

## REPORT

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

1. Name and designation of ICMR-IF : Dr. Subhash Medhi
2. Address : Department of Biological Science, Gauhati University, Institute of Science & Technology, Guwahati-781014
3. Frontline area of research in which training/research was carried out : Function and regulation of the APC/C in cell cycle and cancer
4. Name & address of Professor and host institute : *Prof. Dr. Gustavo J. Gutierrez*  
Vrije Universiteit Brussel  
(VUB-campus Etterbeek),  
Faculty of Sciences & Bioengineering  
Department of Biology,  
Laboratory of Pathophysiological Cell Signaling,  
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Brussels, 1050, Belgium, Europe  
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fax: +32-2-629-2759
5. Duration of fellowship : 21<sup>st</sup> March 2014 to 21<sup>st</sup> September 2014 ( 6 Months)
6. Highlights of work conducted :
  - i) Technique/expertise acquired :
    - a) Site directed mutagenesis to create Lysin to arginine (K→R) mutations at different putative SUMOylation sites of the Anaphase-Promoting Complex protein 4 (APC4).
    - b) Cloning and subcloning of different vector pCMV6-APC4-GFP, pCMV6-APC4-myc-FLAG, pGEX6P1-APC4, pET15b, pET16b, etc
    - c) Transformation of DNA in DH5 $\alpha$  and BL21-DE3 cells
    - d) Purification of GST and 6xHistidine tagged proteins
    - e) *invitro* Translation using Rabbit Reticulocyte Lysate Systems
    - f) *invitro* SUMOylation assays using different mutants of APC4.
    - g) Transfection of HeLa, HEK293 cells by Lipofectamine.

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

The work performed during the stay at the VUB in Brussels (Belgium) will be part of a publication that the host laboratory will do in the near future. It is expected that Dr. Subhash Medhi will be first author on that publication. The detail project report is attached in separate sheet.

iii) Proposed utilization of the experience in India :

The experience gathered at the Laboratory of Pathophysiological Cell Signaling, Department of Biology, VUB, will aid in setting up the preliminary work on protein biochemistry at the Department of Biological Science, Gauhati University. The techniques will be used for better understanding the regulation and modification of different proteins in patients affected with either cancer or hepatitis.



Signature of ICMR-IF

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