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Identification of acidic stress responsive genes and acid tolerance engineering in  
*Synechococcus elongatus* PCC 7942

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**Fig. S1** Biological reproducibility of RNA-seq data with three distinct clusters formed in the principal component analysis.

**Fig. S2** Relative gene expression levels obtained from RNA-seq and qRT-PCR analysis.

a) long-term acidic stress VS control; b) shock treatment VS control.

**Fig. S3** Growth patterns of overexpression mutants and control in BG11 medium at pH7.5

and pH5.6. a) *pex*; b) *synpcc7942\_2038*; c) *synpcc7942\_1890*; d) *synpcc7942\_2547*. The

error bars represented the calculated standard deviation of the measurements of three biological replicates.

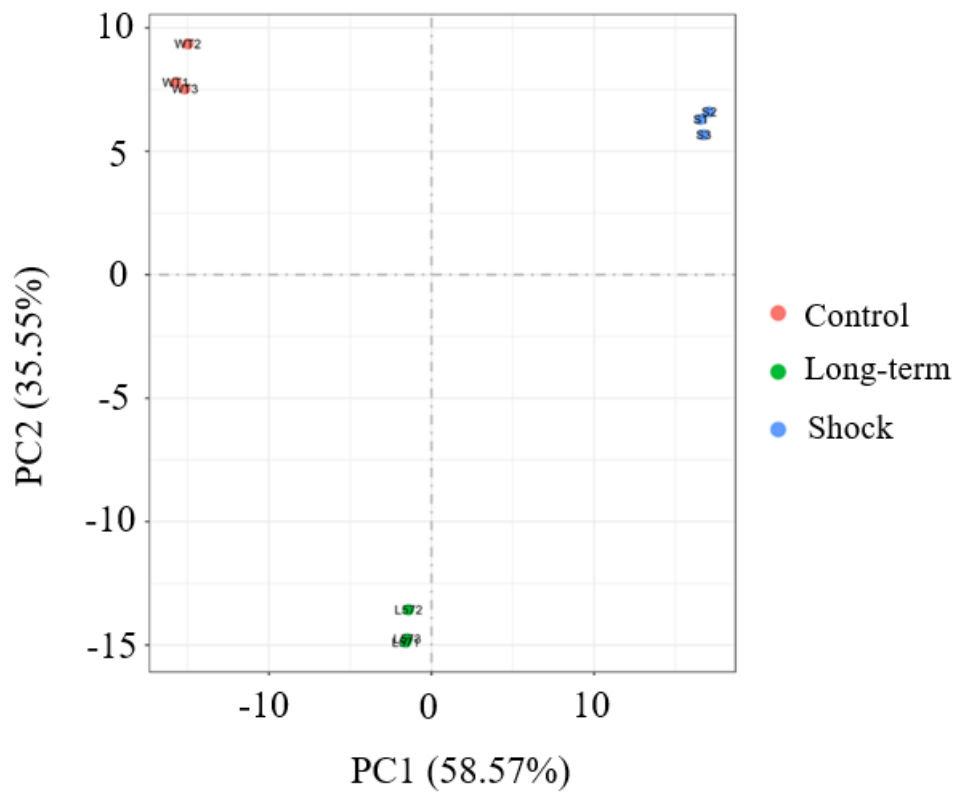
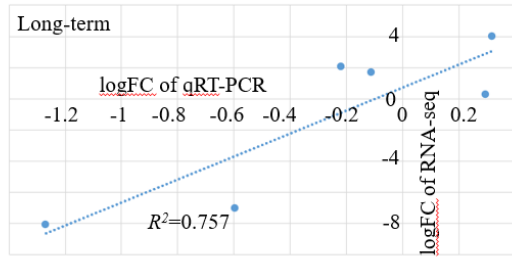


Fig. S1

a



b

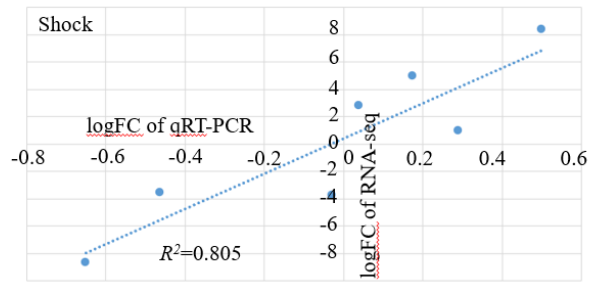


Fig. S2

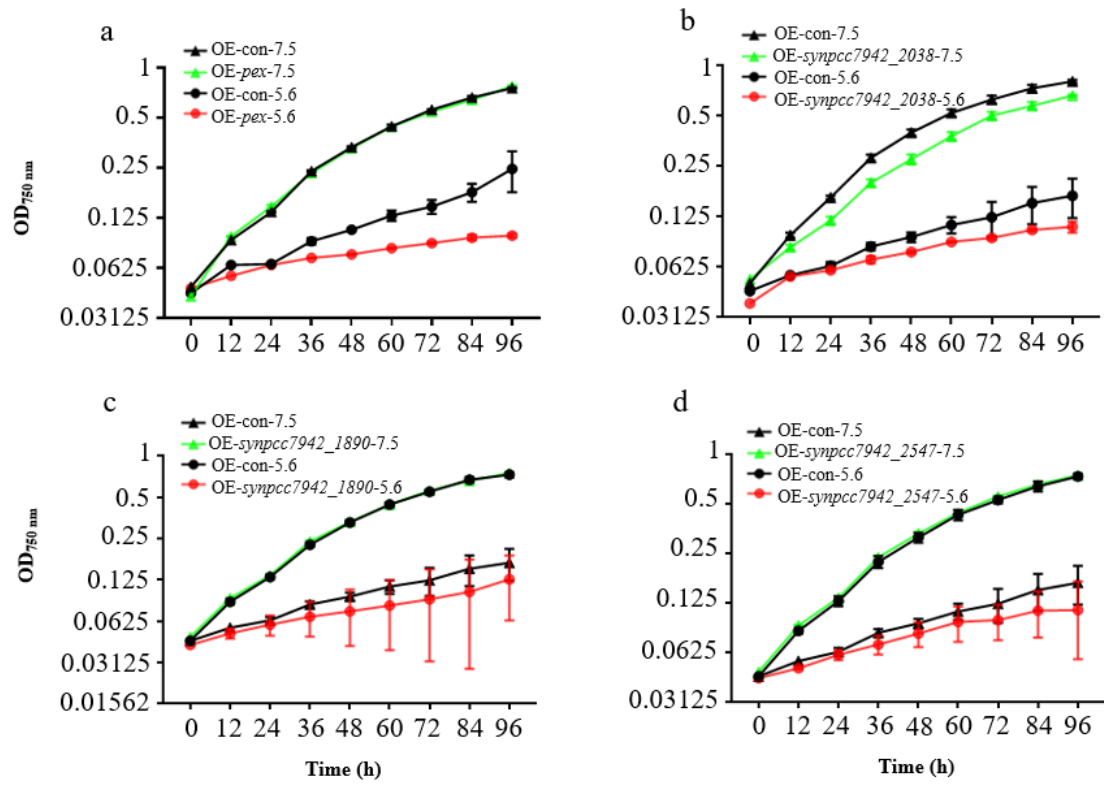


Fig. S3

## **Credit Author Statement**

J. Z wrote the manuscript, conducted the experiments and analyzed the data. L. C edited the manuscript and T. S supervised the work. Funding was sourced by L. C and W.W. Z.