Article

Anti-inflammatory, antioxidant and wound healing properties of cyanobacteria from thermal mud of Balaruc-les-Bains, France: a multi-approach study

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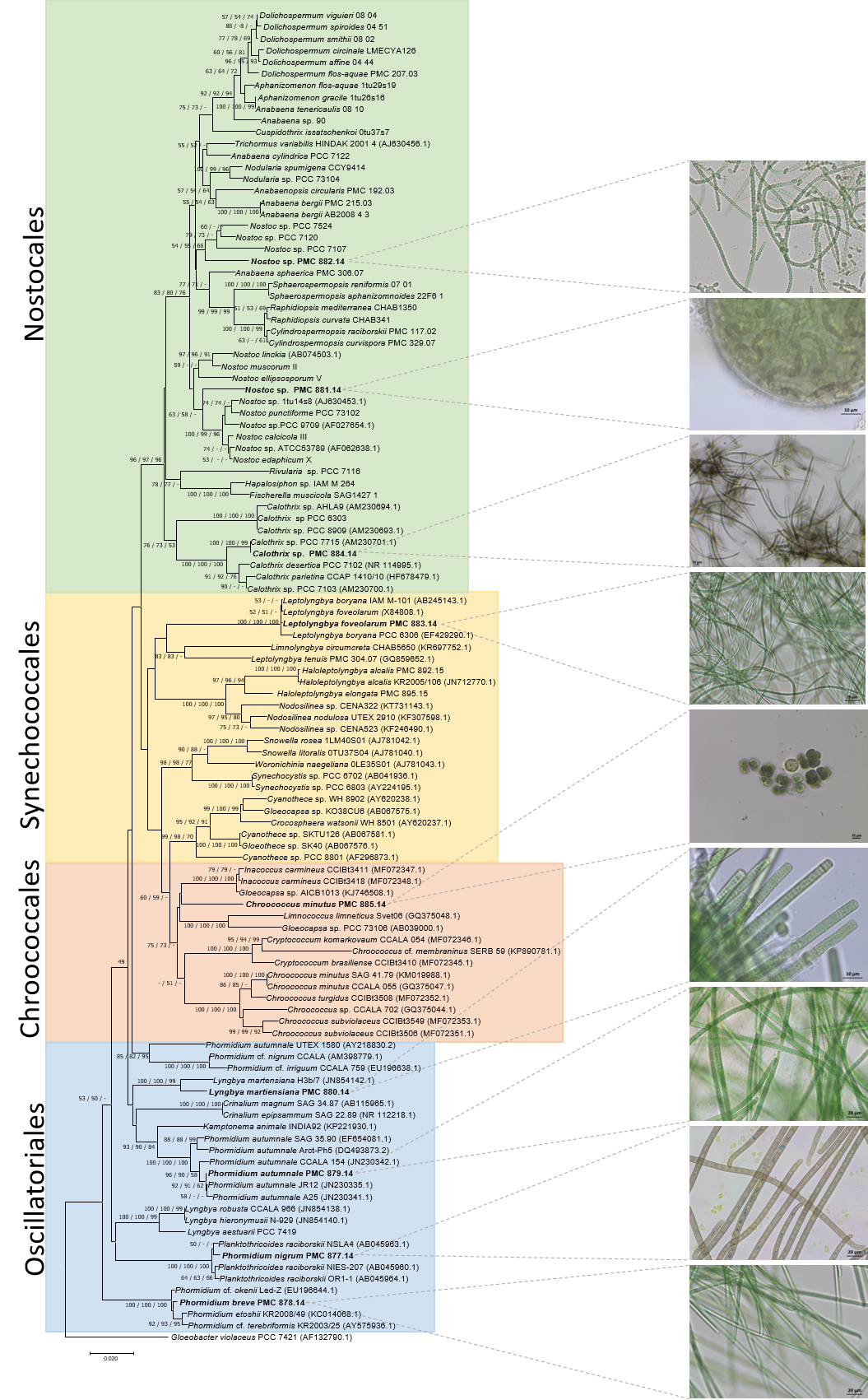
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Supplementary data



**Figure S1.** Consensus phylogenetic tree based on 16S rRNA gene sequences of representative cyanobacteria strains belonging to the orders Oscillatoriales, Nostocales, Chroococcales and Synechococcales, Balaruc-les-Bains strains (in bold) and one outgroup (*Gloeobacter violaceus*). Numbers above branches indicate bootstrap support (>50%) from 1000 replicates. Bootstrap values are given in the following order: neighbor joining/maximum likelihood/maximum parsimony.

