

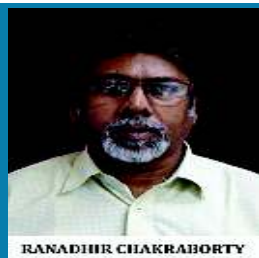


ENLIGHTENMENT TO EXCELLENCE

## UNIVERSITY OF NORTH BENGAL

Accredited by NAAC with grade 'A'  
Raja Rammohunpur, Dist- Darjeeling, West Bengal, Pin-734013, India.

## Department of Bio-Technology



## Dr. Ranadhir Chakraborty

M.Sc., Ph.D.

Professor

Members of Learned Societies: Life Member, Society of Biological Chemists (INDIA)



## Contact Addresses:

Phone	+91- 9434872273(M)
Mailing Address	Department of Bio-Technology, University of North Bengal, Raja Rammohanpur, P.O.- NBU, Dist- Darjeeling, West Bengal, Pin -734013, India.
e-Mail	<a href="mailto:rcnbusilguri@gmail.com">rcnbusilguri@gmail.com</a>

Subject specialization: Molecular Microbiology

Areas of Research Interest: Microbial genetics, Microbial genomics

No. of Ph.D. students: (a) Supervised: 09 (Awarded); 02 (Submitted) (b) Ongoing: 06 (Registered).

No. of M.Phil. students: (a) Supervised: Nil (b) Ongoing: Nil .

No. of Publications: (a) Journal(s) : 49 (b) No. of Books : 10 (c) No. of Books Edited: 01 (d) International Journal Volume Edited: 01

## Achievement &amp; Awards:

- Silver Medalist (1st Class 2nd )in M.Sc examination [1989]
- Qualified Graduate Aptitude Test in Engineering (GATE)[1989];
- Declared eligible for Lectureship in Universities/Colleges in India (1989) -through National Education Test Eligibility for Lectureship (CSIR/UGC);
- Bose Institute Junior Research Fellowship Award (1990)- DST, GoI, New Delhi, INDIA;
- Bose Institute Senior Research Fellowship Award (1993)- DST, GoI, New Delhi, INDIA;
- Second best Poster Award in Genetic Engineering (1994)- MICON International Conference held in Mysore;
- Second best Poster Award (as communicating author of the research paper) (2011) in Young Research Conference, Institute of Chemical Technology, Bombay.
- INTERNATIONAL TRAVEL AWARD, SCIENCE AND ENGINEERING RESEARCH BOARD to attend and present paper FEBS EMBO CONFERENCE-2014 at PARIS, FRANCE during 30/08/2014- 04/09/2014
- Invited as one of the distinguished speakers from Clinical Research & Academic Institution in the 3rd ANNUAL NEXT GENERATION SEQUENCING DATA CONGRESS held in London, UK, from 15 to 16th June 2015, organized by OXFORD GLOBAL, United Kingdom.

## Professional Experience:

- Teaching, Learning And Evaluation Related Activities:
  - Lectures, Seminars, Tutorials, Practicals, Contact Hours (semester-wise details)

S. No.	Course/Paper	Level	Mode of teaching*	Hours per week allotted
1.	Semester-I; Molecular Biology	PG	L	02
2.	Semester-I; Lab II- Molecular Biology	PG	P	03
3.	Semester-II; Microbiology and Industrial Applications	PG	L	01
4.	Semester-II; Genetics	PG	L	01
5.	Semester-II; Genetic Engineering	PG	L	01
6.	Semester-II; Lab-IV-Microbiology	PG	P	03
7.	Semester-II; Lab-V- Genetic Engineering	PG	P	01
8.	Semester-III, Bioprocess Engineering & Technology	PG	L	02
9.	Semester-III, IPR & Biosafety	PG	L	01
10.	Semester-III, Lab VI- Bioprocess Engineering & Technology	PG	P	02

11.	Semester-III; Lab-VII- Based on Elective	PG	P	01
12.	Semester-IV; Bioentrepreneurship	PG	L	03
13.	Semester-IV; Project Work	PG	L,P,S, T,	15

\*Lecture (L), Seminar(S), Tutorial (T), Practical (P), Contact Hours (C)

o **Reading / Instructional material consulted and additional knowledge resources provided to Students**

