सत्यमेव जयते

NATIONAL INSTITUTE OF MENTAL HEALTH AND NEURO SCIENCES, BENGALURU
राष्ट्रीय मानसिक स्वास्थ्य एवं तंत्रिका विज्ञान संस्थान, बेंगलुरु
ರಾಷ್ಟ್ರೀಯ ಮಾನಸಿಕ ಆರೋಗ್ಯ ಮತ್ತು ನರ ವಿಜ್ಞಾನ ಸಂಸ್ಥೆ, ಬೆಂಗಳೂರು
Institute of National Importance I राष्ट्रीय महत्व का संस्थान I ರಾಷ್ಟ್ರೀಯ ಮಹತ್ವದ ಸಂಸ್ಥೆ
Government of India I भारत सरकार I ಭಾರತ ಸರ್ಕಾರ
Department of Biophysics

27 September 2021

TO WHOMSOEVER IT MAY CONCERN

I, Dr. Indrani Datta, Associate Professor, Biophysics department, National Institute of Mental Health and Neuro Sciences (NIMHANS), Bangalore, Karnataka, would like to nominate Ms. Aishwarya Raj, a PhD student under my guidance, in the Biophysics department, NIMHANS, for the Sun Pharma Science Foundation Science Scholar Award.

I know the applicant, Ms. Aishwarya Raj for the last 3 years. She cleared PhD entrance of NIMHANS and joined for PhD with DST-INSPIRE fellowship. She is academically strong as it is evident, she had topped her University at the M.Sc. level and she successfully cleared the NIMHANS All-India PhD entrance examination.

Her work deals with assessing effect of alpha-synuclein on midbrain astrocytes in context of pathophysiology of Parkinson's disease. The work she is submitting for Science Scholar Award is regarding the consequence of α-synuclein on anti-oxidant mechanism and glutamate metabolic profile of cultured astrocytes. Being a source of glutathione and up-taking and metabolising glutamate are the primary supportive roles of astrocytes for adjacent neurons. Despite clear physical association between astrocytes and α-synuclein, the effect of extracellular α-synuclein on these astrocytic-functions has not yet been elucidated. From the outcome of this study, we now know that extracellular α-synuclein in sublethal level alters anti-oxidant machinery and glutamate metabolic profile of astrocytes. The study not only helps in understanding the effect of α-synuclein on astrocyte function but also suggests 'one-size-fit-all' approach cannot be adopted for tackling monomer and aggregate induced changes in cellular functions. This might allow us to consider these niche cells as potential targets for therapeutic strategies.

Aishwarya's PhD protocol involves work with primary astrocyte and midbrain dopaminergic neuronal cultures isolated from rats. In these few years itself, she can independently conduct molecular biology and biochemical experiments along with fluorescence microscopy, live cell

imaging and flow cytometry. Being a PhD student she has to design her own experiments and trouble-shoot them too. She has the correct combination of dedication, hard work and rational thinking to work in research. She is a team person and contributes substantially for other lab-work too. I strongly believe she is well-deserving candidate for the Sun Pharma Science Scholars Award and strongly recommend his candidature. It will be valuable recognition for her hard work in the field of science. This award and thus exposure to international conferences and other platforms will definitely improve her knowledge for her PhD work and enrich her growth as a researcher.

Indrani Datta

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