



## President's Column



**Maj Gen Suhaib Ahmed**

Please accept my very best wishes for the new year. The PSH 14th National Haematology Conference is scheduled for 23rd to 25th Feb 2012. I am grateful to Prof Muhammad Javaid Asif and his team for taking the responsibility of organizing this event at the Sheikh Zaid Medical Complex Lahore. I am confident that the blossoming spring of Lahore would be a perfect match for this prestigious event. As usual the conference would be preceded by various workshops while the main event would include symposia, scientific sessions and poster presentations. On behalf of the organizing committee of the conference and Pakistan Society of Haematology I warmly welcome all of you to join us in making this event a success. I am sure this would be an excellent opportunity for scientific as well as social interaction between the members and the other colleagues.

I have been informed by Prof Khalid Hassan that the work on Haematology Updates and the PSH Textbook of haematology is on track. The long awaited textbook should be available during the next year. Earlier this year Dr. Tahir Shamsi had suggested establishing National database/registries of important haematological disorders in Pakistan. It is a good idea and would certainly provide a sound basis for planning and conducting research. I would like to reiterate full support for this noble cause.

I had pointed out in the previous newsletter that the recent outbreak of dengue has posed new challenges for us. Transmission of dengue by blood transfusion in endemic areas may be a rare event (Tambyah et al, N Engl J Med 2008; 359:1526-1527). But I was wondering as to what would it be like in an epidemic of the scale that we recently had at Lahore? The preclinical viraemia in a donor is certainly a potential risk for dengue transmission. Detection of such individuals is far beyond the reach of the available serological methods. In an endeavor to find out the potential risk involved and how to detect such high risk donors we are conducting research at AFIP. We have developed a very sensitive and low cost Taqman probe based real time PCR for dengue infections. It is a pan dengue PCR targeting the 3'-UTR shared by the four known genotypes of the virus. The PCR can be useful in the diagnosis of very early febrile stage of dengue when the serological tests are mostly negative. We are also aiming at finding the prevalence of healthy individuals who are asymptomatic carriers of the virus during a full blown epidemic of dengue. We have also developed a very low cost real time PCR for malaria. Besides the diagnostic use of PCR for dengue and malaria our major objectives are to use these for screening of blood donors. Hopefully the results of this research would enable us to formulate recommendations for Nucleic Acid Testing of donors for dengue and malaria. I would like to invite the readers to kindly give your comments and suggestions on this issue.

With warm regards,  
**Maj Gen Suhaib Ahmed**



# Academics

## Molecular Diagnostics

Contributed by: Maj Gen Suhaib Ahmed

MBBS; MCPS; FCPS (Pak); PhD (London)

Armed Forces Institute of Pathology Rawalpindi

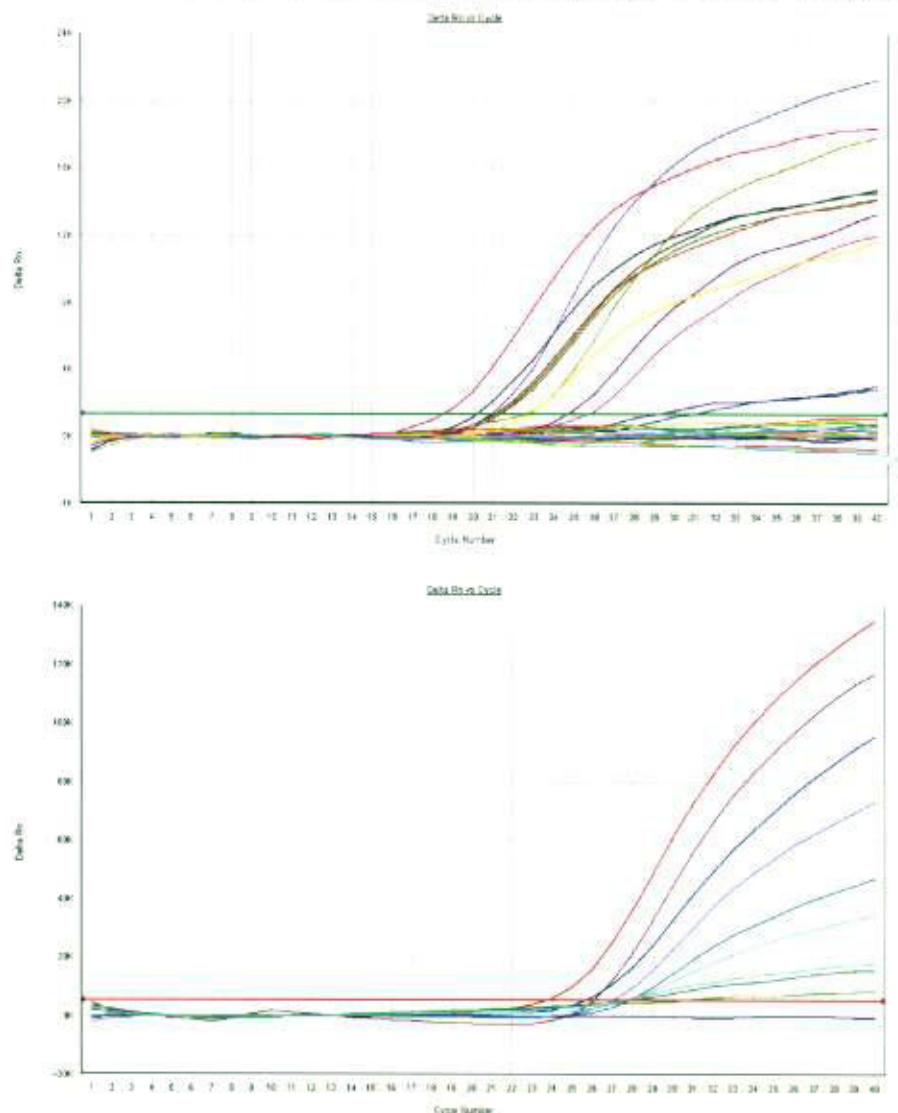
## PCR for Malaria and Dengue fever:

