

# Mahmud Tareq Hassan Khan

## *Personal info*

**Father's Name** : Dr. Mohammad Hassan Ali Khan  
**Mother's Name** : Mrs. Mahmuda Hassan  
**Date of Birth** : September 23, 1973.  
**Nationality** : Bangladeshi (by birth)  
**Passport no.** : W0214241  
**Norwegian social security no.** : 230973-25375



**Present and mailing address:** GenØk – Center for Biosafety, Science Park, Breivika University of Tromsø, 9037 Tromsø, Norway. Cell. +47-97794171; Home phone: +47-776-99992; E-mails: [mahmud.khan@uit.no](mailto:mahmud.khan@uit.no); [mthkhan2002@yahoo.com](mailto:mthkhan2002@yahoo.com)

**Present home address:** Holmboevegen 3B, Tromsø 9010, Norway

**Permanent address:** House # 21, Road # 3 (Main Avenue), Section # 11, Mirpur, Dhaka-1221, Bangladesh.

**Marital status** : Married

**Name of spouse** : Arjumand Ather (Date of birth: Sep. 29, 1976) (Biotechnologist)

**Name of son** : Araz Mahmud Khan (Date of birth: Oct. 01, 2004)

**Name of daughter** : Aurora Fadilah Khan (Date of birth: Jan. 09, 2007)

## **Academic qualifications:**

**Ph. D.** – University of Tromsø, Norway – 2009 (in Molecular & Structural Biology) –

**Title of Thesis:** Thermolysin – A Prototype Zn-Metalloproteinase: Bioinformatics, Structural Biology and Discovery of Inhibitors

**M. Pharm.** (Thesis) – University of Science and Technology, Chittagong, Bangladesh - April, from 1997 to 2001 (Officially)

**Title of Thesis:** Study of the Pharmacological Activities of Mohot Ponchomul and Its' Individual Ingredients (24 months)

**B. Pharm.** (Honors; with Thesis) – University of Science and Technology, Chittagong, Bangladesh – from 1993 to 1997 (Officially)

**Title of Thesis:** Pharmaco-Toxicological Study of *Nigella sativa* Linn. and Pharmacotaxonomic study and Clinical Trials on Female UTI Patients and Male Normotensive Subjects (14 months)

## ✚ **Personal skills and working experiences:**

### ➤ ***Experimental experiences:***

1. *In vivo*: Several years working experiences with different *in vivo* methods and animal models, like mice, rats, guinea-pigs, rabbits, etc.
2. *In vitro* or *in situ*: Several years working experiences with different *in vitro*, *in situ* and on different isolated tissues or organ based methods;
3. Protein chemistry and enzymology: competitive binding studies, kinetic experiments, radio probe-based binding assays, Electrophoretic mobility shift assay (EMSA), preparation and screening of chemical arrays, etc.
4. Preliminary experiences of protein cloning and expression;
5. Molecular biology: DNA, RNA isolation and purification, cloning cDNA, different human and animal cancer cell cultures, cell counting, PCR, real-time RT-PCR, FACS, electrophoresis, etc.
6. Biophysical methods: SPR-based Biacore, general experiences with Calorimetry, etc.
7. Analytical methods: HPLC, GC, Mass Spectrometry, LC-MS, general experiences with NMR, etc.
8. Phytochemical methods: Isolation and purification of plant secondary metabolites, etc.

### ➤ ***Softwares experiences:***

1. Homology-based modelling, analysis and bioinformatics: ICM, Swiss-Modeller, different model analysis programs, CLC workbench, FASTA, BLAST, BioEdit, ClastalW, etc.
2. Molecular modelling softwares: HyperChem, Spartan, Gaussian, etc.
3. Molecular docking softwares: ICM, GOLD, MVD, MOE, Glide, etc.
4. Pharmacophore modelling and screening: LigandScout, MOE, etc.
5. Structure-based virtual screening: ICM, Glide, MVD, GOLD, etc.
6. Ligand-based virtual screening: PipeLine Pilot, ICM, etc.
7. Similarity-based screening and diversity analysis: PipeLine Pilot.
8. ChemoGenomic studies: PipeLine Pilot.
9. QSAR modelling: MVD, PipeLine Pilot, SigmaStat, etc.
10. Molecular descriptors based modelling: AdrianaCode, PipeLine Pilot, SigmaStat, etc.
11. Combinatorial library design: iLib Diverse, etc.

