

SCIENTIFIC DATA



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Data Descriptor: Transcriptome characterisation and simple sequence repeat marker discovery in the seagrass *Posidonia oceanica*

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Posidonia oceanica is an endemic seagrass in the Mediterranean Sea, where it provides important ecosystem services and sustains a rich and diverse ecosystem. *P. oceanica* meadows extend from the surface to 40 meters depth. With the aim of boosting research in this iconic species, we generated a comprehensive RNA-Seq data set for *P. oceanica* by sequencing specimens collected at two depths and two times during the day. With this approach we attempted to capture the transcriptional diversity associated with change in light and other depth-related environmental factors. Using this extensive data set we generated gene predictions and identified an extensive catalogue of potential Simple Sequence Repeats (SSR) markers. The data generated here will open new avenues for the analysis of population genetic features and functional variation in *P. oceanica*. In total, 79,235 contigs were obtained by the assembly of 70,453,120 paired end reads. 43,711 contigs were successfully annotated. A total of 17,436 SSR were identified within 13,912 contigs.

Design Type(s)	genetic structural variation analysis objective
Measurement Type(s)	RNA sequencing
Technology Type(s)	RNA-seq assay
Factor Type(s)	underwater depth • diurnal timepoint
Sample Characteristic(s)	<i>Posidonia oceanica</i> • leaf • Golfe de Calvi

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