

Curriculum Vitae
Dilruba Nasrin, M.B.B.S, Ph.D.
Assistant Professor, Department of Medicine
University of Maryland School of Medicine

Date **January, 2015**

Contact Information

Business Address: Center for Vaccine Development,
University of Maryland School of Medicine
685 West Baltimore Street, room 367,
Baltimore, Maryland 21201

Telephone: +1 410 926 6675 (US mobile), 06-84959633 (Netherlands Mobile)
Email: dnasrin@medicine.umaryland.edu
Mother tongue: Bengali
Foreign Languages: English, Hindi, Urdu, French (working knowledge)

Education

1990 MBBS, Chittagong Medical College, Bangladesh

2001 Ph.D., Epidemiology, Australian National University, Canberra
Thesis title: Effect of antibiotic use on respiratory illness and on antibiotic
resistance in children
Thesis Advisor: R. M. Douglas

Post Graduate Education and Training

1990 - 1991 Internship, Chittagong Medical College and Hospital, Bangladesh
1992 - 1996 Residency, Holy Family Red Crescent Hospital, Dhaka, Bangladesh

Medical Licensures

Active Bangladesh Medical and Dental Council

Employment History

Academic Appointments

2000-2002 Lecturer, Department of Public Health, School of Medicine, University Putra
Malaysia, Kuala Lumpur, Malaysia

2003 - 2006 Senior Operations Researcher, Centre for Health and Population Research
(ICDDR,B), Dhaka, Bangladesh

2006-present Assistant Professor, Center for Vaccine Development, Division of Geographic Medicine, University of Maryland School of Medicine

Professional Society Memberships

1997-2000 General Practice Evaluation Program, Australia
2005-present Bangladesh Medical Society (BMA)
2007-present American Society of Tropical Medicine and Hygiene

Administrative Service

Local and National Service

2004-Present *Ad Hoc* Reviewer, *Journal of Health, Population and Nutrition*
Number of reviews completed per year:
2004 - 1 2005 - 0 2006 - 0
2007 - 1 2008 - 1 2009 - 0
2010 - 1 2011 - 2 2012 - 1
2013 - 0

International Service

1997-2000 Member of Organizing Committee for International Conference of Acute Respiratory Infections (ARI), Australian National University, Canberra, Australia.
2003-2004 Training Manager, Scaling up zinc for Young children (SUZY) Project, ICDDR,B, Dhaka, Bangladesh.
2004-2006 Member of Organizing Committee for International Conferences on Scaling Up Zinc as a Treatment for Young Children (SUZY), ICDDR,B, Dhaka, Bangladesh.
2006 Co-chair a plenary session entitled “combating micronutrient malnutrition” in 8th Commonwealth Congress on Diarrhea and Malnutrition, Dhaka, Bangladesh, February 2006.
2006-present Coordinating epidemiologist for diarrheal disease burden study in Asia and Africa, University of Maryland School of Medicine, Baltimore, Maryland

Teaching Service

2001-2003 Lecturer, Department of Community Health, University Putra Malaysia, Kuala Lumpur
2005-2006 Faculty member, Introductory Course on Epidemiology and Biostatistics, ICDDR,B, Dhaka, Bangladesh

Grant Support

Active grants:

06/15/2011 – 09/30/2014 (Co-Investigator, 100%) PI: M. M. Levine

Title of grant: Diarrheal disease in infants and young children in developing countries (GEMS1A)
Gates # OPP1033572
Bill and Melinda Gates foundation
Annual Direct Costs: \$2,232,912
Total Direct costs: \$ 13,814,218
Role: Coordinating Epidemiologist for study sites, training of interviewers, analysis, and write up.

Completed grants:

2006 –2011

(Co-Investigator, 100%) PI: M. M. Levine)
Title of grant: Diarrheal disease in infants and young children in developing countries (GEMS1)
Gates# 3884
Bill and Melinda Gates foundation
Total Direct costs: \$29,136,707
Role: Coordinating Epidemiologist for study sites, training of interviewers, analysis, and write up.

2006-2007

(PI: 50%)
Title of grant: Efficacy of zinc in the treatment of bronchiolitis in children
USAID
Total direct costs: \$169,157
Role: Developed protocol and instruments for data collection, trained the interviewers, overall supervision, analysis and write up.

