

RUKHSANA CHOWDHURY *Ph.D*

Chief Scientist (Retired)
Infectious Diseases and Immunology Division
CSIR-Indian Institute of Chemical Biology
Kolkata 700 032

Personal

Address *Home*
Ekta Oleander Flat 6C Block 2
16 R. N. Chowdhury Road
Kolkata 700015, India

Contact : *Phone* 9830175773
Email: rukhsana@iicb.res.in
rukhsanachowdhury@hotmail.com

Education

Ph.D in Biochemistry, 1989, University of Calcutta, India
M.Sc. in Biochemistry, 1982, University of Calcutta, India, First Class
B.Sc. with Chemistry (Hons), 1979, Presidency College, Calcutta, India , First Class

Awards/Honours

Fellow, WB Academy of Science and Technology, 2011
National Young Woman Bioscientist Award, Department of Biotechnology, 2003
Member, Guha Research Conference, 2003
Raman Research Fellowship 2001
DBT Overseas Associateship, 1995
CSIR Young Scientist Award, 1991
Associate, Indian Academy of Sciences, 1989
Guha Memorial Prize, Calcutta University, 1979
National Scholarship, Calcutta University, 1979
National Merit Scholarship, 1975

Area of research interest

Infectious Diseases, Genetic regulation of bacterial pathogenesis, Microbiome

Supervised 19 Ph.D students and mentored about 30 M.Sc students

SELECTED PUBLICATIONS

- Sengupta C, Mukherjee O, Chowdhury R. 2016 Adherence to intestinal cells promotes biofilm formation in *Vibrio cholerae*
J Infect Dis. 214:1571-1578 [IF 6.34]
- Bhattacharya S, Mukherjee O, Mukhopadhyay AK, Pal AK, Dhar KK and Chowdhury R. 2016 A conserved *Helicobacter pylori* gene, HP0102, is induced upon contact with gastric cells and has multiple roles in pathogenicity
J Infect Dis. 214:196-204 [IF 6.34]
- Sengupta C, Ekka M, Arora S, Dhaware PD, Chowdhury R*, Raychaudhuri S* 2016 Cross feeding of glucose metabolism byproducts of *Escherichia coli* human gut isolates and probiotic strains affect survival of *Vibrio cholerae*
Gut Pathog. doi: 10.1186/s13099-016-0153-x. [IF 2.816]
- Baidya AK, Bhattacharya S, Chowdhury R. 2014 Role of the flagellar hook length control protein FliK and sigma-28 in *cagA* expression in gastric cell adhered *Helicobacter pylori*.
J. Infect Dis (IF 6.34) [IF 6.34]
- Sengupta C, Ray S, Chowdhury R. 2014. Fine tuning of virulence regulatory pathways in enteric bacteria in response to varying bile and oxygen concentrations in the gastrointestinal tract.
Gut Pathog. 6:38. doi: 10.1186/s13099-014-0038-9. (Invited review) [IF 2.738]
- Sinha S, Giri AK, Chowdhury R, Ray K. 2014 Mitochondrial genome variations among arsenic exposed individuals and potential correlation with apoptotic parameters.
Environ Mol Mutagen. 55:70-76 [IF 3.7]
- Raghwan, Chowdhury R. 2014 Host cell contact induces Fur-dependent expression of virulence factors CagA and VacA in *Helicobacter pylori*.
Helicobacter. 19:17-25. **Selected as 'Faculty of 1000 Prime'** [IF 3.5]
- Chatterjee E, Chowdhury R. 2013 Reduced virulence of the *Vibrio cholerae fadD* mutant is due to induction of the extracytoplasmic stress response
Infect Immun. 81:3935-41 [IF 4.1]
- Dey AK, Bhagat A, Chowdhury R. 2013 Host cell contact induces expression of virulence factors and VieA, a cyclic di-GMP phosphodiesterase, in *Vibrio cholerae*.
J Bacteriol. 195: 2004-10. [IF 3.2]
- Pradhan S, Mallick SK, Chowdhury R. 2013 *Vibrio cholerae* classical biotype is converted to the viable non-culturable state when cultured with the El Tor biotype.
PLoS One. 8:e53504. [IF 3.73]
- Chakraborti S, Bhattacharya S, Chowdhury R, Chakrabarti P. 2013 The molecular basis of inactivation of metronidazole-resistant *Helicobacter pylori* using polyethyleneimine functionalized zinc oxide nanoparticles.
PLoS One. 8:e70776 [IF 3.73]
- [Ghosh A, Choudhury A, Das A, Chatterjee NS](#), Das T, Chowdhury R, Panda K, Banerjee R, and Chatterjee I.B. 2012. Cigarette smoke induces p-benzoquinone-albumin adduct in blood serum: Implications on structure and ligand binding properties.
Toxicology 292:78-89 [IF 3.15]

