

Curriculum vitae of
Shakila Nargis Khan

Permanent address	Flat 7A, Garden Heights 13, Eskaton Garden road, Ramna, Dhaka 1000 Tel: (+880 2) 934 2464 (res.) and 01817 530043 (cell)
Working & Mailing address	Professor Department of Microbiology University of Dhaka, Dhaka 1000, Bangladesh Tel: (+880 2) 966 1900-73 (extension 7748) Fax: (+ 880 2) 9667222 E mail: shakila@du.ac.bd
Date and place of birth	Sep 26, 1971, Dhaka, Bangladesh
Marital status	Married

Academic qualification

- 1) **Post-doc** (2002-2004): Department of Biochemistry, McGill University, Montreal, Canada.
Project title: Effect of small molecules on the translation regulation.
- 2) **PhD** (1997-2000): Department of Biomolecular Sciences, University of Manchester Institute of Science and Technology (UMIST), Manchester, UK
Thesis title: Molecular characterization of the xylanolytic system in *Phanerochaete chrysosporium*.
- 3) **M.Sc.** (1991-1992, Exam held in 1995): Obtained from the Department of Microbiology, University of Dhaka, Bangladesh, and was awarded **First class** (position 2nd). A thesis was submitted for the partial fulfillment of the degree working in the Department of Microbiology, University of Dhaka, Dhaka-1000, Bangladesh.
Thesis title: Production and partial characterization of endoxylanase and endoglucanase by thermophilic fungi.
- 4) **B.Sc. (Honours)** (1988-1991, Exam held in 1993): Obtained from the Department of Microbiology, University of Dhaka, Bangladesh, and was awarded **First class** (position 2nd). Botany and Biochemistry were studied as minor subjects in addition.
- 5) **H.S.C.** (Higher Secondary Certificate) (1986-1988): Obtained from the Secondary and Higher Secondary Education Board, Dhaka, studying in Holy Cross College, Dhaka. **First Division** (79.3%) was obtained.
- 6) **S.S.C.** (Secondary School Certificate) (1986): Obtained from the Secondary and Higher Secondary Education Board, Dhaka, studying in Agrani School, Dhaka. **First Division** (81.4%) was obtained which placed me 14th in the combined merit list position in Dhaka Board.

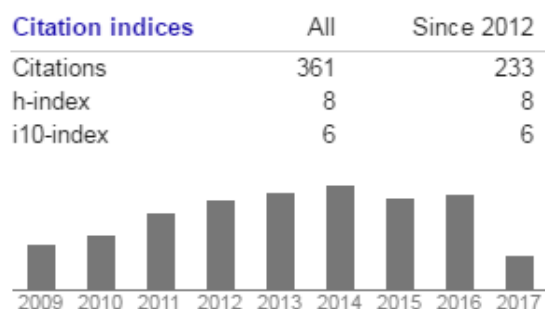
Research Projects

1. Enhanced production of Phytase from selected bacteria to be used as digestive aid in poultry feed in Bangladesh. 2019-2020. MoE (Ref
2. *Artemia* mediated biohazard control and management by probiotic technology for shrimp industries in Bangladesh. 2019-2020. S&T. Ref
3. "Enhanced production of alpha amylase from *Bacillus licheniformis* for potential application in textile industries of Bangladesh. Ministry of Science, Information, Communication and Technology. 2018-19. (Ref:39.00.0000.09.02.90.19-09/235/Gr.SL: BS-326).
4. Determination of Anticancer and Antibacterial Activities by the Violacein from '*Chromobacterium violaceum*' UGC, DU 2018-19. (Ref: Reg/Adm-3/61444)

