

CURRICULUM VITAE

DIPANKAR MANNA

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Education:

- 1995 **Doctor of Philosophy**, Life Sciences,
Centre for Cellular and Molecular Biology Hyderabad, India
- 1988 **Master of Science**, Biotechnology,
The University of Pune, Poona, India.
- 1985 **Bachelor of Science**, Physics,
The University of Calcutta, Calcutta, India

Positions Held:

- 2001- Present **Research Associate**, University of Alabama at Birmingham,
Birmingham, Alabama, USA.
- 1995 - 2000 **Postdoctoral Research Fellow**, University of Alabama at Birmingham,
Birmingham, Alabama, USA.
- 1988 - 1994 **Research Fellow**, Centre for Cellular and Molecular Biology,
Hyderabad, India.

Areas of Research:

DNA transposition, chromosome structure and dynamics,
gene regulation, stress tolerance.

Awards and Fellowships:

- 1995 **INSA Medal for Young Scientist**, by Indian National Science Academy
(INSA), India.
- 1988-1995 **Graduate Research Fellowship**, by Council of Scientific and Industrial
Research, Government of India.
- 1986-1988 **Merit Fellowship** during M.S., by Department of Biotechnology,
Government of India.

Publications:

Reviewed

1. **Dipankar Manna** and J. Gowrishankar. 1994. Evidence for involvement of proteins HU and RpoS in transcription of the osmoreponsive *proU* operon in *Escherichia coli*. **Journal of Bacteriology**. 176 : 5378-5384.
2. **Dipankar Manna** and N. Patrick Higgins. 1999. Phage Mu transposition immunity reflects supercoil domain structure of the chromosome. **Molecular Microbiology**. 32: 595-606.
3. **Dipankar Manna**, Xiuhua Wang, and N. Patrick Higgins. 2001. Mu and IS1 transposition exhibit strong orientation bias at the *Escherichia coli bgl* locus. **Journal of Bacteriology**. 183:3328-3335.
4. **Dipankar Manna**, Adam M. Breier and N. Patrick Higgins. 2004. Microarray analysis of transposition targets in *Escherichia coli*: The impact of transcription. **Proceedings of the National Academy of Sciences, USA**. 101:9780-9785.
5. **Dipankar Manna**, Shuang Deng, Adam M. Breier, and N. Patrick Higgins. 2004. Bacteriophage Mu targets the trinucleotide sequence CGG. **Journal of Bacteriology**. 187:3586-3588.
6. Zhenhua Pang, Ray Chen, **Dipankar Manna** and N. Patrick Higgins. 2005. A gyrase mutant with low catalytic activity promotes chromosome breaks and supercoil diffusion at the replication terminus. **Journal of Bacteriology (In Press)**.

Invited

1. J. Gowrishankar and **Dipankar Manna**. 1996. How is osmotic regulation of transcription of the *Escherichia coli proU* operon achieved? A review and a model. **Genetica**. 97: 363-378.
2. N. Patrick Higgins, Shuang Deng, Zhenhua Pang, Richard A. Stein, Keith Champion and **Dipankar Manna**. 2004. Domain Behavior and supercoil dynamics in bacterial chromosomes. Chapter 6 in **The Bacterial Chromosome**. Edited by N. Patrick Higgins. ASM Press, Washington, D.C. p133-153.

In preparation

1. **Dipankar Manna**, Michael McClelland and N. Patrick Higgins. 2005. Microarray analysis of transposition targets in *Salmonella typhimurium*: Evidence for target site occlusion by spreading nucleoprotein complex.
2. **Dipankar Manna** and N. Patrick Higgins. 2005. A whole genome analysis of DNA binding sites for phage Mu transposition protein B in *Salmonella typhimurium*: Positive and negative effects of DNA-binding proteins on DNA accessibility in vivo.

Invited talks and meeting abstracts:

1. **Dipankar Manna**. 2005. Genome-wide identification of Mu transposition targets in *Escherichia coli* and *Salmonella typhimurium*: Target specificity modulation by local nucleoid organization. Gordon Research Conference on Chromosome Dynamics. July 31- August 5, New London, New Hampshire, USA (**Talk**).

1. **Dipankar Manna**. 2004. Genome-wide transposition profile of bacteriophage Mu in *Escherichia coli* and *Salmonella typhimurium*: Effect of replication, transcription and DNA-binding proteins. ASM conference on The New Phage Biology. August 1-5, Key Biscayne, Florida, USA (**Talk**).

2. Shuang Deng, **Dipankar Manna** and N. Patrick Higgins. 2004. Target selection by bacteriophage Mu and a consensus for transposition target site in *Escherichia coli*. ASM conference on The New Phage Biology. August 1-5, Key Biscayne, Florida, USA.

3. **Dipankar Manna** and N. Patrick Higgins. 2003. A genome wide survey of bacteriophage Mu transposition hotspots in the *Escherichia coli* chromosome using DNA microarray. 103rd General Meeting of the American Society for Microbiology. May 18-22, Washington, D.C. USA.

4. **Dipankar Manna** and N. Patrick Higgins. 2001. Long range DNA interaction in vivo: Comparison of FLP and RES mediated recombination efficiencies on the chromosome of *Salmonella typhimurium*. 101st General Meeting of the American Society for Microbiology. May 20-24, Orlando, Florida, USA.

5. **Dipankar Manna** and N. Patrick Higgins. 1999. Mu transposition hot spots at the *bgI* promoter of *Escherichia coli* is related to the structure of bacterial chromatin. At the meeting of Molecular Genetics of Bacteria and Phages. University of Wisconsin-Madison, Wisconsin, USA.

6. **Dipankar Manna** and N. Patrick Higgins. 1998. Long range interaction in bacterial chromosome: A case of Mu transposition immunity. Keystone Symposia on Molecular and Cellular Biology, Santa Fe, New Mexico, USA.

7. **Dipankar Manna** and J. Gowrishankar. 1994. Mechanism of transcriptional regulation of osmoreponsive *proU* operon in *Escherichia coli*. At the 16th international Congress of International Union of Biochemistry and Molecular Biology, New Delhi, India.

8. **Dipankar Manna** and J. Gowrishankar. 1994. Osmoregulation of *proU* operon in *Escherichia coli*: Distinct mechanisms affected by stationary phase sigma factor RpoS and nucleoid proteins HU, IHF and HNS. At the Department of Atomic Energy Symposia on Stress and Adaptive Responses in Biological Systems, M. S. University of Baroda, Vadodara, India.

9. **Dipankar Manna** and J. Gowrishankar. 1991. Molecular and genetic analysis of a regulatory mutant for an osmotically inducible L-proline and glycine-betaine uptake system in *Escherichia coli*. At the Annual Meeting of the Society of Biological Chemists (India), Calcutta, India.