S. No.	Course/Paper	Consulted	Prescribed	Additional Resource provided
1.	Semester-I; Molecular Biology	Methods updated in various journals; Methodology detailed in the Instruction Manual; Journal articles	Reading Reviews; current updates in development of methods and applications	Hand-out; ppt,
2.	Semester-I; Lab II- Molecular Biology	World Class Manuals and Handbooks, Printed versions of 'Methods in Enzymology'	To follow Manuals; prepare reagents, conduct own experiment; Take up challenging problems to interpret the results	Written Instructions of the methodologies
3.	Semester-II; Microbiology and Industrial Applications	Knowledge updating through e-learning sources; Playing U-tubes of lectures by renowned teachers/researchers across the globe	Text Books written by the Scientists; Reading Reviews; current updates in development of methods and applications	Hand-out; CDs, e-transfer materials, specialized print-outs of current development on the subject
4.	Semester-II; Genetics	Texts written by the original performers of the experimental genetics e.g William Hayes, Arthur Kornberg etc.	Texts written by the original performers of the experimental genetics e.g William Hayes, Arthur Kornberg etc	Hand-out; CDs, e-transfer materials, specialized print-outs of current development on the subject
5.	Semester-II; Genetic Engineering	Latest advancement in the tool box of the genetic engineers accessed on-line	Texts with challenging problems; consulting easy elucidations published in books of international editions	e-books; CDs, e-transfer materials, specialized print-outs of current development on the
6.	Semester-II; Lab-IV- Microbiology	American Society for Microbiology (ASM) handbooks and manuals	Following modified methods of certain assays suited to the availability of equipment; interconnected practical enabling the students with the flavor of research	Texts related to the modifications
7.	Semester-II; Lab-V- Genetic Engineering	Standard Handbooks/ Laboratory Manuals	To understand construction of genetically engineered strains and vectors before performing recombinant DNA technology practical	Texts that are referred to a method
8.	Semester-III, Bioprocess Engineering & Technology	Texts that are associated with problems related to each chapters	Thorough self-learning through solving practical problems encountered in a Bioprocess Industry	Problems to be solved by the students
9.	Semester-III, IPR & Biosafety	e-learning materials; Case studies both Indian and international	To study case studies and track development/ time line of the evolution and execution of IPR	To induce students to attend IPR workshops; collect materials from such workshops
10.	Semester-III, Lab VI- Bioprocess Engineering & Technology	Methods elaborated in Journal articles	Standardize assays before performing the main experiment	Print-outs
11.	Semester-IV; Lab- Elective related to Plant-Biotechnology	Journals; Industry proptocols	To take up training courses in Tissue culture at the centre of Floriculture and Agri-business Management	Commercial protocols are dictated by the Technical assistants of COFAM, NBU
12.	Semester-IV; Bioentrepreneurship	Assimilate materials scattered elsewhere	To develop innovative Bioentrepreneurial projects that are bankable	Model Bankable projects projects
13.	Semester-IV; Project Work	Journals	To go through original papers and innovate	e-versions of thesis (international institutes)

o **Use of Participatory and Innovative Teaching-Learning Methodologies, Updating of Subject Content, Course Improvement etc.**

S. No.	Short Description
1.	To develop innovative Bioentrepreneurial projects that are bankable; Challenge the students intellectually with problems; induce self-learning spree
2.	Design researchable interconnected practical

o **Examination Duties Assigned and Performed**

S. No.	Type of Examination Duties	Duties Assigned
1.	Centre-in- Charge	To monitor all jobs related to conducting of examinations
2.	Chairman of the Moderation Committee	To moderate questions papers, PG levels
3.	Chairman of Microbiology (UG level practical examination)	To execute planning and framing of practical question, evaluating scripts as Head-examiner
4.	Question -setter	Setting of questions in courses that are taught in semesters
5.	Examiner	Examine theory and practical papers in Semester examinations at P.G level

• **Co-Curricular, Extension, Professional Development Related Activities:**

S. No.	Type of Activity	Average Hrs/Week

Extension, Co-curricular & field based Activities		
1.	Floriculture and Horticulture technical consultancy, training	06
	Contribution to Corporate Life and Management of the Institution	Yearly/Semester wise responsibilities
2.	Head of the Department since September 2004	All responsibilities in running the department
3.	Member of the Honorable Court, NBU, since 2004	
4.	Course Coordinator of the DBT sponsored M.Sc course in Biotechnology	To act as the bridge between DBT, GoI, & NBU
Professional Development Activities		
5.	Delivering lectures in every Orientation Courses since inception of the Academic Staff College, NBU	
6.	Participating as experts in Government organized Skill-development programmes including workshops	

