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शरीरमाद्यं खलु धर्मसाधनम्

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TO WHOM IT MAY CONCERN

This is with reference to nomination of **Ms. Shipra, Ph.D. student** registered under my supervision in the Department of Cardiac Biochemistry, All India Institute of Medical Sciences (AIIMS), New Delhi. Her proposed thesis work involves the understanding of intricate network of alarmins-autophagy-necroptosis in driving inflammation, immune regulation and cardiac homeostasis in doxorubicin induced model of cardiomyopathy.

In her thesis Ms. Shipra is working on various intervention strategies to rescue the doxorubicin induced acute and chronic cardiomyopathy (cardiotoxicity). She developed a robust doxorubicin induced acute and chronic cardiomyopathy in C57BL/6J mice. In her thesis, she identified a PGC-1α (peroxisome proliferator-activated receptor gamma ((PPAR-γ) coactivator-1alpha) agonist (i.e. ZLN005) that was found to enhance the expression of PGC-1α in cardiac tissue and targets the mitochondria mediated bioenergetics. PGC-1α is considered as the 'master regulator' of mitochondrial biogenesis and function. Her interventional study successfully demonstrated that the PGC1α agonist (ZLN005) mitigates cardiomyopathy phenotype by strengthening the redox balance via mitigating the DOX mediated oxidative stress, preventing the harmful tissue remodelling effects and necroptosis. Considering the global burden of cardiovascular diseases leading to heart failure, her research work demonstrated the novel therapeutic potential of PGC1α agonist and it may be translated to the clinical set-up for the management of various cardiac injury based disease conditions and/or to prevent the progression towards heart failure. However, a targeted delivery of PGC1α agonist in heart or cardiomyocyte specific overexpression of PGC1α may further improve the efficacy of PGC1α agonist.

The research work submitted is a part of her PhD thesis work and 'Sun Pharma Science Foundation Awards' may provide her the required impetus to excel in her career and will encourage her to continue working in the scientific field. Therefore, I nominate her work for 'Sun Pharma Science Foundation Awards' and strongly recommendation her candidature for same without any reservation.

Dr. Manoj Kumar Tembhre