

## REPORT

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

1. Name and designation of ICMR- IF : Dr. M. Michael Gromiha  
Associate Professor
2. Address  
Department of Biotechnology  
Indian Institute of Technology Madras  
Chennai 600036
3. Frontline area of research in which  
training/research was carried out  
Computational Biology and Bioinformatics
4. Name & address of Professor and host institute  
Professor Arne Elofsson  
Science for Life Laboratory  
Stockholm University  
Box 1031,  
17121 Solna, Sweden
5. Duration of fellowship : 8-15 Jan 2014
6. Highlights of work conducted

i) Technique/expertise acquired

We have discussed research areas of mutual interest, such as membrane proteins and structure based drug design. Specifically, on the problem of understanding the molecular mechanism of antimicrobial compounds and identifying potential drug targets for Methicilin Resistant Staphylococcal aureus (MRSA) treatment. We have devised an arrangement to collaborate with each other on different aspects of MRSA such as the structural analysis and database development at IITM, and modeling of membrane proteins at Stockholm University, complementing with each other.

Based on our discussions we planned to submit research proposals to Government funding agencies at National level both in India and Sweden. In this regard, we elaborated the details of works to be done, approaches to tackle the problem, possibility of mutual visits and probable deliverables.

The teaching methodology adapted at IIT Madras and Stockholm University has been discussed.

We also planned for short exchange visits of PhD students to each other's labs.

In this regard, we discussed the possibility of having an MoU between IIT Madras and Stockholm University either at Institute/University level or at the department level.

ii) Research results, including any papers, prepared/submitted for publication

I delivered a seminar on "Computational approaches on structural and functional annotation of membrane proteins" on 10<sup>th</sup> Jan 2014 at the Science for Life Laboratory, Stockholm University. I had fruitful discussions with the audience.

We have prepared a project proposal for joint collaborations between India (IITM) and Sweden (Stockholm University), which will be submitted to funding agencies when there will be a call for proposals for international collaborations.

I had a discussion with other leading experts in Stockholm University as well as with the students.

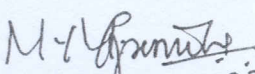
iii) Proposed utilization of the experience in India

The visit is useful for extending the collaboration between IITM and Stockholm University. This can be strengthened by joint research projects as well as MoU.

We have made arrangements for student's exchange visits to train them.

The discussions with leading experts and students opened up few research problems, which can be implemented at IITM in collaboration with Stockholm University.

Organizing an international conference on Bioinformatics at IITM has been proposed

  
Signature of ICMR-IF 22/1/2014

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