#### Administrative Experiences:

- Head of the Department, Biotechnology (2004 – till date).
- Head of the Department, Microbiology (2005- 2007)
- Project Manager, Center of Floriculture And Agri-business Management (COFAM) (2006- till date)

#### Selective List of Publications:

##### Edited Books:

1. [Amit Basak](#) (Editor), [Ranadhir Chakraborty](#) (Editor), [Santi M. Mandal](#) (Editor). 2016. *Recent Trends in Antifungal Agents and Antifungal Therapy*. Publisher: Springer; 1st ed. 2016 edition (5 June 2016) ISBN-10: 8132227808 ISBN-13: 978-8132227809.

##### Book Chapters:

2. Bhowal S, Chakraborty R. 2015. *MICROBIAL DIVERSITY OF ACIDOPHILIC HETEROTROPHIC BACTERIA: AN OVERVIEW*. In Biodiversity, Conservation and Sustainable Development Vol.I Issues and Approaches, Edition: Volume I, Chapter: 17, Publisher: New Academic Publishers, New Delhi 2015, Editors: Prithwiraj Jha, pp.157-
3. Cray JA, Bhaganna P, Singhal RS, Patil SV, Saha D, Chakraborty R, Iwaguchi S, Timson DJ, Hallsworth JE. 2014. *Chaotropic and Hydrophobic Stress Mechanisms of Antifungal Substances*. In: Dehne HW; Deising HB; Fraaije B; Gisi U; Hermann D; Mehl A; Oerke EC; Russell PE; Stammler G; Kuck KH; Lyr H (Eds), "Modern Fungicides and Antifungal Compounds", Vol.VII, pp. 73-80. © 2014 Deutsche Phytomedizinische Gesellschaft, Braunschweig, ISBN: 978-3-941261-13-6.
4. [Chakraborty R](#), Kumar A, Mukherjee S, Saha Bhowal S, Mandal AK, Tiwary BK. 2013. *Oligotrophic bacteria of River Mahananda: Spanking reservoir of integron-borne gene cassettes coding for diverse proteins including antibiotic-resistance*. In: Biotechnology for people. ISBN:978-93-80663-86-9 (ed. S. Mukherjee), p. 50-59. Levant Books, Kolkata.
5. Saha Bhowal S, [Chakraborty R](#). 2013. *Sulfur lithotrophy by acid-tolerant bacteria in acid-mine drainage*. In: Biotechnology for people. ISBN:978-93-80663-86-9 (ed. S. Mukherjee), p. 77-86. Levant Books, Kolkata.
6. Tiwary BK, Pradhan K, Nanda AK, Bothra AK, [Chakraborty R](#). 2013. *Basics of Computer-aided drug design*. In: Biotechnology for people. ISBN:978-93-80663-86-9 (ed. S. Mukherjee), p. 151-167. Levant Books, Kolkata
7. Yadav K K, Mandal A K, [Chakraborty R](#). 2012. *Biology of Bacterial biofilms*. In: Biology of Plants and Microbes. ISBN: 978-93-80663-63-0 (eds. D. Bose and S. Roy), Levant Books, Kolkata 14.
8. [Chakraborty R](#), Roy P. 2006. *Microbial genomics as an integrated tool for developing Biosensors for toxic trace elements in the environment*. In Trace Elements in the Environment: Biogeochemistry, Biotechnology, and Bioremediation. P. 170-197 (editors: MNV Prasad et. Al.), CRC press, USA.
9. [Bhowal S](#), [Bhadra B](#), [Chakraborty R](#). 2005. *Transposon mutagenesis of a metal resistant Gram negative isolate of river Torsa to target the genetic loci responsible for resistance to cobalt and nickel*. In Stress Biology. Narosa Publishing House, New Delhi. ISBN-13: 978-8173196652 (eds. U. Chakraborty and B. Chakraborty).
10. [Bhadra B](#), [Chakraborty R](#). 2005. *Molecular screening of cobalt and nickel resistant gram negative isolates of river Torsa for the presence of homologous sequences of well characterized resistance genetic system*. In Stress Biology. Narosa Publishing House, New Delhi. ISBN-13: 978-8173196652 (eds. U. Chakraborty and B. Chakraborty).
11. Roy P, Sengupta A, [Chakraborty R](#), Lahiri C, Ghosh W. 2002. *Chemotaxis of Acidithiobacillus ferrooxidans vis-à-vis Mineral-microbe interaction*. In Mineral Biotechnology. Allied Publishers Pvt. Ltd. New Delhi. ISBN 81-7764-349-5. (eds. L. B. Shukla and V. N. Misra).

