{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.
Marine Environmental Research. Volume 150, September 2019, 104763.
https://doi.org/10.1016/j.marenvres.2019.104763

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*