

Principal: Dr. S. B. Bari M.Pharm. Ph.D., D.I.M.F.J.C.

TO WHOM SO EVER IT MAY CONCERN

I am **Dr. Pravin Onkar Patil,** a Professor in the Department of Pharmaceutical Chemistry at the H. R. Patel Institute of Pharmaceutical Education and Research in Shirpur, Maharashtra. I wholeheartedly endorse **Mr. Sopan Namdev Nangare** for the "**Sun Pharma Science Foundation-Science Scholar Awards 2023**." He is a dedicated, motivated, and highly intellectual student who consistently demonstrates a willingness to tackle complex research challenges.

Mr. Sopan Namdev Nangare, the applicant in question, joined our institute in April 2019 to pursue a Ph.D. program within the Kavayitri Bahinabai Chaudhari North Maharashtra University (KBC-NMU), Jargon, Faculty of Science and Technology, specializing in Pharmacy. Since his enrollment, he has been diligently engaged in the **development of a graphene oxide nanocomposite-based surface plasmon resonance biosensor for the label-free prognosis of Alzheimer's disease**. Mr. Sopan has not only been committed to advancing his own research endeavors but has also embraced additional research challenges within our Nanotech section over the span of four years. During this tenure, he served as a Junior Research Fellow on a project funded by the Indian Council of Medical Research (ICMR), New Delhi. Notably, he is the sole candidate we are aware of who continued to work diligently without interruption throughout the COVID-19 pandemic at our research institute. In view of his exceptional dedication, consistent contributions, and unwavering commitment to research, I am confident that Mr. Sopan Nangare is a deserving nominee for the "Sun Pharma Science Foundation-Science Scholar Awards 2023."

Ph.D. Research Work: As an integral component of his Ph.D. research, he conceived and developed a biosensor device based on graphene oxide and surface plasmon resonance (SPR) technology. This innovative device has been specifically engineered to detect and identify beta-amyloid, Tau protein, and BACE-1, critical biomarkers linked to Alzheimer's disease. Notably, the **Indian Patent Office** in Mumbai has recognized the significance of his work and subsequently published his patent related to this well-established study. Currently, the patent is in the phase of awaiting examination. In addition to patent innovation, his academic contributions have extended across various fronts. He has successfully authored and published **3 research papers** (**Thomson Reuters impact factor: 22.6**). These publications underscore his capacity for generating high-impact, original research within his chosen field. Furthermore, he has authored **4 review papers**

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(Thomson Reuters impact factor: 15.3). This demonstrates his prowess in critically analyzing and synthesizing existing research, thereby contributing insightful perspectives to his research domain. Additionally, his accomplishments include the acceptance of one book chapter for publication, which serves as a testament to his comprehensive understanding of the subject matter and his ability to provide valuable insights to the academic community. Collectively, his exceptional body of work showcases his dedication to advancing the realm of research, particularly in the context of Alzheimer's disease biomarkers detection. His accomplishments reflect his competence, commitment, and significant contributions as a doctoral researcher.

Research Contributions: Mr. Sopan's impact on research is truly commendable. He has amassed a portfolio of over 57 research and review papers, which have been featured in esteemed national and international publications. This remarkable body of work has collectively contributed to a significant Thomson Reuters Cumulative Impact Factor (IF), exceeding 153. In addition to his publications, he has made substantial contributions to the academic community through his involvement in 11 book chapters. Among these, 5 chapters have already been published, while an additional 6 are currently in the pipeline for future publication. These book chapters underscore his commitment to sharing his insights and expertise on a global platform. Furthermore, Mr. Sopan's innovative spirit shines through his status as the inventor of 4 Indian patents. These patents stand as a testament to his creative approach and his ability to translate his research into practical applications. Overall, Mr. Sopan's dedication to research is evident through his extensive publications, contributions to books, and patent achievements. His work significantly enriches the field and highlights his prowess as a research scholar.

Academic Achievements: it is noteworthy to emphasize Mr. Sopan's exceptional academic track record in both his bachelor's and master's degrees. He has consistently demonstrated excellence, securing **university merit ranks** and qualifying successfully in the GPAT examination (**Percentile: 97.48**). His academic prowess has been recognized through the prestigious "Best Outgoing Student" award bestowed upon him by Bharati Vidyapeeth College of Pharmacy, Kolhapur.

Industrial experience and visits: In addition to his research accomplishments, Mr. Sopan possesses valuable industry experience gained during his tenure at Alembic Pharmaceuticals Ltd., Hyderabad, where he was actively involved in Formulation Research and Development (FRD). Moreover, he has undertaken insightful visits to various prominent organizations, including Micro Labs Pvt. Ltd. in



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Bangalore, Dr. Reddy Laboratory in Hyderabad, Vishwachaitanya Ayurvedic Ras-shala in Baramati, and Biological E Ltd. in Hyderabad. These visits have contributed to his well-rounded understanding of the pharmaceutical landscape. Furthermore, Mr. Sopan's commitment to research excellence led him to embark on research-related tours. Notably, he and his research team toured prestigious institutions such as the Indian Institutes of Technology (IIT) Indore and the UGC-DAE Consortium for Scientific Research, Indore, in 2022. These visits were instrumental in enhancing his Ph.D. research endeavors and fostering collaborative interactions within the research community.

