TECHNOLOGIES FOR NEW INDIA@75
आज़ादी का अमृत महोत्सव

IMSc Distinguished Lecture Series

Azadi Ka Amrit Mahotsav

Friday, 11 March 2022 | 1600 – 1700 IST

Meeting ID: 980 6437 9891 | Passcode: 724060

matsciencechannel

The Value of a Quiet Life: Muscle Stem Cells and Their Balancing Act in Tissue Repair

Prof. Jyotsna Dhawan (DBT/Wellcome Trust India Alliance & CSIR CCMB, Hyderabad)

While most of the drama of cell proliferation and movement happens during embryonic development, stem cells persist within adult tissues, in a dormant state, and contribute to tissue repair after damage. Earlier depicted as a hibernating state characterized by very low metabolic activity, cellular quiescence is now emerging as a balanced or poised state where both proliferation and specialization programs are held in check by active mechanisms. Skeletal muscle tissue provides an excellent model to understanding quiescence in stem cells, as muscle cells can be cultured in distinct cellular states, permitting comparisons of multiple developmental programs. I will speak about our work on defining and dissecting the molecular basis of quiescence, and locate this discussion in a context of the field of stem cell biology, and how this basic understanding may eventually lead to therapeutic avenues.

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