UNIVERSITÀ DI TRENTO
Dipartimento di Biologia Cellulare, Computazionale e Integrata - CIBIO

2023

06/12 at 2.30 p.m. | room A210 Povo1

DEVELOPMENTAL CONTROL OF T-LOOPS AND END-PROTECTION

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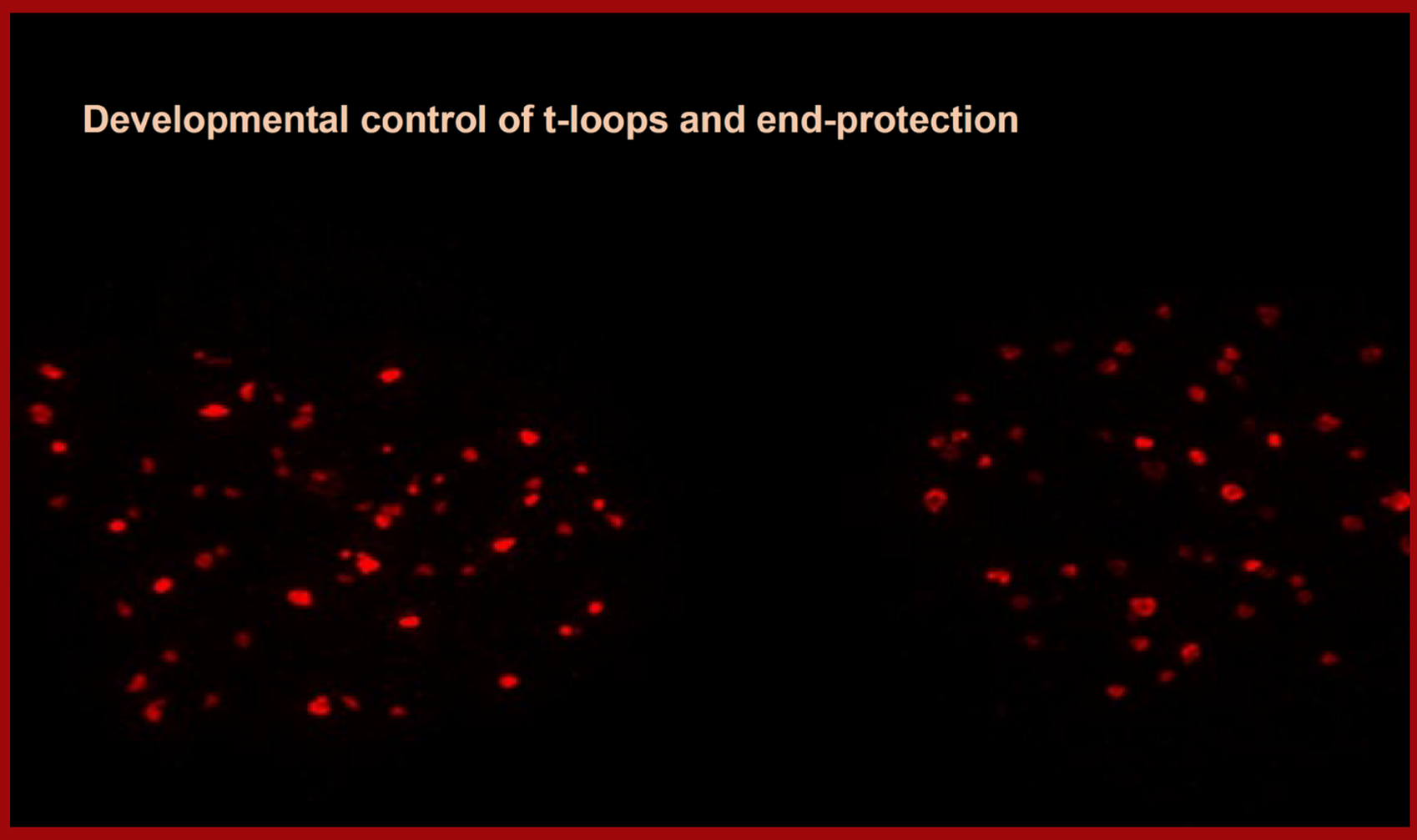

EPIGENETIC SEMINAR

Chromosome-end protection is crucial for the maintenance of genome stability. Telomeres end with a 3' single-stranded DNA overhang potentially bound by telomerase for elongation. This overhang can also tuck back into the duplex telomeric DNA to form the telomere-loop (t-loop) structure.

T-loops are thought to protect chromosome-ends; however, this could not be formally demonstrated. Here, we identify TElomere Loop Stabilizing protein 1 (TELS1), a telomere-specific protein necessary for t-loop stabilization in pluripotent cells and upon pluripotency exit. We show that TELS1-dependent t-loops control telomerase recruitment but do not seem to be involved in telomere protection.

I will present data suggesting that the t-loop is a biologically relevant structure, whose biogenesis and functions are developmentally regulated.

HOSTED BY MARTA BIAGIOLI

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