induce cellular redox imbalance, activate NF- κ B, and increase TNF- α /CRP secretion: a possible pathway in the pathogenesis of COPD, Toxicology Research 5, no. 3 (2016): 895-904.
8. Deka, C., Aidew, L., Devi, N., Buragohain, A. K. and Kakati, D. K. (2016): Synthesis of Curcumin-loaded Chitosan phosphate Nanoparticle and study of its Cytotoxicity and Antimicrobial activity, Journal of Biomaterials Science, Polymer Edition, 27:16, 16591673, DOI: 10.1080/09205063.2016.1226051.
9. Saikia, Jyoti Prasad, Khatun, Bably, Gogoi, Bhaskarjyoti, Buragohain, Alak Kumar and Nath, Yutika (2016): Vigna mungo Seed Non-Destructive Based Colloidal Silver Nanoparticle Synthesis and Toxicity, Indian Journal of Biology, Volume 3, Number 2, July-December, ISSN: 2394-1391, DOI: <http://dx.doi.org/10.21088/ijb.2394.1391.3216.5>.

10. Saikia, Jyoti Prasad, Saikia, Rajesh, Nath, Yutika, Buragohain, Alak Kumar and Bhaskarjyoti Gogoi (2016): Antibacterial and Toxicity of *Dillenia indica* L. Based Green Colloidal Silver Nanoparticle (CSNP), *Indian Journal of Biology*, Volume 3, Number 2, July-December, ISSN: 2394-1391, DOI: <http://dx.doi.org/10.21088/ijb.2394.1391.3216.3>.
11. Gogoi, Dhruvajyoti, Baruah, Vishwa Jyoti, Chaliha, Amrita Kashyap, Kakoti, Bibhuti Bhushan, Sarma, Diganta and Buragohain, Alak Kumar (2016): 3D pharmacophorebased virtual screening, docking and density functional theory approach towards the discovery of novel human epidermal growth factor receptor-2 (HER2) inhibitors, *Journal of Theoretical Biology*, Volume 411, 21 December, Pages 68-80, *SCI Impact Factor* (2015/16) 2.049.

2015

1.

Barua, Shaswat; Gogoi, Bhaskarjyoti; Aidew, Lipika; Buragohain, Alak; Chattopadhyay, Pronobesh; Karak, Niranjana, (2015) Sustainable resource based hyperbranched epoxy nanocomposite as an infection resistant, biodegradable, implantable muscle scaffold (Accepted in *ACS Sustainable Chemistry & Engineering*)

J. Upadhyay, A. Kumar, B. Gogoi, A.K. Buragohain, (2015) Antibacterial and hemolysis activity of polypyrrole nanotubes decorated with silver nanoparticles by an in-situ reduction process. (Accepted in *Materials Science and Engineering C*)

2.

Prajapati VK, Satapathy SS, Satish Kumar MV, Buragohain AK, Ray SK. Evidences Indicating the Involvement of Selection Mechanisms for the Occurrence of C34 Anticodon in Bacteria. *J Cell SciMolecul Biol.* 2015;2(1): 112.

3.

4. SujataPramanik, Reji Gopalakrishna, NilakshiBarua, Alak K Buragohain, NiranjanaKarak, (2015) Montmorillonite immobilized Curcuma aromatic/Zanthoxylumlimonella oil nanoconjugate as a green antibacterial and biocompatible material with mosquito repellent attributes. *Applied Clay Science*, 109–110: 33–38

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6. Shubhendu Shekhar, Divya Mishra, Alak K Buragohain, Subhra Chakraborty, Niranjana Chakraborty, (2015) Comparative analysis for nutrient availability in two contrasting cultivars of sweet potato (*Ipomoea batatas* L.). *Food Chem.*, 15, 173:957-65.

2014

1. Lipika Aidew and Alak K. Buragohain, (2014) Antimicrobial and Antioxidant activities of the fruit of *Trapanatans* L. var. *Bispinosa* reveal its therapeutic potential, *Am J Phytomed Clin Ther* 2 (10), 1234-1245
2. Bhaskar jyoti Gogoi, Priyajit Chatterjee, Sandip Mukherjee, Alak K Buragohain, Samir Bhattacharya, Suman Dasgupta, (2014) A polyphenol rescues lipid induced insulin resistance in skeletal muscle cells and adipocytes, *Biochemical and Biophysical Research Communication*, 452(3), 382-388.
3. T. Borgohain, B. Gogoi, A.K. Buragohain, S. Dasgupta (2014) Protective and curative effect of *Scopariadulcis* leave extract against free fatty acid induced insulin resistance in rat L6 myotubes. *Am J Phytomed Clin Ther* 2(7), 842-854.
4. S. Barua, P Chattopadhyay, L Aidew, A K Buragohain, N Karak, (2015) Infection resistant implantable hyperbranched epoxy/ clay-silver nanocomposite, *Polymer International, Polym Int*, 64, 303-311
5. K. Bhattacharya, B. Gogoi, A.K. Buragohain, P Deb, (2014) Fe₂O₃/C nanocomposites having distinctive antioxidant activity and hemolysis prevention activity, *Material Science and Engineering C*, 42, 595-600.
6. Mukul Kalita, Prasanta Gogoi, Pranjit Barman, Bipul Sarma, Alak K. Buragohain, Ranjan D. Kalita, (2014) A new series of Ni(II), Cu(II), Co(II) and Pd(II) complexes with an ONS donor Schiff base: Synthesis, crystal structure, catalytic properties and bioactivities, *Polyhedron* 74, 93- 98.
7. J. Upadhyaya, A. Kumar, B. Gogoi, A.K. Buragohain (2014) Biocompatibility and antioxidant activity of polypyrrole nanotubes, *Synthetic Metals*, 189, 119-125.

