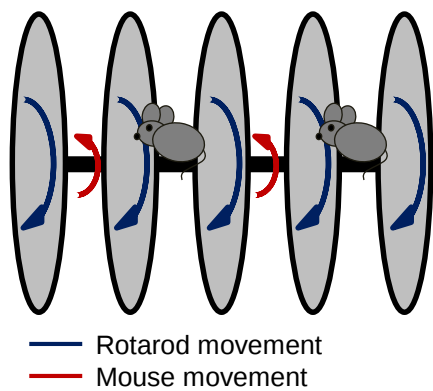


Supplementary Information

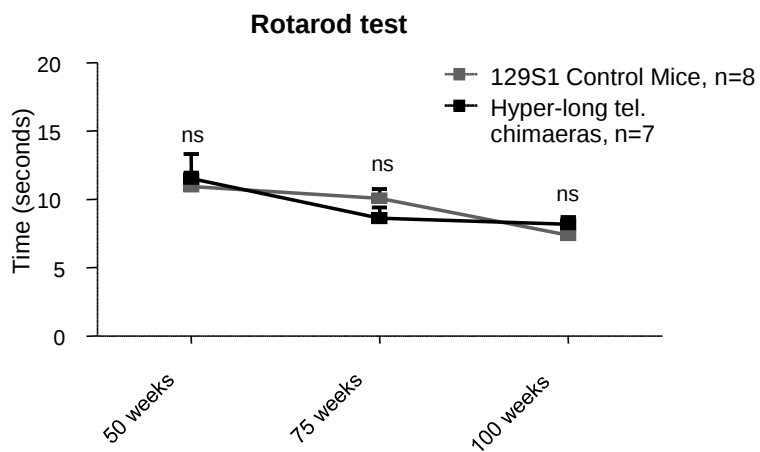
Mice with hyper-long telomeres show less metabolic aging and longer lifespans

Muñoz-Lorente *et al.*

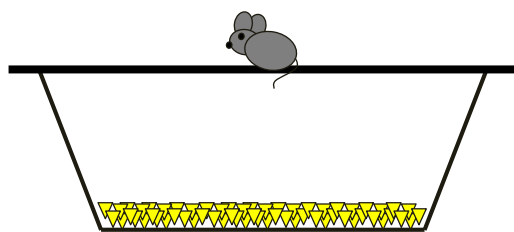
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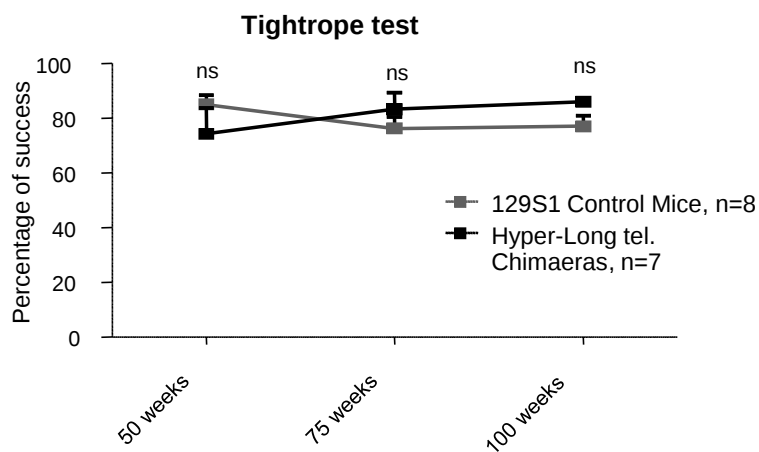
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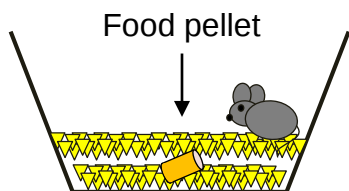
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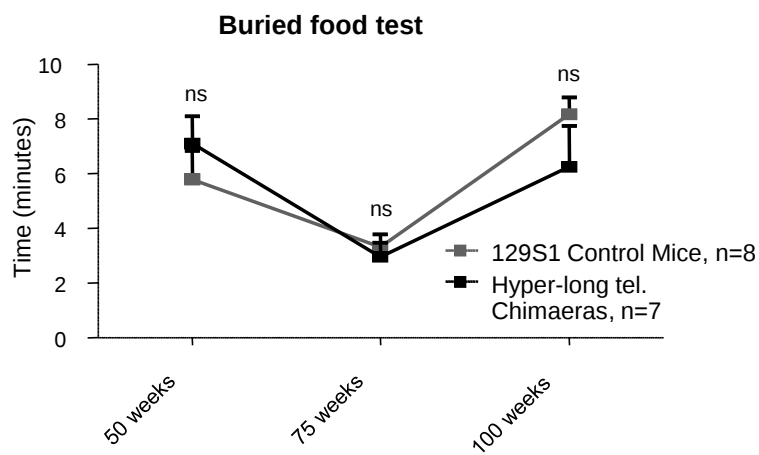
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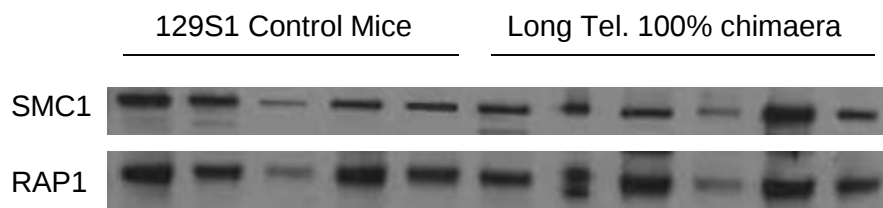
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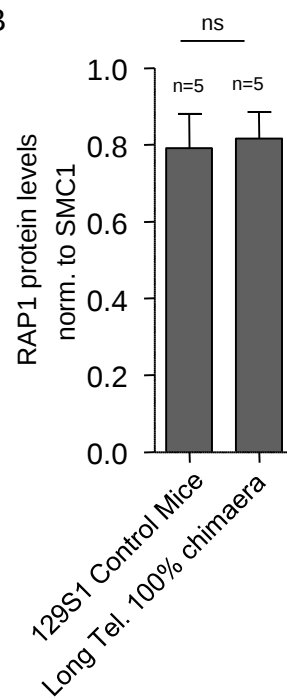
Supplementary Figure 1. Mice with hyper-long telomeres have normal cognitive capabilities. A-F. Different cognitive assays were performed in hyper-long telomere mice and age-matched controls at 50, 75 and 100 weeks of age. In order to evaluate neuromuscular endurance we performed the rotarod test (A-B) which measures the time that mice are able to stay on a rotating platform with accelerated movement without falling, for coordination we performed tightrope test which evaluates the capability of the mice to stay on a rope without falling during at least 1 minute (C-D) and for sensory perception we performed the buried food test (E-F) in which we measured the ability of mice to find a buried food pellet after 16h fasting. Error bars represent standard error. *t*-test was used for statistical analysis. The number of mice is indicated in each case.

