

# DSV Seminars 2019



UNIVERSITÀ  
DEGLI STUDI DI TRIESTE



DIPARTIMENTO DI  
SCIENZE DELLA VITA



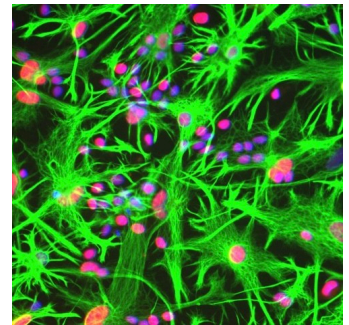
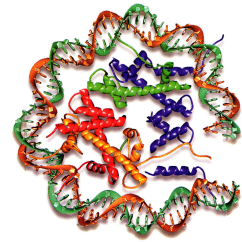
## ***PhD Program in Molecular Biomedicine***

Thursday, 21<sup>o</sup> February 2019 – 12:00

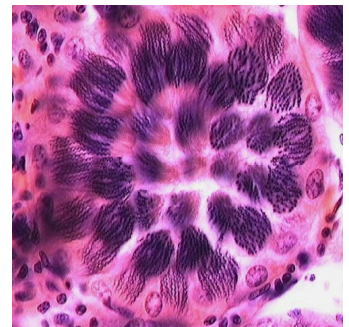
Seminar room, I floor, Q Building  
University of Trieste

### **Dr. Emilio Cusanelli**

Laboratory of Cell Biology and Molecular Genetics  
Department of Cellular, Computational and Integrative  
Biology – CIBIO, University of Trento



### **Investigating the dynamics of the telomeric noncoding RNA TERRA using a live cell imaging approach**



The finding that telomeres are transcribed by RNA pol II has opened new fields of study on the regulation and functions of the telomeric transcripts. Emerging evidence indicates that a class of telomeric long noncoding RNAs, known as TERRA, actively participates in the mechanisms regulating telomere maintenance and chromosome end protection. Intriguingly, TERRA transcripts have been proposed to regulate DNA replication, chromatin formation and gene expression. However, the molecular details of TERRA activities remain to be elucidated.



We have developed a live cell imaging approach to visualize TERRA molecules expressed from a single telomere in living cells. We have applied this approach to study TERRA in yeast *S. cerevisiae* and human cancer cells. I will go over our recent findings and discuss unpublished data on the dynamics of TERRA in yeast and cancer cells.