5. Community Structure and Quality Assessment of *Artemia* Cysts Used as Shrimp Feed in Aquaculture Industries of Bangladesh. 37.20.0000.004.033.005.2014-1309/1 (42). MoE 2013-14
6. Cost effective expression and purification of recombinant 'keratinase' from *Bacillus licheniformis* for biotechnological application in Bangladesh. a project funded by Ministry of Science, Information, Communication and Technology (Reference: 39.009.002.01.00.053.2014-2015/92/BS-296)
7. "Production of fungal enzymes as inoculum for green jute retting in Bangladesh"– a project funded by Ministry of Science, Information, Communication and Technology (Reference: MOSIC&T/Sha-9/be anu pro-16/ 2007-2008/35, dated 13-02-2008).
8. 'Abundance and community structure of bacteria associated with *Artemia* cysts of used in hatchery operations of Bangladesh' a project funded by University Grants Commission Bangladesh, 2008-09.

Employment Record

Period	Position held	Name of the Institution
Feb 2011- Onwards	Professor	Department of Microbiology University of Dhaka, Dhaka, Bangladesh
Oct 2005- Feb 2011	Associate Professor	Department of Microbiology University of Dhaka, Dhaka, Bangladesh
Nov 2002- Oct 2004	Post-doctoral Fellow	Department of Biochemistry, McGill University, Montreal, Canada
Jun 2001- Oct 2005	Assistant Professor	Department of Microbiology University of Dhaka, Dhaka, Bangladesh



Sep 1999- Jun 2000	Student Demonstrator	Department of Biomolecular Sciences, University of Manchester Institute of Science and Technology (UMIST), Manchester, M60 1QD, UK
Sep 1997- Dec 2000	Graduate Student	Department of Biomolecular Sciences, UMIST, Manchester, M60 1QD, UK
Jan 1997- Jun 2001	Lecturer	Department of Microbiology University of Dhaka, Dhaka 1000, Bangladesh
Sep 1996- Dec 1996	Product Officer	Acme Laboratories (A pharmaceutical company) Satmasjid road, Dhaka, Bangladesh
June 1993- Dec 1995	Research Student	Bangladesh Jute Research Institute Manik Mia Avenue, Dhaka, Bangladesh

Publication record as calculated by Google Scholar

(<https://scholar.google.com/citations?hl=en&user=R9Klac8AAAAJ&btnA=1&cstart=20&pagesize=20>)

