

❖ Name & Designation	: Mr. Vishant Boradia, Ph.D Scholar
❖ Address	: Dept. of Biotechnology, NIPER, S.A.S Nagar, Sector-67, Punjab-160062
❖ Name of the International Conference/ Seminar/Symposium/ Workshop	: The Biological and Biomedical Consequences of Protein Moonlighting-2014
❖ Title of the abstract accepted	: Mycobacterial Glyceraldehyde-3 phosphate dehydrogenase (GAPDH) is involved in the siderophore independent acquisition of transferrin iron.
❖ Venue & Date	: London, UK, 29-30th July 2014.
❖ Money sanctioned	: ₹ 81,262/-
❖ Money reimbursed	: ₹ 89,677/- (Due to hike the fare of air travel an additional ₹ 8,415/- were sanctioned)
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### Participation Report

This was for the first time that a conference on the topic of "Protein Moonlighting" was organized. The term "Protein Moonlighting" was first described by Constance Jeffery who headed the conference and was organized by Brian and Andrew. In the conference researchers from 18 different countries were present and I was the only member representing India at the conference. There were a total of five different sessions which consisted of talks from eminent scientists and oral presentation of the selected participants. In between the sessions there were two poster presentation sessions and an open discussion session with Jeffery and Brian (100 words).

### **Academic highlights of the Training/workshops, including major recommendation and following:**

#### **(i) New Development presented at the conference:**

The objective of the meeting was to bring together a world community of researchers working on diverse aspects of protein moonlighting to provide a current overview of this rapidly developing field. The conference was attended by the delegates from around the world which included interdisciplinary groups comprising of academicians, researchers and industry professionals. In two days of the conference, major questions which were tried to answer was (i) the nature of the mechanism(s) by which individual protein families, such as the glyceraldehyde-3-phosphate dehydrogenase (GAPDH) family, can exhibit so many distinct biological functions, (ii) the phenomena and evolution of protein moonlighting and how this relates to protein sequence and structure. Currently, moonlighting proteins represent a tiny fraction of all known proteins. It is unclear whether this is the true state of affairs or is a result of inadequate searching for moonlighting proteins. Protein moonlighting is not merely a curiosity of protein biology/protein evolution. Moonlighting proteins play key roles in eukaryotic and prokaryotic homeostatic cell function. Unfortunately, growing evidence indicates that moonlighting proteins also play important roles in idiopathic human diseases. In addition, in infectious diseases, moonlighting proteins have been identified as important virulence factors. This results in the unexpected situation in which moonlighting proteins are both the target of novel therapeutics and also potential novel therapeutics in their own right.

**(ii) New Development resulting from the conference (200 words):**

The conference provided participants with a menu of good science in the field of protein moonlighting. I have acquired in-depth knowledge and learnt new trends and future perspectives of the cutting-edge research in the field of protein moonlighting. It is worth mentioning that this meeting provided me an excellent forum for interaction with contemporary international researchers and an excellent opportunity for networking and learning various new aspects of research. I got an incredible opportunity to exchange ideas with various experts of the field. The conference was an incredible experience to me. Exposure to such an opportunity at this stage of my scientific career have given me new directions to my thinking and encouraged me in broadening my research outlook. Overall, Biochemical Society conference "The Biological and Biomedical Consequences of Protein Moonlighting" was a marvelous platform where I gained an in-depth knowledge in the recent advances in the field and also got a lot of suggestions, questions, appreciation and encouragement for my research work. This would really help me improve the quality of my research work further more. (177 words)

**(iii) Name of the publication in case your work is recommended for publication:**

My work was recommended and I was given an opportunity to write a mini-review in the journal "Biochemical Society Transactions" (Impact factor: 3.238). I have uploaded the manuscript entitled "Protein Moonlighting in Iron Metabolism – GAPDH" which is under editorial review for corrections if any. It will be published in their special issue on protein moonlighting.

**Participant's contribution to the Conference (100 words)**

I was selected for both poster presentation and oral presentation out of the 25 participants. My first contribution was in the open discussion session where I actively participated and discussed on the topic of GAPDH as a moonlighting protein. This was followed by poster session where I presented my poster. My poster was visited by all the participants and I got many suggestions and appreciation of my research work. I also gave an oral presentation and answered all their queries. After my presentation I was really appreciated and encouraged by all eminent scientists. After the conference I also received emails from Constance Jeffery saying I gave a great lecture and Brian saying my oral presentation was marvelous and they also found my research work very interesting. (126 words)