2004 –2006

(Co-Investigator, 50%) PI: F. Qadri)
Title of grant: Immunological and clinical outcome of zinc supplement: a randomized controlled trial
Bill and Melinda Gates foundation
Annual Direct costs:
Total direct costs: \$275,826
Role: Training and supervision of research physician and field research interviewers, analysis and write up.

2004 – 2007

(Co-Investigator 50%) PI: A. Brooks)
Title of grant: Randomized controlled trial of zinc as an adjuvant therapy in outpatient pneumonia in children
Bill and Melinda Gates foundation, Thrasher foundation
Annual Direct costs:
Total direct costs: \$500,000

Role: Training and supervision of research physician and field research interviewers.

Publications

Peer-reviewed journal articles

1. **Nasrin, D.**, Collignon, P. J., Wilson, E. J., Pilotto, L. D. and Douglas, R. M. Antibiotic resistance in *Streptococcus pneumoniae* isolated from children. *Journals of Paediatrics and Child Health*, 35:558-561. 1999.
2. Wilson, E. J., **Nasrin, D.**, Banwell, C., Broom, D., and Douglas, R. M. Realities of practice Engaging parents and GPs in developing clinical practice guidelines. *Australian Family Physician*, 29(5):498-503. 2000.
3. **Nasrin, D.**, Collignon, P. J., Roberts, L., Wilson, E. J., Pilotto, L. S. and Douglas, R.M. Effect of beta-lactam antibiotic use in children on pneumococcal resistance to penicillin. *BMJ*; 324:28. 2002.
4. Wilson, E. J., **Nasrin, D.**, Dear, K., and Douglas, R.M. Changing GPs' antibiotic prescribing: A randomised controlled trial. *Communicable Disease Intelligence*; 27 Suppl:S32-8. 2003.
5. **Nasrin, D.**, Larson, C.P., Sultana, S., Khan, T. U. Acceptability and adherence to zinc dispersible tablet treatment of acute childhood diarrhea. *Journal of Health, Population and Nutrition in September*, 23(3):215-221. 2005.
6. Brooks, WA., Breiman, RF., Goswami, D., Hossain, A., Alam, K, Saha SK Nahar K, **Nasrin, D.**, Ahmed N, El Arifeen S, Naheed A, Sack DA, Luby S. Invasive pneumococcal disease burden and implications for vaccine policy in urban Bangladesh. *Am J Trop Med Hyg.* 2007 Nov; 77(5): 795-801.
7. Sheikh A, Shamsuzzaman S, Ahmad SM, **Nasrin, D.**, Nahar S, Alam MM, AI Tarique A, Begum YA, Qadri SS, Chowdhury MI, Saha A, Larson CP, Qadri F. Zinc influences innate immune responses in children with enterotoxigenic *Escherichia coli*-induced diarrhea. *J Nutr.* 2010 May; 140(5): 1049-56. Epub 2010 Mar 17.
8. Larson CP, **Nasrin, D.**, Saha A, Chowdhury MI, Qadri F. The added benefit of zinc supplementation after zinc treatment of acute childhood diarrhea: a randomized, double-blind field trial. *Trop Med Int Health.* 2010 Jun; 15(6): 754-61. Epub 2010 Mar 29.
9. Farag TH, **Nasrin, D.**, Wu Y, Muhsen K, Blackwelder WC, Sommerfelt H, Panchalingam S, Nataro JP, Kotloff KL, Levine MM. Some epidemiologic, clinical, microbiologic, and organizational assumptions that influenced the design and performance of the Global Enteric Multicenter Study (GEMS). *Clin Infect Dis.* 2012 Dec;55 Suppl 4:S225-31.
10. Kotloff KL, Blackwelder WC, **Nasrin, D.**, Nataro JP, Farag TH, van Eijk A, Adegbola RA, Alonso PL, Breiman RF, Faruque AS, Saha D, Sow SO, Sur D, Zaidi AK, Biswas K, Panchalingam S, Clemens JD, Cohen D, Glass RI, Mintz ED, Sommerfelt H, Levine MM. The Global Enteric Multicenter Study (GEMS) of diarrheal disease in infants and young children in developing countries: epidemiologic and clinical methods of the case/control study. *Clin Infect Dis.* 2012 Dec;55 Suppl 4:S232-45.