List of most significant publications

1. Hasan MM, Khan SN, Karim MM, Begum and Hoq MM (2019). Complete genome and plasmid sequence of a novel *Bacillus* sp. BD59S, a parasporal protein synthesizing bacterium. *3 Biotech*. 9:318.
2. Ferdous UT, Shishir AS, Khan SN and Hoq MM (2018). *Bacillus* spp: Attractive sources of anti-cancer and anti-proliferative biomolecules. *Microbial Bioactives*, 1(1):033-045.
3. Akter D, Khan MM, Mian MM, **Khan SN**, Hoq MM (2018). Phytase Production from a Novel *Klebsiella* sp. on Wheat Bran for Animal Feed Digestion. *Microbial Bioactives*, 1(1), 014-021.
4. Hossain MS, Akhter MZ, Hossain MM, Shishir MA, **Khan SN**, Hoq MM. 2018. Complete genome sequence of *Bacillus subtilis* strain MH1, which has a high level of bacteriocin-like activity, isolated from soil in Bangladesh. *Genome Announcement*. **6** (25): e 00516-18. <https://doi.org/10.1128/genomeA.00516-18>
5. Md. Arafat Al Mamun, Md. Mahmuduzzaman Mian, Mohammad Saifuddin, **Khan SN**, Md. Mozammel Hoq. (2017). Optimization of fermenting medium by statistical method for production of alkaline protease by *Bacillus licheniformis* MZK05M9. *Journal of Applied Biology & Biotechnology*. 5(6), pp. 24-28.
6. Md.Arafat Al Mamun, Md.Mahmuduzzaman Mian, Shamima Begum,Amika Ahmed Manzum, **Khan SN** and Md.Mozammel Hoq. (2017). Stabilization of protease from *Bacillus licheniformis* MZK05M9. *Bangladesh J Ind Microbiol Biotechnol*. 1(1):39-45.
7. Md. Asad uz Zaman, Md. Arafat Al Mamun, **Khan SN** and Md. Mozammel Hoq and Md. Abdul Mazid. (2016). Partial purification of Alkaline protease as thrombolytic agent from mutant strain *Bacillus licheniformis* EMS250-O-1. *Dhaka Univ. J. Pharm. Sci*. 15(2):135-141.
8. Nahar M., Shishir M.A., Waliullah S., Haque S., Ilias M., Karim M.M., **Khan SN**. and Hoq M.M. (2016). Cloning, expression and structure simulation of keratinase from *Bacillus licheniformis* strain MZK05. *Malays J Microbiol*. 12(1).
9. Al Mamun, Md Arafat, Md Abir Hosain, Sobur Ahmed, Fatema Tuj Zohra, Rajia Sultana, Md Murad Khan, Marufa Zerine Akhter, **Khan SN**, and Md Mozammel Hoq. "Development of an Alternative Enzyme-assisted Dehairing Method of Animal Skins using Proteases from *Bacillus licheniformis* MZK05M9." *Bangladesh Journal of Microbiology* 32 (2015): 33-37.
10. Khan T.T., Mamun A.A., Mian M.M., Khan SN. and Hoq M.M. (2015) Stability of *Bacillus licheniformis* MZK05 mutants upon mutagenic treatment for enhanced protease activity. *BANGL J BOT*.
11. Islam M.N., Akhand N.R., Mamun A.A., Shishir A., Aktar M.Z., **Khan SN**., Hoq M.M. and Hossain M.S. (2015). Screening and Characterization of Bacteriocin-Like Inhibitory Substances Produced by Bangladeshi Strains of *Bacillus thuringiensis*. *Bangladesh pharm. j*. 18 (2):149-156.
12. Mamun A.A., Khan M.M., Akand M.N.R., **Khan SN**. and Hoq M.M. (2015). Characterization of an alkaline protease with high quality bating potential in leather processing from *Bacillus licheniformis* MZK05M9 mutant. *Int J Biol Res*. 3(1):36-41.
13. Mourin M., Shishir A., **Khan SN**. and Hoq M.M. (2015). Regulation of major cultural components for designing a cost effective medium to increase δ -endotoxin synthesis by *Bacillus thuringiensis*. *Afr J Biotechnol*. 14(16): 1379-1386.
14. Shishir M.A., Pervin S., Sultana M., **Khan SN**., and Hoq M.M. (2015). Genetic Diversity of Indigenous *Bacillus thuringiensis* Strains by RAPD-PCR to Combat Pest Resistance. *Bt Research*. 6: 1-16.
15. Bhowmik A., Mourin M., Shishir M.A., **Khan SN**. and Hoq M.M. (2015) Development of a cost effective medium for enhanced production of *Bacillus thuringiensis* δ - endotoxin. *Bangladesh J Microbiol*. 32(1): 1- 6.

