

## BIOGRAPHICAL SKETCH

### ANWAR HUQ, Ph.D

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#### **Education:**

<u>Institution</u>	<u>Major(s)</u>	<u>Degree</u>	<u>Year</u>
University of Karachi, Pakistan	Zoology	B. Sc. (Honors)	1973
University of Karachi, Pakistan	Marine Zoology	M. Sc.	1973
University of Maryland, USA	Microbiology	Ph.D.	1984

#### **Appointments:**

##### Current

Associate Professor, Center of Marine Biotechnology, University of Maryland Biotechnology Institute, Maryland, USA, 2001 to present

Director, UNESCO-MIRCEN (Microbiological Resources Center), University of Maryland Biotechnology Institute, Baltimore, Maryland, USA, 1999-present

##### Past

Research Associate Professor, Center of Public Issues in Biotechnology, University of Maryland Biotechnology Institute, Maryland, USA, 1997 to 2001

Research Associate Professor, Department of Microbiology, University of Maryland, College Park, MD, USA, 1989-1997

Head, Research Microbiology Branch, Laboratory Sciences Division, International Center for Diarrhoeal Disease Research, Bangladesh (ICDDR,B,) Dhaka, Bangladesh, 1987-1992

Associate Scientist, Laboratory Sciences Division, ICDDR,B, Dhaka, Bangladesh, 1987-1992

Head, Environmental Microbiology Laboratory, ICDDR,B, Dhaka, Bangladesh, 1986-1989

Manager, Laboratory Services Department, ICDDR,B, Dhaka, Bangladesh, 1986-1987

Assistant Scientist, Laboratory Sciences and Epidemiology Division, ICDDR,B, Dhaka, Bangladesh, 1984-1987

Manager, Microbiology Branch, ICDDR,B, Dhaka, Bangladesh, 1984-1986

Faculty Research Assistant, Department of Microbiology, University of Maryland, College Park, Maryland USA, 1980-1984

Research Officer, ICDDR,B, Dhaka, Bangladesh, 1979-1984

Research Assistant, Cholera Research Laboratory, (CRL) Dhaka, Bangladesh, 1976-1979

Research Assistant, Johns Hopkins University, International Center for Medical Research and Training (ICMRT), Dhaka, Bangladesh, 1975-1976

#### **Total Publication in peer reviewed journals and book chapters, over 130.**

##### **Publications - last 5 years: 2002-2007**

1. Lipp, E.K., Rivera, I.N.G., Gil, A.I., Espeland, E.M., Choopun, N., Louis, V.R., Russek-Cohen, E., Huq, A., Colwell, R.R. 2003. Direct Detection of *Vibrio cholerae* and *ctxA* in Peruvian Coastal Water and Plankton by PCR. *Appl Environ Microbiol* 69:3676-3680.
2. Talledo, M., I.N.G. Rivera, E.K. Lipp, A. Neale, D. Karaolis, A. Huq, R.R. Colwell. 2003. Characterization of *Vibrio cholerae* phages isolated from the coast of Peru. *Environ. Microbiol.* 5(5): 350-354.

