

## SUPPLEMENTARY INFORMATION

### Modulation of Stress Protein Gene Expression in Potato Tissues *in Vitro* under the Influence of Chalcogen and Metal Nanocomposites During the Infection with *Pectobacterium carotovorum*

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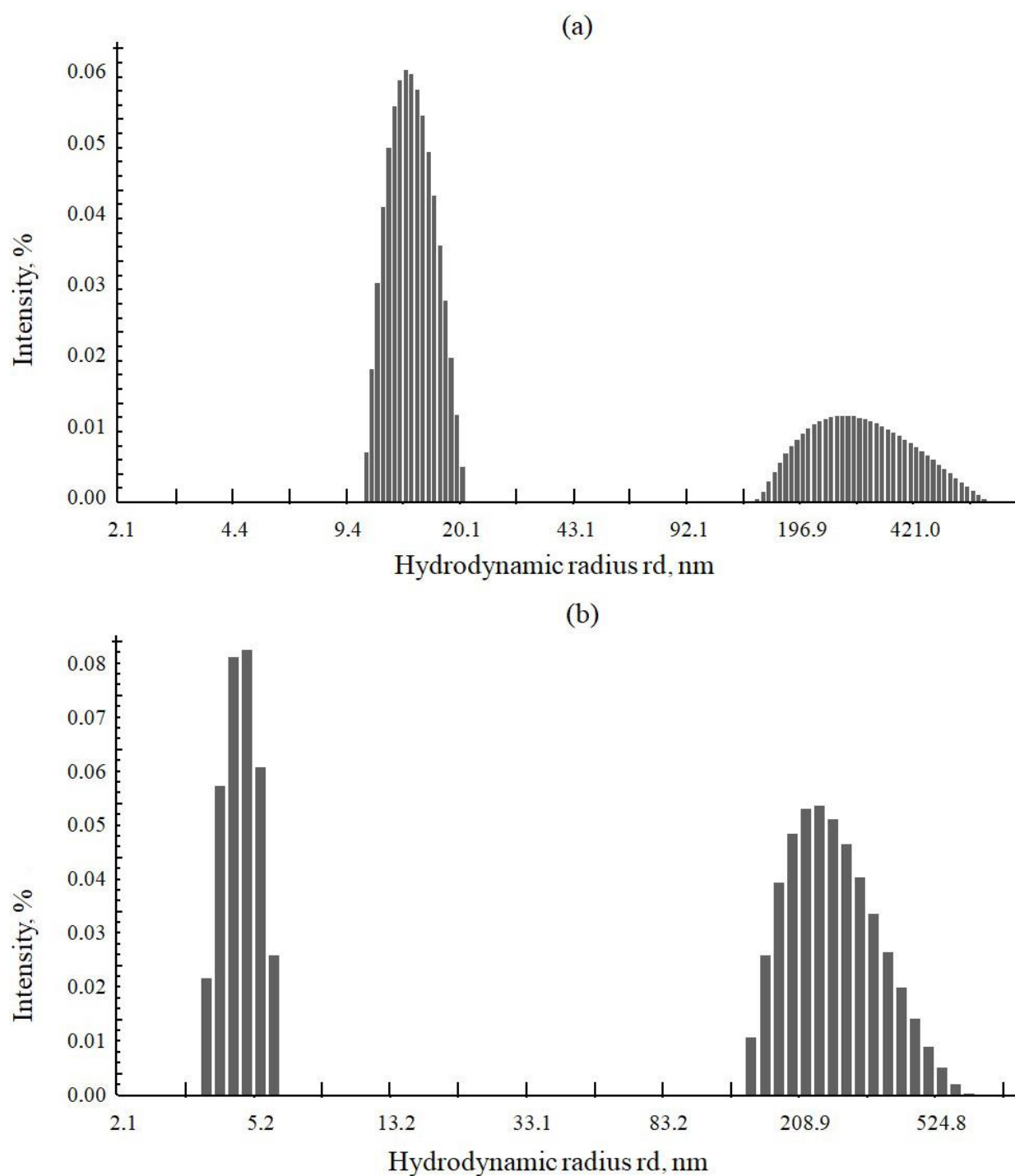
#### **Supplementary Table S1.** The primers used in the RT-PCR