Ray S, Chatterjee E, Chatterjee A, Paul K, and R. Chowdhury. 2011 A *fadD* mutant of *Vibrio cholerae* is impaired in the production of virulence factors and membrane localization of the virulence regulatory protein TcpP.
Infect Immun. 79:258-66. [IF 4.1]

Pradhan S, Baidya AK, Ghosh A, Paul K and R. Chowdhury. 2010 The El Tor biotype of *Vibrio cholerae* exhibits a growth advantage in the stationary phase in mixed cultures with the classical biotype.
J Bacteriol. 192 :955-63. [IF 3.5]

Chatterjee A and R. Chowdhury 2008 Bile and unsaturated fatty acids inhibit the binding of cholera toxin and Escherichia coli heat labile enterotoxin to GM1 receptor. *Antimicrob. Agents Chemother* 52: 220-224 [IF 4.6]

Chatterjee A., P.K. Dutta and R. Chowdhury. 2007. Effect of fatty acids and cholesterol present in bile on expression of virulence factors and motility of *Vibrio cholerae*
Infect. Immun. 75: 1946-1953 [IF 4.3]

Ghosh, A., K. Paul and R. Chowdhury 2006 Role of H-NS in colonization, motility and bile dependent repression of virulence gene expression in *Vibrio cholerae*.
Infect. Immun. 74: 3060-3064 [IF 4.2]

Banerjee S., and R. Chowdhury. 2006 An orphan DNA (cytosine-5-)-methyltransferase in *Vibrio cholerae*.
Microbiology 152: 1055-1062 [IF 3.6]

Chatterjee, A., S. Chaudhuri, G. Saha, S. Gupta, and R. Chowdhury. 2004 Effect of bile on the cell surface permeability barrier and efflux system of *Vibrio cholerae*.
J. Bacteriol. 188: 6809-6814 [IF 4]

Paul, K., A. Ghosh, N. Sengupta and R. Chowdhury. 2004 Competitive growth advantage of non-toxicogenic mutants in the stationary phase in archival cultures of pathogenic *Vibrio cholerae* strains.
Infect. Immun. 72: 5478-5482 [IF 4.2]

Krishnan, H. H., A. Ghosh, K. Paul and R. Chowdhury. 2004. Effect of anaerobiosis on expression of virulence factors in *Vibrio cholerae*.
Infect. Immun. 72: 3961-3967 [IF 4.2]

Sengupta N., K. Paul and R. Chowdhury. 2003 The global regulator ArcA modulates expression of virulence factors in *Vibrio cholerae*.
Infect. Immun. 71: 5583-5589 [IF ~4]

Mohanakumar K. P., B. Thomas, S. Sharma, D. Muralikrishnan, R. Chowdhury and C. C. Chiueh. 2002. Nitric Oxide: An antioxidant and neuroprotector.
Ann. N. Y. Acad. Sci. 962: 389-401

Chakrabarti S., N. Sengupta and R. Chowdhury. 1999. Role of DnaK in *in vitro* and *in vivo* expression of virulence factors of *Vibrio cholerae*.
Infect. Immun. 67 : 1025 – 1033. [IF~ 4]

Gupta S. and R. Chowdhury. 1997 Bile affects production of virulence factors and motility of *Vibrio cholerae*.
Infect. Immun. 65 : 1131 – 1134. [IF~ 4]

Sahu G.K., R. Chowdhury and J. Das. 1997. The rpoH gene encoding sigma 32 homolog of *Vibrio cholerae*.
Gene 189 : 203 – 207

Sahu G.K., R. Chowdhury and J. Das. 1994. Heat shock proteins and heat shock protein antigens of *V. cholerae*. *Infect. Immun.* 62 : 5624 -5631. [IF ~4]

Biswas S.K., R. Chowdhry and J. Das. 1992. A 14 kilodalton inner membrane protein of *V. cholerae* biotype El Tor confers resistance to Group IV infection to classical *Vibrios*.
J. Bacteriol. 174: 6221-6229. [IF ~4]

Chowdhury R., S.K Biswas. and J. Das. 1989. Abortive replication of cholera phage ϕ 149 in the biotype El Tor of *Vibrio cholerae*.
J. Virol. 63 : 392-397 [IF ~6]

Chowdhury R., A., Sengupta P.Ray and J. Das. 1987. Replication and packaging of cholera phage ϕ 149 DNA
J. Virol. 61 : 3999-4006 [IF~ 6]

Chowdhury R. and J. Das. 1986. Infection by cholera phage ϕ 138 : Bacteriophage DNA and replicative intermediates.
J. Virol. 57 : 960-967 [IF ~6]