**Table S1.** Biosynthetic gene clusters from *Planktothricoides raciborskii* PMC 877.14

**Table S2.** Biosynthetic gene clusters from *Laspinema* sp. PMC 878.14

**Table S3.** Biosynthetic gene clusters from *Microcoleus vaginatus* PMC 879.14

**Table S4.** Biosynthetic gene clusters from *Lyngbya martensiana* PMC 880.14

**Table S5.** Biosynthetic gene clusters from *Nostoc* sp. PMC 881.14

**Table S6.** Biosynthetic gene clusters from *Aliinostoc* sp. PMC 882.14

**Table S7.** Biosynthetic gene clusters from *Leptolyngbya boryana* PMC 883.14

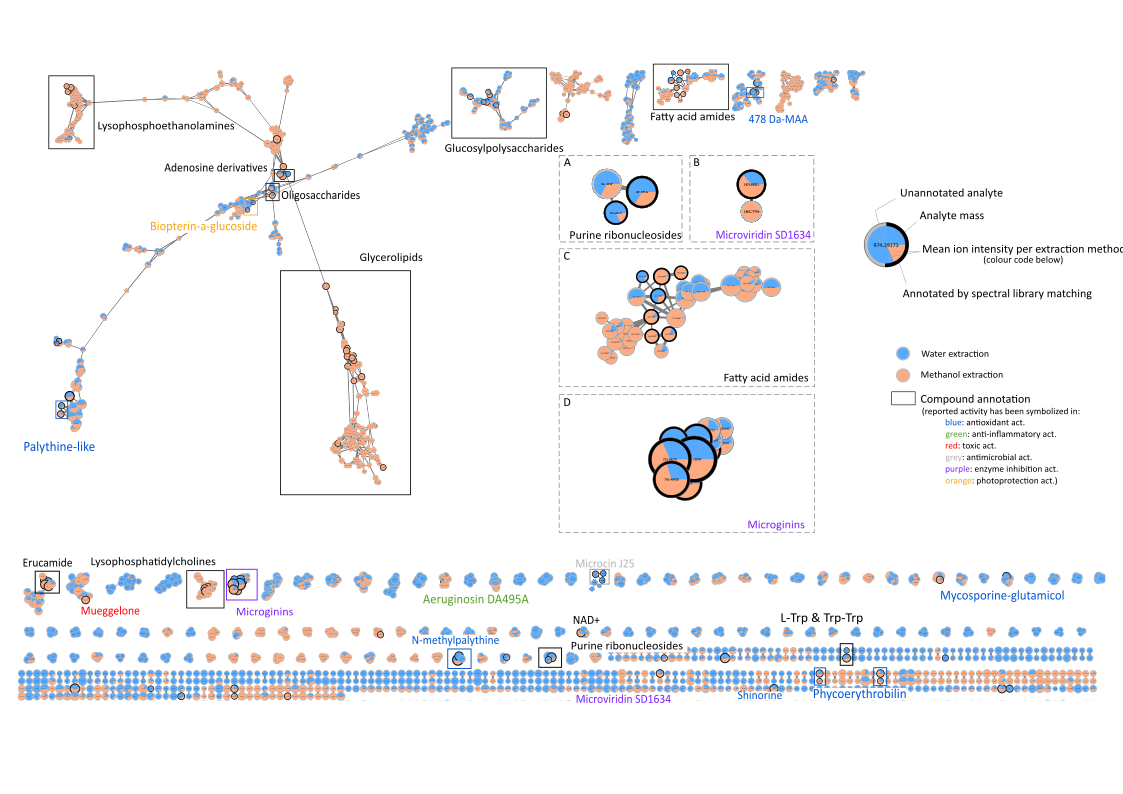
**Table S8.** Biosynthetic gene clusters from *Calothrix* sp. PMC 884.14

**Table S9.** Biosynthetic gene clusters from *Pseudo-chroococcus couteii* PMC 885.14

**Table S10.** Biosynthetic genes for pigment production

**Table S12-S20**. BGCs from heterotrophic bacteria associated to Balaruc cyanobacteria in culture

(see .xsls file)

**Figure S2.** Molecular network of the metabolites produced by the nine cyanobacteria isolated from Balaruc thermal mud. Annotations obtained by untargeted analysis are figured inboxes. Nodes have been coloured according to the fraction of the extraction in which they were detected.

**Table S11.** Cell viability bioassays were assessed on the three cell types used for other activity tests (RAW 264.7; HaCaT; PMBC cell lines). The reliable toxicity threshold is set at a 40% decrease in cell viability.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | *P. raciborskii*  PMC 887.14 | | *Laspinema* sp.  PMC 878.14 | | *M. vaginatus*  PMC 879.14 | | *L. martensiana*  PMC 880.14 | | *Nostoc* sp.  PMC 881.14 | | *Aliinostoc* sp.  PMC 882.14 | | *L. boryana*  PMC 883.14 | | *Calothrix* sp.  PMC 884.14 | | *P. couteii*  PMC 885.14 | | |
| Bioassay |  | µg.mL-1 | MeOH | H2O | MeOH | H2O | MeOH | H2O | MeOH | H2O | MeOH | H2O | MeOH | H2O | MeOH | H2O | MeOH | H2O | MeOH | H2O |
| Cell Viability | RAW 264.7 | 1 | - | | - | -30 +/-2 | - | | - | -33 +/-1 | - | -38 +/-1 | - | -32 +/-2 | - | | - | | - | |
| 5 | - | | - | -32 +/-2 | - | | - | -34 +/-5 | -32 +/-1 | -41 +/-0 | - | -36 +/-3 | - | | - | | - | |
| 10 | - | | - | -30 +/-2 | - | | - | -28 +/-6 | -35 +/-1 | -37 +/-2 | - | | - | | - | | - | |
| 50 | - | | - | | - | | -28 +/-2 | - | - | | -28 +/-3 | - | - | | - | -32 +/-1 | - | |
| HaCaT | 1 | - | | | | | | | | | | | | | | | | | |
| 5 | - | | | | | | | | | | | | | | | | | |
| 10 | - | | | | | | | | | | | | | | | | | |
| 50 | - | | | | | | | | | | | | | | | | | |
| PBMC | 1 | - | | | | | | | | | | | | | | | | | |
| 5 | - | | | | | | | | | | | | | | | | | |
| 10 | - | | | | | | | | | | | | | | | | | |
| 50 | - | | | | | | | | | | | | | | | | | |