| Gene product                           | Gene name      | GenBank no. | Primers (5'-3')                                                    | Ref. |
|----------------------------------------|----------------|-------------|--------------------------------------------------------------------|------|
| Elongation factor 1-alpha-like protein | <i>EF1α</i>    | 102577640   | EF1α_F: CAAGGATGACCCAGCCAAG<br>EF1α_R: TTCCTTACCTGAACGCCTGT        | [20] |
| Peroxidase N1                          | <i>POX</i>     | AM231411    | POX_F: CAAGGTTGTGACGGTTCCATCC<br>POX_R: ACGAGCAGCAAGAGCAAGAATG     | [21] |
| PR3 acidic endochitinase pcht28        | <i>PR3</i>     | AF024537    | PR3_F: GATGATACCGCCCGTAAGAA<br>PR3_R: TGGGAACATTCAGCATACCA         | [22] |
| STPR-5-18                              | <i>PR-5-18</i> | -           | PR-5-18_F: ATGGGGTAAACCGCCAAACA<br>PR-5-18_R: CCAGGTCCAGGCTTAGTTGG | [23] |

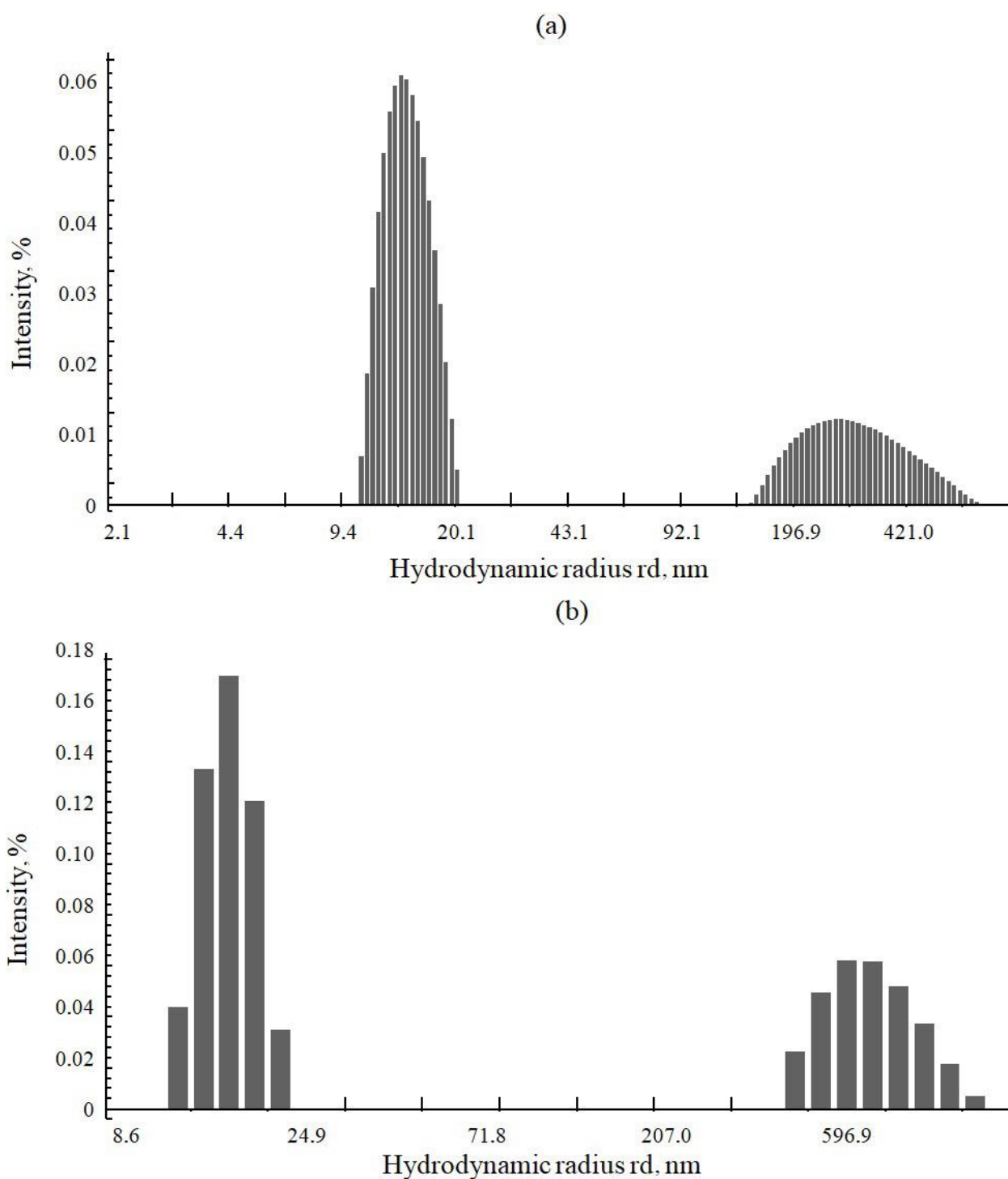
|                                                          |             |                  |                                                                     |      |
|----------------------------------------------------------|-------------|------------------|---------------------------------------------------------------------|------|
| PR1b<br>pathogenesis-<br>related protein 1b<br>precursor | <i>PR1</i>  | 102577780        | PR1_F: GGCATCCCGAGCACAAAAT<br>PR1_R: CTGCACCGGAATGAATCAAGT          | [24] |
| PR2<br>endo-1,3-beta-D-<br>glucanase                     | <i>PR2</i>  | U01902.1         | PR2_F: GTGAAGCTGGTTTGGGAAATG<br>PR2_R: TTGCCAATCAACGTCATGTCTAC      | [25] |
| PR6<br><br>proteinase inhibitor<br>II                    | <i>PR6</i>  | KX710107         | PR 6_F: TGCCCACG TTCAGAAGGAAG<br>PR6_R: TGGGTCAGATTCTCCTTCGC        | [26] |
| PR9<br>peroxidase 51-like                                | <i>PR9</i>  | AJ401150         | PR9_F: AAGAAACAACACCAGGGCAC<br>PR9_R: TGCCCTCAAGCTGAAGAAAT          | [22] |
| PR10<br>pathogenesis-<br>related protein<br>STH-2-like   | <i>PR10</i> | XM_0063408<br>27 | PR10_F: TGATGTTAAGAGCATTGAGGTTGT<br>PR10_R: ATTGGACCACCTTCAACAAAGTT | [26] |

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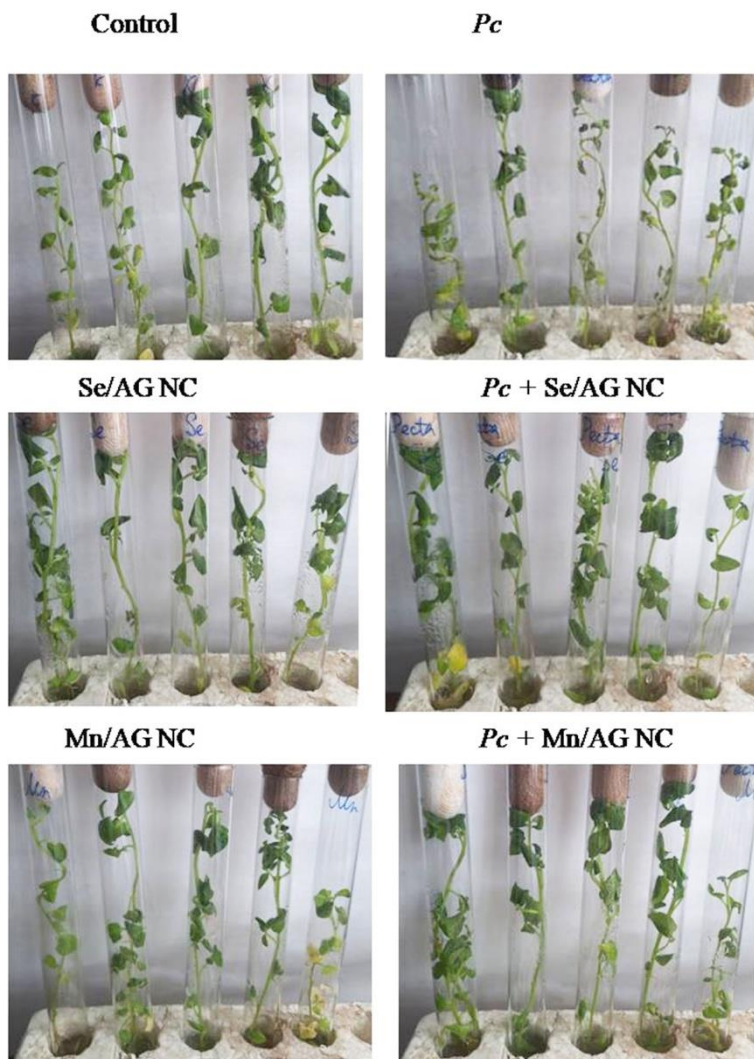
## Supplementary Figures



**Supplementary Fig. S1.** Distribution of hydrodynamic dimensions of the starting AG (a) and its selenium nanocomposite Se/AG (b).



**Supplementary Fig. S2.** Distribution of hydrodynamic dimensions of the starting AG (a) and its manganese nanocomposite Mn/AG (b).



**Supplementary Fig. S3.** Visual image of in vitro potato plants infected with *Pc* and treated with Se/AG NC and Mn/AG NC.