

REPORT

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

1. Name and designation of ICMR-IF : Dr Kausar Mahmood Ansari, Scientist
2. Address : CSIR-Indian Institute of Toxicology
Research, Vish Vigyan Bhawan, M G Road,
Lucknow, 226001, India.
3. Frontline area of research in which training/research was carried out : Chemical Biology (glycosylation profiling for the molecular characterization of exosomes)
4. Name and address of Professor And host institute : Dr Alexander R. Ivanov, Department of Chemistry & Chemical Biology, Barnett Institute of Chemical & Biological Analysis, Northeastern University
360 Huntington Avenue, 412TF, Boston, MA, USA
5. Duration of the fellowship with exact date : Three Months (27th March 2023 to 26th June 2023)
6. Highlights of work conducted :
 - i) Technique/expertise acquired : I got trained in the isolation and characterization of exosomes (extracellular vesicles, EVs) from 2D cells, spheroids and E. Coli. In addition, Received training in extracellular vesicle proteome and glycan analysis.
 - ii) Research results, including any papers: Proteomics analysis of E. Coli shed extracellular vesicles were done. We found some novel proteins. However, deeper analysis using different bioinformatic tools is in progress. Based on my contribution to this project, I will be part of one manuscript.
 - iii) Proposed utilization of the experience: At CSIR-IITR, we are working on the role of exosomes in ochratoxin A-induced nephrotoxicity. The acquired knowledge will immensely help in the discovery of novel biomarkers of exposure based on the changes in glycosylation patterns in biological fluids. This approach would be an alternative to surgical biopsies of solid tissues for diagnostic and prognostic purposes.

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Kausar Mahmood
Signature of ICMR-IF