12. *De novo* library design: Pantheon MUSE.
13. Large molecular docking: HEX, PatchDock, ICM, etc.
14. Biomolecular simulations: MD using AMBER.
15. Visualization softwares: ICM, PyMol, Discovery Studio, MVD, VMD, Swiss PDB viewer, etc.
16. Intermolecular Interactions analysis: LigPlot, LigX (MOE), etc.
17. Statistical programs: SPSS, SigmaStat, SigmaPlot, R, etc.
18. General and graphical programs: MS Office, EndNote, Open Office, SigmaPlot, Harvard Graphics, Adobe PhotoShop, Adobe Elements, etc.
19. Chemistry programs: CS ChemOffice, ACD Chem, MDL ISIS, etc.
20. Operating systems: MS XP, Vista, Linux (Red Hat, Ubuntu), MAC OS, X Server, SSH, etc.

**Career tracks:**

1. Post-doc, GenØk – Center for Biosafety, Tromsø, Norway, from Sep. 1<sup>st</sup> 2009 to now;
2. *Visiting Scientist*, Department of Pharmacognosy, Faculty of Pharmacy, Gazi University, Ankara, Turkey, from Feb. 1 to 13, 2009.
3. *Research Fellow*, Department of Pharmacology, IMB, University of Tromsø, Norway, from 2005-Today.
4. *Researcher*, Department of Biochemistry and Molecular Biology, University of Ferrara, Italy, from 2004-2005;
5. *Senior Research Fellow*, International Center for Chemical Sciences, HEJ Research Institute of Chemistry, University of Karachi, Pakistan, from 2002-2004;
6. *Research Fellow*, International Center for Chemical Sciences, HEJ Research Institute of Chemistry, University of Karachi, Pakistan, from 2001-2002;
7. *Assistant Manager*, Product Management Department, Al-Amin Pharmaceutical Ltd., Bangladesh, 2001;
8. *Product Officer*, Product Management Department, Pharma Division, Advanced Chemical Industries (ACI), Bangladesh Ltd., 2001;
9. *Research Fellow*, World Health Organization, Bangladesh, from 1999-2001;
10. *Post-Graduate Student*, Department of Pharmacy, University of Science and Technology, Chittagong, Bangladesh, from 1997-1999;

11. *Graduate Student*, Department of Pharmacy, University of Science and Technology, Chittagong, Bangladesh, from 1993-1997.

**Fellowships and Awards:**

1. Research Fellowship, World Health Organization (WHO) (1999-2001).
2. The “South-South Fellowship”, Third World Academy of Science (TWAS), Italy (2001-2003).
3. The “UNESCO-MCBN” Fellowship, Switzerland (2003-2004).
4. “Young Investigator’s Award”, on Bioinformatics, PRICPS 2004, jointly by The Protein Society USA and the Protein Society of Japan (2004).
5. “Travel Grant” from Higher Education Commission (HEC) of the Government of Pakistan to attend PRICPS 2004, jointly by The Protein Society USA and the Protein Society of Japan (2004).
6. “Research Fellowship” from the Interuniversity Consortium for Biotechnology (CIB) Fellowship, Italy (2004).
7. “Research Fellowship” from Associazione Veneta per la Lotta alla Talassemia (AVTL), Italy (October, 2004 to December, 2005).
8. “Travel Grant” from Functional Genomics Platform of Northern-Norway (FUGE-NN), Norway, 2006.
9. “Travel Grant” from Functional Genomics Platform of Northern-Norway (FUGE-NN), Norway, 2008.
10. “Visiting Scientist Fellowship” from the Scientific and technological Research Council of Turkey (TUBITAK) – Scientific Human Resources Development (BIDEB-2221), Feb 01-17, 2009.
11. “Travel Grant” from Functional Genomics Platform of Northern-Norway (FUGE-NN), Norway, 2009.

