

## The thesis is based on following publications:

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### (A) Papers published:

- I. **Bhadra B**, Mukherjee S, Chakraborty R and Nanda A K (2003). Physico-chemical and bacteriological investigation on the river Torsa of North Bengal. *J Environ Biol*, **24** (2), 125-133.
- II. **Bhadra B**, Das S, Chakraborty R and Nanda A K (2004). Investigation of some basic water quality parameter of the North Bengal Terai River Kaljani- A tributary of River Torsa, and Comparison their of with the main stream. *J Environ Biol*, **26**(2), 277-286.

### (B) Papers Accepted for publications:

- III. **Bhadra B**, Roy P and Chakraborty R (2005). *Serratia ureilytica* sp. nov., a novel urea utilizing species. *Int J Syst Evol Microbiol*. MS no. 63674(in press).
- IV. **Bhadra B**, Nanda A K and Chakraborty R (2005). Inducible Nickel resistance in a river isolate of India phylogenetically ascertained as a novel strain of *Acinetobacter junii*. *World J Microbiol. Biotech*, MS no. WIBI553R1 (accepted).

### (C) Papers communicated:

- V. **Bhadra B**, Nanda A K and Chakraborty R (2005). Fluctuation in recoverable nickel and zinc resistant copiotrophic bacteria explained by the varying zinc ion content of Torsa River in different months. *Arch Microbiol*, MS no. ArchMicrobiol-2005-0052, (communicated)
- VI. **Bhadra B**, Roy P and Chakraborty R (2005). *Enterobacter indica* sp. nov., a novel nickel resistant species isolated from Torsa River water of India. *Int J Syst Evol Microbiol*, (MS no. 63845) (communicated).

### (D) In abstract volume of National Symposiums and Seminars:

- I. Mukherjee S, **Bhadra B**, Sarkar S, Nanda A K and Chakraborty R (2000). Microbiological Examination of Torsa River water: an attempt to understand the basic phenomenon of multiple antibiotic resistances. In abstract volume of '7<sup>th</sup> West Bengal State Science and Technological Congress', PHAR -11, Jadavpur University. West Bengal (WB).
- II. **Bhadra B** and Chakraborty R (2002). Diversity in multiple metal resistant patterns of standard plate count bacteria isolated from river Torsa of north Bengal. In abstract volume of *National Symposium on Diversity of Microbial Resources and their potential Application* [MicroSymp-2002, March 4-6], MB-4, pp. 34, 2002.
- III. **Bhadra B** and Chakraborty R (2003). Genetic diversity of Nickel -Cobalt resistance in gram negative bacteria with special reference to Torsa River isolates of North Bengal. In abstract volume of 'National symposium on Assessment and Management of Bioresources', (dated May 28-30), OI-15, pp. 7, North Bengal University, WB.
- IV. **Bhadra B**, Chakraborty R, Sarkar S and Nanda A K (2003). River water quality of Himalayan Rivers in the foothills region of West Bengal. In abstract volume of, National symposium on 'Recent trends in Biology and Biotechnology' and 23<sup>rd</sup> annual session of AEB [dated, October 9- 11], 265, pp.137-138, Shivaji University, Kolhapur, Maharashtra.
- V. **Bhadra B** and Chakraborty R (2004). 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 abstract volume of 'National symposium on

*Current perspectives in Stress Biology*, (dated February 6-8), **OR 41**, pp. 37, North Bengal University, WB.

- VI. Bhowal S, **Bharda B** and Chakraborty R (2004). 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 abstract volume of 'National symposium on Current perspectives in Stress Biology'*, (dated February 6-8), **PP 32**, pp. 66, North Bengal University, WB.

**(E) Nucleotide sequence deposited in GenBank database:**

- VII. Chakraborty R and **Bhadra B** (2003). *Acinetobacter junii* strain BB1A partial *bbrc* gene, EMBL nucleotide database, Acc.No. AJ563421.
- VIII. Chakraborty R and **Bhadra B** (2004). *Acinetobacter junii* strain BB1A partial 16S rRNA gene sequence, EMBL nucleotide database, Acc.No. AJ786647.
- IX. Chakraborty R and **Bhadra B** (2004). *Serratia ureilytica* strain NiVa 51 16S rRNA gene, EMBL nucleotide database, Acc. No. AJ854062.
- X. Chakraborty R and **Bhadra B** (2004). *Enterobacter nickellidurans\** strain NiVas 114 16S rRNA gene, EMBL nucleotide database, Acc. No. AJ854063.
- XI. Chakraborty R and **Bhadra B** (2005). *Enterobacter nickellidurans\** strain NiVas 114 partial gene for putative transmembrane protein and gene for putative HAM1 homologue, EMBL nucleotide database, Acc. No. AM003901.
- XII. Chakraborty R and **Bhadra B** (2005). *Enterobacter nickellidurans\** strain NiVas 114 ORF 1 and 2 (partial) for hypothetical inner membrane and hypothetical protein, EMBL nucleotide database, Acc. No. AM039520.

\*, *Enterobacter nickellidurans* (now known as *Enterobacter indica*)

**(F) Bacterial cultures deposited in Culture Collections:**

- XIII. **Bhadra B** and Chakraborty R (2004). *Acinetobacter junii* strain BB1A, BCCM<sup>®</sup>/LMG Bacterial Collection, Gent, Belgium, Acc. No. LMG 22734.
- XIV. **Bhadra B** and Chakraborty R (2005). *Serratia ureilytica* strain NiVa 51<sup>T</sup>, BCCM<sup>®</sup>/LMG Bacterial Collection Gent, Belgium, Acc. No. LMG 22860 [=*Serratia ureilytica* NiVa 51<sup>T</sup>, JCM 13046, Japan Collection of Microorganisms, Saitama, Japan].
- XV. **Bhadra B** and Chakraborty R (2005). *Enterobacter nickellidurans* strain NiVas 114<sup>T</sup>, CCUG 50595, CCUG, Goteborg, Sweden [=*Enterobacter indica* strain NiVas 114, JCM 13045, Japan Collection of Microorganisms, Saitama, Japan].



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