3. Colwell, R. R., A. Huq, S. Islam, K.M. A. Aziz, M. Yunus, N. H. Khan, A. Mahmood, R. B. Sack, J. Chakrabarti, G. B. Nair, D. Sack, and E. Russek-Cohen. 2003. Reduction of Cholera in Bangladesh Villages by Simple Filtration. *Pros. Natl. Acad. Sc.* 100:1051-1055.
4. Rivera, I.N.G., Lipp, E.K., Gil, A., Choopun, N., Huq, A., Colwell, R.R. 2003. Method of DNA extraction and application of multiplex polymerase chain reaction to detect toxigenic *Vibrio cholerae* O1 and O139 from aquatic ecosystems. *Environ Microbiol* 5:599-606.
5. Louis, V.R., Russek-Cohen, E., Choopun, N., Rivera, I.N.G., Gangle, B., Jiang, S.C., Rubin, A., Patz, J.A., Huq, A., Colwell, R.R. 2003. Predictability of *Vibrio cholerae* in Chesapeake Bay. *Appl Environ Microbiol* 69:2773-2785.
6. Karunasagar, I., Rivera, I, Joseph, B., Kennedy, B., Shetty, V.R., Huq, A., Karunasagar, I., R.R. Colwell. August 2003. ompU genes in non-toxicogenic *Vibrio cholerae* associated with aquaculture. *J Appl Microbiol* 95:338-343.
7. Sack, R.B., Siddique, A.K., Longini, I.M. Jr., Nizam, A., Yunus, M. Islam, M.S., Morris, J.G., Jr., Ali, A., Huq, A., Nair, G.B. Qadri, F., Faruque, S.M., Sack, D.A., Colwell, R.R. 2003. A 4-year study of the epidemiology of *Vibrio cholerae* in four rural areas of Bangladesh. *J Infect Dis* 187(1) 96-101.
8. Espeland, EM, Lipp, E.K., Huq, A., Colwell, R.R. 2004. Polylysogeny and prophage induction by secondary infection in *Vibrio cholerae*. *Environ Microbiol* 6 (7):760-763.
9. Gil A, Louis VR, Rivera ING, Lipp EK, Huq A, Lantana CF, Taylor DN, Russek-Cohen E, Choopun N, Sack RB, Colwell RR. 2004. Occurrence and distribution of *Vibrio cholerae* in the coastal environment of Peru. *Environ Microbiol* 6 (7): 699-706.
10. Binsztein, N, Costagliola, MC, Pichel, M, Jurquiza, V, Ramirez, FC, Akselman, R, Vacchino, M, Huq, A, and Colwell, RR. 2004 (December). Viable but Nonculturable *Vibrio cholerae* O1 in the Aquatic Environment of Argentina. *Appl Environ Microbiol* 70:7481-7486.
11. Islam, MS, Talukder, KA, Khan, NH, Mahmud, ZH, Rahman, MZ, Nair, GB, Siddique, AKM, Yunus, M, Sack, DA, Sack, RB, Huq, A, and Colwell, RR. 2004. Variation of Toxigenic *Vibrio cholerae* O1 in the Aquatic Environment of Bangladesh and Its Correlation with the Clinical Strains. *Microbiol Immunol* 48:773 – 777.
12. Islam, MS, Tasmin, R, Khan, SI, Bakht, HBM, Mahmood, ZH, Rahman, MZ, Bhuiyan, NA, Nishibuchi, M, Nair, GB, Sack, RB, Huq, A, Colwell, RR, Sack, DA. 2004. Pandemic strains of O3:K6 *Vibrio parahaemolyticus* in the aquatic environment of Bangladesh. *Can J Microbiol* 50:827-834.
13. Huq, A, Sack, RB, Nizam, A, Longini, IM, Nair, GB, Ali, A, Morris, JG, Khan, MNH, Siddique, AK, Yunus, M, Albert, MJ, Sack, DA, Colwell, RR. 2005. Critical Factors Influencing the Occurrence of *Vibrio cholerae* in the Environment of Bangladesh. *Appl Environ Microbiol* 71:4645-4654.