11. Blackwelder WC, Biswas K, Wu Y, Kotloff KL, Farag TH, **Nasrin, D.**, Graubard BI, Sommerfelt H, Levine MM. Statistical methods in the Global Enteric Multicenter Study (GEMS). *Clin Infect Dis.* 2012 Dec;55 Suppl 4:S246-53.
12. Biswas K, Carty C, Horney R, **Nasrin, D.**, Farag TH, Kotloff KL, Levine MM. Data management and other logistical challenges for the GEMS: the data coordinating center perspective. *Clin Infect Dis.* 2012 Dec;55 Suppl 4:S254-61.
13. Sommerfelt H, Steinsland H, van der Merwe L, Blackwelder WC, **Nasrin, D.**, Farag TH, Kotloff KL, Levine MM, Gjessing HK. Case/control studies with follow-up: constructing the source population to estimate effects of risk factors on development, disease, and survival. *Clin Infect Dis.* 2012 Dec;55 Suppl 4:S262-70.
14. Rheingans R, Kukla M, Adegbola RA, Saha D, Omoro R, Breiman RF, Sow SO, Onwuchekwa U, **Nasrin, D.**, Farag TH, Kotloff KL, Levine MM. Exploring household economic impacts of childhood diarrheal illnesses in 3 African settings. *Clin Infect Dis.* 2012 Dec;55 Suppl 4:S317-26.
15. Rheingans R, Kukla M, Faruque AS, Sur D, Zaidi AK, **Nasrin, D.**, Farag TH, Levine MM, Kotloff KL. Determinants of household costs associated with childhood diarrhea in 3 South Asian settings. *Clin Infect Dis.* 2012 Dec;55 Suppl 4:S327-35.
16. Saha D, Akinsola A, Sharples K, Adeyemi MO, Antonio M, Imran S, Jasseh M, Hossain MJ, **Nasrin, D.**, Kotloff KL, Levine MM, Hill PC. Health care utilization and attitudes survey: understanding diarrheal disease in rural Gambia. *Am J Trop Med Hyg.* 2013 Apr 29.
17. Nhampossa T, Mandomando I, Acacio S, Nhalungo D, Sacoora C, Nhacolo A, Macete E, Nhabanga A, Quintó L, Kotloff K, Levine MM, **Nasrin, D.**, Farag T, Bassat Q, Alonso P. Healthcare use and attitudes survey in cases of moderate-to-severe diarrhea among children 0-59 months in the district of Manhica, Southern Mozambique. *Am J Trop Med Hyg.* 2013 Apr 29.
18. Quadri F, **Nasrin, D.**, Khan A, Bokhari T, Sunder Tikmani S, Nisar MI, Bhatti Z, Kotloff K, Levine MM, Zaidi AK. Healthcare use patterns for diarrhea in children in low-income periurban communities of Karachi, Pakistan. *Am J Trop Med Hyg.* 2013 Apr 29.
19. Manna B, **Nasrin D.**, Kanungo S, Roy S, Ramamurthy T, Kotloff KL, Levine MM, Sur D. Determinants of health care seeking for diarrheal illness in young children in urban slums of Kolkata, India. *Am J Trop Med Hyg.* 2013 Apr 29.
20. Das SK, **Nasrin, D.**, Ahmed S, Wu Y, Ferdous F, Dil Farzana F, Hossain Khan S, Malek MA, El Arifeen S, Levine MM, Kotloff KL, Faruque AS. Health care-seeking behavior for childhood diarrhea in Mirzapur, rural Bangladesh. *Am J Trop Med Hyg.* 2013 Apr 29.
21. **Nasrin, D.**, Wu Y, Blackwelder WC, Farag TH, Saha D, Sow SO, Alonso PL, Breiman RF, Sur D, Faruque AS, Zaidi AK, Biswas K, Van Eijk AM, Levine MM, Kotloff KL. Healthcare-seeking for childhood diarrhea in developing countries: evidence from seven sites in Africa and Asia. *Am J Trop Med Hyg.* 2013 Apr 29.
22. Kotloff K, Blackwelder WC, **Nasrin, D.**, Farag T, Panchalingam S, et al. Burden and aetiology of diarrhoeal disease in infants and young children in developing countries (The Global Enteric Multicenter Study, GEMS): a prospective, case-control study. *The Lancet;* 382: 209-22. 2013.
23. Farag TH, Faruque AS, Wu Y, Das SK, Hossain A, Ahmed S, Ahmed D, **Nasrin D,** Kotloff KL, et al. Housefly population density correlates with shigellosis among children in Mirzapur, Bangladesh: a time series analysis. *Plos Negl Trop Dis;* 7(6): 2013.