**Professional Memberships:**

1. American Chemical Society (ACS);
2. Society for Biomolecular Screening (SBS), USA;
3. European Federation of Biotechnology (EFB);
4. European Association of Pharma Biotechnology (EAPB);
5. International Society for Computational Biology (ISCB), U. S. A.
6. International Science Advisory Board (SAB), USA;

7. European Society for Ethnopharmacology (ESE),
8. French Society for Ethnopharmacology,
9. Swiss Genomic Society (SGS),
10. International Society for Ethnopharmacology (ISE), Netherlands,
11. Canadian Society for Pharmaceutical Sciences (CSPS) [Membership # 524],
12. Japanese Society of Pharmacognosy (JSP) [Membership # 021-010-3930(1)],
13. Asian Network for the Research on Antidiabetic Plants (ANRAP),
14. Chemical Society of Pakistan (CSP),
15. Bangladesh Pharmaceutical Society (BPS),
16. Pharmacy Graduate Association (PGA), Bangladesh,
17. Bangladesh Association for Scientists and Scientific Professions (BASSP),
18. Bangladesh Photographic Society (BPS),
19. Chittagong Photographic Society (CPS), Bangladesh, etc.

#### **Journal Affiliations:**

##### **Reviewer of –**

1. Science, USA;
2. Drug Discovery Today; USA;
3. Nucleosides, Nucleotides & Nucleic Acids, USA;
4. European Journal of Medicinal Chemistry, Italy;
5. *In Silico* Biology, Germany;
6. Food and Chemical Toxicology, Elsevier Science, Netherlands;
7. Bioorganic and Medicinal Chemistry, Elsevier Science, Netherlands;
8. Bioorganic and Medicinal Chemistry Letters, Elsevier Science, Netherlands;
9. Molecules, MDPI, Switzerland;
10. Medicinal Chemistry, Bentham Sci Publisher, Netherlands;
11. Mini Reviews in Medicinal Chemistry, Bentham Sci Publisher, Netherlands;
12. International Journal of Computational Biology (IJCB);
13. Minerva Biotechnology, Italy
14. Medical Reports;
15. Phosphorus, Sulfur, and Silicon and the Related Elements, USA;
16. Archives of Biological Research;
17. Journal of Medical Systems;
18. Chromatographia, Elsevier Science, Netherlands;

19. Journal of the Science of Food and Agriculture;
20. Recent Patents on CNS Drug Discovery;
21. Journal of Biological Sciences;
22. International Journal Pharmacology;
23. E-book proposals, Bentham Science Publisher, Netherlands
24. Pakistan Journal of Science and Industrial Research, Pakistan
25. Journal of Medicinal Food, USA

#### **Editors**

1. Annual Reviews of Phytomedicine, Bentham Science Publisher, Netherlands;
2. Recent Trends on QSAR in the Pharmaceutical Perceptions, Bentham Science Publisher, Netherlands;

#### **Guest Editors**

1. Mini-Reviews in Medicinal Chemistry, Bentham Science Publisher, Netherlands
2. Minerva Biotechnology, Italy

#### **Technical Editors**

3. International Journal of Pharmacology;
4. International Journal of Biological Chemistry;
5. Research Journal of Phytochemistry;
6. Trends in Molecular Sciences;
7. Biotechnology;
8. Scirus™ Topics Page.

#### **Teaching Experiences:**

1. **Course Lecturer.** General Pharmacology, Bio-2031, to the M. Sc. students of the Department of Biology, University of Tromsø, Norway, from Feb., 2006 to present.
2. **Course Lecturer.** Pharmacology, Bio-3304, to the M. Sc. students of the Department of Biology, University of Tromsø, Norway, from Aug., 2006 to present.

#### **(Co-)Supervisions of Theses:**

1. Yimingjiang Wuxiuer, Thesis title: Theoretical and experimental studies of Thermolysin inhibition, University of Tromsø, Norway, Submitted: May, 2008.
2. Bente Sved Skottvoll, Project title: Zn-metalloproteinases in human health, University of Tromsø, Norway, 2009.

