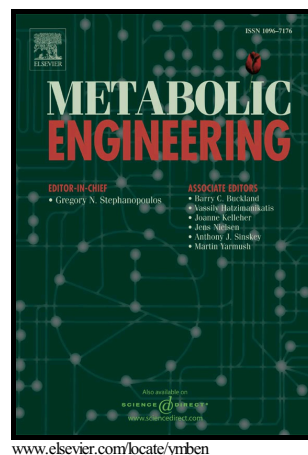


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**CRISPR interference as a titratable, *trans*-acting regulatory tool for metabolic engineering in the cyanobacterium *Synechococcus sp.* strain PCC 7002**

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**Abstract**

Trans-acting regulators provide novel opportunities to study essential genes and regulate metabolic pathways. We have adapted the clustered regularly interspersed palindromic repeats (CRISPR) system from *Streptococcus pyogenes* to repress genes *in trans* in the cyanobacterium *Synechococcus sp.* strain PCC 7002 (hereafter PCC 7002). With this approach, termed CRISPR

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