Malaria is a major tropical illness that globally causes up to 500 million clinical cases and 2.7 million deaths each year. More recently Dengue has also emerged as a new challenge that infects 50 to 100 million people worldwide each year. It causes up to 500,000 hospital admissions and approximately 12,500–25,000 deaths.

After the recent epidemics of dengue in Pakistan, malaria and dengue are considered at the top of the list in the differential diagnosis of a patient with acute febrile illness. The treatment of such patients requires accurate and rapid diagnosis. Microscopic examination of blood smear is the "gold standard" for diagnosis of malaria. Surrogate markers like blood counts and the absence of malarial parasite on morphology supports the diagnosis of dengue. Microscopy is reasonably sensitive and very specific but the method is laborious and time-consuming. Several antigen capture assays have also been developed that are rapid and sensitive. The confirmation of dengue is mostly done by serological tests. However, the later are mostly negative during the early febrile period of illness.

We have developed Taqman probe based in-house real time PCR for malaria and dengue (Fig 1 & 2). The PCR for malaria targets the small-subunit (SSU) rRNA gene present in all four sub-species of Plasmodium. Similarly the PCR for dengue targets the highly conserved 3' un-translated RNA sequences present in the four genotypes of dengue virus. Besides being extremely sensitive the two assays are very cost effective and the testing can be completed within three hours of collecting blood samples.

Fig 1. Real Time PCR for dengue. Out of the 22 blood samples tested 10 were strongly positive whereas 2 samples showed a weak





positive result. Most of the positive samples were from patients with 2-3 days history of fever and these patients were also Dengue IgM negative. The negative samples were from patients who either did not have dengue infection or had cleared the virus as a result of the natural course of illness.

Fig 2. Real Time PCR plot of a serially diluted sample of DNA extracted from whole blood of a patient with Plasmodium vivax malaria. The PCR is several times more sensitive than the conventional microscopy.

### **BRAF mutation in Hairy Cell Leukaemia:**

In a recent landmark paper (Tiacci et al, 2011, N Engl J Med 364: 2305-2315) reported the BRAFV600E point mutation in all 47 patients of Hairy cell leukaemia (HCL). None of the 195 patients with other peripheral B-cell lymphomas and leukaemias had this mutation. The patients with HCL variant also did not show the mutation.

Recently we did genomic sequencing of the BRAF gene on DNA extracted from archival bone marrow smears of five patients of HCL diagnosed at AFIP. Interestingly three of the patients showed clear evidence of the BRAFV600E mutation (Fig 3). Likely explanation for the absence of mutation in the two patients could be the low numbers of hairy cells in the diluted marrow smears used for the DNA extraction.