3. Tasmina Rahman, Thesis title: Comparative Pharmacological Studies between Spice and Non-spice Ayurvedic Herbs; Jahangirnagar University, Bangladesh. Submitted: February, 2001.
4. M. Rokonuddin, Thesis title: Clinico-pharmacological Study on the Renal Study of “Dasamool”. Jahangirnagar University, Bangladesh. Submitted February, 2001
5. Shayla Afroz, Thesis title: Study Report on the Efficacy and Safety of Traditional Medicines Claimed to Possess Anti-diarrhoeal, Analgesic and Diuretic Properties. Jahangirnagar University, Bangladesh. Submitted February, 2001
6. M. Shaphiullah, Thesis title: Pharmacological Studies of Extracts of *Ludwigia hyssopifolia* Linn. Dhaka University, Bangladesh. Submitted 2002.
7. M. S. Islam, Thesis title: Pharmacological Studies of the Root Extracts of *Rumex maritimus*. Dhaka University, Bangladesh. Submitted 2002.
8. Nushratun Nahar, Thesis title: Jahangirnagar University, Bangladesh. During 2000-2001.

#### **Lectures delivered:**

- ✚ **Invited Lecture**, *Structural Bioinformatics in the Discovery of Novel Drugs*. 9<sup>th</sup> Eurasia Conference on Chemical Sciences, Sep. 10, 2006, **Turkey**.
- ✚ **Invited Lecture**, *Structural Bioinformatics in the Discovery of Novel Drugs*. Faculty of Science and Arts, University of Trakya, Sep. 15, 2006, **Turkey**.
- ✚ **Lectures**, *Molecular Features & Inhibition of the Thermolysin Family of Enzymes*. Department of Pharmacology, June, 2006, UiTø, Tromsø, Norway; Lipari Summer School of Proteomics, Aug., 2006, Lipari, Italy; PhD School of Molecular and Structural Biology, Oct, 2006; and University Hospital Northern-Norway (UNN), Oct 06, 2006, Tromsø, **Norway**.
- ✚ **Invited Lecture**, *Aspects of Bioinformatics in Drug Design at Post-Genomic Era*, Jan. 17, 2006, University of Science and Technology, Chittagong, **Bangladesh**.
- ✚ **Visiting Invited Lecture**, *Why Bioinformatics?*, 30 July, 2007, University of Development Alternatives, Dhaka, **Bangladesh**.
- ✚ **Oral Presentation**, *Novel Putative Psychrophilic and Thermophilic Zinc Metalloproteinases from M4 sub-families*, “Bioinformatics for Young Scientists (BFYS)” Sommarøya, Tromsø, May 11-13, 2007, **Norway**.

- ✚ **Visiting Invited Lecture**, *Discovery and Designing Designer's Drugs (D<sup>4</sup>): Then and Now*. May 01-05, 2008, Department of Chemistry, Organic and Bioorganic Chemistry, Bielefeld University, **Germany**.
- ✚ **Visiting Invited Lecture**, *Molecular Modelling and Computational Chemistry: An Introduction*, Faculty of Pharmacy, Gazi University, Ankara, Feb. 12, 2009, **Turkey**.
- ✚ **Visiting Invited Lecture**, *Structural Bioinformatics in the Discovery of Novel Drugs*, Faculty of Pharmacy, Gazi University, Ankara, Feb. 10, 2009, **Turkey**.
- ✚ **Visiting Invited Lecture**, *Why Bioinformatics? Drug Design: Then and Now*, Faculty of Pharmacy, Gazi University, Ankara, Feb. 05, 2009, **Turkey**.