16. Shishir A., Bhowmik A., Akand N.R., Mamun A.A., **Khan SN.** and Hoq M.M. (2015). Efficacy of Indigenous *Bacillus thuringiensis* Strains for Controlling Major Vegetable Pests in Bangladesh. *Egypt J. Biol. Pest Control.* 25(3):729-734.
17. Salaheen S, Mamun M.A, **Khan SN.** and Md Mozammel Hoq. (2015) "Improvement of *Bacillus licheniformis* MZK05 by mutation for increased production of keratinase". *Dhaka Univ. J. Biol. Sci.* **24** (1):17-23
18. Md. Asaduzzaman Shishir, Asma Akter, Md. Bodiuzzaman, M Aftab Hossain, Md. Musfiqul Alam, Shakil Ahmed Khan, **Shakila Nargis Khan** and M Mozammel Hoq. 2015. Novel toxicity of *Bacillus thuringiensis* strains against melon fruit fly, *Bactrocera cucurbitae* (Diptera: Tephritidae). *Biocontrol Sci.* **20** (2).
19. Mamun M.A, Khan M.M, Akand MNR, **Khan SN,** Hoq MM. (2015). Characterization of an alkaline protease with high quality bating potential in leather processing from *Bacillus licheniformis* MZK05M9 mutant. *Int J Biol Res.* 3 (1):36-41
20. Shishir M, Roy A, Islam N, Rahman A and, **Khan SN** and Hoq MM (2014). Abundance and diversity of *Bacillus thuringiensis* in Bangladesh and their cry genes profile. *Front. Environ. Sci.* **2**:20.
21. Khandoker N., Mamun A.A., Nafiz T.N., **Khan SN.** and Hoq M.M. (2013). Strain improvement of *Trichoderma viride* through mutation for enhanced production of cellulase. *Bangladesh J. Microbiol.* 30(1&2):43-47.
22. Hoq M.M., Mamun A.A., Shishir M.A., Khan M.M., Akand M.N.R. and **Khan SN.** (2013). Bioprocess development for eco-friendly microbial products and impacts on bio-industry establishment in Bangladesh. *Proceedings of international conference on biotechnology*, 25-26 May, 2013.
23. Asaduzzaman Shishir, Asma Akter, Bodiuzzaman, Nasima Aktar, Mushfiqur Rahman, Dr. Shakil A. Khan, Mohammad Ilias, Shakila Nargis Khan and Mozammel Hoq. Molecular characterization of indigenous *Bacillus thuringiensis kurstaki* isolates from Bangladesh and toxicity of Btk HD-73 against melon fruit fly, *Bactrocera cucurbitae*. *Proceedings of 1st AFSA Conferences on Food Safety and Food Security* held in Osaka, Japan from September 15-17, 2012.
24. Shishir A, Akter A, Hassan MH, Kibria G, Ilias M, **Khan SN,** Hoq MM. (2012). Characterization of locally isolated *Bacillus thuringiensis* for the development of eco-friendly biopesticides in Bangladesh. *Journal of Biopesticides. J.Bio.pest.* **5**: 216-222.
25. Rahman S, **Khan SN,** Naser MN and Karim MM. (2011). Safety issues of isolated probiotic natured bacteria from Bangladesh coastal waters for controlling shrimp diseases. *J.Sci.Res.* 3(3): 659-668.
26. Hasan MH, Akter A, Ilias M, **Khan SN,** Hoq MM. (2010). Growth, sporulation and toxin production by *Bacillus thuringiensis* isolates in media based on mustard-seed meal. *Banglad J Microbiol.* **27** (2): 51-55.
27. Zahan Z, **Khan SN** and Hoq MM. 2010. Screening of keratinolytic bacteria from poultry wastes. *Bangladesh j. sci. ind. res.* 45(3): 261-266.
28. Sarker A, Rahman S, **Khan SN,** Naser MN and Karim MM.(2010). Optimization and partial characterization of a putative probiotic bacterium antagonistic to vibrios in shrimp larval rearing system. *Dhaka University J. Pharmaceutical Sciences.* 9(1):23-29.
29. Fahmi T, Karim MM, Rahman S, Naser MN and **Khan SN.** (2010). Abundance and Community Structure of Bacteria Associated with *Artemia* Cysts of Commercial Brands Commonly Used in Hatchery Operations of Bangladesh. *Bangladesh j. zool.* **38** (1): 41-49.
30. Rahman S, **Khan SN,** Naser MN and Karim MM. (2010). Isolation of *Vibrio* spp from penaeid shrimp hatchery and coastal waters of Cox's Bazar, Bangladesh. *Asian J Exp Biol Sci.* **1**(2): 288-293.

