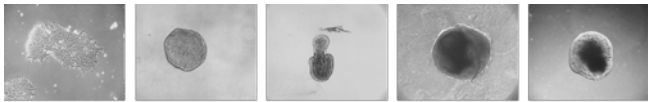


REPORT

Report on participation of the ICMR International Fellow (ICMR-IF) in Training/ Research abroad.		
1	Name and designation of ICMR- IF	Debabrata Ghosh , Ph.D./ Principal Scientist
2	Address	CSIR-Indian Institute of Toxicology Research, Vishvigyan Bhawan, 31, MG Marg, Lucknow, UP-226001
3	Frontline area of research in which training/research was carried out	Development of brain organoids from human induced pluripotent stem cells (hiPSC) and establishment of a co-culture system of brain organoids with isogenic microglia to study the biological process which involves interactions between brain cells and immune cells.
4	Name & address of Professor and host institute	Ivan Nalvarte , Ph.D. Associate Professor, Group Leader Dept. Biosciences and Nutrition, Karolinska Institute Hälsövägen 7C, Neo, SE-14157 Huddinge, Sweden Present address: Division of Neurogeriatrics at Department of Neurobiology, Care Sciences and Society, Karolinska Institute, BioClinicum J9:20, Visionsgatan 4, 17165 Solna, Sweden
5	Duration of fellowship with exact date	March 28, 2023 to March 27, 2024
6	Highlights of work conducted	
	(i) Technique/expertise acquired	<ul style="list-style-type: none"> • Derivation of neuro-epithelial stem (NES) cells from human iPSC (KISCOi001A) • Derivation of microglial precursor cells from KISCOi001A and mature microglia from precursor cells. • Generation of brain organoid from KISCOi001A • Establishment of brain organoid and microglia co-culture system.
	(ii) Research results, including any papers, prepared/submitted for publication	<p>Successful derivation of neuro-epithelial stem (NES) cells and microglial precursor cells from KISCOi001A followed by generation brain organoid (Fig.1).</p>  <p>hiPSC (10x) 2d FBO (10x) 4d FBO (05x) 28d FBO (2.5x) 41d FBO 2.5x</p> <p>Fig.1. Different stages of forebrain organoid (FBO) development</p>
	(iii) Proposed utilization of the experience in India	The expertise gained during the training period will be used in the ongoing/future fundamental research of the laboratory. An effort will also be made to develop a screening tool for the evaluation of toxicity potential new industrial chemical, environmental chemical or food adulterants.
7	ICMR sanction number:	INDO/FRC/452/Y-09/2022-23-IH&HRD

Debabrata Ghosh

03-04-2024

Signature of ICMR-IF