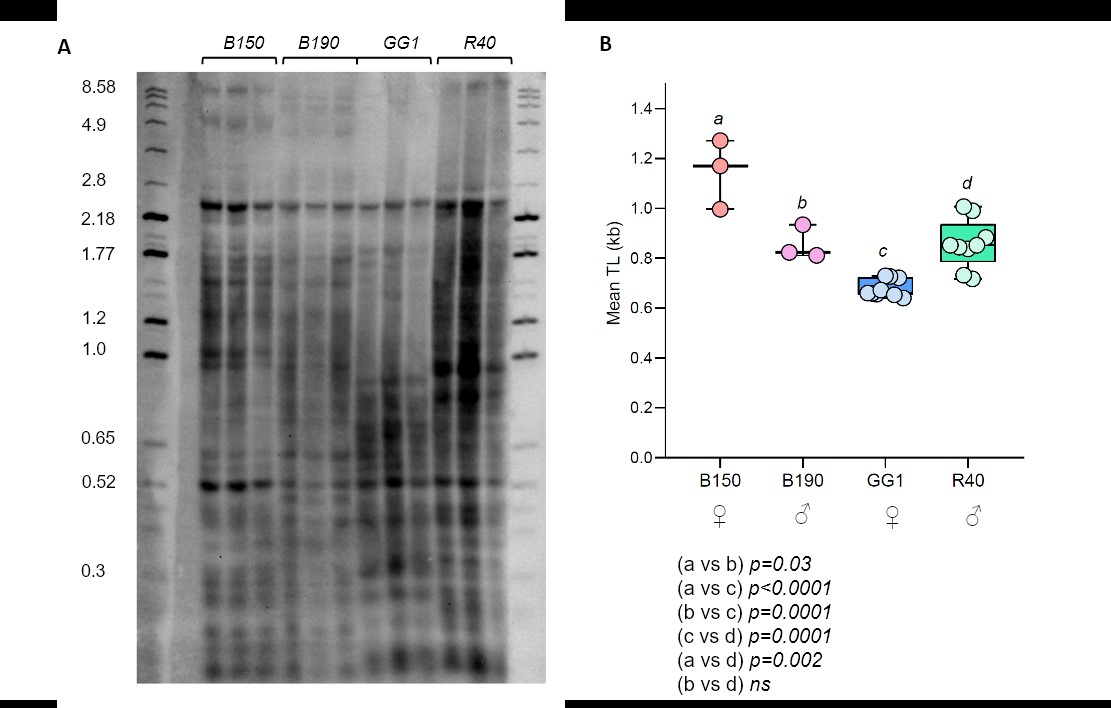
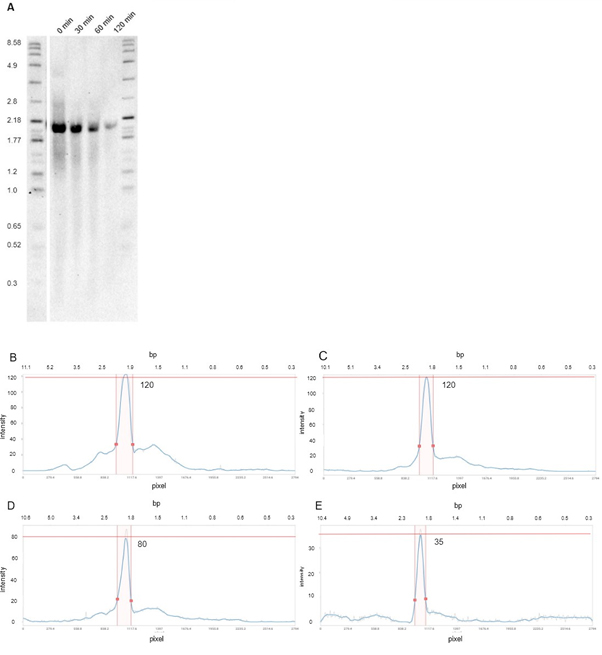
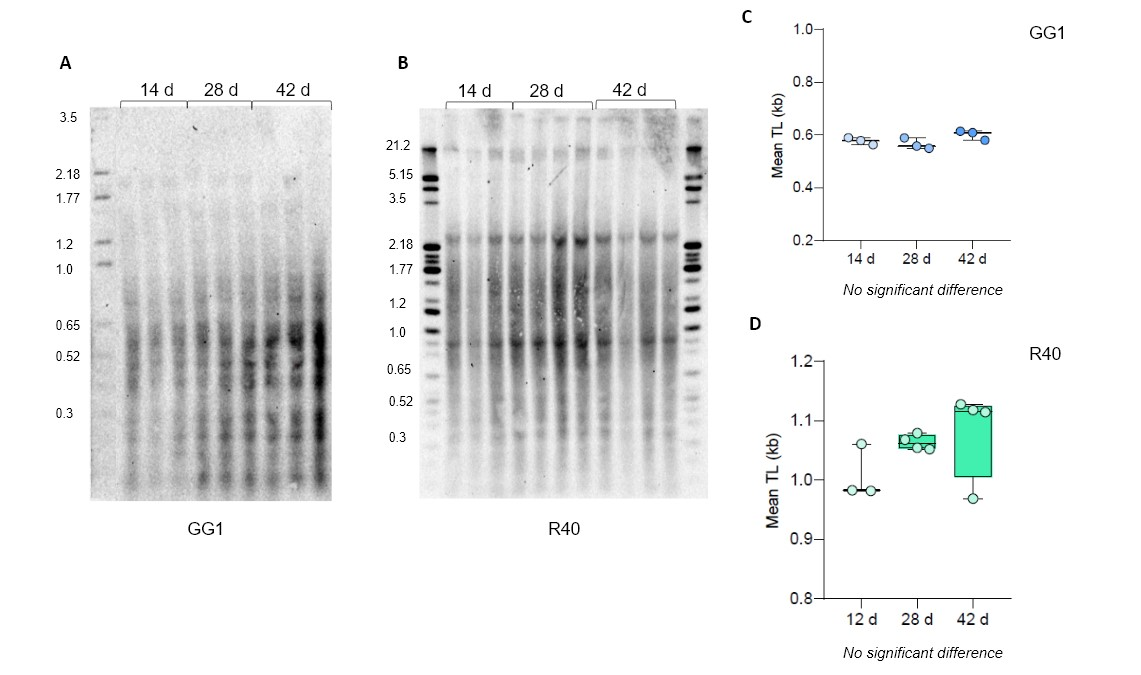
****