31. Rahman S, **Khan SN**, Naser MN and Karim MM. (2009). Application of probiotic bacteria: a novel approach towards ensuring food safety in shrimp aquaculture. *Journal of Bangladesh Academy of Sciences*. **33**(1): 139-144.
32. MT Alam, Karim MM and **Khan SN**. (2009). Antibacterial activity of different organic solvent extracts from *Achyranthes aspera* and *Cassia alata*. *J Sci Res* .**1** (2): 393-398.
33. Sarker A, **Khan SN**, Naser MN and Karim MM. (2008). Isolation of probiotic bacteria from natural sources to control diseases in shrimp aquaculture. *In: Food Safety and Hygiene*. N Choudhury, CR Ahsan and MM Karim (eds.), Bangladesh Academy of Sciences, Bangladesh. pp 129-135.
34. Francis Robert, Lee D. Kapp, **Khan SN**, Michael Acker, Randal J. Kaufman, William C. Merrick, Jon R. Lorsch and Jerry Pelletier. (2006). Translation initiation by the HCV IRES is refractory to reduced ternary complex availability. *Mol. Biol. Cell*. **17**(11):4632-4644.
35. **Khan SN** and Paul F. G. Sims. (2005). Molecular characterization of two endo-1,4- β -xylanase genes from *Phanerochaete chrysosporium*. *Bangladesh J. Bot*. **34**(2):101-108.
36. Marufa Z. Akhter, Adeeba Hussain and **Khan SN**. 2005. Plasmid mediated multi-drug resistance of *E. coli* isolated from urinary tract infection: a preliminary study. *Bangladesh J. Microbiol*. **22** (1): 55-58.
37. Malina A, **Khan SN**, Carlson CB, Svitkin Y, Harvey I, Sonenberg N, Beal PA, Pelletier J. (2005) Inhibitory properties of nucleic acid-binding ligands on protein synthesis. *FEBS Lett* **579**(1):79-89.
38. Jenny Chan, **Khan SN**, Isabelle Harvey, William Merrick and Jerry Pelletier (2004) Eukaryotic Protein synthesis inhibitor identified by comparison of cytotoxicity profiles. *RNA* **10**: 528-543.
39. Seraj, Z. I., Khan, H., Sarker, R. H., **Khan SN** and Islam, A. S. (2004) Harnessing biotechnology. *In Bangladesh in the new millennium* Edited by Abul Kalam. The University Press Ltd., Dhaka Bangladesh. pp 393-422.
40. **Khan SN**, Marufa Z. Akter and Paul F. G. Sims (2002) Cloning and Expression analysis of two endo-1,4- β -xylanase genes from *Phanerochaete chrysosporium*. *Plant Tissue Culture*. **12** (1): 57-68.
41. **Khan SN** and Paul F. G. Sims (2002) Substrate dependant PCR based analysis of *in vivo* expression of *Phanerochaete chrysosporium xynA* and *xynB* genes *Dhaka Univ. J. Biol. Sci*. **11** (2): 159-165.
42. **Khan SN**, Donald J. Gomes, G. Mohiuddin and Naiyyum Choudhury (1996) Characterisation of xylanase and β -xylosidase from *Thermomyces lanuginosus* TF5. *Bangladesh J. Microbiol*. **13** (1 & 2):49-56.
43. **Khan SN**, Donald J. Gomes, and Naiyyum Choudhury (1996) Optimization of culture medium for the production of xylanase from *Thermomyces lanuginosus* TF5 using Box-Wilson method. *Bangladesh J. Life Sci*. **8** (2): 35-44.
44. **Khan SN**, Donald J. Gomes, G. Mohiuddin and Naiyyum Choudhury (1995) Optimization of culture medium for the production of xylanases by a newly isolated thermophilic fungus *Thermomyces lanuginosus*. *Bangladesh J. Microbiol*. **12** (1 & 2):7-14.

*denotes peer-reviewed international journals

Publications in the GenBank

Khan, S. N., Loera-Corral, O., Aspinall, T.V. and Sims,P.F.G. (2001) *Phanerochaete chrysosporium* strain ME446 endo-1,4-B-xylanase A (xynA) gene, xynA-A allele, complete cds. **GenBank accession no. AF301902**.

