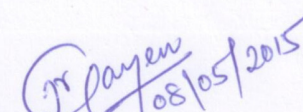


REPORT

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

1. Name and designation of ICMR-IF :	Dr. Jiaur Rahaman Gayen, Scientist
2. Address :	CSIR-Central Drug Research Institute PKM Division, Sitapur Road, Jankipuram Extension, Lucknow- 226031
3. Frontline area of research in which : training/research was carried out	Diabetes
4. Name and address of Professor : and the host institute	Univ. Prof. Dr. Michael Roden Director, German Diabetes Center Auf'm Hennekamp 65, 40225 Dusseldorf, Germany
5. Duration of fellowship :	6 months (Nov 2014 – Apr 2015)
6. Highlight of work conducted : i) Technique/experience acquired ii) Research results, including any papers prepared/submitted for publication iii) Proposed utilization of the experience in India	i) New important techniques/expertise acquired during the training includes: a) Respirometry using Oroborous Oxygraph-2K (Oroborous Instruments, Austria) in tissue as well as mitochondria, b) Evaluation of ROS production using fluorescence module in Oxygraph-2K, c) Isolation of mitochondria from tissues, d) Citrate synthase activity (CSA) to check mitochondrial number/content, e) mtDNA content by realtime qPCR, f) Oxidative stress damage markers (TBARS assay for lipid peroxidation, DNA oxidation), g) Anti-oxidant defence parameters (Superoxide dismutase activity assay, Glutathione quantification assay), h) Calculation of Oxygraph parameters using DatLab software, etc. ii) I have made substantial contribution to develop and optimize the protocol for Oxygraph to measure different mitochondrial complexes and oxidative parameters. I worked with animal and human samples as <i>ex-vivo</i> for different assays. I contributed to the High Intensity Training study and Bariatrix study of diabetes. I generated data and graphs using DatLab software. My contributions may be published as co-author from the group. iii) I like to establish the Oxygraph facility and work on mitochondrial function (related to diabetes) after return to India. The enrichment of scientific knowledge and capabilities by this program will help me to get International funding and collaboration.

ICMR Sanction No: INDO/FRC/452/Y-07/2014-15-IHD


Signature of ICMR-IF