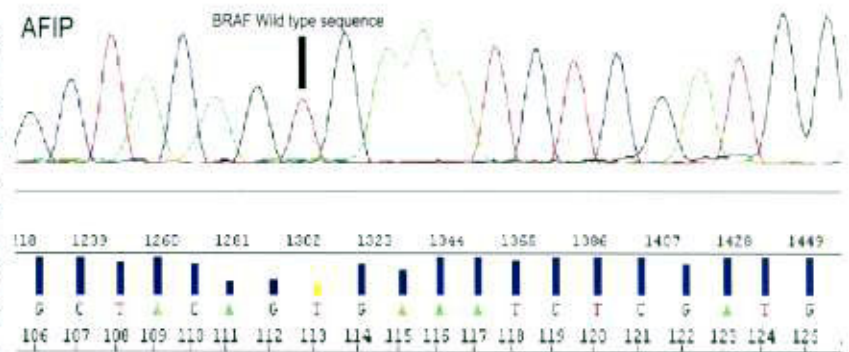
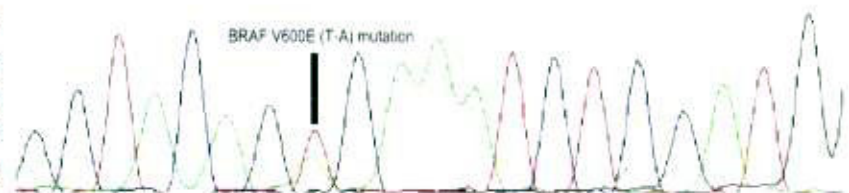


Fig 3. Genomic sequencing of a patient with HCL and the wild type (normal) DNA. The A-T substitution is clearly demonstrated in the patient samples (bottom) as compared to the normal (top).



### **ASH Provides Hematology Training Support to Promising Physicians from Developing Countries**

**Contributed by: Dr Muhammad Nadeem  
MBBS, MCPS, FCPS (Hematology)  
Consultant Haematologist National  
Institute of blood diseases Karachi  
Information Source: ASH**

(WASHINGTON, October 7, 2011) - The American Society of Hematology (ASH) announced the 11 hematologists and medical professionals from developing countries selected to participate in the Society's 2011 Visitor Training Program. This program provides funds for hematologists and medical professionals from developing nations to train on a specific topic or technique under the mentorship of an ASH member anywhere in the world for up to 12 weeks. Once participants complete their training, they return to their home institutions to implement what they have learned





and share their new skills with colleagues. "The Visitor Training Program provides these talented doctors and scientists from developing countries with a valuable opportunity to learn new and advanced approaches to patient care and research that they do not have at their home hospitals or research institutions," said ASH President J. Evan Sadler, MD, PhD, of the Washington University School of Medicine in St. Louis. "By providing program participants with specialized, individualized training that they can implement at their home institutions, ASH is helping to increase the quality of hematologic care in underserved areas around the world."

Recipient	Training	Mentor/Institution
Walter Gabriel Borelli Piedras, MD <i>Uruguay</i>	Clinical care of chronic graft-versus-host disease (cGVHD) patients.	Dr. Marcos J.G. De Lima, MD University of Texas, Houston, TX
Lallindra Viranjan Gooneratne MD, MBBS, FRCPath <i>Sri Lanka</i>	Flow cytometry in hematologic malignancies.	Stephen Devereux, PhD, FRCP, FRCPath King's College Hospital, London, UK
Naima Islam, MBBS, FCPS (Hematology) <i>Bangladesh</i>	Treatment protocols and procedures for leukemia.	Vikas Gupta, MD, FRCP, FRCPath Princess Margaret Hospital, Toronto, Ontario, CA
Ana Ilda Ayala Lugo, PhD, MsC <i>Paraguay</i>	Training in immunofluorescence with anti-PML, RT-PCR, qRT-PCR and FISH diagnostic and disease monitoring with emphasis in acute promyelocytic leukemia (APL).	Eduardo Magalhães Rego, MD, PhD University of São Paulo, Medical, São Paulo, Brazil
Muhammad Nadeem, MBBS, MCPS, FCPS (Hematology) <i>Pakistan</i>	Techniques involved in diagnosis and management of suspected cases of myelodysplastic syndromes (MDS).	Azra Raza, MD Columbia University, New York, NY
Ninoska Rojas Soto, MD <i>Peru</i>	Data banking and management of acute promyelocytic leukemia (APL) cases.	Eduardo Magalhães Rego, MD, PhD University of São Paulo, Medical, São Paulo, Brazil
Humayoon Shafique Satti, M. Phil <i>Pakistan</i>	Stem cell culture techniques.	Rupert Handgretinger, MD Children's University Hospital, Tübingen, Germany
Manju Sengar, MD, DM <i>India</i>	Gene expression profiling (microarray methodology and data analysis).	Sandeep Dave, MD, MS Duke University, Durham, NC
Alain Nsabimana Uwumugambi, MD <i>Rwanda</i>	Assessment of the morphology of peripheral blood work and bone marrow aspirates.	Leslie Lehmann, MD Dana-Farber Cancer Institute, Boston, MA
Rafil Toma Hurmiz Yaqo, MBChB, FIBMS <i>Iraq</i>	Latest developments in the diagnostics of malignant lymphomas.	Aliyah R. Sohani, MD Massachusetts General Hospital, Boston, MA
Dina Yassin, MD <i>Egypt</i>	Gene sequencing and analysis to improve the evaluation and treatment of pediatric leukemias in Egypt.	Lia Gore, MD Children's Hospital Colorado, Aurora, CO





The Visitor Training Program is designed for hematologists and scientists in developing countries at any level in their careers. In addition to being paired with a mentor, each participant is paired with a member of the ASH International Members Committee, who assists in the development of participants' programs and implementation of their new expertise at their home institutions following their training.