8. Satapathy, S.S., Powdel, B.R., Dutta, M., Buragohain, A.K. and Ray, S.K. (2014) Constraint on dinucleotides by codon usage bias in bacterial genomes. *Gene*, 536, 18-28.
9. Satapathy, S.S., Powdel, B.R., Dutta, M., Buragohain, A.K. and Ray, S.K. (2014) Selection on GGU and CGU codons in the high expression genes in bacteria. *J MolEvol.* 78, 13-23.
10. S Barua, N Dutta, S Karmakar, P Chattopadhyay, L Aidew, AK Buragohain, N Karak, (2014) Biocompatible high performance hyperbranched epoxy/clay nanocomposite as an implantable material, *Biomed. Mater.* 9 025006 (14pp).
11. S Barua, S Thakur, L Aidew, A K Buragohain, P Chattopadhyay, N Karak, One step preparation of a biocompatible, antimicrobial reduced graphene oxide–silver nanohybrid as a topical antimicrobial agent, *RSC Adv.* 2014, 4, 9777–9783.

2013

1. Lisha Gurung, Bhaben Tanti, Alak K. Buragohain and Sailendra P Boorah, (2013), Freshwater diatom diversity in Deepor Beel- a Ramsar site, *J. Res. Plant. Sci*, 2 (2), 182-191.
2. S Barua, G Das, L Aidew, AK Buragohain, N Karak- Copper/copper oxide coated nanofibrillar cellulose-a promising biomaterial, *RSC Adv.* 3, 14997-15004, 2013.
3. Buragohain, A.K., Tanti, B., Sarma, H.K., Barman, P. and Das, K. (2013) Characterization of yeast starter cultures used in household alcoholic beverage preparation by a few ethnic communities of Northeast India. *Annals of Microbiology* (Springer). 63(3): 863-869. doi: 10.1007/s13213-012-0537-1.
4. Bhaben Tanti, Alak K Buragohain, Biodegradation of Petroleum Tar by *Pseudomonas* spp. from Oil Field of Assam, India, *Bioremediation Journal*, 17 (2), 107-112, 2013.
5. G. Das, R. D. Kalita, A. K. Buragohain, N. Karak, Biodegradation, cytocompatibility and performance studies of vegetable oil based hyperbranched polyurethane

modified biocompatible sulfonated epoxy resin/clay nanocomposites, *Progress in Organic Coatings*, 76, 1103-1111, 2013.

6. J. Upadhyay, B. Gogoi, A. Kumar, A. K. Buragohain, Diameter dependent antioxidant property of polypyrrole nanotubes for biomedical applications, *Materials Letters*, 102/103, 33-35, 2013.

7. ShubhenduShekhar, LalitAgrawal, Alak Kumar Buragohain, Asis Datta, Subhra Chakraborty, Nirranjan Chakraborty, (2013) Genotype Independent Regeneration

and Agrobacterium-mediated Genetic Transformation of Sweet Potato (*Ipomoea batatas* L.), *Plant Tissue Cult. & Biotech.* 23(1): 87-100.

8. Ranjan D Kalita, YutikaNath, Martins EOchubiojo, Alak K Buragohain, (2013) Extraction and Characterization of Microcrystalline Cellulose from fodder grass; *Setariaglauca* (L) P. Beauv, and its potential as a drug delivery vehicle for isoniazid, a first line antituberculosis drug, *Collids and Surfaces B: Biointerfaces*, 108, 85-89.

9. Sanchita Roy, NilakshiBarua, Alak K Buragohain, Gazi A. Ahmed, (2013) Study of ZnO nanoparticle: Antibacterial property and light depolarization property using light scattering tool, *Journal of Quantitative Spectroscopy and Radiative Transfer*, 118,8-13.

10. Susmita Singh, Jyoti P. Saikia, Alak K. Buragohain, (2013) A novel reusable PAniPVA Amylase film: Activity and Analysis, *Collids and Surfaces B: Biointerfaces*, 106, 46-50.