24. Baker KK, Farzana FD, Ferdous F, Ahmed S, Das SK, Faruque ASG, Nasrin D, Kotloff KL, Nataro JP, Kolappaswamy K, Levine M. Association between moderate-to-severe diarrhea in young children in the Global Enteric Multicenter Study (GEMS) and types of handwashing materials used by caretakers in Mirzapur, Bangladesh. *Am J Trop Med Hyg.* 2014 Apr 28.
25. Livio S, Strockbine NA, Panchalingam S, Tennant SM, Barry EM, Marohn ME, Antonio M, Hossain A, Mandomando I, Ochieng JB, Oundo JO, Qureshi S, Ramamurthy T, Tamboura B, Adegbola RA, Hossain MJ, Saha D, Sen S, Faruque AS, Alonso PL, Breiman RF, Zaidi AK, Sur D, Sow SO, Berkeley LY, O'Reilly CE, Mintz ED, Biswas K, Cohen D, Farag TH, **Nasrin D**, Wu Y, Blackwelder WC, Kotloff KL, Nataro JP, Levine MM. Shigella isolates from the global enteric multiventer study inform vaccine development. *Clin Infect Dis.* 2014 Oct; 59 (7): 933-41
26. Lindsay B, Oundo J, Hossain MA, Antonio M, Tamboura B, Walker AW, Paulson JN, Parkhill J, Omere R, Faruque AS, Das SK, Ikumapayi UN, Adeyemi M, Sanogo D, Saha D, Sow S, Farag TH, **Nasrin D**, Li S, Panchalingam S, Levine MM, Kotloff K, Magder LS, Hungerford L, Sommerfelt H, Pop M, Nataro JP, Stine OC. Microbiota that affect risk for shigellosis in children in low-income countries. *Emerg Infect Dis.* 2015 Feb;21(2): 242-50.
27. Nhampossa T, Mandomando I, Acacio S, Quintó L, Vubil D, Ruiz J, Nhalungo D, Sacoor C, Nhabanga A, Nhacolo A, Aide P, Machevo S, Sigauque B, Nhama A, Kotloff K, Farag T, **Nasrin D**, Bassat Q, Macete E, Levine MM, Alonso P. Diarrheal disease in rural Mozambique: burden, risk factors and etiology of diarrheal disease among children aged 0-59 months seeking care at health facilities. *PLoS One.* 2015 May 14 ; 10(5).
28. Lindsay B, Saha D, Sanogo D, Das SK, Omere R, Farag TH, **Nasrin D**, Li S, Panchalingam S, Levine MM, Kotloff K, Nataro JP, Magder L, Hungerford L, Faruque AS, Oundo J, Hossain MA, Adeyemi M, Stine OC. (Association between shigella infection and diarrhea varies based on location and age of children. *Am J Trop Med Hyg.* 2015 Nov; 93(5): 918-24.
29. Nygren BL, O'Reilly CE, Rajasingham A, Omere R, Ombok M, Awuor AO, Jaron P, Moke F, Vulule J, Laserson K, Farag TH, **Nasrin D**, Nataro JP, Kotloff KL, Levine MM, Derado G, Ayers TL, Lash RR, Breiman RF, Mintz ED. The Relationship Between Distance to Water Source and Moderate-to-Severe Diarrhea in the Global Enterics Multi-Center Study in Kenya, 2008-2011. *Am J Trop Med Hyg.* 2016 May 4; 94(5): 1143-9.
30. Baker KK, O'Reilly CE, Levine MM, Kotloff KL, Nataro JP, Ayers TL, Farag TH, **Nasrin D**, Blackwelder WC, Wu Y, Alonso PL, Breiman RF, Omere R, Faruque AS, Das SK, Ahmed S, Saha D, Sow SO, Sur D, Zaidi AK, Quadri F, Mintz ED. Sanitation and Hygiene-Specific Risk Factors for Moderate-to-Severe Diarrhea in Young Children in the Global Enteric Multicenter Study, 2007-2011: Case-Control Study. *PLoS Med.* 2016 May 3; 13(5).
31. Sow SO, Muhsen K, **Nasrin D**, Blackwelder WC, Wu Y, Farag TH, Panchalingam S, Sur D, Zaidi AK, Faruque AS, Saha D, Adegbola R, Alonso PL, Breiman RF, Bassat Q, Tamboura B, Sanogo D, Onwuchekwa U, Manna B, Ramamurthy T, Kanungo S, Ahmed S, Qureshi S, Quadri F, Hossain A, Das SK, Antonio M, Hossain MJ, Mandomando I, Nhampossa T, Acácio S, Omere R, Oundo JO, Ochieng JB, Mintz ED, O'Reilly CE, Berkeley LY, Livio S, Tennant SM, Sommerfelt H, Nataro JP, Ziv-Baran T, Robins-

