Supplementary Figures

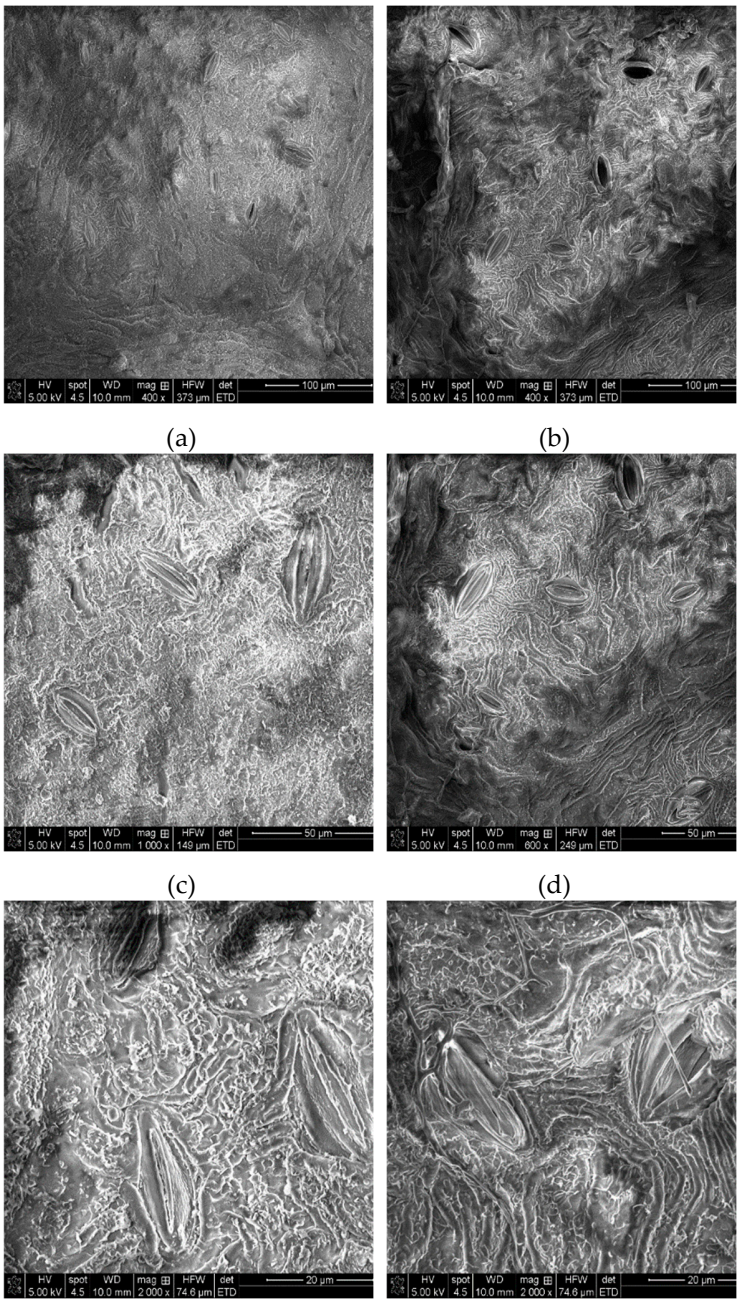


Figure S1. SEM micrographs of the abaxial surface of *Pyrus communis* L. leaves collected from Ilfov and Vrancea counties: (**a**,**b**) Ilfov and Vrancea samples, respectively, at a scale bar of 100 μm; (**c**,**d**) Ilfov and Vrancea samples, respectively, at a scale bar of 50 μm; (**e**,**f**) Ilfov and Vrancea samples, respectively, at a scale bar of 20 μm.

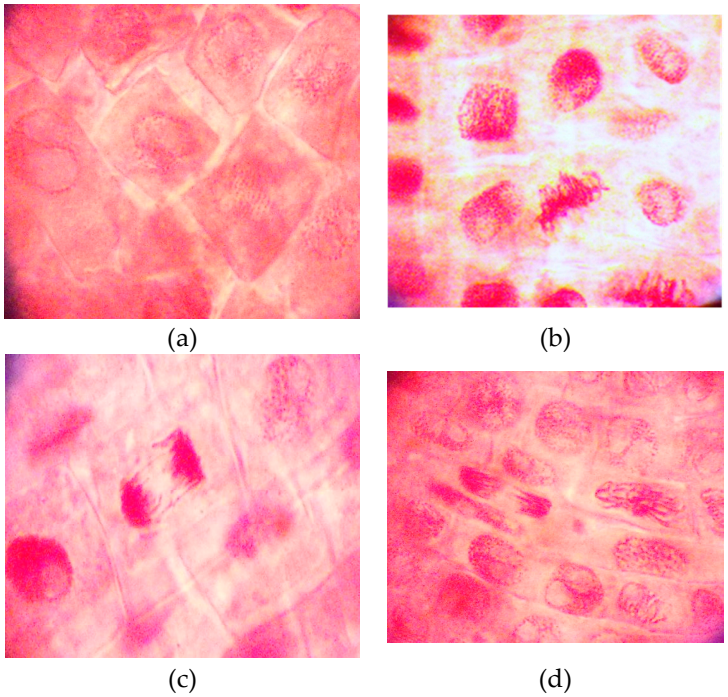


Figure S2. Cytogenetic observations in root-tip cells of *Triticum aestivum* exposed to pear leaf extracts: (a) nuclei with hypertrophied nucleoli (PV, 1.66%; 40× objective); (b) metaphase showing tropokinesis (PV, 0.33%; 40× objective); (c) telophase with a chromatin bridge (PB, 2.5%; 40× objective); (d) hypertrophied nucleoli, telophase with lagging chromosomes, and metaphase with a star-like chromosome arrangement (PB, 0.33%; 40× objective).

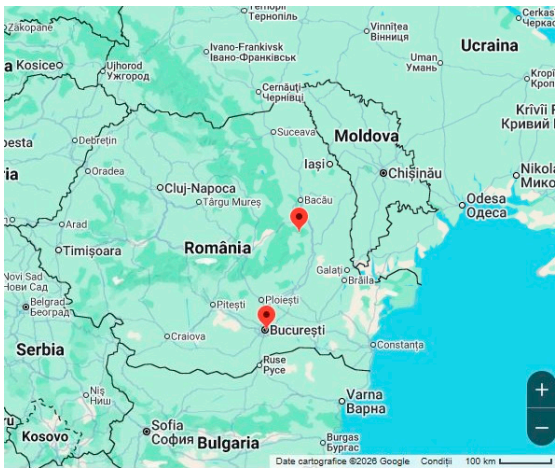


Figure S3. Sampling locations of *Pyrus communis* L. leaf material in Romania: Popești-Leordeni, Ilfov County (44.3693194° N, 26.1438812° E), and Răcoasa, Vrancea County (45.9909924° N, 26.8809485° E). Markers represent the GPS coordinates reported for the two sampling localities.

Supplementary Methods

S1. Artemia franciscana lethality assay

Artificial seawater was prepared by dissolving a commercial salt mixture (CoralMarine, Grotech) in distilled water to a final salinity of 33.4 g/L. Cysts of *Artemia franciscana* Kellogg (Ocean Star International, USA; repackaged by S.K. Trading, Thailand) were hatched by placing 2 g of cysts in 500 mL of artificial seawater at 25 °C under continuous aeration. Hatching began after approximately 40 h, and freshly hatched nauplii were used within 10 h. Nauplii were separated from cyst residues and concentrated using their positive phototactic response before transfer with a micropipette.

A 5% extract stock solution was adjusted to the same salinity and serially diluted with artificial seawater to obtain nominal extract concentrations of 1%, 0.5%, 0.25%, 0.125%, and 0.0675%. Artificial seawater served as the negative control. Each test condition was assessed in three replicate wells containing 2 mL of solution and 15 nauplii per well. The covered multiwell plates were incubated at 25 °C in the dark. Mortality was evaluated after 24 h using images acquired with a Leica DMS 100 digital microscope. Nauplii showing no internal or external movement during an observation period of at least 10 s were considered dead.

S2. Triticum aestivum phytotoxicity assay

The phytotoxicity of the pear leaf extracts was evaluated using the Constantinescu phytobiological assay with *Triticum aestivum* L. The hydroalcoholic extract solutions were evaporated to dryness, and the residues were redissolved in distilled water. Five nominal concentrations were prepared: 3.3%, 2.5%, 1.66%, 0.33%, and 0.033%. Distilled water was used as the negative control. The test solutions (15 mL) were placed in Petri dishes, which were maintained in the dark at 23–25 °C for 72 h.

Root elongation was recorded at 24, 48, and 72 h. Ten germinated caryopses were evaluated for each extract concentration and for the negative control at each measurement time. Root elongation was assessed as the quantitative phytotoxicity endpoint, together with cytogenetic examination of the root-tip cells.

After 24 h of exposure, one caryopsis was collected from each experimental sample. The embryonic root was excised, stained with acetic orcein, and prepared as a squash slide. The preparations were examined using a Nikon Labophot 2 microscope equipped with a 10× eyepiece and 40× and 100× objectives, with cedar-oil immersion used for the 100× objective. Mitotic activity and possible abnormalities during karyokinesis were assessed in comparison with the negative control (distilled water).

Analysis of photomicrographs of root tips treated with different concentrations of the pear leaf extract showed results consistent with the root-length measurements. At concentrations that produced an inhibitory effect, mitotic inhibition was observed. At concentrations associated with a weaker inhibitory effect, normal cell divisions or only occasional abnormalities of the mitotic phases were detected, including metaphases showing tropokinesis, telophases with chromatin bridges, hypertrophied nucleoli, telophases with lagging chromosomes, and disorganized metaphases.