

Tanvira Afroze Sultana

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SUMMARY:

Over 12 years of extensive experience in the field of haemato-oncology including haematopathology, molecular diagnostics, and clinical haematology. Strong leadership and organizing skills. Worked in tertiary level referral hospitals as well as low resource settings both in Bangladesh and abroad. Proven role as initiative-taker in introducing diagnostic facilities for hemato-oncology in the country. Extensive bench work experience of routine and special haematological investigations. Sound experience in molecular hematology including PCR and flow cytometry. Hard-working, used to multitasking and can work under tight deadlines. Very good writing and oral communication skills. Awarded as Young Physician Leader by InterAcademy Medical Panel (IAMP) in 2011 and invited again by IAMP as Chairperson and speaker at a core session in the Fourth World Health Summit at Berlin, Germany in 2012. Awarded TWAS (Third World Academy of Sciences) Young Scientist prize in medical sciences for 2013. Trained as Technical Assessor by Bangladesh Accreditation Board and Norwegian Accreditation Board on ISO 15189 Accreditation for Medical Laboratories.

SKILLS:

- Haematopathology including morphology of peripheral blood and bone marrow
- Stem cell research involving flowcytometry, PCR and other genetic assays, human cell culture and other biological assays
- Leadership skills in collaborative clinical and research work

EDUCATION:

- **PhD in Medical Science: 1999-2003**
Department of Hematology and Oncology, Division of Clinical Research, Research Institute for Radiation Biology and Medicine, Hiroshima University, Hiroshima 734, Japan.
- **MBBS: 1992-1997**
Lady Hardinge Medical College, University of Delhi, New Delhi, India

RESEARCH ACTIVITIES IN PHD COURSE

April 1999 to March 2003 Department of Hematology and Oncology
Faculty of Medicine
Hiroshima University
Supervisor: Professor Akiro Kimura, M.D., Ph. D

A four year post graduate course leading to Doctor of Philosophy in Medical Sciences. The lab specifically, focused on hematological disorders such as leukemias, lymphomas, myeloproliferative disorders, myelodysplastic syndromes(MDS), myelomas, aplastic anemias, platelet and other bleeding or thrombotic diseases to clarify their pathophysiology and utilize the information for diagnosis (gene diagnosis) and treatment (gene therapy, cell therapy). Studies performed were aimed to understand the mechanism of evolution and disease manifestation in MDS and MDS-AML patients including adhesion properties as well as proliferation

and differentiation pathways of stem cells of various types of leukemia and MDS at the signal transduction or gene expression level. Specific activities involved flow cytometric assays of G-CSF receptor and other adhesion molecules, gene expression patterns of factors upstream and downstream to the receptor expression level like AML1 gene, CEBP alpha and downstream signal transduction proteins of the JAK-STAT pathway using flowcytometry, qualitative PCR, real time PCR, PCR-SSCP, representative differential analysis (RDA), TA cloning, sequencing etc.

CAREER EXPERIENCE:

Senior Scientific Officer and Assistant Professor:

June 2004 to June 2009

July 2011 to August 2014

Haematology Section,

Laboratory Department,

Bangladesh Institute for Research and Rehabilitation of Diabetes, Endocrine
and Metabolic Disorders (BIRDEM),

122, Kazi Nazrul Islam Avenue, Dhaka 1000, Bangladesh

Major Responsibilities:

Overall administration of the Hematology unit of the Laboratory department as the Head. Responsibilities included performing as well as supervision of

- automated and manual routine laboratory tests,
- quality assurance of tests and equipments,
- equipment procurement and maintenance,
- planning and preparing project proposals for further upgrading of laboratory,
- networking with other labs and departments,
- clinical consultation for referral services etc.

Research activities:

- Established rtPCR based molecular cytogenetic tests for diagnosis and monitoring of haematological malignancies for the first time in BIRDEM, Bangladesh. Presently performing nested PCR for BCR/ABL, PML/RAR α , AML-MTG8 and CBF β /MYH11 in BIRDEM Laboratory in Bangladesh.
- Pioneer in performing epidemiological studies and molecular profiling of haematological malignancies in Bangladesh.
- Served as Principal Investigator of the largest multicentre study in Bangladesh till on demography of hematological malignancies in BIRDEM (completed). The study involved all the major medical institutes in and other large private hospitals.

Specialist -Registrar:

April 2009 to January 2010

Hematology Department, Square Hospitals Limited

RESEARCH PUBLICATIONS:

1. Hossain MS, Iqbal MS, Khan MA, Rabbani MG, Khatun H, Munira S, Miah MMZ, Kabir AL, Islam N, Dipta TF, Rahman F, Mottalib MA, Afrose S, Ara T, Biswas AR, Rahman M, Abedin AKMM, Rahman M, Yunus ABM, Niessen LW and Sultana TA. Diagnosed hematological malignancies in Bangladesh - a retrospective analysis of over 5000 cases from 10 specialized hospitals. BMC Cancer 2014, 14:438.
2. Mottalib MA, Sultana TA, Khalil MI, Gan SH, Islam MS, Choudhury S and Hossain MA. Phase distribution of chronic myeloid leukemia in Bangladesh. BMC Research Notes 2014, 7:142.
3. Choudhury S, Sultana TA, Islam MS, Islam, MA, Khanam PA. Multiple Myeloma – A hospital based cross sectional study in Bangladesh. J. Asiat. Soc. Bangladesh, Sci. 2012, 38(2): 189-198.
4. Gee RE, Jarniven T, Sultana TA, Destura R, Gjoneska B. IAMP tackles a void in medical leadership. The Lancet 2012, 379 (9813): 25.
5. Sultana TA, Mottalib MA, Islam MS, Khan MA, Choudhury S. rt-PCR method for diagnosis and follow up of haematological malignancies: first approach in Bangladesh. Bangladesh Medical Research Council Bulletin 2008, 34: 1-11.
6. Liu-L-G, Tanaka H, Ito K, Ito T, Sultana TA, Kyo T, Kimura A. Absence of gene mutation in TRAIL receptor 1 (TRAIL-R1) and TRAIL receptor 2 (TRAIL-2) in chronic myelogenous leukemia and myelodysplastic syndrome, and analysis of mRNA expressions of TRAIL and TRAIL-related genes in chronic myelogenous leukemia. Acta Haematologica 2005, 113 (2): 113-23
7. Kimura A, Sultana TA. Granulocyte colony-stimulating factor receptors on CD34++ cells in patients with myelodysplastic syndrome (MDS) and MDS-acute myeloid leukemia. Leukemia Lymphoma 2004, 45(10): 1995-2000.
8. Ito K, Tanaka H, Ito T, Sultana TA, Kyo T, Imanaka F, Ohmoto Y, Kimura A. Initial expression of interferon alpha receptor 2 (IFNAR2) on CD34-positive cells and its down regulation correlate with clinical response to interferon therapy in chronic myelogenous leukemia. European Journal of Haematology 2004, Vol 73 (3):191-205.
9. Sultana TA, Harada H, Ito K, Tanaka H, Kyo T, Kimura A. Expression and functional analysis of granulocyte colony stimulating factor receptors on CD34++ cells in patients with myelodysplastic syndrome (MDS) and MDS-acute myeloid leukemia. British Journal of Haematology 2003, Vol 121, 63-75.

ORAL AND POSTER PRESENTATIONS:

Title:

1. Status of haematological malignancies in Bangladesh - a retrospective analysis of over 5000 cases from 10 specialized and tertiary level hospitals. Bangladesh Cancer Congress Sept 2014, Dhaka, Bangladesh (poster, third prize).
2. Challenges in HbA1c analysis and reporting in the presence of variant hemoglobins. Diabetes and Endocrine Conference Feb 2014, Dhaka, Bangladesh (oral, first prize).
3. A comparison of hematological and cytogenetic parameters using qualitative PCR method in monitoring CML among Bangladeshi patients. International Conference on Biotechnology May 2013 titled “Application of Biotechnology in addressing the developmental needs of Bangladesh (poster).

4. Molecular Diagnostic Tests in Bangladesh: Challenges and Opportunities. In Proceedings of International Conference on Biotechnology, Dhaka, Bangladesh. May 25-26 2013: Application of Biotechnology in addressing the developmental needs of Bangladesh. (oral).
5. The status of Adult Haematological malignancies in Bangladesh – A retrospective study. 19th Conference of the Islamic World Academy of Science. May 2013 (poster).
6. The status of Adult Haematological malignancies in Bangladesh – A retrospective study. 24th Annual Conference & Scientific Seminar 2013 of Association of Physicians of Bangladesh. April 1-2 (poster prize, first).
7. Multiple Myeloma and diabetes – a hospital based cross sectional study in BIRDEM. In: Proceedings of the 7th SAARC Federation of Oncologists (SFO) International Cancer Conference. December 2012: 38 (oral).
8. Sultana TA, Mottalib MA, Islam MS, Choudhury S. rt-PCR analysis of fusion gene transcripts from chromosomal aberrations in haematological malignancies for initial diagnosis and detection of minimal residual disease. In: proceedings of the 1st National Conference on Cancer Prevention and Care, July 2006, Bangladesh Oncology Society, Dhaka, Bangladesh.
9. Granulocyte colony stimulating factor receptor expression and functional analysis of CD34++ cells in patients with MDS and MDS-AML. 2003. 42nd Chugoku-Shikoku Meeting of Japan Society of Hematology, Okayama, Japan. March 2003.

TRAINING WORKSHOP PARTICIPATION

- “Assessor Training Course on Medical Laboratories ISO 15189:2012” organized by Norwegian Academy (NA) and Bangladesh Accreditation Board (BAB) on 3 – 7 November 2013.
- “Initiatives in Science Education, Research and Capacity Building” organized by Bangladesh Academy of Sciences (BAS) and The World Academy of Sciences – Regional Office for Central and South Asia (TWAS-ROCASA) on 15-15 September 2013 in Dhaka, Bangladesh.
- “Awareness Course on ISO 15189” organized by UNIDO under Better Work and Standards Programme (BEST) on 24-25 August in Dhaka, Bangladesh.

AWARDS

- TWAS (Third World Academy of Sciences) and BAS (Bangladesh Academy of Sciences) Young Scientist Gold Medal 2012 in medical sciences.
- One of the 22 “Young Physician Leaders 2011”, awarded by Inter Academy Medical Panel (IAMP) at Berlin, Germany in October 2011.

AFFILIATIONS

- Member of the Haematology Society of Bangladesh.
- Member of Organization of the Women Scientists in the Developing World (OWSD)

PERSONAL INFORMATION

Nationality: Bangladeshi
 Visa Status: Permanent Resident eligible to work in USA.