A

WAT, 100 weeks old mice

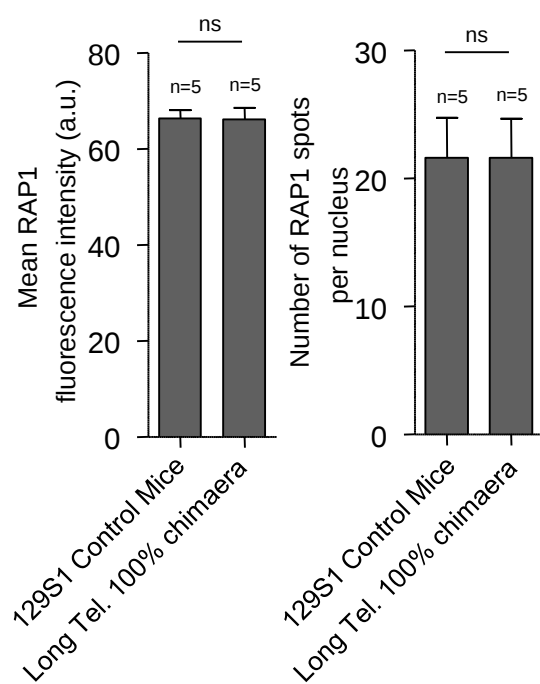


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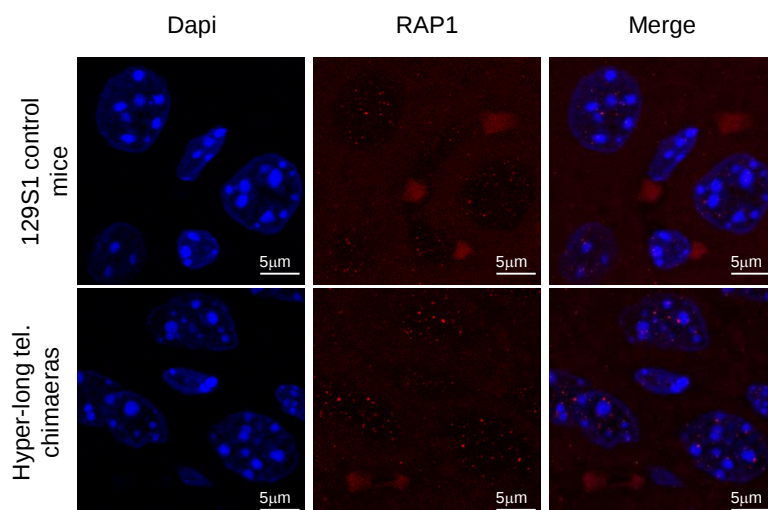


