INTERNATIONAL CENTRE FOR GENETIC ENGINEERING AND BIOTECHNOLOGY

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Dr. Neel Sarovar Bhavesh
Group Leader

Aug 6, 2021

The Members
Selection Committee
Sun Pharma Science Scholar Award

Dear Sir/Madam,

It gives me great pleasure to write this letter in support of Dr. Priyanka Aggarwal who is applying for Sun Pharma Science Scholar Award 2021. Priyanka joined my group in 2015 as a graduate student for Ph.D. I am extremely happy to state that she has performed exceedingly well and she has high impact publications to her credit. She declared eligible for the award of Ph.D. degree by Jawaharlal Nehru University (JNU) on 25th June 2021.

Priyanka was selected at ICGEB following a stiff competition among more than 500 applicants. During the interviews she gave a stellar performance and her proficiency in theoretical and practical aspects of structural biology was apparent from her articulate answers to several challenging questions posed by the panel. During the first year after joining ICGEB, New Delhi she went through a rigorous graduate course program, which involves theory courses in different aspects of biology and experimental projects at the research level. She was placed among top 5% in the course work. She was awarded a fellowship from Council of Scientific and Industrial Research (CSIR) and Department of Biotechnology (DBT) Government of India after successfully qualifying nationwide examinations. She was ranked 51 in the CSIR-JRF examination.

The main theme of Priyanks's work is delineation of the delineation of the molecular basis of the recognition of proto-oncogene *c-myc* promoter by the RBMS1. It was a challenging work as it required through understanding of different biophysical, biochemical and molecular biology techniques. She has delineated the structural, dynamics and thermodynamics basis of recognition of the *c-myc* promoter using techniques like X-ray crystallography, NMR spectroscopy, Isothermal Titration Calorimetery, molecular biology and biochemical techniques. The research provides a deeper understanding of the mechanism that is followed by exclusive and stringent DNA promoter binding proteins during the stochastic DNA search process. During the course of the study, she single-handedly determined crystal structure of the complex and solution structure of the free protein. Thus, she has acquired on the rare expertise of determining bimolecular structure using both X-ray crystallography and solution-state NMR spectroscopy. The work is published in *Nucleic Acids Research* (**Impact Factor 16.971**) in which she is a co-corresponding author as she had contributed with her original ideas and work.

In another work she has helped our collaborator with quantitative NMR which she has used for the determination of purity of 10 potential drug molecules, which were proved to be effective against malaria. The work has recently been published in the *Journal of Medicinal Chemistry*.

Priyanka is a dedicated scholar and has high motivation to do research. She likes to take up challenging projects and is hard working to achieve the desired goals. She is also good in lab organization and was the student in-charge of some of the state-of-the-art instruments like NMR spectrometer and Äkta FPLC system. Combination of these makes her a valuable researcher in my group. She presents her work well and is quick in grasping the significance of the works presented by others. She has the zeal to carry out outstanding work, which she does with tremendous speed. She is very creative and comes up with new ideas to generate new research problems and also solve the problems encountered during execution of the projects. She is up-to-date with literature. She has presented her work well in international conferences and is quick in grasping the significance of the works presented by others.

I am convinced that Dr. Priyanka Aggarwal is a very bright scholar who deserves full encouragement and recognition for the research she has accomplished in short span of time. I strongly recommend her Sun Pharma science scholar award, one of prestigious award in the country. I am sure the award will motivate her to achieve and excel in her career and contribute to scientific research. I trust that the information provided will be of assistance and will be happy to provide further information, if required.

06/08/2021

(Neel Sarovar Bhavesh)

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