Nomination of Prof. Amit Mishra for SUN PHARMA SCIENCE FOUNDATION
in Medical Sciences under Basic Research Category

Contributions of the nominee: Entire Presented Work of Amit Mishra was Performed in India

Prof. Amit Mishra Research Contributions Medical Sciences under Basic Research

Prof. Amit Mishra has done significant work in neuronal protein quality control mechanisms involved in neurodegenerative diseases. This has been achieved by understanding the quality control functions of selective multifaceted E3 ubiquitin ligases, which barricade extreme defense against misfolded proteins aggregation. His findings provide a clear and better understanding of this innovative concept that can develop new therapeutic targets for neurodegeneration and aging. His studies have helped in clarifying the molecular pathways of misfolded recognition strategies based on E3 Ubiquitin Ligases. Amit's findings enlighten the precise molecular mechanism of E3 ubiquitin ligases and molecular chaperones, their involvement in neuronal quality control pathways, and affect overall neuronal homeostasis. Amit designs a different mechanism to modulate the proteasomal functions that can induce autophagy pathways and serve as the anti-aggregation program of affected cellular proteostasis. Research from his lab proposes that E3 Ubiquitin Ligases can act as the first line of defense against proteostasis failure under different protein conformation conditions. Amit developed an innovative harnessing method of molecular protein quality control system that can inhibit aberrant protein aggregation and deregulated proliferation. His group's significant contributions have substantially added knowledge on the progressing neurobiological approaches against multifactorial challenges in neurodegeneration. Shortly results of our studies may offer the more suitable substitute proteolytic machinery therapeutic strategies to balance the proteostasis for the defective events specifically linked with late-onset neurodegenerative diseases and aging.

Prof. Mishra has published more than hundred high-quality publications, several of those being selected as Cover Page of International Journals. SERB India, DBT India, BRNS/BARC, DST-JSPS, INSA-JSPS, and DST awarded him crucial research projects. Well-recognized national and International scientific organizations have recognized Amit's research contributions and bestowed different Honors/Awards/fellowships. His research has gathered attention from various Academic & Research bodies e.g., CSIR, IITs, MHRD, ICMR, DBT, DST, SERB, BRNS/BARC, INSA, NASI, ISCA, NYAS, IABS, BRSI, NAMS, JSPS, Max Planck, RIKEN, RSC, RSB, NYAS, IGC, and IAN. Based on his vital contributions, Prof. Mishra commands a respectable position in the area of protein misfolding research and is considered a leader in the field at such a young age. Taken together all the above achievements and significant research contributions of Prof. Mishra , I highly recommend him for consideration for SUN PHARMA SCIENCE FOUNDATION in Medical Sciences under Basic Research Category. Please feel free to ask me any questions in this regard.

Sincerely Yours

22.8.2023 (Signature)

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