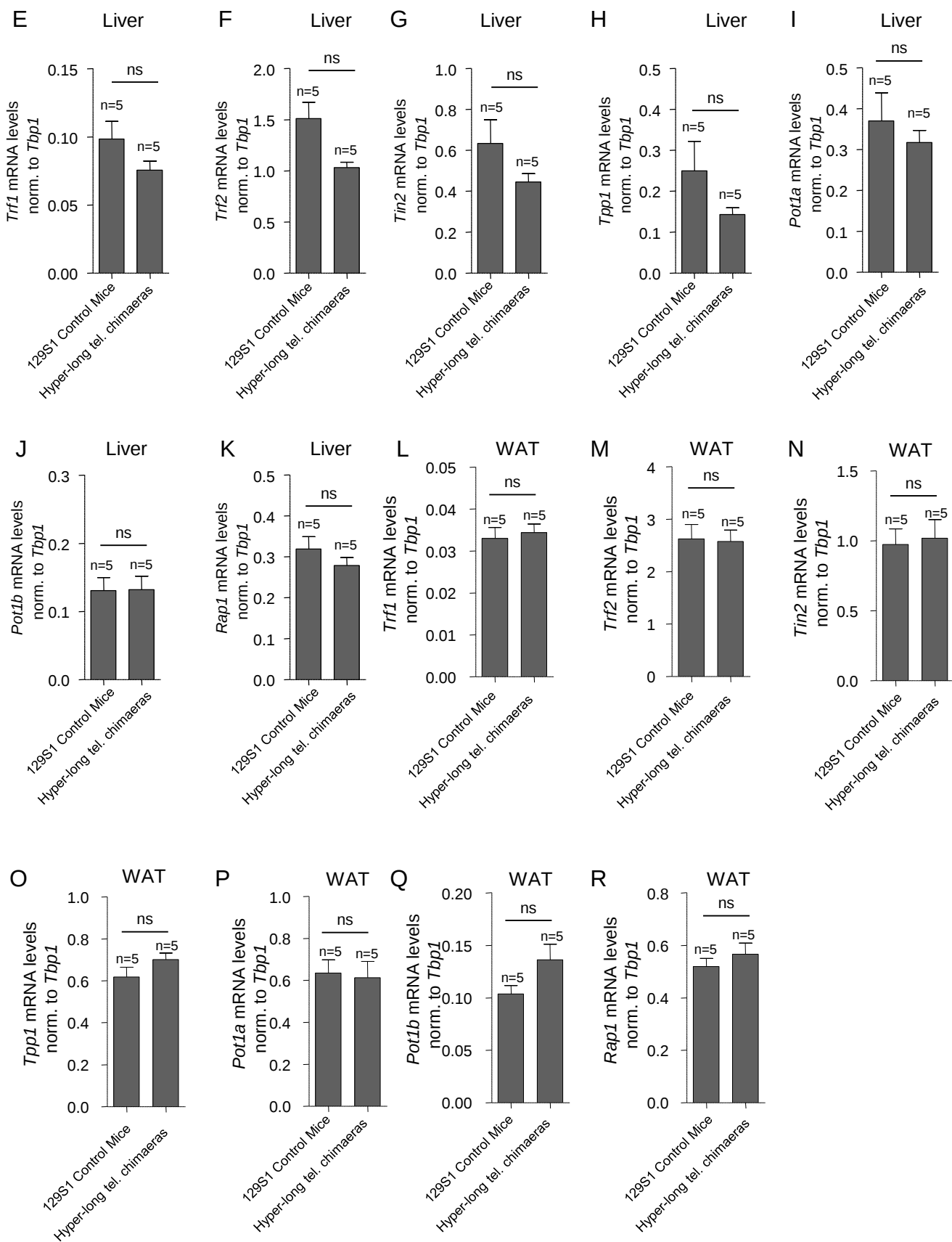
C

Liver, 100 weeks old mice



D





Supplementary Figure 2. Hyper-long telomere mice show normal RAP1 levels. **A-B.** Western Blot analysis shows RAP1 protein levels in white adipose tissue of age-matched (100 weeks old) hyper-long telomere mice and control mice. **C-D.** Immunofluorescence analysis of RAP1 protein levels in the liver of age-matched (100 weeks old) hyper-long telomere mice and control mice. **E-K.** mRNA levels in the liver of shelterins *Trf1* (E), *Trf2* (F), *Tin2* (G), *Tpp1* (H), *Pot1a* (I), *Pot1b* (J) and *Rap1* (K) in 100 weeks-old hyper-long telomere mice and age-matched controls as determined by qPCR. **L-R.** mRNA levels in the WAT of shelterins *Trf1* (L), *Trf2* (M), *Tin2* (N), *Tpp1* (O), *Pot1a* (P), *Pot1b* (Q) and *Rap1* (R) in 100 weeks-old hyper-long telomere mice and age-matched controls measured by qPCR. Error bars represent standard error. *t*-test was used for statistical analysis. The number of mice is indicated in each case.