

# CURRICULUM VITAE PROF. DR. ABDUL HAQUE

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**PROF. DR. ABDUL HAQUE**

*Director, Akhuwat Faisalabad Institute for Research in Science and Technology*

**Field: Medical Microbiology and Molecular Biology**

**Specialities:** Antimicrobial resistance, vaccine studies, monoclonal antibodies, virulence of enteric pathogens

**Funding:**

Have won more than Rs 40 million worth projects during the career.

HEC expert for reviewing NRPU projects (more than 100), Pak-US joint projects and PSF projects.

**Research:**

Impact Factor:	<b>105.0</b>	Citation Index:	<b>625</b>
RG score:	<b>37.9</b>		
International Publications:	43	Local Publications:	19
International book chapters:	03	National book chapter:	01
GenBank submissions:	27		

Reviewer of 15 international journals

Keynote/Invited speaker in 10 countries

**Consultant:** National Center for Genome Resources (NCGR), USA --- 2011-2012

**Research Supervision:**

Ph. D. Supervised: 12

M. Phil. supervised: 17

**Teaching Experience:**

1. Serving as Professor of Biotechnology at Akhuwat Faisalabad Institute for Research in Science and Technology since August 2018.
2. Served as Professor of Pathology at the The University of Faisalabad, Faisalabad from 1<sup>st</sup> June 2013 to 21<sup>st</sup> April, 2018.
3. Served as Deputy Chief, Principal Scientist and Senior Scientist at National Institute for Biotechnology and Genetic Engineering, Faisalabad from 17<sup>th</sup> September 1995 to 24<sup>th</sup> April 2013 teaching Biotechnology to PhD and MPhil students.
4. Served as Adjunct Professor of Quaid-i-Azam University and PIEAS University, Islamabad from 2001 to 2013.
5. Served as Lecturer in Microbiology at Punjab Medical College, Faisalabad from 23<sup>rd</sup> November, 1979 to 17<sup>th</sup> September, 1995.

**Administrative experience:**

1. Serving as Director at Akhuwat Faisalabad Institute for Research in Science and Technology since August 2018.
2. Served as Director Advance Studies and Research from April 2017 to April 2018 at the University of Faisalabad, Faisalabad.
3. Served as Director ORIC from March 2015 to April 2018 at the University of Faisalabad, Faisalabad.

4. Served as Research Coordinator in National Institute for Biotechnology and Genetic Engineering, Faisalabad from 2010 to 2013.
5. Served as Acting Head of Health Biotechnology Department, National Institute for Biotechnology and Genetic Engineering, Faisalabad from 2010 to 2013.

**Salient Academic Achievements:**

1. Throughout first class
2. Two University Positions
3. World record holder in TOEFL
4. Scholarships: Monbusho, Japan (1988-91), Taniguchi, Japan (1993-95), IAEA (2002)

**Salient Professional Achievements:**

1. Awarded a Gold Medal by PAEC/NIBGE for being the best scientist of the year 2000.
2. First to develop a PCR for diagnosis of typhoid anywhere in the world that can be directly applied on patient blood.

**PERSONAL DATA**

**Name:** Abdul Haque

**Father's Name:** Abdul Hameed

**Date of birth:** 25th April, 1953.

**CNIC:** 33100-0263454-1

**Postal Address:** Dr. Abdul Haque, House No: 8, Street No: 12, Block W, Madina Town, Faisalabad 38000, Pakistan

**E-mails:** [ahaqnibge@gmail.com](mailto:ahaqnibge@gmail.com); ahaq\_nibge@yahoo.com

**Mobile:** 0300 - 6613134

**Qualifications:**

1. B. Sc. (Med. Tech), Jinnah Postgraduate Medical Center, University of Karachi (1972) 2<sup>nd</sup> in University
2. M. Sc. (Microbiology) University of Agriculture, Faisalabad (1975) 2<sup>nd</sup> in University  
Thesis title "Bacterial Infections of Urinary Tract in Humans"
3. Ph.D. (Med. Microbiology and Molecular Biology), Osaka University, Japan (1994).  
Title of thesis "Production, purification and characterization of botulinolysin, a thiol-activated hemolysin of *Clostridium botulinum*"
4. Postdoctorate (Med. Microbiology and Molecular Biology), Osaka University, Japan (1994-1995).