Khan, S. N., Loera-Corral, O., Aspinall, T.V. and Sims, P.F.G. (2001) *Phanerochaete chrysosporium* strain ME446 endo-1,4-B-xylanase A (xynA) gene, xynA-B allele, complete cds. **GenBank accession no. AF301903**.

Khan, S. N., Loera-Corral, O., Aspinall, T.V. and Sims, P.F.G. (2001) *Phanerochaete chrysosporium* strain ME446 endo-1,4-B-xylanase B (xynB) gene, xynB-A allele, complete cds. **GenBank accession no. AF301904.**

Khan, S.N., Loera-Corral, O., Aspinall, T.V. and Sims, P.F.G. (2001) *Phanerochaete chrysosporium* strain ME446 endo-1,4-B-xylanase B (xynB) gene, xynB-B allele, complete cds. **GenBank accession no. AF301905.**

Research experience

In my stay in McGill University, I have worked on the effects of small molecules on the regulation of translation. My particular interest was to screen new inhibitors of eukaryotic protein synthesis using High Throughput Screening facility of McGill Cancer Center. I have worked on several synthetic compounds, natural products and plant extracts and finally identified few compounds as novel protein synthesis inhibitors which I had characterized both in vitro and in vivo. The importance of the project was not only to better understand the mechanism of the regulation of translation but a number of studies indicate that deregulation of protein synthesis is a major contributor in cancer initiation and progression.

While doing PhD, various techniques of 'Recombinant DNA technology' and 'Genetic engineering' were applied to complete molecular characterization of two different xylanase genes from the fungus *Phanerochaete chrysosporium*. This work represents the first description of any such genes from this important model organism. The data has been submitted in the GenBank database under accession numbers AF301902 to AF301905. RT-PCR method was used to investigate the kinetics of the expression of these genes. Overexpression and purification of these proteins using heterologous *E. coli* system were also performed. These products were characterized using peptide mass fingerprinting technique.

Abstracts / Poster Presentation in Conferences

1. Sushmita Roy, A Saha, SI Khan, MM Hasan, MM Karim, MM Hoq and **SN Khan**. Multiplex PCR for Differentiation of Closely Related Strains of *Bacillus cereus* Group. 32nd BSM Annual Conference 2019.
2. MM Hasan, **SN Khan**, MM Karim et al. Complete genome and plasmid sequence of a novel *Bacillus thuringiensis* strain BD59S, a HeLa cell killing parasporal crystalline inclusion protein synthesizing bacterium. 32nd BSM Annual Conference 2019
3. S Basak, S Sultana, MM Hoq, MM Karim, MN Naser and **SN Khan**. Bacterial Association with Artemia Cysts used in Aquaculture Industries of Bangladesh and use of Probiotics as Biocontrol Agent. 32nd BSM Conference
4. Hasan MM, **Khan SN**, Begum A, Karim MM and Hoq MM. Identification of Mosquitocidal Toxin Encoded Gene from Plasmid Sequence of indigenous *Bacillus thuringiensis* strain. Abstract number 100, 21st National Conference and AGM of Zoological Society of Bangladesh (ZSB), Shishu Academy, Bangladesh. 7-8 Dec 2018
5. Sadia Sultana, S Basak, MM Hoq, MM Karim, MN Naser and **SN Khan**. "Bacterial association with *Artemia* cysts: Concern for aquaculture industries of Bangladesh and use of probiotics as biocontrol agent". Poster presentation (P-84) in 4th Asian Food Safety and Security Association (AFSA) Int'l Conference, Aug 10-12, 2018, Angkor Paradise hotel, Seam Reap, Cambodia.
6. Shakila N. Khan, Sadia Sultana, Sushmita Basak, Md. Mozammel Hoq, Muhammad Manjurul Karim and M Niamul Naser. Poster on Localization, Abundance and Community Structure of Bacteria Associated with *Artemia* Cysts: Challenges and Possible Remedy. The 14th Asian Congress on Biotechnology (ACB, 2019).

