

Dear Rutger,

Thank you very much for your feedback. We have made all modifications accordingly and updated the manuscript version on Archiv.

1- a) After reading again I consider that the statement (lines 30-31, “The *ccyA* gene shows a clear day/night expression pattern with a maximum transcript abundance at the end of the night.” Could be misleading as the maximum of expression concerns the whole of the second half of the night (see Fig. 3) and not just a single time point prior to “sunrise”. I suggest to change as follows: “The *ccyA* gene shows a clear day/night expression pattern with maximum transcript abundances during the second half of the night.”

This has been modified accordingly

b) Same point lines 249-251 replace as follows: “A clear day/night pattern can be observed in the expression of *ccyA*, with maximum transcript abundances during the second half of the night (t7_N and t8_N, Table 1) and a minimum transcript abundance at 12 am during daytime (t3_D, Table 1)”.

This has been modified accordingly

c) Same point lines 256-258 replace as follows: “When compared with the mean expression of the 4440 genes of the whole transcriptome, the mean expression of the *ccyA* gene was significantly higher (p-value < 0.05) during the second half of the night, i.e., at the two-time points : 2 am (t7_N) and 7 am (t8_N) (Table 1).

This has been modified accordingly

2- To make things a bit more clear I suggest that you replace (lines 73-75) “About the later hypothesis, we note that buoyancy is not just controlled by cell density but also by additional parameters such as cell aggregation. For example, Gu et al. (2020) showed that Ca induces EPS production by *M. aeruginosa*, which can increase buoyancy” by : “About the later hypothesis, we note that buoyancy is not just controlled by cell density but also by additional parameters such as EPS adhering to the cells and cell aggregation. For example, Gu et al. (2020) showed that Ca induces EPS production by *M. aeruginosa*, which particularly when incorporated in the cell aggregates, can increase buoyancy”.

This has been modified accordingly

3- Note the ref Gu et al (2020) is missing in the list.

The ref Gu et al (2020) has now been added to the list

4- You may wish to change (line 111) “Overall, one way of gaining a better understanding” into “A first step of gaining a better understanding”, which makes the justification for your approach a bit stronger.

This has been changed accordingly

5- Legend Fig. 7, replace “Figure 7 - Abundance profiles of three genomic neighbors of” by “Figure 7 – Time course of the Abundances of three genomic neighbors of”

This has been modified

6- a) Line 456, I think the “alternation” is a more appropriate term than “compartmentalization” in this context, as compartmentalization implies occurring in different spaces separated by some sort of boundaries.

Indeed, this was the term used by Straub et al (2011). We changed it to strong changes to remove this idea of physical boundaries.

b) Same point, lines 475-476, I suggest: “is compartmentalized” should be replaced by “alternates”

This was modified similarly

7- There is an error in a name of a co-author in the Straub et al. publication. First name: Nicole; Family name: Tandeau de Marsac; Correct Reference: Straub, C., Quillardet, P., Vergalli, J., Tandeau de Marsac, N., Humbert, J.-F., 2011. A day in the life of 830 *Microcystis aeruginosa* strain PCC 7806 as revealed by a transcriptomic analysis. PLOS ONE 8(1): e16208. <https://doi.org/10.1371/journal.pone.0016208>

Thank you. This has been corrected.