## INTERNATIONAL PUBLICATIONS

**Journals:** \* Corresponding author

**Published/ In Press:**

1. **Sadia Liaquat, Yasra Sarwar\***, Aamir Ali, Abdul Haque, Muhammad Farooq. 2018. Virulotyping of *Salmonella enterica* serovar Typhi isolates from Pakistan: absence of complete SPI-10 in Vi negative isolates. PLoS Negl Trop Dis 12 (11): e0006839. <https://doi.org/10.1371/journal.pntd>.
2. **Aysha Azhar, Samreen Rasool, Asma Haque, Sidra Shan, Muhammad Saeed , Beenish Ehsan and Abdul Haque \***. 2017. Detection of High Levels of Resistance to Linezolid and Vancomycin in *Staphylococcus aureus*. Journal of Medical Microbiology 66(9):1328-1331. DOI 10.1099/jmm.0.000566
3. **Salman M., St. Michael F., Ali, A., Jabbar, A., Cairns, C., Hayes, A. C., Rahman, M., Iqbal, M., Haque, A. and Cox, A. D.** 2017. First conjugation of Vi negative *Salmonella* Typhi O-specific polysaccharides with carrier proteins for preparation and evaluation of immunogenic conjugates. Journal of Immunological Methods 450 (2017) 27–33.
4. **Zainab Rahmat, Aamir Ali, Yasra Sarwar, Muhammad Salman and Abdul Haque\***. 2016. Purification and antigenic detection of O-specific polysaccharides of *Salmonella enterica* serovar Paratyphi A isolate from Pakistan: an emerging threat. Springerplus 5:1954.
5. **Saira Bashir\***, Abdul Haque, Yasra Sarwar and Ahmad Raza. 2015. Prevalence of integrons and antibiotic resistance among uropathogenic *Escherichia coli* from Faisalabad region of Pakistan. Archives of Clinical Microbiology 6:1-7.
6. **Muhammad Salman, Aamir Ali, Abdul Jabbar, Yasra Sarwar, Moazur Rahman, Mazhar Iqbal, Abdul Haque\***. 2015. Simplest identification, o-specific polysaccharide purification and antigenic evaluation of *salmonella enterica* serovar typhi vi negative isolate. EXCLI Journal 14: 1078-1084.
7. **Asma Rehman, Yasra Sarwar, Zulfiqar Ali Raza, Waheed S. Khan, Abdul Haque\*, Irshad Hussain\***. 2015. Metal Nanoparticles Assisted Polymerase Chain Reaction Based Method for Strain Typing of *Salmonella* Typhi. Analyst 140: 7366-7372 DOI: 10.1039/C5AN01286D (Published online).
8. **Anam Farid, Iram Naz, Asma Ashraf, Aamir Ali, Asad-ur-Rehman, Yasra Sarwar and Abdul Haque\***. 2015. Molecular detection of antimicrobial resistance in local isolates of *Staphylococcus epidermidis* from urinary tract infections in Faisalabad region of Pakistan. EXCLI Journal; 14:697-705.
9. **Aqsa Shaheen, Fouzia Ismat, Mazhar Iqbal, Abdul Haque, Rita De Zorzi, Osman Mirza, Thomas Walz and Moazur Rahman\***. 2015. Substrate Profile of Selected Putative Multidrug Resistance Transporters from Major Facilitator Superfamily of *Salmonella enterica* serovar Typhi. Infection and Chemotherapy; 21:357-362.

10. **Sadia Liaqat, Yasra Sarwar\*, Aamir Ali, and Abdul Haque.** 2015. Comparative growth analysis of capsulated (vi+) and acapsulated (vi-) *Salmonella* Typhi isolates in human blood. EXCLI Journal;14:213-219.
11. **Aamir Ali\*, So Jung An, Changfa Cui, Abdul Haque, Rodney Carbis.** 2014. Synthesis and immunogenicity evaluation of *Salmonella enterica* serovar Paratyphi A O-specific polysaccharide conjugated to diphtheria toxoid. Human Vaccines & Immunotherapeutics 10:5-10.
12. **Muhammad Asif Habeeb, Abdul Haque, Shoeib Nematzadeh, Aina Iversen, and Christian Giske\*.** 2013. Occurrence of virulence genes, 16s methylases, and plasmid-mediated quinolone resistance genes in CTX-M-producing *Escherichia coli* from Pakistan. European journal of Clinical Microbiology and Infectious Diseases. DOI 10.1007/s10096-013-1970-1.
13. **Muhammad Asif Habeeb, Abdul Haque, Shoeib Nematzadeh, Aina Iversen, and Christian Giske\*.** 2013. High prevalence of 16S rRNA methylase RmtB among CTX-M Extended- Spectrum  $\beta$ -Lactamase-Producing *Klebsiella pneumoniae* from Islamabad, Pakistan. Int Journal Antimicrob Agents. 41 (2013) 524– 526.
14. **Amna Afzal, Yasra Sarwar, Aamir Ali, Abbas Maqbool, Muhammad Salman, Muhammad Asif Habeeb, and Abdul Haque\*.** 2013. Molecular evaluation of drug resistance in clinical isolates of *Salmonella enterica* serovar Typhi from Pakistan. J Infect Dev Ctries 2013; 7(12):929-940.
15. **Saira Bashir\*, Abdul Haque, Yasra Sarwar, Aamir Ali and Muhammad Irfan Anwar.** 2012. Virulence profile of different phylogenetic groups of locally isolated community acquired uropathogenic *E. coli* from Faisalabad region of Pakistan. Annals of Clinical Microbiology and Antimicrobials 11:23 doi:10.1186/1476-0711-11-23.
16. **Tayyba Iftikhar, Khurram Nawaz, Asghar Butt, Yasra Sarwar, Aamir Ali, Abdul Haque\* and Tanveer Mustafa.** 2012. Genotyping of rotaviruses detected in children admitted to hospitals from Faisalabad region, Pakistan. Journal of Medical Virology 84:2003-2007.
17. **Tariq Ayesha, Abdul Haque \*, Aamir Ali, Muhammad Asif Habeeb, Muhammad Salman and Yasra Sarwar.** 2012. Molecular profiling of antimicrobial resistance and integron association of MDR clinical isolates of *Shigella* species from Faisalabad, Pakistan. Canadian Journal of Microbiology. 58: 1047–54 (2012).
18. **Aamir Ali, Changfa Cui, So Jung An, Abdul Haque\*, Rodney Carbis.** 2012. Preparation of immunogenic conjugates of *Salmonella enterica* serovar Typhi O-specific polysaccharides (OSP) with Diphtheria toxoid (DT). Human Vaccines & Immunotherapeutics (Formerly Human Vaccines) 8:2, 1–5.
19. **Abida Raza, Yasra Sarwar, Aamir Ali, Amer Jamil, Asma Haque and Abdul Haque\*.** 2011. Effect of biofilm formation on the excretion of *Salmonella enterica* serovar Typhi in feces. International Journal of Infectious Diseases 15, e747-752.
20. **Saira Bashir, Yasra Sarwar, Aamir Ali, Mashkoor Mohsin, Muhammad Azeem Saeed, Ayesha Tariq, and Abdul Haque\*.** 2011. Multiple drug resistance patterns in

various phylogenetic groups of uropathogenic *E.coli* isolated from Faisalabad region of Pakistan. *Brazilian Journal of Microbiology* 42: 1278-1283.