14. Alam M, Sadique A, Hasan NA, Bhuiyan NA, Nair, GB, Siddique AK, Sack DA, Ahsan S, Huq A, Sack RB, Colwell RR. 2006. Effect of Transport at Ambient Temperature on Detection and Isolation of *Vibrio cholerae* from Environmental Samples. *Appl Environ Microbiol* 72(3):2185-2190.
15. Alam M, Sultana M, NairGB, Sack RB, Sack DA, Siddique AK, Ali A, Huq A, Colwell RR. 2006. Toxigenic *Vibrio cholerae* in the Aquatic Environment of Mathbaria, Bangladesh. *Appl Environ Microbiol* 72(4):2849-2855.
16. Alam M, Hasan NA, Sadique A, Bhuiha NA, Ahmed KU, Nusrin S, Nair GB, Siddique AK, Sack RB, Sack DA, Huq A, Colwell RR. 2006 Seasonal cholera caused by *Vibrio cholerae* serogroups O1 and O139 in the coastal aquatic environment of Bangladesh. *Appl Environ Microbiol* 72(6):4096-4104.
17. Boettcher K., Smolowitz R, Lewis E, Allam B, Dickerson H, Ford S, Huq A, Reece K, Rivera G, and Woodley C. 2006. Juvenile Oyster Disease (JOD) in *Crassostrea virginica*: Synthesis of knowledge and recommendations. *J. Shellfish Res.* 25(2):683-93.
18. Khondker, M., R. A. Bhuiyan, J. Yeasmin, M. Alam, R. B. Sack, A. Huq, and R. R. Colwell. 2006. New records of phytoplankton for Bangladesh. 1. Cyanophyceae. *Bangladesh J. Bot.* 35(2): 173-179.
19. Chaiyanan S, Chaiyanan S, Grim C, Maugel T, Huq A, Colwell RR. 2007 Ultrastructure of Coccoid Viable but Nonculturable *Vibrio cholerae*. *Environ. Microbiol.* 9(2):393-402.
20. Huq, A., Islam, M.S., Aziz, K.M.A., Yunus, M., Khan, N.H., Mahmood, A., Sack, R.B., Chakrabarti, J., Nair, G.B., Sack, D.A., Russek-Cohen, E., Colwell, R.R. 2004. Simple Filtration for Cholera Intervention. *Proceedings of the Safe Drinking Water Conference in Trieste, Italy. In Examples of Successful Experiences in Providing Safe Drinking Water.* UNDP publication, New York, USA. PP 19-27.
21. Pruzzo, C., Huq, A., Colwell, R.R., Donelli, G. 2005. Pathogenic *Vibrio* species in the marine and estuarine environment. In *Oceans and Health: Pathogens in the Marine Environment.* Kluwer Academic/Plenum Publishers, New York, USA, pp. 217-252.
22. Huq A, Grim C. Nair GB, and Colwell, RR. 2006. Detection, Isolation, and Identification of *Vibrio cholerae* from the Environment. *Current Protocols in Microbiology*, vol. 1, chapter 6. John Wiley Publication, New York, USA.
23. Huq, A. and R. R. Colwell. 2006. Filtering Out Cholera : Bangladesh. *In Sharing Innovative Experiences, Examples of Successful Experiences in Providing Safe Drinking Water.* Published by special Unit of South-South Cooperation, United Nations Development Program, United Nations, New York. pp. 19-28.

**Invited speaker:**

Presented over 75 talks in over 25 countries

**Completed grants:**

Completed over 40 research projects

**Member, Advisory Committee (Past 5 Years)**

Elisa Taviani, Ph. D., 2009  
Chris Grim, Ph. D, November, 2006  
Young Gun Zo, Ph. D., 2005  
Nipa Choopun, Ph. D., 2004  
Sitthipan Chaiyanan, Ph.D. 2002  
Lucy Gibson, Ph. D. 2002  
Saipin Chaiyanan, Ph. D. 2000  
Brian Gangle, M.S. 2000

**CONGRESSIONAL TESTIMONY:**

On October 12, 2000 testified at the US Congress, Subcommittee on Health & Environment Panel 1, as a Witness 3 Global Need to Access to Drinking Water - for Global Access to Safe Drinking Water

**FELLOWSHIP:**

Fellow of the American Academy of Microbiology

**MEMBERSHIP IN PROFESSIONAL SOCIETIES**

- Bangladesh Society of Microbiologists (BSM), 1977 - Life member.
- Bangladesh Association for the Advancement of Science (BAAS), 1978-91.
- American Society for Microbiology (ASM), 1980 - Present.
- Bangladesh Society for Immunology (BSI), 1991- Life member.
- American Association for Advancement of Science (AAAS), 1996 - Present.
- Sigma Xi - The Scientific Research Society, 1991-1997.
- Washington-DC Branch of American Society for Microbiology, 1993-1996.
- American Society of Tropical Medicine and Hygiene, 1999 - Present
- Global Health Council, 2001-Present