7. Md. Mahmud Hasan, Shakila Nargis Khan, Anowara Begum and Md. Mozammel Hoq. Oral presentation on 'Finding cancer cell targeted nontoxic peptide therapeutics from transmembrane protein of nonhemolytic *Bacillus_thuringiensis*'. Oral Presentation on Bangladesh Zoological Society Conference. 2018.
8. Mukitu Nahar, Shakila Nargis Khan*, Muhammad Manjurul Karim, Md. Mozammel Hoq. Oral presentation on High level expression of recombinant keratinase from *Bacillus licheniformis*, The 13th Asian Congress on Biotechnology 2017 (ACB 2017) "Bioinnovation and Bioeconomy" .July 23-27, 2017 Pullman Khon Kaen Raja Orchid Hotel, Khon Kaen, Thailand.
9. Bangladesh Md. Mozammel Hoq, Arafat Al Mamun, Mukitu Nahar, Md. Mahmuduzzaman Mian, Trosposha Tasnim Khan, Muhammad Manjurul Karim and Shakila Nargis Khan, Key note presentation on "Bioprocess development for eco-friendly industrial enzymes from *Bacillus licheniformis*", *International conference on metabolic science*, 20-23 October, 2016, Nanjiao hotel, Shanghai, China.
10. Production and application of Eco-friendly Industrial Enzymes in Bangladesh. Presented (as keynote speech) at the 1st International Congress-2017 by Global Circle for Scientific, Technological and Management Research (GCSTMR), Nabab Nawab Ali Chowdhury Senate Bhavan, University of Dhaka, Bangladesh
11. Md. Arafat Al Mamun, Md. Mahmuduzzaman Mian, **Shakila Nargis Khan** and Md. Mozammel Hoq, Oral presentation on "Optimization of Fermenting medium by Statistical Methodology for Production of Alkaline Serine Protease by *Bacillus licheniformis* MZK05M9", 1st GCSTMR Congress, 4-5 February, 2017, Dhaka, Bangladesh.
12. Biopesticide of *Bacillus thuringiensis* JSc1 effectively cut chemicals in controlling caterpillars infesting vegetables. Presented at the 3rd AFSA Conference on "Food safety and Food Security" Sept 15-17, 2016, KIIT University, Bhubaneswar, India.
13. Md. Mahmuduzzaman Mian, Md. Arafat Al Mamaun, Muhammad Al Mamun, **Shakila Nargis Khan**, Md. Mozammel Hoq, Oral presentation on "Optimization of Amylase Production by *Bacillus licheniformis* MZK250 using Staistical Methods under Submerged Fermentation", 1st GCSTMR Congress, 4-5 February 2017, Dhaka, Bangladesh.
14. Asaduzzaman Shishir, Asma Akter, Bodiuzzaman, Nasima Aktar, Mushfiquir Rahman, Md. Shakil, Mohammad Ilias, Shakila Nargis Khan and Mozammel Hoq. **Molecular characterization of indigenous *Bacillus thuringiensis* kurstaki isolates from Bangladesh and toxicity of Btk HD-73 against melon fruit fly, *Bactrocera cucurbitae*. 1st AFSA Conferences on Food Safety and Food Security** held in Osaka, Japan from September 15-17, 2012.
15. Md. Asaduzzaman , Asma Akther, Mohammad Ilias, Shakila Nargis Khan, Md. Mozammel Hoq. **Characterization of Locally Isolated *Bacillus thuringiensis* for the Development of Eco-friendly Biopesticides in Bangladesh. Presented at the 3rd Biopesticide International Conference (BIOCON-2011)**, November 28 – 30, 2011, Tamil Nadu, India.
16. Characterization of *Bacillus thuringiensis* from different habitats of Bangladesh. Asdauzzaman Shishir, **Shakila Nargis Khan** and Md. Mozammel Hoq, Presented at the Meeting on Biopesticides Nomenclature organized by Neil Christopher, University of Sussex University, UK, 18 – 19th March, 2012.
17. Sumaiya , W., Asdauzzaman S., **Shakila, N.K.** and Mozammel Hoq, Cloning of *kerA* gene for increased production of keratinase from *Bacillus licheniformis* MZK-5. 26th Annual Conference, Bangladesh Society of Microbiologists, 21st January, 2012, Chittagong University, Chittagong
18. Developments of mutants of *Bacillus licheniformis* for increased production of keratinase. Salaheen S., Asdauzzaman S., **Shakila, N. K.** Ilias, M. and Md. Mozammel Hoq. 26th Annual Conference, Bangladesh Society of Microbiologists, 21st January, 2012, Chittagong University, Chittagong
19. Isolation and characterization of indigenous *Bacillus thuringiensis* from Bangladesh for Developing Eco-friendly Biopesticides. Md. Asaduzzaman , Kaniz Fatema, Mohammad Ilias,