21. **Haque. A. 2011.** Current status of PhD education in biomedicine and health sciences in Pakistan. *Turkish Journal of Biochemistry* 36 (1): S42-S44.
22. **Mohsin, M., A. Haque \*, A. Ali, Y. Sarwar, S. Bashir, A. Tariq, A. Afzal, T. Iftikhar and M. A. Saeed.** 2010. Effect of ampicillin, gentamicin and cefotaxime on release of Shiga toxins from Shiga toxin producing *Escherichia coli* isolated during a diarrhea episode in Faisalabad, Pakistan. *Foodborne Pathogens and Disease* 7: 1-6.
23. **Saeed. M. A., A. Haque \*, A. Ali, M. Mohsin, S. Bashir, A. Tariq, A. Afzal, T. Iftikhar, and Y. Sarwar.** 2009. Relationship of drug resistance to phylogenetic groups of *E. coli* isolates from wound infections. *Journal of Infection in Developing Countries.* 3(9):667-670.
24. **Saeed. M. A., A. Haque \*, A. Ali, M. Mohsin, S. Bashir, A. Tariq, A. Afzal, T. Iftikhar, and Y. Sarwar.** 2009. A profile of drug resistance genes and integrons in *E. coli* causing surgical wound infections in the Faisalabad region of Pakistan. *Journal of Antibiotics.* 62, 319–323.
25. **Haque A., A. Raza, and Y. Sarwar.** 2009. Biofilm is not or poorly produced by Vi negative isolates of *S. Typhi*. The 7<sup>th</sup> International Symposium on Invasive Salmonellosis, Kilifi, Kenya, 25-28<sup>th</sup> Jan. 2009. Proceedings available on [www.ivi.org](http://www.ivi.org)
26. **Aamir. A., A. Haque\*, A. Haque, Y. Sarwar, M. Mohsin, S. Bashir, and A. Tariq.** 2009. Multiplex PCR for differential diagnosis of emerging typhoidal pathogens directly from blood samples. *Epidemiology and Infection* 137: 102-107.
27. **Mashkoo. M., A. Hussain , M. A. Butt, S. Bashir , A. Tariq , S. Babar , A. Ali, A. Haque, Y. Sarwar, and A. Haque\*.** 2007. Prevalence of Shiga Toxin-Producing *Escherichia coli* in diarrheal patients in Faisalabad region of Pakistan as determined by multiplex PCR. *J of Inf in Develop Coun* 1(2): 164-169.
28. **Haque, A., A. Haque\*, Y. Sarwar, and A. Ali.** 2006. Multiplex PCR for drug resistance against standard antityphoid drugs in blood samples of typhoid patients. *FEBS Journal (Formerly European Journal of Biochemistry)* 273: sp 33-34.
29. **Baker\*, S., Y. Sarwar, H. Aziz, A. Haque, A. Ali, G. Dougan, J Wain, and A, Haque.** 2005. The detection of Vi negative *Salmonella enterica* serovar Typhi in the peripheral blood of typhoid patients in the Faisalabad region of Pakistan. *J. Clin. Microbiol.* 43 (9): 4418-4425.
30. **Haque, A.\*, A. Naeem, A. Peerzada, A. Raza, S. Bashir, and G. Abbas.** 2001. Utility of PCR in diagnosis of problematic cases of typhoid. *Jap. J. Inf. Dis.* 54 (6): 237-239.
31. **Haque, A.\*, J. Ahmed, and J. A. Qureshi.** 1999. Early detection of typhoid by PCR. *Ann. Sau. Med.* 19: 337-341.
32. **Sekiya, K.\*, H. Danbara, Y. Futaesaku, A. Haque, N. Sugimoto, and M. Matsuda.** 1998. Formation of ring-shaped structures on erythrocyte membranes after treatment with botulinolysin, a thiol-activated hemolysin from *Clostridium botulinum*. *Inf. And Immun.* 66: 2987-2990.

