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To,

29/08/2024

The Selection Committee

Sun Pharma Science Foundation

Subject: Certifying the completion of research work submitted for Sun Pharma Science Foundation Science Scholar Fellowship

Dear Selection Committee,

I am delighted to compose this letter of nomination for Ms. Oyahida Khatun's application for the Sun Pharma Science Foundation Science Scholar Fellowship. Oyahida is a final year Ph.D. student in my lab at the Centre for Infectious Disease Research, IISc, Bangalore. She has recently submitted her thesis and expected to graduate by the end of this year. Coincidentally, her Ph.D. tenure aligned with the COVID-19 pandemic, and she adeptly transformed this challenge into a golden opportunity, contributing to groundbreaking research on SARS-CoV-2. Her doctoral research has been dedicated to identifying cellular targets for host-directed therapy. She identified that FDA approved drug Auranofin, which is used for the treatment of arthritis, can mitigate SARS-CoV-2 infection in vitro and in vivo. Furthermore, she showed that Auranofin synergizes with nucleoside analogue, remdesivir and molnupiravir, thereby their combination therapy potentiates the antiviral activity against SARS-CoV-2. Additionally, she explored the comprehension of SARS-CoV-2 virus-host interactions, how it antagonizes and evades the host immune system, and discovering new antiviral solutions. She discovered that ORF6 protein of SARS-CoV-2, inhibits the nuclear translocation of transcription factors required for interferon dependent innate immune response. The perspective of this work encompasses deleting ORF6 and other SARS-CoV-2 IFN antagonists, to engineer strains for potential vaccine development.

Oyahida has so far co-authored five publications in highly reputable journals, with three as the First author. She was among the pioneers in India to establish cell culture and animal models for studying SARS-CoV-2 under the challenging

conditions of the COVID-19 pandemic. Apart from her doctoral research, she has contributed to several SARS-CoV-2-related collaborative projects, and at least five more publications, where she will be a co-author, are slated for publication by her graduation. Her academic caliber is reflected in her high ranks in national competitive exams like JAM and NET. Oyahida has garnered prestigious awards for her research and had the opportunity to present her work at esteemed international conferences. This includes travel awards for American Society for Virology meeting, OPTIONS meeting by International Society on Influenza and Other Respiratory viruses and Research Excellence award by India Investigator Network supported by EMBO.

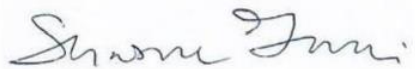
As a researcher, Oyahida demonstrates diligence, resourcefulness, and thoroughness. She has been an exemplary lab citizen, leading efforts to establish the SARS-CoV-2 research program in our lab. Her contributions to SARS-CoV-2 has already had substantial effect, and I am confident that she will emerge as a highly successful scientist in the future.

Her research on identifying antivirals against SARS-CoV-2 and elucidating cellular immune antagonism by viral proteins has already left significant impact and aligns with the eligibility of the fellowship (Pharmaceutical Sciences). I wholeheartedly sponsor Oyahida's application for the Sun Pharma Science Foundation Science Scholar Fellowship and sincerely hope that the committee will recognize and support this well-deserved accolade.

I nominate her application strongly.

Thanking You,

Sincerely,



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