



## Telomeres, Telomerase and Cancer

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### Message from the Guest Editor

Telomeres are nucleoprotein structures where repeated DNA is covered by a six-members protein complex named shelterin. Shelterin proteins protect nucleic acid from enzymatic attack and attenuates DNA damage signalling generated by DNA ends exposure. The progressive erosion of telomeric repeats over rounds of DNA duplication determines senescence of adult somatic cells and represents an intrinsic barrier to cell transformation. Cancer cells overcome replicative senescence by re-activating telomere maintenance mechanisms, mainly telomerase activity and, in a residual percentage of tumors, ALT activity. Recent advances on the comprehension of telomere regulation and metabolism, unveil multiple cross-talks between telomere biology and cancer initiation and progression and strengthen the concept that telomeres components and telomere maintenance mechanisms could represent validated targets for cancer therapy.

This issue focuses on the role of “telosome” elements in cancer progression and as potential targets for cancer therapy. Authors are encouraged to submit relevant basic and translational research articles and review articles on this specific issue.





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## Message from the Editor-in-Chief

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