

29 January 2013

REPORT of HOST INSTITUTE

ICMR-IF Assessment

- Name of Professor
 Professor Robert Flower and A/Professor C Hyland
- Name and address of host institute
 Research and Development (Division)
 Australian Red Cross Blood Service
 44 Musk Avenue,
 Kelvin Grove 4059
 Queensland, Australia
- 3. Duration of fellowship 15 days
- 4. Brief highlights of the achievements

Dr Kulkarni participated and was instructed in procedures relating to blood group genotyping that are performed in the Australian Red Cross Blood Service Research and Development Division. Dr Kulkarni observed and carried out advanced techniques for non-invasive prenatal assessment of fetal *RHD* blood group, by genotyping fetal DNA in the maternal circulation. The complex interpretation algorithms required when testing an analyte at limiting dilutions were also discussed (it may be the case in some samples there is a negative result because there is insufficient target and testing of a number of replicates is required to obtain a reliable data).

In addition Dr Kulkarni observed procedures applied, for the Australian population, for typing blood group polymorphisms, including Rh variants, such as the DEL, using molecular typing and Flow cytometric techniques. Dr Kulkarni has experienced and studied these procedures and with her strong backround in this research area this will facilitate the implementation of such test systems on her return home.

5. Your assessment of the ICMR-IF

This program has opened a several avenues for scientific collaboration and exchange. Dr Kulkarni has been a respectful ambassador and representative for the ICMR. She has been diligent and enthusiastic with a thirst for knowledge in this field of study. In addition she has been eager to share experiences and contribute to the host research laboratory. It has been a pleasure to host Dr Kulkarni and we look forward to ongoing collaborative studies.

6. Any other comments

Dr Kulkarni showed initiative and ambition in applying for and obtaining this Fellowship. It has been a pleasure to host her visit that will provide a strong foundation for further investigation of blood groups of interest in both countries as the proportion of the Australian population of Indian origin is consistently increasing.

Professor Robert Flower Research Program Leader. Transfusion Science and Queensland University of Technology A/Professor Catherine Hyland
Principal Research Fellow
and Queensland University of Technology

Ca Ibsland

REPORT

Report on participation of the ICMR International Fellow (ICMR-IF) in

Training/Research abroad.

1. Name and designation of ICMR-IF: Dr. Swati Kulkarni, Scientist B

2. Address: National Institute of Immunohaematology, 13th floor,

New Multistoreyed building, KEM hospital campus,

Parel, Mumbai-400012

3. Frontline area of research in which training /research carried out: Immunohaematology,
Non invasive fetal RhD typing

4. Name & address of Professor and host Institute

Prof. Robert Flower, Research Programme Leader,

Transfusion Science Research, Research and Development Division, Australian Red Cross Blood Service, 44, Musk Avenue, Kevin Grove, Brisbane, Queensland, 4059,

Post: PO Box 145, Australia

Tel: 61 7 3838 9020

e.mail: rflower@redcrossblood.org.au

5. Duration of fellowship 15 days - 1

15 days - 14th Jan to 28th Jan, 2013

6. Highlights of work conducted

a)Techniques/expertise acquired: Advanced techniques for non invasive prenatal assessment of fetal RhD blood group, by genotyping fetal DNA in maternal circulation.

b) Research results, including any papers, prepared / submitted for publication

nil

c) Proposed utilization of the experience in India: RHD typing on cell-free foetal DNA obtained from the maternal plasma will be standardized at our Institute, it will be applied to all referred Rh alloimmunised antenatal RhD negative Indian women for identification of pregnancies at risk of Hemolytic Disease of Fetus and Newborn.

Fetal DNA from plasma of D-negative non immunized pregnant women will be tested for RhD status, so that antenatal prophylaxis is targeted to women carrying RhD positive fetus.

ICMR Sanction No.

Signature of ICMR-IF

Dr. Swati Kulkarni