33. **Sugimoto, N.\*, A. Haque, Y. Horiguchi, and M. Matsuda.** 1997. Botulinolysin, a thiol-activated hemolysin produced by *Clostridium botulinum*, inhibits endothelium-dependent relaxation of rat aortic ring. **Toxicon.** 35: 265-270.
34. **Matsuda, M.\*, A. Haque, and N. Sugimoto.** 1996. Brief exposure to a sublethal concentration of botulinolysin, a thiol-activated cytotoxin of *Clostridium botulinum* induces differentiation in HL60 cells. **Med. Microbiol. Immunol.** 185: 115-117.
35. **Matsuda, M.\*, A. Haque, and N. Sugimoto.** 1996. Steps in the large pore-formation by botulinolysin, a thiol-activated cytotoxin of *Clostridium botulinum*. **Med. Microbiol. Immunol.** 185: 114.
36. **Sugimoto, N.\*, A. Haque, Y. Horiguchi, and M. Matsuda.** 1995. Coronary vasoconstriction is the most common cause of death of rats intoxicated with botulinolysin, a hemolysin produced by *Clostridium botulinum*. **Toxicon.** 33: 1215-1230.
37. **Matsuda, M.\*, A. Haque, T. Senda, Y. Horiguchi, and N. Sugimoto.** 1995. The mechanism of action of botulinolysin, a thiol-activated cytotoxin of *Clostridium botulinum*. **Toxicon.** 33: 271.
38. **Mitsuyama, M.\*, T. Gonge, A. Haque, and M. Matsuda.** 1994. Induction of Interleukin 1 in peritoneal macrophages by botulinolysin and listeriolysin. **Jpn. J. Bacteriol.** 49: 1-5.
39. **Matsuda, M.\*, A. Haque, and Y. Horiguchi.** 1993. Mechanism of lethal action of *Clostridium perfringens* Type 1 enterotoxin. **Med. Micro. And Immun.** 182: 206.
40. **Matsuda, M.\*, N. Sugimoto, A. Haque, and Y. Horiguchi.** 1993. Target(s) of lethal action of botulinolysin and tetanolysin, thiol-activated cytotoxins of *Clostridium botulinum* and *Clostridium tetani*. **Med. Micro. And Immun.** 182: 201-205.
41. **Haque, A., N. Sugimoto, Y. Horiguchi, T. Okabe, T. Miyata, S. Iwanaga, and M. Matsuda\*.** 1992. Production, purification and characterization of botulinolysin, a thiol-activated hemolysin of *Clostridium botulinum*. **Inf. And Immun.** 60: 71-78.
42. **Sugimoto, N., A. Haque, A. Miyamoto, T. Okabe, Y. Horiguchi, and M. Matsuda\*.** 1991. Botulinolysin: Purification and its action. **Jpn. J. Med. Sci. Biol.** 44: 248-251.

#### **Book chapters:**

1. **Abdul Haque\*.** 2017. Significance of Vi negative isolates of *Salmonella enterica* serovar Typhi. Accepted for publication in Infectious Diseases and Nanomedicine III. Springer Nature Singapore Ltd.
2. **Yasra Sarwar, Aamir Ali, Asma Haque, and Abdul Haque\*.** 2014. Current status of antimicrobial resistance in enteric bacterial pathogens. *Frontiers in Clinical Drug Resistance –Anti –infectives* edited by Prof. Dr . Ata-ur-Rehman. Vol. 1, 263-307. Bentham Science Publishers, USA.
3. **Abdul Haque.** 2012. Therapeutic use of stem cells. *Applications of Biotechnology in Health and Agriculture* being published by Technical Expert Network, Singapore.

#### **Book (citation):**

1. **Alouf, J. E. and J. H. Freer.** 1999. The comprehensive sourcebook of bacterial protein toxins. 2<sup>nd</sup> Edition. Academic Press, London. Pages447-456.



## INTERNATIONAL PRESENTATIONS

### *(Keynote speaker in foreign countries)*

1. **Haque. A.** 2015. Keynote lecture “Significance of Vi negative isolates of *Salmonella enterica* serovar Typhi in causing typhoid fever.” ICIDN (International conference on Infectious Diseases and Nanomedicine) Kathmandu, Nepal from 15<sup>th</sup> to 18<sup>th</sup> December, 2015.
2. **Haque. A.** 2015. Rapid emergence of drug resistance in bacteria. Are we losing the battle? Keynote lecture, Serendivus International Conference on Medicine and Health, Colombo, Sri Lanka, March 17-18<sup>th</sup>, 2015
3. **Haque. A.** 2014. Dengue fever in Asia: 2011 epidemic in Lahore, Pakistan. 7<sup>th</sup> ACPID, Beijing, China, 12-15<sup>th</sup> October, 2014.
4. **Haque. A.** 2014. Diagnosis of travel associated enteric fever and GI infections. APTHC 2014 Conference, Ho Chi Min City Vietnam, 7-10<sup>th</sup> May, 2014.
5. **Haque. A.** 2011. Current status of PhD education in biomedicine and health sciences in Pakistan. 6<sup>th</sup> Orpheus Conference, Izmir, Turkey, 27-30 April, 2011.
6. **Haque A.** 2009. Biofilm is not or poorly produced by Vi negative isolates of *S. Typhi*. The 7<sup>th</sup> International Symposium on Invasive Salmonellosis, Kilifi, Kenya, 25-28<sup>th</sup> Jan. 2009. Proceeding available on [www.ivi.org](http://www.ivi.org)
7. **Haque A.** 2008. Immune response to vaccines. 2<sup>nd</sup> Jordanian-Egyptian Biotechnology Conference Irbid, Jordan 11-13<sup>th</sup> November, 2008.
8. **Haque A.** 2006. Modern Vaccines: Development and Challenges. 1<sup>st</sup> Egyptian-Jordanian Conference under the theme of Biotechnology and Sustainable Development: Current Status and Future Scenarios 11<sup>th</sup> to 14<sup>th</sup> December, 2006, Cairo, Egypt.
9. **Haque, A.** and A. Ali 2004. Development of a multiplex PCR for detection of *Salmonella typhi* and related pathogens. World Conference on Dosing of Antiinfectives, September 9-11, Neuremberg, Germany.
10. **Haque, A., A. Raza, S. Khurshid, and J. A. Qureshi.** 2000. Molecular studies on *Salmonella typhi* strains isolated from Pakistan. **Sixth Asian Conference of Clinical Pathologists** held at Pusan, Korea from 10<sup>th</sup>-14<sup>th</sup> October, 2000.