**To arrange an interview with a Visitor Training Program participant or mentor:** please contact Lindsey Love, ASH Communications Assistant, at 202-552-4925 or [llove@hematology.org](mailto:llove@hematology.org).

The American Society of Hematology ([www.hematology.org](http://www.hematology.org)) is the world's largest professional society concerned with the causes and treatment of blood disorders. Its mission is to further the understanding, diagnosis, treatment, and prevention of disorders affecting blood, bone marrow, and the immunologic, hemostatic, and vascular systems by promoting research, clinical care, education, training, and advocacy in hematology. The official journal of ASH is Blood ([www.bloodjournal.org](http://www.bloodjournal.org)), the most cited peer-reviewed publication in the field, which is available weekly in print and online.

**Contact: Lindsey Love, American Society of Hematology**  
[llove@hematology.org](mailto:llove@hematology.org); 202-552-4925

## PSH News

### 5TH FCPS HAEMATOLOGY INTENSIVE COURSE

*Contributed by: Dr Nisar Ahmed*

5th FCPS Haematology Intensive course was organized by Haematology & Transfusion Medicine Division of The Children's Hospital and Institute of Child Health, Lahore in collaboration with Pakistan Society of Haematology and College of Physicians & Surgeons Pakistan from 16th Nov. to 19th Nov. 2011. Renowned Haematologist from all over Pakistan participated and shared their knowledge and experiences with junior colleagues. Post Graduate residents from different centers attended the course and gained plenty of experience.

Inauguration ceremony took place on 16th Nov. It was presided over by Medical Director, The Children's Hospital Prof. Dr. Ahsan Waheed Rathore. Prof. Dr. Abdul Hayee was the Chief guest. Dr. Nisar Ahmed started the session with recitation of Holy Quran followed by a comprehensive review about the course detail. Respected Prof. Dr. Abdul Hayee shared his experience and highlighted important aspects of Haematology training. First day academic session was given to Transfusion Medicine Dr. Moona Aziz, Associate Professor Shaikh Zaid Hospital Lahore discussed different real life time scenarios about daily transfusion practice. Dr Samina Amanat from PAEC Hospital, Islamabad gave an interesting talk about blood component preparation. Both teachers were interactive and were highly appreciated by all. Dr. Unaiza Qamar, Assistant Professor The Children's Hospital Lahore gave a brief presentation about Antibody Identification and simplified different aspect about topic.

2nd half day was given to Transfusion Medicine practical. Each participant was given opportunity to perform practices individually and covered all important aspect of transfusion module.



2nd day of course was specified for coagulation medicine. Prof. Dr. Tahria Zafar gave a comprehensive outline for pregnancy related haemostatic issues in interesting interactive session. It was followed by case discussion by Dr. Javeria Aijaz Assistant Professor KEMU. 2nd session included coagulation practical. All participants were given chance to identify different coagulation factor deficiencies.

3rd day of FCPS course started with lecture from Brig. Tariq Satti from CMH, Lahore who gave a comprehensive review about BMT complications. It was followed by Hemoglobinopathies session. Different case scenarios were discussed by Dr. Asma Sadia Consultant Hematologist Shalimar Hospital, Lahore.

Morphology session started with important cases were given to participants for identification. 3rd session of day included lecture by Brig. Pervaiz Ahmed about immune Thrombocytopenia. He also gave management plan for Thrombosis case scenarios.

In end of session morphology cases were discussed by Prof. Dr. Samina Naeem from KEMU and Brig. Dr. Tariq Satti. They highlighted important diagnostic points regarding morphology. It turned to be very active interactive session.

The last day of course started with updates about immune thrombocytopenia by Dr. Muhammad Irfan from Liaquat National Hospital Karachi. He discussed management of patients in different age groups. 2nd speaker was Dr. Moona Aziz Associate Professor, Shaikh Zaid Hospital, Lahore. She discussed morphology cases and gave important diagnostic clues to residents. Closing ceremony was honoured by Prof. Dr. Muhammad Amjad, controller examination CPSP, Lahore. He delivered a speech about CPSP achievements in previous years and highlighted different issues about FCPS training and examination.