##### Edited International Journal Volume (Special Issue):

12. **Editors:** Madhab K. Chattopadhyay, [Ranadhir Chakraborty](#), Hans-Peter Grossart, Gundlapally S. Reddy, and Medicharla V. Jagannadham. 2015. *Antibiotic Resistance of Bacteria*. Special issue published in "BioMed Research International"

##### Journals:

13. Roy C, Alam M, Mandal S, Haldar PK, Bhattacharya S, Mukherjee T, Roy R, Rameez MJ, Misra AK, [Chakraborty R](#), Nanda AK, Mukhopadhyay SK, Ghosh W. 2016. [Global Association between Thermophilicity and Vancomycin Susceptibility in Bacteria](#). *Front Microbiol.* 31;7:412. doi: 10.3389/fmicb.2016.00412. eCollection 2016. PMID: 27065976 **Impact Factor: 4.0**
14. [Pradhan K](#), [Tiwary BK](#), [Hossain M](#), [Chakraborty R](#) and [Nanda AK](#). 2016. A mechanistic study of carbonyl activation under solvent-free conditions: evidence drawn from the synthesis of imidazoles. *RSC Adv.* 6, 10743-10749 DOI: 10.1039/C5RA16386B. Impact Factor: 3.84
15. Mandal SM, Pati BR, [Chakraborty R](#), Franco OL. 2016. [New insights into the bioactivity of peptides from probiotics](#). *Front Biosci* (Elite Ed). 2016 Jun 1;8:450-9. PMID: 27100351. **Impact Factor: 3.52**
16. Tiwary, B. , Kumar, A. , Pathak, R. , Pandey, N. , Yadav, K. and Chakraborty, R. 2016. The Locus *PgaABCD* of Acinetobacter junii Putatively Responsible for Poly-β-(1,6)-N-Acetylglucosamine Biosynthesis Might Be Related to Biofilm Formation: A Computational Analysis. *Advances in Microbiology*, 6, 222-232. doi: [10.4236/aim.2016.63022](#). **Global Impact Factor: 0.765**.
17. Tiwary BK , Pradhan K, Nanda AK, [Chakraborty R](#). 2015. Implication of Quinazoline-4(3H)-ones in Medicinal Chemistry: A Brief Review. *J Chem Biol Ther* 1: 104. doi: 10.4172/jcbt.1000104
18. Mandal SM, , Chakraborty A, Hossain M, Mahata D, Porto W F, [Chakraborty R](#), Mukhopadhyay CK, Franco OL, Hazra, TK, BasaK A. 2015. Amphotericin B and Anidulafungin Directly Interact with DNA and Induce Oxidative Damage in Mammalian Genome. *Molecular BioSystems* 07/2015;