#### **Professional Trainings/Courses Attended:**

1. Successfully completed the six weeks "In-plant Training" program in the production facilities of former *GlaxoWellcome* (BD.) LTD. (presently GlaxoSmithKline, GSK, BD. Ltd.), Chittagong, Bangladesh, 1997.
2. Successfully done 7 days training on "Marketing and Regularity Affairs" organized by Pharmacy Graduates Association (PGA) in Dhaka (Bangladesh) from May 29 to June 4, 1999.
3. Successfully done 7 days training on "Utilization of Polymer and Biopolymer Chemistry", Dr. Shahadat Ali, Wolongong University, Australia, 2001.
4. Successfully done 7 days training on "Bio-inorganic Chemistry and their Medicinal Properties", Dr. Mahroof Tahir, St. Claud State University, Minnesota, USA, 2001.
5. Successfully done 15 days training on "Scientific Integrity" organized by H.E.J Research Institute of Chemistry, University of Karachi, Pakistan, August 1 to 15, 2002.
6. Successfully done 7 days training on "Total Synthesis of Important Natural Alkaloids", Prof. Ichiya Ninomya, Kobe Pharmaceutical University, Japan, October, 2002.
7. Successfully done 7 days training on "Diabetes and AGEing and their Complications", conducted by Dr. Neesar Ahmed, Department of Biological Sciences, Manchester Metropolitan University, UK, April, 2003.
8. Successfully attended "International Workshop on Bioinformatics" organized by COMSTECH-PTCL Frontier Technologies Research Center, Islamabad, Pakistan, April, 2003.
9. Successfully attended "International Workshop on The Development of Medicines from Plants" organized by H.E.J.-COMSTECH-TWAS, Karachi, Pakistan, September 8-13, 2003.

10. Successfully attended seven days several workshops on “New Approaches to Structure and Function of Proteins in Pacific-Rim”, organized jointly by the Protein Society, U.S.A., and the Protein Society of Japan, April 14-18, 2004, Yokohama [**Japan**].
11. Earned 4 ECTS (European Credit Transfer System) credits from University of Bologna, Italy, on “How Complex is Functional Genomics?”, from 13 to 19 February, 2005 [**Italy**].
12. Two-Days workshop on “Molecular Modelling and Drug Design” organized by Department of Pharmacology, University of Tromsø, Norway, December, 2005 [**Norway**]
13. One-Week workshop on “Bioinformatics of Transcriptional Regulation”, Swiss Institute of Bioinformatics, Jan 28-Feb1, 2008, Lausanne, Switzerland.
14. Two-Days industrial training on Biacore T100 Basic and Kinetic & Affinity Analysis, GE Healthcare, Uppsala, Sweden, March 4-5, 2008

### **Research Topics:**

#### **✚ Present Research Topics: *Bioinformatics, Structural Bioinformatics, and Medicinal Chemistry***

- ✚ “Molecular Insight of Thermolysin Family of Protein and Discovery of their Inhibitors”.
- ✚ “Molecular Recognitions for the Interactions of Cholinesterases Inhibitors using Structural Bioinformatics”.
- ✚ “Molecular Modeling and Chemoinformatic Studies of Tyrosinase Inhibitors and their Docking Experiments through Bioinformatic Approaches”.

### **Academic referees:**

#### **1. Prof. Ingebrigt Sylte**

Department of Pharmacology, Institute of Medical Biology, University of Tromsø, 9037 Tromsø, Norway; Office: +47-776-44705; Cell: +47-90834533; E-mail: [ingebrigt.sylte@uit.no](mailto:ingebrigt.sylte@uit.no)

#### **2. Prof. M. Mahroof Tahir**

Department of Chemistry, College of Science and Engineering, St. Cloud State University, St. Cloud, MN 56304, United States of America; Phone: +1-320-308-3198; E-mail: [mmahroof@stcloudstate.edu](mailto:mmahroof@stcloudstate.edu)

#### **3. Prof. Noriyuki Kurita**

Toyohashi University of Technology Department of Knowledge-Based Information  
Engineering Tempaku-cho, Toyohashi, 441-8580, Japan; Tel.: +81-532-44-6875,  
Fax: +81-532-44-6875; E-mail: [kurita@cochem2.tutkie.tut.ac.jp](mailto:kurita@cochem2.tutkie.tut.ac.jp)

**4. Prof. Roberto Gambari**

Department of Biochemistry and Molecular Biology, University of Ferrara, Ferrara,  
Italy; Email: [gam@unife.it](mailto:gam@unife.it)

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