**Supplemental Figure 1. Telomere length variation in *C. purpureus* ecotypes**. (**A**) TRF Southern blot for DNA from *C. purpureus* lines B150 (female), B190 (male), GG1 (female) and R40 (male) digested with *TruI1*. Molecular weight DNA markers (in kb) are shown. **(B)** Telomere length (mean TRF) distributions in ≥3 biological replicates of each genotype are shown in boxplots. Significant *p*-values are shown; ns - no significant differences.



**Supplemental Figure 2.** **Analysis of sensitivity of *S. fallax* telomeric DNA to *BAL31* nuclease**. **(A)** TRF Southern blots for *BAL31*-digested DNA. Lanes show *Tru1I* digestion of *S. fallax* genomic DNA without prior *Bal31* treatment (0 min), and after various incubation periods with *Bal31* exonuclease (30, 60, 120 min). Molecular weight markers are shown in kb. WALTER software quantifications of signal intensity from telomeric DNA treated with *BAL31* for 0 min (**B**), 30 min (**C**), 60 min (**D**), and 120 min (**E**) are shown. Red lines show signal intensity for 2.1 kb band.

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**Supplemental Figure 3.** **Telomere length dynamics in *C. purpureus* GG1 and R40 ecotypes**. TRF Southern blots for DNA from 14-, 28- and 42-day protonema cultures of GG1 (**A**) and R40 (**B**) ecotypes digested with *Tru1I*. Telomere length (mean TRF) distributions in 3 biological replicates of GG1 (**C**)and R40 (**D**) cultures are shown in boxplots. No significant changes in telomere length are detected.

**Supplemental Table 1. Telomere length distribution in *P. patens* ecotypes, in kb.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Telomere length | Gd | Re | Ka | Vx |
| Mean | 1.21±0.06 | 1.29±0.04 | 1.08±0.13 | 1,71±0,19 |
| Min | 0.67±0.03 | 0.88±0.12 | 0.70±0.07 | 0,95±0,18 |
| 1st Quartile | 0.88±0.04 | 1.08±0.09 | 0.85±0.10 | 1,32±0,15 |
| Median | 1.14±0.04 | 1.27±0.04 | 1.03±0.14 | 1,67±0,18 |
| 3rd Quartile | 1.62±0.13 | 1.53±0.13 | 1.34±0.19 | 2,14±0,34 |
| Max | 3.16±0.41 | 2.25±0.26 | 2.41±0.69 | 3,93±1,67 |