- DOI:10.1039/C5MB00366K. Impact Factor: **3.18**.
19. Manna DK, Mandal AK, Sen IK, Maji P, Chakraborty S, **Chakraborty R**, Islam SS. 2015. Antibacterial and DNA degradation potential of silver nanoparticles synthesized via green route. **International Journal of Biological Macromolecules** 07/2015; Impact Factor: **3.10**
  20. Kumar A, Tiwary BK, Kachhap S, Nanda AK, **Chakraborty R**. 2015. An *Escherichia coli* Strain, PGB01, Isolated from Feral Pigeon Faeces, Thermally Fit to Survive in Pigeon, Shows High Level Resistance to Trimethoprim. **PlosOne**. DOI:10.1371/journal.pone.0119329. Impact Factor: **3.53 PMID-25750990**
  21. Tiwary BK, Bihani S, Kumar A, **Chakraborty R**, Ghosh R. 2015. The *in vitro* cytotoxic activity of ethno-pharmacological important plants of Darjeeling district of West Bengal against different human cancer cell lines. **BMC Complement Altern Med**. 7;15:22. Impact Factor: **2.02. PMID: 2588741**.
  22. Chattopadhyay, M. K., **Chakraborty, R.**, Grossart, H. P., Reddy, G. S., & Jagannadham, M. V. 2015. Antibiotic Resistance of Bacteria (*Editorial*). **BioMed Research International**. 2015. Article ID 501658. Impact Factor: **1.579**
  23. Mandal, A. K., Sen, I. K., Maity, P., Chattopadhyay, S., **Chakraborty, R.**, Roy, S., & Islam, S. S. 2015. Structural elucidation and biological studies of a novel exopolysaccharide from *Klebsiella pneumoniae* PB12. **International journal of biological macromolecules**.79: 413-22. Impact Factor: **3.10. PMID-25999015**
  24. Saha S, Nayak S, Bhattacharyya I, Saha S, Mandal AK, Chakraborty S, Bhattacharyya R, **Chakraborty R**, Mandal SM, Basak A. 2014. Understanding the Patterns of Antibiotic Susceptibility of Bacteria Causing Urinary Tract Infection in West Bengal, India. **Frontiers in Microbiology** 5: 463; doi 10.3389/fmicb.2014.00463. Impact Factor : **4.0 PMID-25278932**
  25. Ghosh R, Tiwary BK, Kumar A, **Chakraborty R**. 2014. Guava leaf extract inhibits quorum-sensing and *Chromobacterium violaceum* induced lysis of human hepatoma cells: whole transcriptome analysis reveals differential gene expression. **PlosOne**. DOI 10.1371/journal.pone.0107703. Impact Factor: **3.53 PMID-25229331** Page 26 of 10
  26. Tiwary BK, Kumar A, Nanda AK, **Chakraborty R**. 2014. A Study on Optimization of Marigold Petal Yield, Pure Lutein, and Formulation of Free-Flowing Lutein Esters. **Journal of Crop Science and Biotechnology (Springer)**. DOI No.10.1007/s12892-014-0049-6. Impact Factor (yet to be decided).
  27. Chakraborty S, Mandal AK, Sarwar S, Singh P, **Chakraborty R**, Chakraborty P. 2014. Bactericidal Effect of Polyethyleneimine Capped ZnO Nanoparticles on Multiple Antibiotic Resistant Bacteria Harboring Genes of High-Pathogenicity Island. **Colloids and Surfaces B :Biointerfaces**.http://dx.doi.org/10.1016/j.colsurfb.2014.03.044. Impact Factor: **4.29 PMID-24937133**
  28. Tiwary BK, Pathak RK, Pradhan K, Nanda AK, Bothra AK, **Chakraborty R**. 2014. Evaluation of drug candidature of some Quinazoline-4-(3H)-ones as inhibitor of human dihydrofolate reductase enzyme: Molecular docking and *In silico* studies. **International Journal of Pharmacy & Pharmaceutical Sciences**. 5. Supplement 2, 393-400. Impact Factor: **1.59**
  29. Tiwary BK, Zirmire RK, Pradhan K, Nanda AK, **Chakraborty R**. 2014. Preparation and spectroscopic characterization of inclusion complex of 2-phenyl-4H-Benzo[d][1,3]Oxacin-4-One and  $\beta$ -Cyclodextrin. **International Journal of Pharmacy & Pharmaceutical Sciences**. 6. Supplement 2, 176-79. Impact Factor: **1.59**
  30. Sen IK, Mandal AK, **Chakraborty R**, Behera B, Yadav KK, Mait TK, Islam SS. 2013. Structural and immunological studies of an exopolysaccharide from *Acinetobacter junii* BB1A. **Carbohydrate Polymer**. 101: 188-195 Impact Factor: **3.48 PMID-24299764**
  31. Sen IK, Mandal AK, Chakraborty S, Dey B, **Chakraborty R**, Islam SS. 2013. Green synthesis of silver nanoparticles using glucan from mushroom and study of antibacterial activity. **Int. J. Biol. Macromolecules**. 62: 439 – 449. Impact Factor: **3.10 PMID-24076192**
  32. Kumar A, Ince I, Kati A, **Chakraborty R**. 2013. *Brevibacterium siliguriense* sp. nov., a facultatively oligotrophic bacterium isolated from river water. **Int. J. Sys.Evol. Microbiol**. 63: 511-515. Impact Factor: **2.80 PMID-22523163**
  33. Mukherjee S, Kumar D, Nanda AK, **Chakraborty R**. 2013. 16S rRNA gene sequence analyses of the metagenome derived from waters of river Mahananda at Siliguri: An approach to understand bacterial diversity. **Ind. J. Biotechnol**. 12: 80-87. Impact Factor : **0.6**