Dr. Nisar Ahmed thanked all the participants of course and certificates & shields were distributed by Chief Guest.

## **MASTER IN TRANSFUSION MEDICINE & TISSUE TYPING**

**COURSE: Contributed by: Dr. M. Akbar Agha Professor of Pathology  
Dow International Medical Collage, Director, Dow Institute of Haematology  
Dow University of Health Sciences. Karachi**

The Dow Institute of Haematology (DIH), Oncology, Transfusion Medicine & Tissue Typing, offering Master in Transfusion Medicine & Tissue Typing Program for Doctors. This Postgraduate Degree is Recognized by PMDC.

Aims: 4 Semester based 2-3 Years Postgraduate Teaching/ Research program on Blood Transfusion, Tissue Typing. MS. Is a Research based Degree program for production of Transfusion & Transplantation Practicing Personnel in the field of Blood Banking & Transplantation Medicine.

After qualification, the graduates will be very strong and successful leaders in to work on





managerial / Director Posts of Private as well as Public sector in the field of Blood Transfusion Services as well as Transplantation setups.

Learning Process & Course Contents: DIH is a well equipped Institute with state of the art Research facilities situated in the Premises of DOW MEDICAL CITY at Ojha Campus collaboration with Dow Diagnostic Complex, strong backup of all the modern Research & Development setups like Histopathology, Microbiology, Chemical Pathology & Molecular Pathology Departments.

4 Semesters (2-3 Years) will be divided as first 2 semesters as a basic teaching modules of Molecular Biology, Genetics, Epidemiology, Biostatistics & Research Methodology along Basic knowledge of Blood & its components, the Semesters 3&4 advance Transfusion & Tissue Typing practices with thesis /Dissertation writing.

Selection & eligibility criteria: Entrance test is mandatory for admission in Master program Basic Qualification, MBBS. From recognized Institution Suitable Previous Postgraduate Qualifications will be treated as a priority & a relaxation/ credit benefits will be awarded after scrutiny from Post-Graduate Education Committee (maximum of 2 semesters).

**Contact: Dr. M. Akbar Agha Professor of Pathology 0333-211-2930**  
**DUHS WEB SITE: [www.duhs.edu.pk](http://www.duhs.edu.pk)**

## About PSH

Pakistan Society of Hematology (PSH) is a non-political, non – sectarian Govt registered organization consisting of hematologists of Pakistan. PSH promotes the advancement of hematology including transfusion medicine, through encouragement of research, improvement of teaching & technical methods, organization of scientific meetings, publication of scientific material, and is affiliated with other National & International organizations. PSH also provides forum for the persons practicing hematology and transfusion medicine to discuss problems and to formulate agreed viewpoints at National and International forum.

Membership (1). Members: MBBS or equivalent plus post graduate qualification in hematology/transfusion medicine and show evidence of active work in hematology during the last three years including the period spent in training for post graduate examination in hematology/transfusion medicine.

(2). Associate members: Those who fulfill the qualification for a member but not completed three years of active work in hematology

(3). Junior members: Registered students of postgraduate training in hematology/transfusion medicine for at least one year.

(4). Corporate members: Those with MBBS qualification and have keen interest in hematology, and become members on payment of Rs 5000 per annum. They will not be eligible for vote or contest of any office.





# Dear friends

We request you to join us in newsletter by sending your comments, short communications, case reports, issues of national interest, new developments in your departments, and scientific activities in your institutes. Your contribution is the back bone of this newsletter. It is requested that report/write up should be brief and concise. For information, suggestions, and correspondences please e-mail to:

[dr.nadir.ali@gmail.com](mailto:dr.nadir.ali@gmail.com)

In case you are a member and you are not receiving mails from us please update your postal and email address urgently




**LEUKOKINE Inj.**  
Filgrastim / r-metHuG-CSF

**THROMBOMAX**  
Recombinant Human  
Interleukin 11

**Nilsetron 5 mg**  
(Inj. & Cap. Tropisetron)

Medac Disodium Pamidronate

**SEPO**  
Rh Human Erythropoietin  
2000 IU & 4000IU

**Your views and news**

Dear Colleagues: Your contributions to PSH newsletter are backbone to its success. Please send short communications, case reports, scientific activities and developments in your departments and issues of common interest. Photographs of scientific events/meetings are also welcome. Members are requested to visit PSH website and post in their contributions.

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**AMGOFERON** 3 MIU  
Recombinant Human Interferon alfa 2b