### **International Presentations: (Keynote speaker in Pakistan)**

1. **Haque, A.** 2013: Conjugate vaccines; a success story among modern vaccines. 10<sup>th</sup> IBCAST, 15-19<sup>th</sup> February, Islamabad.
2. **Haque A.** 2008. Immunity to Vaccines. Microbiology Conference. Arid University, Rawalpindi, December 2008.
3. **Haque A.** 2007. New Generation conjugate salmonella vaccine. International Workshop on Vaccines at COMSTECH, Islamabad held from 3-9<sup>th</sup> September, 2007.
4. **Haque A.** 2006. Vaccines: modern trends, prospects and pitfalls. 1<sup>st</sup> International Conference on Biotechnology and Informatics, Balochistan University of Information Technology and Management Sciences, 10-12<sup>th</sup> April, Quetta, Pakistan.
6. **Haque, A.** 2005. Emergence of Vi negative strains of *S. Typhi* and Their Importance in Vaccine Development. 18<sup>th</sup> FABOMB Symposium. Genomics and Proteomics in Health and Agriculture, November 20- 23, Lahore, Pakistan.
7. **Haque, A** 2005. Role of conjugate vaccines in combating infections caused by bacteria producing lipopolysaccharide antigens. Fifth International Biennial Conference of Pakistan Society for Microbiology, January 10-15, 2005, Karachi, Pakistan.
8. **Haque, A.** 2003. Conjugate vaccines in childhood: some recent advances. Seminar on Vaccine development, production and utilization in developing countries: issues, prospects and implications for Pakistan, August 8-10, 2003, Karachi, Pakistan.
9. **Haque, A.** 2002. PCR\_based diagnosis of typhoid: the Pakistan experience. Fifth International Symposium on Typhoid Fever & other Salmonellosis. Karachi, Pakistan from 4<sup>th</sup>-7<sup>th</sup> February.

### **International Presentations:**

1. **Raza, A., S. Bashir, and A. Haque.** 2002. Difference in drug resistance patterns of *Salmonella typhi* PCR tibotypes isolated from Pakistan. **Fifth International Symposium on Typhoid Fever & other Salmonellosis.** Karachi, Pakistan from 4<sup>th</sup>-7<sup>th</sup> February.
2. **S. Bashir, A. Raza and A. Haque.** 2002. Incidence of typhoid markers in cases of Hepatitis C. **Fifth International Symposium on Typhoid Fever & other Salmonellosis.** Karachi, Pakistan from 4<sup>th</sup>-7<sup>th</sup> February.
3. **Matsuda, M., A. Haque, and N. Sugimoto.** Brief exposure to sublethal dose of botulinolysin induced differentiation in HL60 cells. **International Workshop on pore-forming toxins**, 22-23 September, 1993 Mainz, Germany.
4. **Matsuda, M., A. Haque, N. Sugimoto, Y. Horiguchi, and T. Senda.** 1993. The biological effects of *Clostridial* pore-forming toxins. Presented at **10th FAOB symposium on Protein Research**, 8-10 December, Taipei, Taiwan.
5. **Haque, A., Y. Horiguchi, N. Sugimoto, and N. Matsuda.** 1993. Cytotoxicity of botulinolysin. Presented at **Meeting of Japanese Society of Bacteriology**, 16-17 November, Nara, Japan.

6. **Haque, A.** 1991. A new toxin (thiol-activated hemolysin) of *Clostridium botulinum*. Presented at **3rd International Conference of Pakistan Association of Pathologists**, 22-25 November, Lahore.

## NATIONAL PUBLICATIONS

### \* Corresponding author

1. **Haque A, A Haque, M Saeed, A Azhar, S Rasool, S Shan, B Ehsan, Z Nisar.** 2017. Rapid screening of pyogenic *Staphylococcus aureus* for confirmation of genus and species, methicillin resistance and virulence factors by using two novel multiplex PCR. *Pak J Med Sci.* 2017. 33(5) 1095-1100.
2. **Jabbar, A., M. Salman, A. Ali, A. Haque, and M. Iqbal\*.** 2014. Fatty Acid Profiling of Lipid a Isolated from Indigenous *Salmonella* Typhi Strain by Gas Chromatography–Mass Spectrometry. *Journal of the Chemical Society of Pakistan.* Vol: 36: 140-149. **2**
3. **Salman, M., A. Ali, Y. Sarwar, and A. Haque\*.** 2013. A novel multiplex PCR for detection of *Pseudomonas aeruginosa*: A major cause of wound infections. *Pak J Med Sci*2013;29(4):957-961. **11**
4. **Muhammad Asif Habeeb, Yasra Sarwar, Aamir Ali, Muhammad Salman, and Abdul Haque\*.** 2013. Rapid emergence of ESBL producers in *E. coli* causing urinary and wound infections in Pakistan. *Pak J Med Sci* 2013;29(2):540-544. doi: <http://dx.doi.org/10.12669/pjms.292.3144>. **17**
5. **Amna Afzal, Yasra Sarwar, Aamir Ali, and Abdul Haque.** 2012. Current status of fluoroquinolone and cephalosporin resistance in *Salmonella enterica* serovar Typhi isolates from Faisalabad, Pakistan. *Pak J Med Sci.* 28(4):602-607. **11**
6. **Bashir. A., A. Haque, S. Bashir, A. Ali, Y. Sarwar, and A. Haque\*.** 2009. Molecular analysis of drug resistance in clinical isolates of MDR *Salmonella enterica* serovar Typhi in Faisalabad, Pakistan. *Pakistan Journal of Zoology.* 41:363-369.
7. **Ali. A, A. Haque\*, Y. Sarwar, A. Haque, M. Mohsin, A. Afzal, T. Iftikhar, and A. Tariq.** 2008. Nested PCR based diagnosis of *Salmonella enterica* serovar Paratyphi A directly from blood samples. *Pakistan Journal of Medical Sciences.* 24:545-549. **6**
8. **Jamil, M., S. Bashir, M. Mohsin, A. Tariq, A. Bashir, A. Haque, Y. Sarwar, A. Ali, and A. Haque\*.** 2007. Differentiation of common gram negative pathogens by PCR-ribotyping. *Pakistan Journal of Medical Sciences.* 23:233-237. **5**
9. **Haque, A., A. Haque\*, Y. Sarwar, A. Ali, S. Bashir, A. Tariq and M. Mohsin.** 2005. Identification of drug resistance genes in clinical isolates of *Salmonella typhi* for development of diagnostic multiplex PCR. *Pakistan Journal of Medical Sciences.* 21: 402-407. **5**
10. **Samina, B., A. Haque\*, N. Ahmed, A. Raza, A. Haque, Y. Sarwar, A. Ali, S. Bashir, M. Ahmed, I. Ahmed, and J. Ahmed.** 2005. Significant incidence of typhoid in Hepatitis C patients. *The Professional.* 12:287-294. **1**
11. **Raza, A., A. Haque\*, S. Khurshid, J. A. Qureshi, A. Jamil, and M. A. Sheikh.** 2003. In vitro relationship between different levels of virulence and antibiotic resistance. *Inter. J. of Agri. and Biol.* 5: 2003.
12. **Haque, A.** 2003. Stem Cells. *The Professional.* 10: 2-5.