  34. **Chakraborty R**, Kumar A, Bhowal SS, Mandal AK, Tiwary BK, Mukherjee S. 2013. Diverse gene cassettes in class 1 integrons of facultative oligotrophic bacteria of river Mahananda, West Bengal, India. **PLoS One**. 8(8):e71753. doi: 10.1371/journal.pone.0071753. Impact Factor: **3.53 PMID-23951238**
  35. Yadav KK, Mandal AK, **Chakraborty R**. 2013. Copper susceptibility in *Acinetobacter junii* BB1A is related to the production of extracellular polymeric substances. Page 27 of 10 *Antonie Van Leeuwenhoek*. 104(2):261-9. doi: 10.1007/s10482-013-9946-9. Epub 2013 Jun 12. Impact Factor: **2.07 PMID-23756604**
  36. Ghosh W, Alam M, Roy C, Pyne P, George A, **Chakraborty R**, Majumder S, Agarwal A, Chakraborty S, Majumdar S, Gupta SK. 2013. Genome implosion elicits host confinement in Alcaligenaceae: evidence from the comparative genomics of *Tetrathiodacter kashmirensis*, a pathogen in the making. **PLoS One**. 8(5):e64856. doi: 10.1371/journal.pone.0064856. Print 2013. Impact Factor: **3.53 PMID-23741407**
  37. Mandal AK, Yadav KK, Sen IK, Kumar A, Chakraborty S, Islam SS, **Chakraborty R**. 2013. Partial characterization and flocculating behavior of an exopolysaccharide produced in nutrient-poor medium by a facultative oligotrophic *Klebsiella* sp. PB12. **J Biosci Bioeng**. 115(1):76-81. doi: 10.1016/j.jbiosc.2012.08.006. Epub 2012 Sep 1. Impact Factor: **1.74 PMID- 22944200**
  38. Yadav K K, **Chakraborty R**. 2012. Designing primers to fish auto-inducer synthase gene(s) of the quorum sensing system in  $\gamma$ -*proteobacteria* and their *in-silico* PCR validation. **NBU J. Plant Sciences** Vol. 6, No.1 March 2012 p.25-29
  39. Yadav KK, Mandal AK, Sen IK, Chakraborty S, Islam SS, **Chakraborty R**. 2012. Flocculating property of extracellular polymeric substances produced by a biofilm forming bacterium *Acinetobacter junii* BB1A. **Appl Biochem Biotechnol**. 168(6):1621-34. doi: 10.1007/s12010-012-9883-5. Epub 2012 Sep 12. Impact Factor: **1.94 PMID- 22968590**.
  40. Kumar A, Chakraborty S, Joshi P, Chakraborty P, **Chakraborty R**. A multiple antibiotic and serum resistant oligotrophic strain, *Klebsiella pneumoniae* MB45 having novel dfrA30, is sensitive to ZnO QDs. **Ann Clin Microbiol Antimicrob**. 10:19. doi: 10.1186/1476-0711-10-19. Impact Factor: **2.19. PMID-21595893**
  41. Bhowal S, **Chakraborty R**. 2011. Five novel acid-tolerant oligotrophic thiosulfate metabolizing chemolithotrophic acid mine drainage strains affiliated with the genus *Burkholderia* of *Betaproteobacteria* and identification of two novel *soxB* gene homologues. **Res. Microbiol**. 162: 436-45. Impact Factor: **2.83 PMID-21349327**
  42. Bhadra B, Nanda A K, **Chakraborty R**. 2011. *Enterobacter nickelidurans* sp. nov., a novel nickel tolerant enterobacteria isolated from Torsa river water of India. **NBU J Plant Sc**. 5:15-23
  43. Kumar A, S. Mukherjee, **Chakraborty, R**. 2010. Characterization of a novel Trimethoprim Resistance gene, dfr28, in Class 1 integron of an Oligotrophic *Acinetobacter johnsonii* Strain, MB52, isolated from River Mahananda, India. **Microbial Drug Resistance**.16: 29-37. Impact Factor : **2.52 PMID-20192821**
  44. Gurung A, **Chakraborty R**. 2009. *Acidithiobacillus ferrooxidans* in alleviating the inhibitory effect of thiosulfate on the growth of acidophilic *Acidiphilium* species isolated from Garubathan AMD samples, India. **Can J. Microbiol**. 55: 1040-1048. Impact Factor: **1.221 PMID-19898546**
  45. Sarkar S, **Chakraborty R**. 2008. Quorum sensing in metal tolerance of *Acinetobacter junii* BB1A is associated with biofilm production. **FEMS Microbiol Lett**. 282: 160-165. Impact Factor: **2.72 PMID-18397291** Page 28 of 10
  46. Sarkar C, Mitra PK, Saha S, Nayak CR, **Chakraborty R**. 2008. Effect of copper hydroquinone complex on oxidative stress-related parameters in human erythrocytes (in Vitro). **Toxicol. Mech. & Methods**. 19. DOI: 10.1080/15376510802164683. Impact Factor: **1.37. PMID-19778251**
  47. Dey D, Mukhopadhyay A, **Chakraborty R**. 2008. A novel bacterial pathogen (*Enterobacter* sp.) isolated from the leaf roller, *Caloptilia theivora* of tea of Darjeeling foothills. **W. J. Microbiol. & Biotechnol**. 24: 2727-2729. Impact Factor: **1.779**.
  48. Mukherjee S, **Chakraborty R**. 2007. Conjugation potential and class 1 integron carriage of resident plasmids in river water copiotrophs. **Acta Microbiol Immunol Hung**. 254:379-397. Impact Factor: **0.778. PMID 18088011**.
  49. Nanda AK, Ganguli S, **Chakraborty R**. 2007. Antibacterial activity of some 3-(arylideneamino)-2-phenylquinazoline-4(3H)-ones: synthesis and preliminary QSAR studies. **Molecules**.12:2413-2426. Impact Factor: **2.79. PMID 17978766**.

