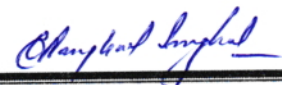


REPORT OF ICMR FELLOW

(Dr.MANPHOOL SINGHAL, P.G.I.M.E.R, Chandigarh)

Report on participation of the ICMR International fellow (ICMR_IF) in Training/research abroad.

- 1. Name and designation of ICMR_IF** **Dr. MANPHOOL SINGHAL**
Associate Professor
- 2. Address** Department of Radiodiagnosis and Imaging, Nehru Hospital
Post Graduate Institute of Medical Education and Research
(P.G.I.M.E.R), Madhya Marg, Sector-12,
Chandigarh-160012, INDIA
- 3. Frontline area of research in which training/research was carried out** Cardiac Magnetic Resonance Imaging (CMR)
- 4. Name & address of Professor/consultant and host institute** **Prof. James Moon,**
Clinical Director- Cardiac Imaging
Department of Cardiac MRI (Level II, Kings George V)
Barts Heart Centre, Barts NHS trust, St Bartholomew's Hospital
West Smithfield, London EC1A 7BE
Switchboard: + 44 20 34165000
E-mail: james@moonmail.co.uk, James.Moon@bartshealth.nhs.uk
- 5. Duration of Fellowship** Six months (From 16/02/2017 to 15/08/2017)
- 6. Highlights of work conducted Technique/ expertise acquired** I had joined the Department of Cardiac MRI (CMR), Barts Heart Center, London, UK for six months under International Fellowship program (young Scientists) of Indian Council of Medical Research (ICMR) for the year 2016-17 on 16 -02- 2017.



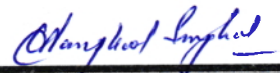
The objectives of this training were: to learn clinical applications of cardiac MRI (CMR) for assessment of cardiac functions & disorders.

During my tenure of training/ fellowship I learned various aspects of cardiac MRI: CMR protocols scanning/ data acquisition, data evaluation, interpretation and reporting besides understanding hardware, CMR physics, and CMR sequences.

Barts heart center is among the top cardiac MRI centers of the world and an incubation center of quality clinical CMR research. This provided me a platform for planning and delivering CMR research.

Fellowship/ training consisted of following:

- a) **Study protocols:** learned CMR protocols from consultants as per the clinical information.
- b) **Scanning patients:** Barts heart center is equipped with three state of art MRI scanners (two-1.5T and one-3T) with advanced scanning hardware's and software's. I scanned patients under supervision of specialist radiographers and consultants.
- c) **Data interpretation and reporting:** this was done on PACS (picture archiving and communication system) and CVI42 (data evaluation and reporting platform). During my tenure I have reported about 500 CMR scans- which used to be finalized by consultants after discussion.



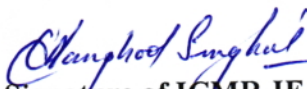
- d) **Didactic lectures:** Attended lectures related to CMR safety, physics, role in various pathologies and multi-modality cardiac imaging, as a part of center's academic program.
- e) **Research and audit meetings:** Attended center's research and audit meetings which were extremely useful in designing, conducting and interpreting research studies.
- f) **Conferences:** Attended London CMR meeting at London (12-03-2017) and European CMR conference (May 25 to 27, 2017) at Prague. Appeared for European Association of Cardiovascular Imaging Cardiac MRI (**ESCVI CMR**) examination held in Prague on 27 May 2017.
- g) **Certification in CMR:** Declared successful in the European Association of Cardiovascular Imaging Cardiac MRI examination held in Prague on 27 May 2017. This entitles me for level II/ III certification of **ESCVI CMR**. Also eligible for level II/ III certification of Society of Cardiac Magnetic Resonance (**SCMR**), USA.
- h) **Research collaborations:** were discussed and one such on iron quantification (liver and myocardium) by CMR in thalassemia patients in on anvil. Few others may be possible in due course.

In addition to the CMR, I had an opportunity to learn cardiac CT for evaluation of coronary, cardiac, aortic & other vascular disorders.

**Proposed utilization
of the experience in
India**

Department of Radiodiagnosis and Imaging, at PGIMER, Chandigarh is equipped with a dedicated 3T MRI unit in the premises of Advanced Cardiac Center and is functional. This training will strengthen cardiac MRI services and will give impetus to our evolving cardiac imaging program. In addition to patient care services this training will provide CMR learning of postgraduates and will boost CMR research and collaborations.

**ICMR Sanction No.
INDO/FRC/452/Y-20/2016-17-IHD dated 28-06-16**


**Signature of ICMR-IF
(Dr.Manphool Singhal)**

**Dr. Manphool Singhal
Associate Professor
Deptt. of Radiodiagnosis & Imaging
P.G.I.M.E.R, Chandigarh**