13. **Raza, A., Haque, A\*., and J. A. Qureshi.** 2000. Evaluation of PCR and Typhidot for early diagnosis of typhoid. **The Professional.** 8(3): 301-305.
14. **Haque, A\*., and N. Ahmed.** 2000. DNA vaccines. An overview. **The Professional.** 7 (3): 260-263.
15. **Qureshi, J. A.\*, W. A. Shah, R. Tabassum, A. Haque, Z. Yasin, and N. Ahmad.** 1998. Disease, DNA and diagnosis: Principles of molecular tests in infectious Diseases. **Inf. Dis. J.** 5: 38-40.
16. **Haque, A.\*** 1998. Cloning: progress or controversy. **The Professional.** 5: 115-117.
17. **Haque, A.\*** 1997. Polymerase Chain Reaction (PCR): A Review. **The Professional.** 4: 105-109.
18. **Haque, A.\*, R. Tabassum, and J. A. Qureshi.** 1996. An overview of modern methods of diagnosis of tuberculosis. **Doctor Intl.** 18: 6.
19. **Chaudhary, F. M., A. Haque,\* N. A. Chaudhary, and F. Mahmood.** 1986. Isolation of *Salmonella* organisms from stool culture of apparently healthy persons. **Pak. J. Med. Res.** 25: 182-185.
20. **Haque, A.\* and R. A. Cheema.** 1980. Bacterial infections of urinary tract. **The Bulletin.** 4: 19-23.

## NATIONAL PRESENTATIONS

### *(Invited speaker)*

1. **Haque. A. 2012.** Therapeutic use of stem cells. One day symposium on Applications of Biotechnology in Health and Agriculture. Organized by GC University and Technical Expert Network, Singapore on 28<sup>th</sup> March.
2. **Haque A. 2011.** Microbiology and Diagnosis of Dengue Fever. District Dengue Awareness Conference, Faisalabad.
3. **Haque A. 2008.** Immunity to Vaccines. 9th Biennial Conference on Advances in Biochemistry and Molecular Biology, December 17-20, 2008 held in Islamabad.
4. **Haque A. and Aamir Ali. 2008.** Development of conjugates for effective vaccination against typhoidal pathogens. National Commission for Biotechnology Conference, 28-29<sup>th</sup> May.
5. **Haque A. 2007.** Therapeutic Vaccines: An Overview. Sixth International Biennial Conference of Microbiology, 18-21 March National Library of Pakistan, Islamabad.
6. **Haque A. 2006.** Immune response against vaccines. National Workshop on Biotechnology Training Activities in Allergy Vaccine Development in Pakistan, Dr. Panjwani Center for Molecular Medicine and Drug Research, Karachi University, 3<sup>rd</sup> to 8<sup>th</sup> June, 2006, Karachi, Pakistan.
7. **Haque A. 2006.** Review of conjugate vaccines used against capsular bacterial pathogens. National Workshop on Biotechnology Training Activities in Allergy Vaccine Development in Pakistan, Dr. Panjwani Center for Molecular Medicine and Drug Research, Karachi University, 3<sup>rd</sup> to 8<sup>th</sup> June, 2006, Karachi, Pakistan.
8. **Haque A. 2006.** Immune response against vaccines. National Workshop on Biotechnology Training Activities in Allergy Vaccine Development in Pakistan, June 3-8, Dr. Panjawani Center for Molecular Medicine and Drug Research, University of Karachi, Karachi.
9. **Haque A. 2006.** Review of conjugate vaccines used against capsular bacterial pathogens. National Workshop on Biotechnology Training Activities in Allergy Vaccine Development in Pakistan, June 3-8, Dr. Panjawani Center for Molecular Medicine and Drug Research, University of Karachi, Karachi.
10. **Haque A. 2005.** Use of Multiplex PCR for diagnosis of drug resistance. Seminar on Therapeutic Agents and Diagnostic Kits. 14-16<sup>th</sup> February, Lahore.
11. **Haque, A. 2005.** Development of Multiplex PCR for Diagnosis of *Salmonella typhi* and detection of Drug Resistance. First National Conference on Health Biotechnology, 27-28<sup>th</sup> January, Lahore.
12. **Haque, A. 2001.** Stem cell research and ethical issues. Presented at COMSTECH forum, Islamabad on 28<sup>th</sup> August, 2001.