50. Bhadra B, Nanda AK, **Chakraborty R.** 2007. Fluctuation in recoverable nickel and zinc resistant copiotrophic bacteria explained by the varying zinc ion content of Torsa River in different months. **Arch Microbiol.**188:215-224. Impact Factor: **1.86. PMID 17464499.**
51. Mukherjee S, **Chakraborty R.** 2006. Incidence of class 1 integrons in multiple antibiotic-resistant Gram-negative copiotrophic bacteria from the River Torsa in India. **Res Microbiol.**157:220-226. Impact Factor: **2.83. PMID 16239097.**
52. Bhadra B, Nanda AK, **Chakraborty R.** 2006. Inducible nickel resistance in a river water isolate of India phylogenetically ascertained as a novel strain of *Acinetobacter junii*. **W. J. Microbiol. & Biotechnol.** 22: 225-232. Impact Factor: **1.779.**
53. Bhadra B, Roy P, **Chakraborty R.** 2005. *Serratia ureilytica* sp. nov., a novel urea utilizing species. **Int J Syst Evol Microbiol.** 55:2155-2158. Impact Factor: **2.80 PMID 16166724.**
54. Bhadra B., **Chakraborty, R.,** Das, S., Nanda, A.K. 2005. Investigation of some basic water quality parameters of the north Bengal Terai river Kaljani-a tributary of river Torsa, and comparison thereof with the mainstream. **J. Environ. Biol.** 26: 277-86. Impact Factor: **0.68. PMID 16161986.**
55. Mukherjee, S., Bhadra, B., Chakraborty, R., Gurung, A., Some, S., **Chakraborty, R.** 2005. Unregulated use of antibiotics in Siliguri city vis-a-vis occurrence of MAR bacteria in community waste water and river Mahananda and their potential for resistance gene transfer. **J. Environ. Biol.** 26: 229-38. Impact Factor: **0.68. PMID 16161978.**
56. Deb, C., **Chakraborty, R.,** Ghosh, AN., Mandal NC., Mukherjee, T., Roy, P. 2003. A generalized transducing thiophage (TPC-1) of a facultative sulfur chemolithotrophic bacterium, *Bosea thiooxidans* CT5, of  $\alpha$ -Proteobacteria, isolated from Indian soil. **FEMS Microbiology letters.** 227: 87-92. Impact Factor: **2.72 PMID-14568152** Page 29 of 10
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