

## Report

### Report of participation of the ICMR International Fellow (ICMR-IF) in training/Research abroad

1. Name and Designation of ICMR-IF : Dr. V. N. Azger Dusthacker
2. Address : Department of Bacteriology,  
National Institute for Research in Tuberculosis,  
No1. Mayor Sathyamoorthy Road,  
Chetpet, Chennai-600031
3. Frontline area of research in which training/research was carried out : Phage therapy
4. Name & address of Professor and host institute : Danish J Malik  
Senior Lecturer, Department of Chemical Engineering,  
Loughborough university, Loughborough, UK
5. Duration of fellowship : 3 months
6. Highlights of work conducted :
  - i. Technique/expertise acquired : Storage and stability of mycobacteriophages, invitro delivery approaches using multistage liquid impactor and its validation.
  - ii. Research results, including publications : Different methods required for the effective storage and the temperature requirements of mycobacteriophages were evaluated during storage. In addition the effective pulmonary delivery was evaluated using an in-vitro model and the required amount of phage needed for effective in-vivo pulmonary delivery was determined. The results are being compiled for publication. This was done for two of the more widely used mycobacteriophage which are highly suitable for phage therapy.
  - iii. Proposed utilization of the experience in India : The data generated will be used for proposed work at the home institution as a continuation of the completed work at Loughborough university which will form a proof of concept if approved by the HMSC for targeting a major grant under Indo-UK joint

funding aiming to address antimicrobial drug resistance (AMR). This proposal in collaboration with the mentor at Loughborough University will be prepared jointly and submitted for SAC, ethics (IEC) and HMSC clearance. The funding required for this proposed work is being formally agreed to be provide by Loughborough University.

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V. M. Aggarwal  
3/11/2019  
Signature of ICMR-IF