### **National Presentations:**

1. **Raza, A., A. Haque, and J. A. Qureshi.** 2000. In vitro relationship between drug resistance and antibiotic sensitivity in *Salmonella typhi*. Presented at Third International Conference of Pakistan Society of Microbiology, 28-30th March, Lahore.
2. **Haque, A., A. Raza, and J. A. Qureshi.** 1999. Early diagnosis of typhoid by PCR. Presented at Infectious Diseases Conference, 20-21 September, Aga Khan University, Karachi.
3. **Haque, A., and J. A. Qureshi.** 1997. PCR-based diagnosis of problematic cases of typhoid. Presented at 21st National conference of Pathologists, 14-16 November, Faisalabad.
4. **Haque, A., and J. A. Qureshi.** 1997. Advantage of using blood for PCR-based diagnosis of pulmonary tuberculosis. Presented at Second International Conference of Paksitan Society for Microbiology, 24-26 Septemeber, Bhurban.
5. **Haque, A.** 1997. Effect of different body fluids on PCR for *Mycobacterium tuberculosis*. Presented at 5th Annual Conference of Faisalabad Medical Society, 20-21 February, Faisalabad.
6. **Haque, A., F. M. Chaudhary, and N. A. Chaudhary.** 1987. Significance of coagulase negative *staphylococci* in clinical infections. Presented at 14th Annual PMA Faisalabad Conference, 5-6 February, Faisalabad.

## LIST OF PhD STUDENTS SUPERVISED

1. Abida Raza: Thesis title “Characterization of biofilm produced by clinical isolates of *Salmonella typhi*” (2003)
2. Asma Haque: Thesis title “Molecular detection of *Salmonella typhi* strains and their drug resistance pattern” (2007)
3. Yasra Sarwar (HEC scholar): Thesis title “Detection, and molecular analysis of local Vi negative strains of *Salmonella typhi*” (2007).
4. Aamir Ali (HEC scholar) for his thesis “Preparation of multiple conjugates (LPS-protein) for immunization against typhoidal diseases” (2008).
5. Saira Bashir for her thesis “Molecular characterization of human extraintestinal *Escherichia coli* isolates from Pakistan”.
6. Mashkooor Mohsin (HEC scholar) for his thesis “Isolation and characterization of Shiga toxin producing *E. coli* strains in intestinal and extra intestinal isolates from local population”.
7. Amna Afzal (HEC scholar): thesis title “Molecular characterization of chromosomal and extrachromosomal elements involved In drug resistance against *Salmonella enterica* serovar Typhi isolates from Pakistan”
8. Muhammad Asif Habib for his thesis “Biochemical and molecular characterization of local ESBL producing bacterial human pathogens”.
9. Ayesha Tariq: thesis title “Molecular Characterization of Virulence Genes and Drug Resistance of Local Human Isolates of *Shigella* Species”.
10. Tayyaba Iftikhar: thesis title “Molecular sub-typing of rotaviruses causing infection in children in local population”.
11. Muhammad Salman for his thesis “Preparation of polysaccharide-protein conjugates of *Salmonella* Typhi using BSA and *Pseudomonas aeruginosa* exotoxin A”.
12. Sadia Liaqat thesis title “Molecular evaluation of virulence in local isolates of *Salmonella enterica* serovar Typhi.”

## LIST OF M. Phil. STUDENTS SUPERVISED

1. Abida Raza: Thesis title “Relationship between virulence and drug resistance among *Salmonella typhi* strains as assessed by *in vitro* biofilm production” (2000). Sadia Khurshid: Thesis title “Discrimination of *Salmonella typhi* and related bacteria by PCR-ribotyping” (2001).
2. Samina Bashir: Thesis title “Incidence of typhoid in cases of Hepatitis C (2002).”
3. Syed Shakil Abbas: Thesis title “Determination of typhoid carriers in normal human population by PCR (2002).



4. Yasra Sarwar Thesis title: "Prevalence of Vi negative strains in Pakistani isolates of *Salmonella typhi*" (2003).
5. Hafsa Aziz: Thesis title "Relative efficacy of *fliC* gene and Vi-gene based methods for the diagnosis of suspected cases of typhoid" (2003).
6. Asma Haque: Thesis title "Phytochemistry and inhibitory effect of *Acacia arabica*, *Eucalyptus camaldulensis* and *Commiphora mukul* on oral bacterial population" (2001).
7. Zahida Parveen: Thesis title "Preparation and evaluation of a herbal mouth wash." (2001).
8. Aamir Ali: Thesis title "Development of a multiplex PCR for detection of *Salmonella typhi* and related pathogens" (2004).
9. Mamoona Naz: Thesis title "Isolation and characterization of hemolysin produced by *Escherichia coli* causing urinary tract and wound infections" (2004).
10. Hajra Sadia: Thesis title "Detection of *Escherichia coli* virulence genes in clinical samples using multiplex PCR" (2004).
11. Saira Bashir: Thesis title "Identification of integrons and drug resistance genes in the clinical isolates of Extraintestinal *E. coli*." (2005).
12. Mahwish Jamil: Thesis title "Molecular ribotyping of clinical isolates of enteric bacteria by PCR" (2006).
13. Aasia Bashir: Thesis title "Molecular analysis of genetic elements causing drug resistance in clinical isolates of MDR *Salmonella typhi*" (2006).
14. Muhammad Azeem Saeed for his thesis "Molecular analysis of drug resistance of *E. coli* isolated from wound infections" (2009).
16. Zainab Rehmat for her thesis "Extraction and purification of *Salmonella* Paratyphi a O-SP antigen for potential use in preparation of conjugate vaccines" (2010).
17. Naila Mushtaq for her thesis "Phenotypic and genotypic characterization of common ESBL producing Gram negative human pathogens"

