



# Indian Institute of Science

## Centre for BioSystems Science and Engineering



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25–September-2021

To,  
Sun Pharma Science Foundation Science Scholar Awards 2021

It is a pleasure for me to nominate Mr. Ameya Atul Dravid for Sun Pharma Science Foundation Science Scholar Awards 2021. I have known Ameya since August 2017, when he joined my laboratory (Drug Delivery research group) at the Centre for BioSystems Science and Engineering, Indian Institute of Science, Bangalore as a Ph.D. student. He was selected based on the interview where he was one of the best performing candidates among the >300 applicants. He will be the first student to obtain a Ph.D. degree from my laboratory and hence I have spent countless hours mentoring and guiding him. He has demonstrated the characteristics of a good student and has the potential to become an excellent scientist

During his stay, he has worked on developing biomaterial-based carriers for sustained delivery of drugs to treat Osteoarthritis. Despite several setbacks, he had managed to keep his enthusiasm and passion for doing good science alive. This can be exemplified using an incident in his Ph.D. when he was reproducing the surgical model of Osteoarthritis in mice. This technique is characterized by highly invasive surgery, extensive animal handling followed by histology, and requires detailed planning and skill. This model is slow and requires a housing period of 3 months followed by many histology steps. Despite the initial failures in performing the entire pipeline of this technique successfully, Ameya refused to give up and ultimately was able to reproduce it properly. This feat took 1.5 years, but with all the steps well-optimized, he was then able to use this model to test his therapeutics that resulted in successful completion of the project and is now accepted in *Bioengineering and Translational Medicine* (Impact Factor: 10.711). This model would also be useful to many students who will join the laboratory in the coming years.

Ameya is very adept in several bioengineering and biology techniques and properly plans the experiment before performing them. He is also extremely hard working and motivated and is in line to finish his Ph.D. in less than five years (expected to graduate by Feb/March 2022). He often comes with new and relevant experiments that add value to the project and is never afraid to try new things. His ability to effectively manage time has led her to meet the project deadlines with utmost care to produce robust and reproducible data. He also has a good grasp of the fundamentals of the topic.

I have known Ameya to also be a kind and helpful peer towards his lab mates. There were several instances in the past where he had assisted them in different techniques without the expectation of reward. He also has a lot of interest in teaching others which is shown from the

fact that he has voluntarily performed teaching assistant duties for three separate sessions. Among all the students that I have interacted with, he is among the top 10%. In brief, Ameya is a hard-working, perseverant, and compassionate individual. These qualities align with the ethos of the Sun Pharma Scholar Award, and hence he is an ideal candidate for it. In my view, Ameya deserves a strong consideration for this award, and I strongly recommend him for the same.

Please do not hesitate to contact me if you have any questions about her work in my laboratory.

Thanks & Regards,

A handwritten signature in black ink, reading 'Rachit Agarwal', written in a cursive style.

Rachit Agarwal  
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