Browne RM, Mishcherkin V, Zhang J, Liu J, Houpt ER, Kotloff KL, Levine MM. The Burden of Cryptosporidium Diarrheal Disease among Children < 24 Months of Age in Moderate/High Mortality Regions of Sub-Saharan Africa and South Asia, Utilizing Data from the Global Enteric Multicenter Study (GEMS). PLoS Negl Trop Dis. 2016 May 24; 10(5).

32. Omore R, Tate JE, O'Reilly CE, Ayers T, Williamson J, Moke F, Schilling KA, Awuor AO, Jaron P, Ochieng JB, Oundo J, Parashar UD, Parsons MB, Bopp CC, **Nasrin D**, Farag TH, Kotloff KL, Nataro JP, Panchalingam S, Levine MM, Laserson KF, Nuorti JP, Mintz ED, Breiman RF. Epidemiology, Seasonality and Factors Associated with Rotavirus Infection among Children with Moderate-to-Severe Diarrhea in Rural Western Kenya, 2008-2012: The Global Enteric Multicenter Study (GEMS). PLoS One. 2016 Aug 5; 11(8).
33. Qamar FN, Nisar MI, Quadri F, Shakoor S, Sow SO, **Nasrin D**, Blackwelder WC, Wu Y, Farag T, Panchalingam S, Sur D, Qureshi S, Faruque AS, Saha D, Alonso PL, Breiman RF, Bassat Q, Tamboura B, Ramamurthy T, Kanungo S, Ahmed S, Hossain A, Das SK, Antonio M, Hossain MJ, Mandomando I, Mintz ED, Tennant SM, Kotloff KL, Levine MM, Zaidi AK. Aeromonas-Associated Diarrhea in Children Under 5 Years: The GEMS Experience. Am J Trop Med Hyg. 2016 Aug 15.

Non-Peer-reviewed journal articles

1. Abdullah, A. B. M., **Nasrin, D**. Acute intermittent porphyria: a rare case of acute abdomen. Bangladesh Journal of Neuromedicine; January:16-20. 1995.
2. Abdullah, A. B. M., **Nasrin, D**. Intestinal obstruction: a rare presentation of hypothyroidism. Journal of the Medical Teachers Federation, 54-55. 1996.

Report

1. **Nasrin, D**. Impact assessment of the circular issued on 16 September 2002 regarding medical treatment and examination of victims of violence. Report submitted to MOH, Bangladesh 2005.

Major Invited Speeches

1. **Nasrin, D**. Antibiotic prescribing in ARI: effect on health outcome and antibiotic resistance. General Practice Evaluation Conference, Sydney, Australia. May 1998.
2. **Nasrin, D**. Effect of antibiotic prescribing on antibiotic resistance. General Practice Evaluation Conference, Brisbane, Australia. May 1999.

3. **Nasrin, D.** Acceptability and adherence to zinc dispersible tablet treatment in acute childhood diarrhea, National Conference for Civil Surgeons in Dhaka, Bangladesh, February 2004.
4. **Nasrin, D.** Impact of training on service use of depot-holders: Relevance to scaling-up zinc program, 8th Commonwealth Congress on Diarrhea and Malnutrition, Dhaka, Bangladesh, February 2006.
5. **Nasrin, D.** Effect of moderate to severe diarrhea on linear growth. Annual conference of American Society of Tropical Medicine and Hygiene (ASTMH), Washington, D. C., USA, 2009. **Nasrin, D.** Effect of moderate to severe diarrhea on mortality in under-5 children in developing countries. Annual conference of American Society of Tropical Medicine and Hygiene (ASTMH), Atlanta, USA, 2010. **Nasrin, D.** Effect of moderate to severe diarrhea on linear growth. Keystone symposia on Malnutrition, gut-microbial interactions and mucosal immunity to vaccines, New Delhi 2011.