**Supplemental Table 2. Telomere length distribution in *P. patens* Gd and Re ecotypes (in kb) treated with different enzyme combinations.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Telomere length | Gd | | Re | |
|  | *TruI1* and *RsaI* | *HaeIII,* *MboI,* *AluI* | *TruI1* and *RsaI* | *HaeIII,* *MboI,* *AluI* |
| Mean | 1.15±0.004 | 1.17±0.012 | 1.35±0.07 | 1.46±0.05 |
| Min | 0.79±0.02 | 0.88±0.001 | 1.04±0.11 | 1.14±0.03 |
| 1st Quartile | 1.01±0.01 | 1.00±0.001 | 1.22±0.08 | 1.31±0.03 |
| Median | 1.15±0.004 | 1.15±0.006 | 1.34±0.06 | 1.44±0.04 |
| 3rd Quartile | 1.30±0.008 | 1.35±0.03 | 1.48±0.07 | 1.63±0.07 |
| Max | 1.65±0.04 | 1.84±0.17 | 1.90±0.09 | 2.12±0.14 |

**Supplemental Table 3. Telomere lengths distribution in *C. purpureus* isolates, in kb.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Telomere length | B150 | B190 | GG1 | R40 |
| Mean | 1.15±0.14 | 0.86±0.07 | 0.68±0.04 | 0.85±0.10 |
| Min | 0.57±0.01 | 0.47±0.08 | 0.43±0.06 | 0.46±0.11 |
| 1st Quartile | 0.90±0.14 | 0.65±0.07 | 0.58±0.04 | 0.63±0.09 |
| Median | 1.13±0.16 | 0.81±0.07 | 0.66±0.03 | 0.81±0.08 |
| 3rd Quartile | 1.41±0.11 | 1.11±0.06 | 0.80±0.03 | 1.12±0.15 |
| Max | 2.20±0.04 | 2.38±0.18 | 1.41±0.42 | 1.86±0.46 |

**Supplemental Table 4. Telomere length distribution (in kb) in *C. purpureus* ecotypes treated with different enzyme combinations.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Telomere length | GG1 | | R40 | |
|  | *TruI1,* *RsaI* | *HaeIII,* *MboI,* *AluI* | *TruI1,* *RsaI* | *HaeIII,* *MboI,* *AluI* |
| Mean | 0.61±0.02 | 1.53±0.11 | 0.90±0.11 | 1.42±0.03 |
| Min | 0.48±0.01 | 1.14±0.03 | 0.52±0.06 | 1.11±0.11 |
| 1st Quartile | 0.53±0.01 | 1.33±0.03 | 0.67±0.14 | 1.29±0.04 |
| Median | 0.60±0.02 | 1.47±0.07 | 0.89±0.15 | 1.39±0.03 |
| 3rd Quartile | 0.70±0.04 | 1.79±0.23 | 1.14±0.05 | 1.59±0.04 |
| Max | 0.98±0.05 | 3.21±1.02 | 1.61±0.11 | 2.36±0.06 |

**Supplemental Table 5. Telomere length distribution in *M. polymorpha* ecotypes, in kb*.***

|  |  |  |
| --- | --- | --- |
| Telomere length | Tak-1 | Tak-2 |
| Mean | 2.15±0.25 | 2.45±0.25 |
| Min | 1.54±0.17 | 1.55±0.20 |
| 1st Quartile | 1.83±0.21 | 1.87±0.20 |
| Median | 2.11±0.27 | 2.36±0.28 |
| 3rd Quartile | 2.52±0.29 | 3.12±0.32 |
| Max | 3.41±0.40 | 4.64±0.21 |

**Supplemental Table 6. Telomere length distribution in *Sphagnum* isolates, in kb*.***

|  |  |  |  |
| --- | --- | --- | --- |
| Telomere length | *S. fallax* | *Sphagnum sp.* | *S. girgensohnii* |
| Mean | 1.86±0.08 | 1.35±0.11 | 1.56±0.21 |
| Min | 1.12±0.21 | 1.06±0.01 | 0.91±0.16 |
| 1st Quartile | 1.61±0.11 | 1.12±0.07 | 1.25±0.16 |
| Median | 1.91±0.10 | 1.33±0.10 | 1.54±0.23 |
| 3rd Quartile | 2.06±0.06 | 1.60±0.16 | 1.88±0.25 |
| Max | 3.39±1.15 | 2.34±0.11 | 3.56±0.86 |