

REPORT

Report on participation of the ICMR International Fellow (ICMR-IF) in Training/Research abroad

1. Name and designation of ICMR- IF: Dr Guruprasad Kalthur
Professor
2. Address: Department of Clinical Embryology
Kasturba Medical College
Manipal Academy of Higher Education
Manipal- 576104, Karnataka
3. Frontline area of research in which training/research was carried out: Assisted Reproductive Technology
4. Name and address of the Professor and host institute: Dr Nagarajan Kannan
Principal Investigator & Head
Stem Cell and Cancer Biology Laboratory Division
of Experimental Pathology
Department of Laboratory Medicine and
Pathology, Mayo Clinic, 200 First Street
SW Rochester, MN 55905, USA
5. Duration of fellowship: 3 months
6. Highlights of work conducted:
 - a. Technique/expertise acquired: ICMR-IF has acquired sufficient technical skills in tissue digestion and processing for spermatogonial stem cell isolation from adult testes, sorting the spermatogonial stem cells from testicular population, maintenance of the stem cells, cryopreservation technique, senescence assay, MTT assay, clonogenic assay, confocal microscopy etc.
 - b. Research results, including any papers, prepared/submitted for publication: Spermatogonial stem cells (SSC) from mouse and human testicular tissue were isolated by enzymatic digestion and differential plating method. The SSCs were cultured in different

medium (DMEM/F12, N2 medium, SF7 medium). The proliferation of the SSC was found to be better in N2 medium. In addition to this ICMR-IF was involved in ongoing research project in host PI's laboratory on characterization of ETV6-NTRK3 and its G431R mutants in human epithelial cells for which the manuscript is under preparation. The host laboratory has appointed ICMR-IF as visiting scientists for a period of 18 months from 19-05-2018 to 18-11-2019 which will give the opportunity for ICMR-IF to continue the work initiated in host laboratory and also perform cutting edge research in the field of spermatogonial stem cell research.

c. Proposed utilization of experience in India:

The research training received in host laboratory has given adequate hands on technical exposure to the ICMR-IF which will be utilized in the ongoing research projects in home country. Furthermore, the fellowship has given an excellent opportunity for the ICMR-IF in building an international collaborative research team for future research in the field of fertility preservation and spermatogonial stem cell research. Based on the expertise of host laboratory supervisor and the research interest of ICMR-IF joint research projects will be submitted for funding in future.

INDO/FRC/452/Y-65/2017-18-IHD

ICMR Sanction Number


Signature of ICMR-IF