- Shakila Nargis Khan**, Md. Mozammel Hoq. 26th Annual Conference, Bangladesh Society of Microbiologists, 21 January, 2012, Chittagong University, Chittagong
20. MM Hoq, MS Hossain, Nizamuddin, A Rahman, M Ilias and **SN Khan**. 2009. Biotechnological production and application of environmentally friendly industrial enzymes in Bangladesh. First Humboldt Kolleg International Conference. Theme: "Environmental challenges in the new millennium". Organized by Association of Humboldt Fellow Bangladesh at Senate Bhaban, University of Dhaka, and Dhaka Sheraton Hotel, 19-21 Nov 2009.
 21. A Sarker, **SN Khan**, MN Naser and MM Karim. Indigenous Probiotics can control Pathogenic *Vibrio* infection during Shrimp Larva Development in Hatcheries. Oral presentation and Abstract (no. 44) published on the proceedings of the "15th International Congress on Biotechnology in Animal Reproduction (ICBAR)." Bangladesh Agricultural University, Mymensingh, Bangladesh. 6-7 August 2008.
 22. Fahmi T, MN Naser, MM Karim and **SN Khan**. Bacteria in Dormant Embryonic Phase (cyst) of *Artemia*. Abstract no. 45 published on the proceedings of the "15th International Congress on Biotechnology in Animal Reproduction (ICBAR)". Bangladesh Agricultural University, Mymensingh, Bangladesh 06-07 August 2008.
 23. MT Alam, MM Karim and **SN Khan**. Antibacterial activity of different solvent extracts of *Achyranthes aspera* and *Cassia alata*. Abstract no. 49 published on the proceedings of the "24th Annual Conference of Bangladesh Society of Microbiologists (BSM) on Microbes in the Food and Environment", IFST auditorium, BCSIR (Science Laboratory), Dhaka, 28 June 2008.

Awards and Scholarships

1. "Commonwealth Scholarship" from Association of Commonwealth Universities (ACU), London, UK for doing PhD at UMIST, Manchester, UK, 1997-2000;
2. Dhaka University Grant Scholarship in B. Sc. (Honours), 1991;
3. Dean's Honours Award, Dhaka University, 1995;
4. Dhaka Board Scholarship in H.S.C. level, 1988;
5. Dhaka Board Scholarship in S.S.C. level, 1986;
6. "Chancellor's Award" in 1988 from the President of the People's Republic of Bangladesh;
7. Talent Pool Junior Scholarship in Dhaka Division, Bangladesh, 1983;
8. Talent Pool Primary Scholarship in Dhaka Division, Bangladesh, 1980

Referees

1. Paul F. G. Sims, PhD

Senior Lecturer in Molecular biology
Department of Biomolecular Sciences
University of Manchester Institute of Science and Technology (UMIST),
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2. Jerry Pelletier, PhD

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Department of Biochemistry
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3. Md Mozammel Hoq, PhD

Professor
Department of Microbiology
University of Dhaka, Dhaka 1000, Bangladesh