

## Effects of fish farming on flavonoids in *Posidonia oceanica*

Magali Cannac, Lila Ferrat, Christine Pergent-Martini,  
Gerard Pergent, Vanina Pasqualini \*

*University of Corsica, Faculty of Sciences, Equipe Ecosystèmes Littoraux, BP 52, 20250 Corte, France*

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### Abstract

This work is a first approach to flavonoid responses (total proanthocyanidins and total and simple flavonols) in *Posidonia oceanica* in function of nutrient enrichment (aquaculture activities — fish farming), in the western Mediterranean Sea (Calvi–Corsica–France). The first result is the presence of total and simple flavonoids in *P. oceanica*. The second result shows an increase in total proanthocyanidin and total flavonol concentrations near cages, which would be linked to the high grazing pressure induced by meadow enrichment. Concerning simple flavonols, only quercetin shows a response to fish farming, which could be due to its strong antioxidant capacity. The presence of fish farming, which causes variations in environmental parameters, could affect the functioning of *P. oceanica* meadows. Flavonoid concentrations in *P. oceanica* seem to be a possible bioindicator of nutrient enrichment for the management of the littoral environment.

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\* Corresponding author. Tel.: +33 4 95 45 06 52; fax: +33 4 95 45 01 62.

*E-mail address:* [pasqualini@univ-corse.fr](mailto:pasqualini@univ-corse.fr) (V. Pasqualini).