Supplemental data for:

Effects of green seaweed extract on *Arabidopsis* early development suggest roles for hormone signalling in plant responses to algal fertilisers.

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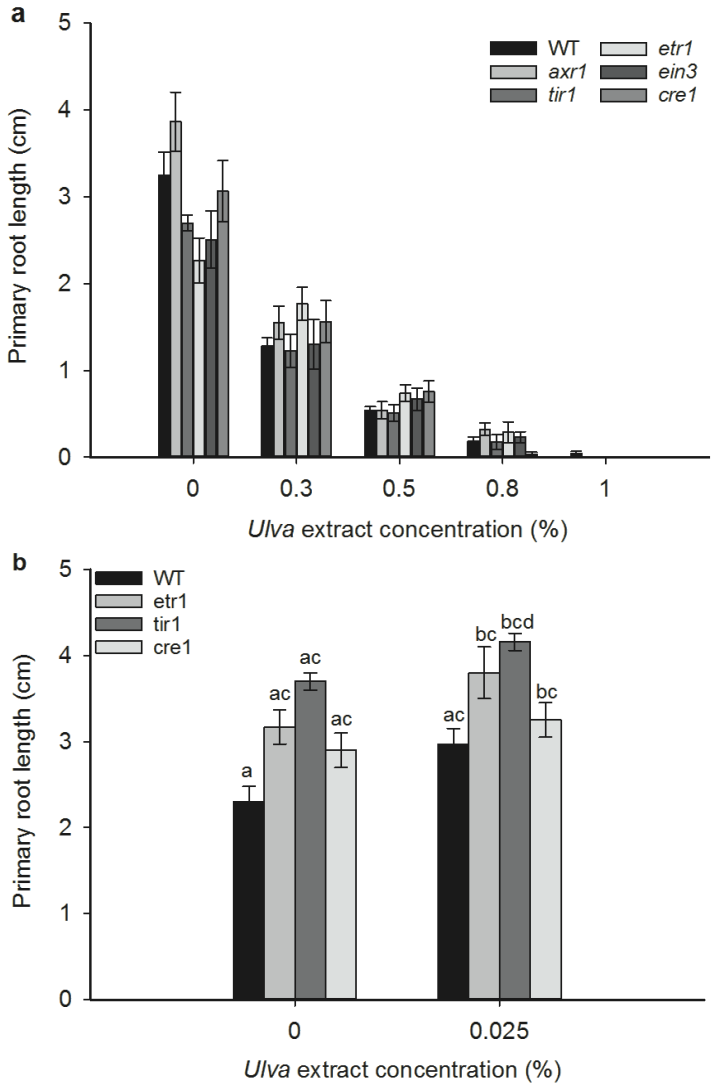
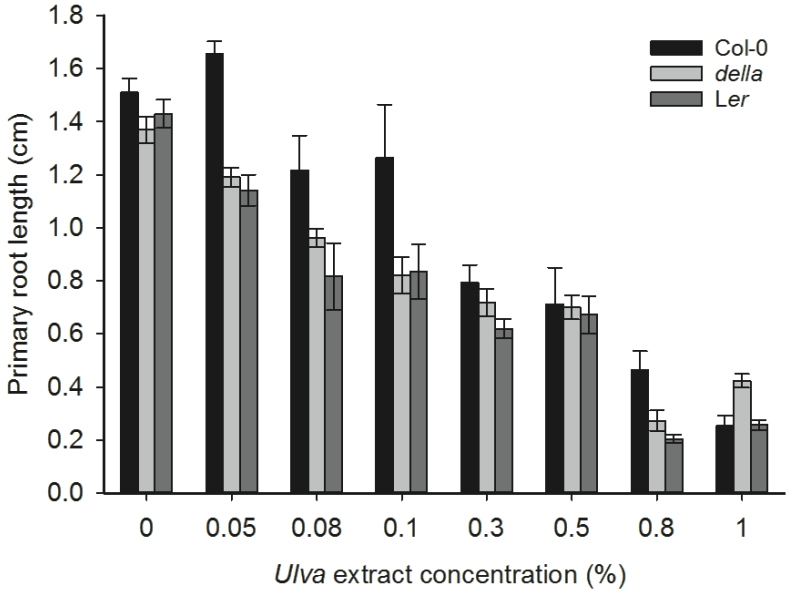


Supplemental Figure 1. Ethylene, auxin and cytokinin signaling mutants' root growth is inhibited by high concentrations of *Ulva* extract, similarly to wild-type plants.
a) Inhibition of root growth by 0.3-1% *Ulva* extract in all hormone mutants, similarly to wild type. Comparison across genotypes and treatments using a Kruskal-Wallis test and a Dunn's post-hoc test indicates that 0.3% *Ulva* extract reduces root growth ($p \leq 0.05\%$) compared to the control in all genotypes but *etr1*, while 0.5% reduces root growth ($p \leq 0.05\%$) compared to the control in all genotypes but *cre1*. 0.8% and 1% *Ulva* extract significantly reduce root growth in all genotypes compared to the control ($p \leq 0.05$). In terms of between-genotype differences, under control conditions only *etr1* is significantly different from other genotypes ($p<0.05$), at 0.3% and 0.5% there are no significant differences between the genotypes, at 0.8% *cre1* is significantly different from wild-type and *axr1* ($p<0.05$) and at 1% no genotypes are significantly different from one another.
b) Stimulation of root growth in all hormone signaling mutants by 0.025% *Ulva* extract. An analysis of variance followed by a Tukey's post-hoc test demonstrates significant differences between wild-type control and *etr1* and *tir1* treated with *Ulva* extract ($p<0.01$), between wild type control and cre1 treated with *Ulva* extract ($p<0.05$), between wild-type treated with *Ulva* extract and and *tir1* treated with *Ulva* extract ($p<0.05$), between *cre1* control plants and *etr1* treated with *Ulva* extract, and between *cre1* control and *tir1* treated with *Ulva* extract. These differences are represented by the letters above the graph.



Supplemental Figure 2. The *Arabidopsis* quintuple *della* mutant is sensitive to the inhibitory effects of *Ulva* extract on root growth.
The *della* mutant was generated in a L*er* background also containing 3Mb of Col-0 sequence (Belfield et al., 2012). For each *Ulva* extract concentration, the effects on Col-0, *della* and L*er* are shown.

Supplemental Reference

Belfield, E. J. *et al.* Genome-wide analysis of mutations in mutant lineages selected following fast-neutron irradiation mutagenesis of Arabidopsis thaliana. *Genome research* **22**, 1306-1315 (2012).