

Re-write the abstract (5 points)

An abstract is a short summary of a larger work, allowing readers to make a quick decision whether to read the full paper or not. For primary research reports, it often reads like a mini-paper, with 1-2 sentences each devoted to Introduction, Materials and Methods, Results, and Discussion. Abstracts are also useful in cataloging papers and provide keywords for electronic search engines. The trouble is, abstracts are often impenetrably dense to readers not already familiar with the field.

For this exercise, you will work with a group of students and re-write the abstract for the scientific paper you were assigned. Each student should SUBMIT TO THEIR GSI'S LAB CANVAS SITE BY THE BEGINNING OF LAB NEXT WEEK a draft version that they have written up on their own. The aim is to make the abstract clear for undergraduate science students. After discussion, the group will submit a "consensus" abstract containing one sentence from each person in the group. For reference, the actual abstract is shown below.

Abstract: C. Argueta et al., Journal of Microbiological Methods 59 (2004) 181-188.

Two transcriptional reporter shuttle vectors were constructed for the filamentous cyanobacterium *Nostoc punctiforme* using the green fluorescence protein (GFP) reporter. Both the ampicillin- and kanamycin-resistant versions of the plasmid allow promoters to be directionally cloned into a multiple cloning site preceding a promoterless gfp gene using an *Escherichia coli* host. The ability of the self-replicating shuttle plasmids to report cell-type-specific gene expression in *N. punctiforme* was tested by cloning promoters expressed in normal vegetative cells, nitrogen-fixing heterocysts and spore-like akinetes. A P_{psaC} reporter gene fusion was expressed in vegetative cells and not in heterocysts, whereas GFP driven from P_{hetR} was found highly expressed in heterocysts. GFP expression driven by the promoter for the *N. punctiforme* homologue of the akinete-specific gene *avaK* was expressed in developing akinetes. Decreased expression of GFP from the P_{psaC} reporter in hormogonia was also observed. The results demonstrate the utility of these GFP vectors to study cell-type-specific gene expression in differentiating filamentous cyanobacteria.

Provide 1-2 sentences for each area of the paper

Background/Problem to be investigated:

What was made (and how) during the course of this work:

Results demonstrated by this work:

Significance/Limitations of this work: