

Review of: "Comprehensive characterization and molecular insights into the salt tolerance of a Cu, Zn-superoxide dismutase from an Indian Mangrove, *Avicennia marina*"

Sandra Pucciarelli¹

¹ University of Camerino

Potential competing interests: The author(s) declared that no potential competing interests exist.

The paper reports a deep characterization of SOD from Mangroves.

I suggest the following modifications to improve the paper: the Introduction is quite short. More information should be provided about SOD family.

the following papers could be of interest for improving the introduction:

1: Ferro D, Bakiu R, Pucciarelli S, Miceli C, Vallesi A, Irato P, Santovito G.

Molecular Characterization, Protein-Protein Interaction Network, and Evolution

of Four Glutathione Peroxidases from *Tetrahymena thermophila*.

Antioxidants (Basel). 2020 Oct 2;9(10):949. doi: 10.3390/antiox9100949. PMID:

33023127; PMCID: PMC7600574.

2: Ferro D, Bakiu R, De Pittà C, Boldrin F, Cattalini F, Pucciarelli S, Miceli

C, Santovito G. Cu,Zn superoxide dismutases from *Tetrahymena thermophila*:

molecular evolution and gene expression of the first line of antioxidant

defenses. Protist. 2015 Feb;166(1):131-45. doi: 10.1016/j.protis.2014.12.003.

Epub 2014 Dec 16. PMID: 25681687.

Furthermore, I suggest a comparison with additional SODs from an extremophile:

Pischedda A, Ramasamy KP, Mangiagalli M, Chiappori F, Milanesi L, Miceli C, Pucciarelli S, Lotti M. Antarctic

marine ciliates under stress: superoxide dismutases from the psychrophilic *Euplotes focardii* are cold-

active yet heat tolerant enzymes. Sci Rep. 2018 Oct 3;8(1):14721. doi: 10.1038/s41598-018-33127-1.

PMID: 30283056; PMCID: PMC6170424.

in order to verify if the mechanism of adaptation to extreme environment may be similar or not.

