

REPORT

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

1. Name and designation of ICMR- IF : **Dr. Amitava Sengupta**, Principal Scientist, Associate Professor
PI. Stem Cell & Leukemia Lab, CSIR-IICB, Kolkata
2. Address : CSIR-Indian Institute of Chemical Biology, CN-6, Sector V, Salt Lake
Kolkata 700091, West Bengal, India
3. Frontline area of research in which training/research was carried out (AML) pathogenesis, Cancer epigenetics : Human acute myeloid leukemia
4. Name & address of Professor and host institute : **Dr. John E Dick**, FRS, Senior Scientist, Princess Margaret Cancer Centre
University Health Network, University of Toronto
Toronto, Ontario, Canada
5. Duration of fellowship with exact date (3 months) : 22 October 2019 to 17 January 2020
6. Highlights of work conducted :
 - i) Technique/expertise acquired : Xenotransplantation studies of human AML into immunodeficient mice models, epigenomic characterization, high dimensional flow cytometry and exposure on mass cytometry analysis and overall understanding of leukemia stem cell clonal evolution
 - ii) Research results, including any papers, prepared/submitted for publication : As an integral component of this collaborative effort we have performed human AML xenotransplantation studies to functionally characterize potential synthetic lethal vulnerabilities.
In addition, we are also validating AML stem/progenitor-intrinsic epigenetic fingerprints with respect to prognosis and therapeutic outcome.
Manuscript in preparation, ICMR-DHR, Govt. of India will be duly acknowledged in future publications

At

- iii) Proposed utilization of the experience in India : Have established a cutting edge international collaboration to investigate human AML pathogenesis and cancer epigenetics.

This will help establish and functionally characterize pre-clinical models of human leukemias engrafted into immune-compromised mice models for better understanding of disease pathogenesis and translating leads on epigenetic inhibition.

Amitava Sengupta

Signature of ICMR-IF

31/1/20



Dr. Amitava Sengupta

प्रधान वैज्ञानिक, सह-प्राध्यापक
Principal Scientist, Associate Professor

सी.एस.आई.आर - भारतीय रासायनिक जीवविज्ञान संस्थान
CSIR-Indian Institute of Chemical Biology
CN-6, Sector V, Salt Lake, Kolkata - 700091

Dr. Amitava Sengupta, Principal Scientist,
Associate Professor, CSIR-Indian Institute of
Chemical Biology

Kolkata, West Bengal, India

Email: amitava.sengupta@iicb.res.in;
amitava.iicb@gmail.com

ICMR Sanction No. **INDO/FRC/452/S-11/2019-20-IHD**