



Indian Institute of Science

Department of Bioengineering

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To,
Sun Pharma Science Foundation Scholar Awards, 2024

It is a pleasure for me to nominate Ms. Bhagyashree Padhan, who has applied for Sun Pharma Science Foundation Scholar Awards, 2024. I have known Bhagyashree since January 2021, when she joined my laboratory (Drug delivery research group) at the Department of Bioengineering, Indian Institute of Science, Bangalore as a Ph.D. student. She was selected based on the interview where she was one of the best performing candidates among the >300 applicants. Over the last two and half years, I have spent countless hours mentoring and guiding her. She has demonstrated the characteristics of a good student and has the potential to become an excellent scientist.

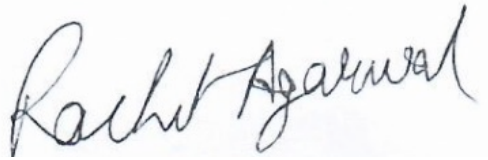
She has worked on developing polymeric microparticles and in-situ crosslinking hydrogels for delivery of autophagy inducer (Nordihydroguaiaretic acid) and growth factors for the treatment of Osteoarthritis (OA). This is a project that she has taken over from a previous graduate student in the laboratory and has done an excellent job in learning all the techniques and concepts. She has now started to identify major challenge in treatment of OA and is now attempting to develop therapeutics to treat late-stage OA patients for whom there is currently no cure except for total knee replacement. This required significant literature survey and coming up with novel and innovative strategies to design formulations that can reverse damage in the joint. The project involves techniques in chemistry, materials and biology, animal handling, surgery and tissue processing. Bhagyashree has been able to get a good grasp of all these techniques and generate data. She is highly interested in the work and curious about the new techniques, willing to learn new methods and concepts. She works independently in a well-organized manner and has excellent time management. She is critical of her own work, noticing issues and problems, and is able to discuss and offer her own solutions.

Bhagyashree is friendly and cheerful and gets well with rest of the group. She also takes failures in positive manner and troubleshoots her way out of it. She has also been consistently performing well in academics as can be seen from numerous awards that she has won. In addition, even before starting her Ph.D., Bhagyashree already has one first author paper and two co-author papers published from her previous training. During her time in my laboratory, she has a co-first author paper currently under revision at *Journal of Materials Chemistry B*. She has also contributed to another publication in *Journal of BioMedical Research Part A*.

All these qualities and attributes has made her an essential part of my laboratory and a deserving candidate for this award, and I strongly recommend her 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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