Fellowship Achievements: Mr. Sopan Nangare's journey is marked by several distinguished fellowships, each reflecting his exceptional research credentials and project proposals. Drawing recognition from his research accomplishments, he was granted the esteemed Research Associate **Fellowship** (**RA-ICMR**) by ICMR, Delhi, in April 2022. This prestigious fellowship underscores his dynamic role as a dedicated Research Scholar. Furthermore, his remarkable achievements extend to the realm of academic recognition. He was honored with a fellowship from 'AVISHKAR 2023,' the 15th Maharashtra State Inter-University Research Convention, which was hosted by Savitribai Phule Pune University in January 2023. Prior to these notable achievements, he served as a Junior Research Fellow (JRF) for a Ph.D. Research Project, which was financed by the Indian Council of Medical Research (ICMR), Delhi. This enriching experience spanned from 3rd April 2019 to 3rd January 2022, showcasing his commitment to impactful research endeavors. Mr. Sopan Nangare's journey is punctuated by his academic accomplishments as well. He was a recipient of the esteemed Government of **India Post-Matric Scholarship** during his Master's Program (2016-2018). Additionally, his success in the **Graduate Pharmacy Aptitude Test** (GPAT-2017) paved the way for his selection for an AICTE Fellowship during his Master's studies. Notably, his preference was aligned with the Government of India Post-Matric Scholarship, a testament to his thoughtful consideration of available opportunities. Collectively, these fellowships and scholarships reflect Mr. Sopan's dedication, academic prowess, and commitment to research excellence across diverse domains.

Awards and Achievements for Ph.D. Work: Mr. Sopan's Ph.D. journey has been adorned with numerous accolades and recognitions, underscoring his exceptional contributions to the field. Over the last four years, he has presented his Ph.D. research work at several prestigious international and national conferences, showcasing the depth and significance of his work. Here is a comprehensive

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list of his noteworthy achievements: Mr. Sopan achieved the "Third Prize" at ANVESHAN 2023 (National level, India), a prestigious event organized by Ganpat University, Gujarat, in collaboration with the Association of Indian Universities (AIU), New Delhi. This accomplishment took place on March 2023 and was accompanied by an esteemed prize of INR 25,000. He proudly secured the "First Prize" for his exceptional poster presentation at 'AVISHKAR 2023,' the 15th Maharashtra State Inter-University Research Convention masterfully orchestrated by Savitribai Phule Pune University, Pune. The event unfolded in January 2023, and his remarkable achievement was recognized with a substantial prize of INR 1,250,000. His dedication bore fruit with the "Second Prize" at ANVESHAN 2023 (Western Zone, India), an event organized by Ajinkya D. Y. Patil University, Pune, in collaboration with the Association of Indian Universities (AIU), New Delhi. This triumph was celebrated on January 2023. He was honored with the coveted "Best Paper **Award**" in the biomedical domain at the Indo-South Korea-Thailand 2nd International Conference. This joint endeavor was hosted by the Core Facility Center for Photochemistry and Nanomaterials at Gyeongsang National University, South Korea, Chulalongsang University, Thailand, and Vinayaka Mission's Kirupananda Variyar Arts and Science College, Salem Tamil Nadu. The conference took place in November 2022. A significant achievement came through the "First Prize" for his outstanding poster presentation at 'AVISHKAR 2022-23,' an esteemed event organized by KBC-NMU, Jalgaon. The event spanned from November 2022. He was recognized as the recipient of the "First Prize" at the E-Poster presentation competition in the Pharma Philia Virtual Conference, themed "Bridging The Gap Between Practice & Learning." This meticulously organized conference took place at Indubhai Patel College of Pharmacy and Research Centre, Dharmaj, Anand Gujarat, under the sponsorship of the Gujarat State Pharmacy Council, on February 2022. The "Best Poster Presentation Award" was conferred upon him at the Indo-South Korea International Conference, a collaborative event hosted by the Core Facility Center for Photochemistry and Nanomaterials at Gyeongsang National University, South Korea, and Vinayaka Mission's Kirupananda Variyar Arts and Science College, Salem Tamil Nadu. This achievement unfolded in October 2021. Mr. Sopan's exemplary performance was acknowledged with the "First Prize" at the Two Days Virtual 15th INDO-US Conference titled "Global Advances in Pharmaceutical and Allied Sciences." The event, held in collaboration with APP Gujarat State Branch, APP American International Branch, and APP PharmEdu HealthCare Manag Division, took place in December 2021. He triumphed by securing the



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"Second Prize" at the E-International Conference on "Pharmaceutical Sciences and Drug Developments," meticulously organized by the Faculty of Pharmacy, Nootan Pharmacy College, Sankalchand Patel University, Visnagar-384315, Gujarat (India) in September 2021. His accomplishments also include the "Third Prize" at ANVESHAN 2019-20, a West zone interuniversity student research convention (INTER-STATE) hosted by the Association of Indian Universities (AIU), New Delhi, in February 2020. Mr. Sopan's exceptional aptitude led him to clinch the "First Prize" for his outstanding poster presentation at 'AVISHKAR 2019-20,' a notable event organized by KBC-NMU, Jalgaon, from January 2020. These accolades and awards are a testament to Mr. Sopan's remarkable dedication, excellence, and profound contributions to the field of pharmaceutical research throughout his Ph.D. journey.

The Sun Pharma Science Foundation's Science Scholar Award holds a prestigious position within the pharmaceutical and biomedical domains, serving as a catalyst for advancing research endeavors across the nation. Notably, this award has a profound impact, motivating numerous aspiring scholars to embark on Ph.D. journeys in pharmaceutical and biomedical subjects. Recognizing the far-reaching influence of the Science Scholar Award, I am confident that it will provide Mr. Sopan Nangare with a novel platform to further his biomedical research pursuits. His remarkable dedication, innovative thinking, and prolific contributions to the field make him an exemplary candidate for this esteemed recognition. Therefore, with the utmost sincerity, I wholeheartedly endorse Mr. Sopan Nangare for the "Sun Pharma Science Foundation- Science Scholar Awards 2023." I am certain that his inclusion as a recipient will not only validate his remarkable accomplishments but also propel his promising research trajectory into the future.

Yours Sincerely,

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