11. Susmita Singh, Jyoti P. Saikia, AlakK. Buragohain, (2013) A novel green synthesis of colloidal silver nanoparticles (SNP) using *Dilleniaindica*fruit extract, *Collids and Surfaces B: Biointerfaces*, 102, 83-85.

12. S Pramanik, R Konwarh, R C Deka, L Aidew, N Barua, A K Buragohain, D Mohanta, N Karak, (2013) Microwave-assisted poly(glycidyl methacrylate)-3 functionalized

multiwall carbon nano tubes 4 with a tendrillar nano fibrous polyaniline wrapping and their interaction at bio-interface, *Carbon*, 55, 34-43

13. Alak K Buragohain, Bhaben Tanti, HridipSarma, Pranjan Barman and Kishore Das, (2013) Characterization of yeast starter cultures used in household alcoholic beverage preparation by a few ethnic communities of North East India, *Annals of Microbiology*, 63, 863-869.

2012

1. Lisha Gurung, Bhaben Tanti, Alak K Buragohain and Sailendra P. Borah, (2012) Studies on the freshwater diatom diversity in Deepar Beel, Assam, India, *JASS*, 53(2), 1-6.
2. Satapathy SS, Dutta M, Buragohain AK, Ray SK, Transfer RNA Gene Numbers May Not Be Completely Responsible For The Codon Usage Bias In Asparagine, Isoleucine, Phenylalanine, And Tyrosine In The High Expression Genes In Bacteria, *Journal of Molecular Evolution*, 2012, Vol 75 (Issue 1-2), 34-42.
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5. Bhaben Tanti, Suvendra Kr Ray and Alak Kumar Buragohain, Differentiation of petroleum hydrocarbon degrading *Pseudomonas* spp. based on PCR-RFLP of the 16S-23S rDNA intergenic spacer region, *Folia Microbiologica*, 2012, Vol 57 (1): 4752
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2011

1. S Roy, N Barua, A. K. Buragohain, G. A. Ahmed, Light scattering study of ZnO nano particles for the application of its antibacterial property, AAPP, Attidella Accademia Peloritamadei Pericolanti, 2011, Vol 89, Suppl No 1, C1V89S1P001
2. Sanchita Roy, Rupjyoti Mahatta, Nilakshi Barua, Alak K. Buragohain, Gazi A. Ahmed, Monitoring of pathogen carrying air-borne tea dust particles by light scattering , Journal of Quantitative Spectroscopy and Radiative Transfer, 2011, Vol 112 (11): 1784-1791

2010

1. Harekrishna Deka, Niranjana Karak, Ranjan Dutta Kalita and Alak Kumar Buragohain, Bio based thermostable biodegradable and biocompatible hyper branched silver nano composites with antimicrobial activity, Journal of Polymer Degradation and Stability, 2010, Vol 95(9):1509-1517.
2. Bhaben Tanti, Alak Kumar Buragohain, Lisha Gurung, Debashree Kakati, Ajoy Kumar Das and Sailendra Prasad Borah, Assessment of antimicrobial and antioxidant activities of *Dendrocnidesinuata* (Blume) Chew leaves - A medicinal plant used by ethnic communities of North-east India, Indian Journal of Natural Product and Resources, 2010, Vol 1 (1):17-21
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4. Bhaben Tanti. and A.K. Buragohain, Differentiation of petroleum hydrocarbon degrading *Pseudomonas* based on lectin binding of cell extracts in an agglutination assay, Indian Journal of Biotechnology, 2010, Vol 9 (1): 74-79

5. Harekrishna Deka, Niranjana Karak, Ranjan Dutta Kalita and Alak Kumar Buragohain, Biocompatible hyperbranched polyurethane/multi-walled carbon nanotube composites as shape memory materials, *Carbon*, 2010, 48(7): 2013-2022
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2009

1. B.R. Powdel, Siddhartha Sankar Satapathy, Aditya Kumar, Pankaj Kumar Jha, Alak Kumar Buragohain, Munindra Borah, and Suvendra Kumar Ray, A Study in Entire Chromosomes of Violations of the Intra-strand Parity of Complementary Nucleotides (Chargaff's Second Parity Rule), *DNA Research*, 2009; 16(6): 325-343
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1. Bhaben Tanti and Alak Kumar Buragohain, Assessment of Diversity and Hydrocarbon utilizing ability of *Pseudomonas* spp. from Petroleum rich Soil of Assam, India, Journal of Applied Biosciences and Biotechnology, 2008, Vol 4 (1).
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1987- 2007

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9. M.C. Kalita, A.K. Buragohain and N. Bora, Effects of Malathion on Green Gram *Vignaradiata* L., *Journal of Assam Science Society* 29 (4) 34-37, 1987

BOOK CHAPTERS:

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