Department of Materials
Engineering Indian Institute of
Science Sir C.V. Raman Road
Bangalore 560012 India

30th August 2023

Dear Sun Pharma Scholar Awards Committee,

I am pleased to write this letter in support of **the application of Mr. Saswat Choudhury for the Sun Pharma Scholar award**. Mr. Saswat Choudhury is a fourth-year doctoral candidate in the bioengineering program at the Indian Institute of Science (IISc). I serve as his primary research advisor along with Dr. Sonal Asthana, who is a hepatobiliary surgeon and serves as an Adjunct Faculty member in our institute.

Saswat joined the Ph.D. program in August 2019 under the prestigious and highly-competitive Prime Minister's Research Fellowship. Saswat is one of the brightest Ph.D. students under my supervision and has made commendable progress in his research work. He has been working diligently on the research project titled "4D Printing of Smart Materials for Deployable Medical Devices". His research is cutting-edge and highly translational, with a focus on engineering innovative smart biomaterials for a new generation of biomedical devices and implants. His work involves materials development, using nanoparticle-reinforced shape memory polymers that respond to external cues such as temperature, alternate magnetic field or light and then testing the materials in small animal (rats) and larger animal models (rabbits). He has completed the first two parts of the project. The manuscripts prepared from this work are under peer review in reputed international journals. Additionally, he has co-first authored a manuscript on smart hydrogels for sutureless nerve conduits which has been published in a reputed international journal. He has several ambitious plans in the pipeline, which can lead to many new innovations in the field of biomaterials for medicine. He has been successfully integrating concepts of materials, manufacturing, modeling, and biological testing. Notably, many clinicians have appreciated the work Saswat has done and have expressed a strong interest in collaborating with our group to develop clinically-relevant solutions.

My assessment is that Saswat has showcased a strong grasp of the fundamentals of biomaterials science and engineering, which has contributed toward his good research progress so far. He has already published a review article and some other manuscripts as a co-author. He is endowed with good presentation skills, the ability to collaborate across multidisciplinary research teams, and excellent time management skills. He is motivated, has a strong work ethic, and has exhibited exemplary professional conduct in all his activities. Saswat has received several honors and student awards for his work.

Aside from his thesis research, he is involved professionally in other activities, such as serving as the President of the student chapter of the American Chemical Society at IISc, and a core member of the Student Council of the Society for Biomaterials and Artificial Organs of India.

I strongly recommend his application for this scholar award from Sun Pharma Science Foundation. Please do not hesitate to contact me if you need additional information.

Sincerely,

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