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SUPPLEMENTARY MATERIAL TO

Antioxidative response of *Melissa* officinalis L. and *Valeriana officinalis* L. leaves exposed to exogenous melatonin and excessive zinc and cadmium levels

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TABLE S-I. The effect of melatonin on the activities of antioxidative enzymes under different environmental stressors

Plant species	Melatonin concentration	Type of treatment	Changes in antioxidative metabolism				Ref.
			SOD	POD	CAT	APX	
Triticum aestivum	1 mM	Cold stress for 3 days	Increased	–	Same	–	1
Solanum lycopersicum	50 µM for 2 h	22 °C with 75 % relative humidity: 16 h light / 8 h dark regime	–	Increased	Increased	–	2
Lolium perenne L.	20, 50 and 100 µM	Dark stress	Increased	–	Increased	Reduced	3
Malus hupehensis	5 µM	Alkaline stress pH 8.5 to 8.8 for 15 days	Same	Same	Increased	–	4
Triticum aestivum	1 mM	nano-ZnO stress ZnO NPs 300 mg L^{-1}	Increased	–	Increased	Increased	5
Galinsoga parviflora	50, 100, 150, 200 µM	Cd 10 mg for 40 days	Increased	Increased	Increased	–	3

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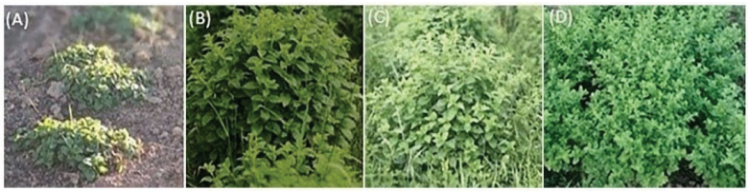

Fig. S-1. Lemon balm (*Melissa officinalis* L.) control plants during development: A) 0, B) 15, C) 30 and D) 45 days from the beginning of the experiment and treatment with Zn and Cd.

Fig. S-2. Valerian (*Valeriana officinalis* L.) control plant during development: A) 0, B) 15, C) 30 and D) 45 days from the beginning of the experiment and treatment with Zn and Cd.

REFERENCES

1. H. Turk, S. Erdal, M. Genisel, O. Atici, Y. Demir, D. J. Yanmis, *Plant Growth Regul*. **74** (2014) 139 (https://doi.org/10.1007/s10725-014-9905-0)
2. Q. Sun, N. Zhang, J. Wang, H. Zhang, D. Li, J. Shi, R. Li, S. Weeda, B. Zhao, S. Ren, Y. D. Guo, *J. Exp. Bot.* **66** (2015) 657 (https://doi.org/10.1093/jxb/eru332)
3. X. Gong, S. Shi, F. Dou, Y. Song, F. Ma, *Molecules* **22** (2017) 1542 (https://doi.org/10.3390/molecules22091542)
4. J. Zhang, H. Li, B. Xu, J. Li, B. Huang, *Front. Plant Sci*. **7** (2016) 1500 (https://doi.org/10.3389/fpls.2016.01500)
5. K. Esmaeilzadeh-Salestani, A. Riahi-Madvar, M. A. Maziyar, *Int. J. Food Allied Sci.* **3** (2014) 562 (http://ijfas.com/wp-content/uploads/2014/05/562-565.pdf).