Dr. Dibyendu Kumar Das
Assistant professor
Department of Biological Sciences and Bioengineering
Indian Institute of Technology Kanpur
Kanpur 208 016, INDIA
Tel: +91-512-259-4064
Email: dkdas@iitk.ac.in

CITATION ON THE RESEARCH WORK

TO WHOM IT MAY CONCERN

It is my immense pleasure to nominate Ms Puspangana Singh for the Sun Pharma Science Scholars Awards-2023 in the Bio-Medical category. Puspangana is a recipient of the Prime Minister's Research Fellowship (PMRF). She started her doctoral work with a focus on unravelling the coronavirus spike protein mediated entry mechanism using fluorescence and single molecule techniques. When the pandemic struck, she started working on the problem of finding out the triggering factors specifically for SARS-CoV-2 entry and fusion. She led the project to completion, and published her findings in Cell Reports **(Singh, P et. al. *Cell Reports*, 2022).** Her work has established that endo-lysosomal pH and calcium concentration are critical parameters for SARS- CoV-2 fusion, and that evolved SARS-CoV-2 strains show higher sensitivity to calciumconcentration. Through many fluorescence techniques and cell-based assays, the work showed that the fusion peptide of the SARS-CoV-2 spike is involved in sensing calciumion concentration. This is an surprising result and the role of Calcium in virus entry would further help us in understanding the molecular mechanism behind SARS-CoV-2 entry.
Being a part of the Sun Pharma Science Scholars Awards will provide her with a platform to expand her scientific horizon and network. I strongly recommend Puspangana for selection in the Sun Pharma Science Scholars Awards-2023.

Dibyendu Kumar Das

Dr. Dibyendu Kumar Das

Assistant Professor, IIT Kanpur

Email: dkdas@iitk.ac.in, Phone: +91-9474753012