

{rokbox title=|Graphical abstract :: Image: Authors|

thumb=|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-oxidative-stress-induction-invasive-sponge-paraleucilla-magna-growing-peyssonnelia-squamaria-algae-julio-diaz-et-al-2019-thumb.jpg|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-oxidative-stress-induction-invasive-sponge-paraleucilla-magna-growing-peyssonnelia-squamaria-algae-julio-diaz-et-al-2019.jpg{/rokbox}

Eleonora Guzzetti, Eduardo Salabery, Pere Ferriol, **Julio A. Díaz**, Silvia Tejada, Caterina Faggio, Antoni Sureda, 2019.

[Oxidative stress induction by the invasive sponge *Paraleucilla magna* growing on *Peyssonnelia squamaria* algae.](#)

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Abstract: The introduction of invasive species can lead to significant adverse effects on the colonized areas. The aim of the present research was to determine if the invasive behavior of *Paraleucilla magna*

could induce the activation of the antioxidant defences in the native red algae,

Peyssonnelia squamaria

. Individuals of isolated

P. squamaria

and individuals epiphytized by

P. magna

, both growing on rocky bottoms, were collected. The activity of the antioxidant enzymes - catalase, superoxide dismutase, glutathione peroxidase and glutathione reductase – and the levels of the malondialdehyde were significantly higher in the algae of the epiphytic group compared to the control group, while the detoxifying enzyme glutathione S-transferase did not show significant differences. The levels of reduced glutathione and total polyphenols were higher in the algae affected by the sponge. In conclusion, the arrival of the species

P. magna

induces an adaptative antioxidant response in

P. squamaria

determined by the use of biomarkers.

Keywords: Antioxidants, Invasive species, Oxidative stress, Mediterranean sea, *Paraleucilla magna*