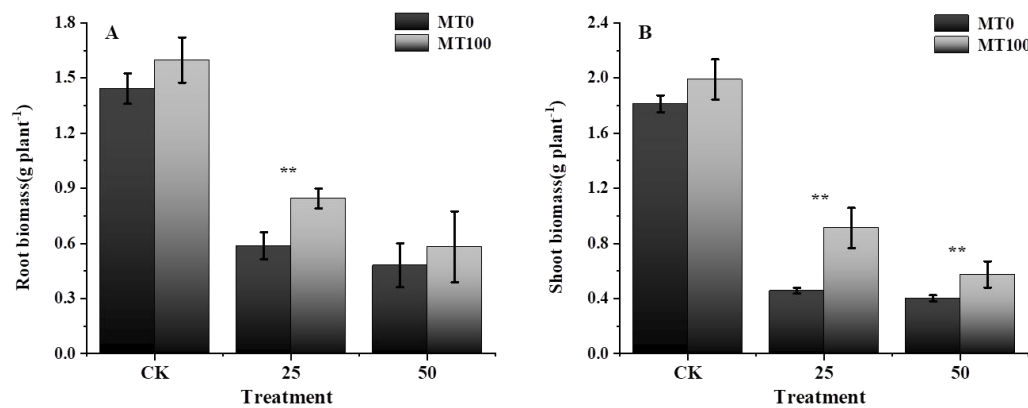


## **Supplementary data**

**Article title: Interpretation of melatonin-mediated vacuolar compartmentalization at the cellular level in the hyperaccumulator plant *Solanum nigrum* L. under cadmium stress**

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**Fig. S1 The Root biomass (A) and Shoot biomass (B) of *Solanum nigrum* L. seedlings. CK, 25, 50 indicate 0  $\mu\text{M}$  CdCl<sub>2</sub>, 25  $\mu\text{M}$  CdCl<sub>2</sub>, 50  $\mu\text{M}$  CdCl<sub>2</sub>, 0  $\mu\text{M}$  melatonin, respectively. MTCK, MT25, MT50 indicate 0  $\mu\text{M}$  CdCl<sub>2</sub>, 25  $\mu\text{M}$  CdCl<sub>2</sub>, 50  $\mu\text{M}$  CdCl<sub>2</sub>, 100  $\mu\text{M}$  melatonin, respectively. Means ( $\pm$  SD) were calculated from three replications ( $n = 3$ ) for each treatment. Two asterisks represent a significant difference between MT0 and MT100 at  $P < 0.01$ .**

**Table S1 Cadmium accumulation concentration, total cadmium content and translocation factors (TF) under different treatments in *S. nigrum*. seedlings. Means ( $\pm$  SD) were calculated from three replications ( $n = 3$ ) for each treatment. Different letters represent a statistically significant difference at  $p < 0.05$ .**

| Treatment | Cd concentration<br>(mg/kg DW) |                       | TF                | Cd accumulation<br>( $\mu\text{g plant}^{-1}$ ) |                   |
|-----------|--------------------------------|-----------------------|-------------------|-------------------------------------------------|-------------------|
|           | Root                           | Shoot                 |                   | Root                                            | Shoot             |
| CK        | -                              | -                     | -                 | -                                               | -                 |
| MTCK      | -                              | -                     | -                 | -                                               | -                 |
| 25        | 2045.56 $\pm$ 21.13c           | 650.64 $\pm$ 24.03c   | 0.318 $\pm$ 0.021 | 81.8 $\pm$ 6.36bc                               | 39.65 $\pm$ 4.89d |
| MT25      | 1623.1 $\pm$ 230.22d           | 647.87 $\pm$ 41.14c   | 0.398 $\pm$ 0.026 | 89.27 $\pm$ 10.3b                               | 62.11 $\pm$ 2.99c |
| 50        | 2472.23 $\pm$ 143.4b           | 1751.11 $\pm$ 220.9a  | 0.708 $\pm$ 0.035 | 77.63 $\pm$ 2.25c                               | 89.06 $\pm$ 7.91a |
| MT50      | 3189.7 $\pm$ 68.76a            | 1322.03 $\pm$ 130.21b | 0.414 $\pm$ 0.04  | 120.99 $\pm$ 3.58a                              | 76.39 $\pm$ 2.44b |