#### **M. Sc.:**

1. Asma Haque: Thesis title "Phytochemical and microbiological screening of indigenous plants" (1998).
2. Farukh Jabeen: Thesis title entitled "Phytochemical screening and antimicrobial activities of *Solanum nigrum* (Mako), *Zingiber zerumbet* (Kachure) and *Rubia cardifolia* (Majith)" (1998).
3. Aasia Bashir: Thesis title "Comparison of PCRs targeting 5S-23S spacer region and *fliC* gene for detection of *Salmonella typhi*" (2003).

4. Mahwish Jamil: Thesis title entitled “Effect of continuous culture on activation of Vi operon in stored Vi negative strains of *Salmonella typhi*” (2003).

**Distinctions of Ph. D. students:**

1. Abida Raza selected for meeting with Nobel Laureates in Germany in 2003
2. Mashkooor Mohsin awarded prestigious Humboldt (Germany) scholarship – the youngest Pakistani to get it.

**Distinctions of M. Phil. students:**

Azeem Saeed won Gold Medal for best presentation in Iranian International Student Conference of Biotechnology, 15-17<sup>th</sup> November, 2008 at Teheran, Iran.

## PROJECTS AWARDED

### PI:

1. Preparation of conjugate vaccine for *Salmonella typhi* and *Salmonella paratyphi* A ( Ministry of Science and Technology worth 37 million)
2. Development of Multiplex PCR for diagnosis of *Salmonella typhi* and its drug resistance (funded by PSF worth 1 million)
3. Molecular typing of rotavirus infection in local population and development of a relevant multiplex PCR diagnostic procedure (Higher Education Commission worth 2.5 million)

### Co-PI:

1. Identification and characterization of MDR efflux pumps of *S. typhi* (Higher Education Commission worth Rs. 4.0 million).
2. Immunological characterization of outer membrane proteins of *Salmonella enterica* serovar Typhi as vaccine candidates(Higher Education Commission worth Rs. 3.4 million).
3. Development of molecular diagnostic strategy for characterization of multidrug resistant staphylococci (MRSA, VRSA) in local population (Higher Education Commission worth Rs. 3.5 million).
4. Molecular characterization of ESBL and carbapenemase producing isolates from Pakistan (Higher Education Commission worth Rs 2.7 million).

### Process development:

- *First to develop a PCR for diagnosis of typhoid anywhere in the world that can be directly applicable on patient blood.*

## MISCELLANEOUS

### **Organization of workshops/symposia:**

1. Symposium on “**Dengue fever: virus and vector control**” held at National Institute for Biotechnology and Genetic Engineering (NIBGE), Faisalabad from 31<sup>st</sup> January to 1<sup>st</sup> February, 2013.
1. Organized first ever workshop in Pakistan on “**Molecular diagnosis of dengue virus**” at NIBGE, Faisalabad from 1<sup>st</sup>-3<sup>rd</sup> February, 2012.
3. Co-organizer of “**Fifth International Symposium on Typhoid Fever & other Salmonellosis**”, held at Aga Khan University, Karachi (4-7<sup>th</sup> February, 2002)

### **Achievement Awards:**

1. Awarded a Gold Medal by PAEC/NIBGE for being the best scientist of the year 2000.
2. Awarded Research Productivity Allowance (RPA) for year 2009

### **Professional awards:**

1. Awarded an IAEA Fellowship (1<sup>st</sup> October to 31<sup>st</sup> December 2002) for research in Center of Molecular Microbiology and Infection, Imperial College, London, the leading typhoid research institute in world.
2. Awarded International Vaccine Institute scholarship to attend 6<sup>th</sup> International Advance Course on Vaccinology in Asia-Pacific region at Seoul, Korea from 15-20 May, 2006.

### **Committee membership:**

1. Member, National Vaccine Development and Production Task Force (VDTF), Pakistan
2. Member Peer Review Committee, National Testing Service, Pakistan
3. Member, Board of Studies, Kohat University, Pakistan
4. Member, Pakistan Microbiology Society

### **Reviewer (Journals):**

1. Clinical Infectious Diseases, USA (IF 8.3)
2. Journal of Hepatology UK (IF 7.0)
3. Infection, Genetics and Evolution (IF 2.8)
4. International Journal of Infectious Diseases (IF 2.4)
5. Foodborne pathogens and disease (IF 2.4)
6. Journal of Virological Methods (IF 2.0)
7. Journal of Infection in Developing Countries, Italy (IF1.2)
8. Journal of Virological Methods (IF: 2.1)
9. International Journal of Medical Sciences, NIH, USA

10. Archives of Microbiology, USA
11. International Journal of Medicine and Medical Sciences
12. Reviews in Infection, Austria
13. Journal of Clinical Medicine and Research
14. Journal of Microbiology and Antimicrobials
15. Journal of Medicine and Medical Sciences

**Reviewer (Projects):**

1. Higher Education Commission of Pakistan
2. Pak-US Joint Academic and Research Program
3. Pakistan Science Foundation