MONDAY

COLLOQUIUM

Tiny Fly, Toxic Truths: Dissecting Drug Side Effects in Vivo

Lolitika Mandal (IISER, Mohali)

16 Nov 2026 (Monday) | 16:00 Hrs (Tea / Coffee 15:45 Hrs) | Venue: TIFRH Auditorium

Hypertension represents a global health crisis, and although drugs such as ACE inhibitors are effective at reducing pressure, clinical reports indicate that they may also disrupt blood cell homeostasis through poorly understood mechanisms. We have employed *Drosophila* to bypass the complexities of human biology and isolate exactly how these drugs disrupt blood cell balance. What we discovered was a fascinating paradox: although the treatments initially cause the immune system to become overactive, this chronic stress eventually has the opposite effect. The prolonged use of these drugs adversely affects the defensive functions of blood cells, such as phagocytosis, and immune responses. Our investigation reveals the hidden molecular pathways underlying this shift, demonstrating that prolonged use of these widely prescribed cardiovascular treatments can lead to unexpected immunosuppression.

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