Electronic Supplementary Material (ESI) for Environmental Science: Nano.

Supporting Information

Nanoplastic ingestion induces behavioral disorders in terrestrial snails: trophic transfer effect via vascular plants

Yooeun Chae and Youn-Joo An*

Department of Environmental Health Science, Konkuk University, 120 Neungdong-ro, Gwangjin-gu, Seoul 05029, Korea

Corresponding Author
Youn-Joo An. Phone: 82-2-2049-6090; email: anyjoo@konkuk.ac.kr

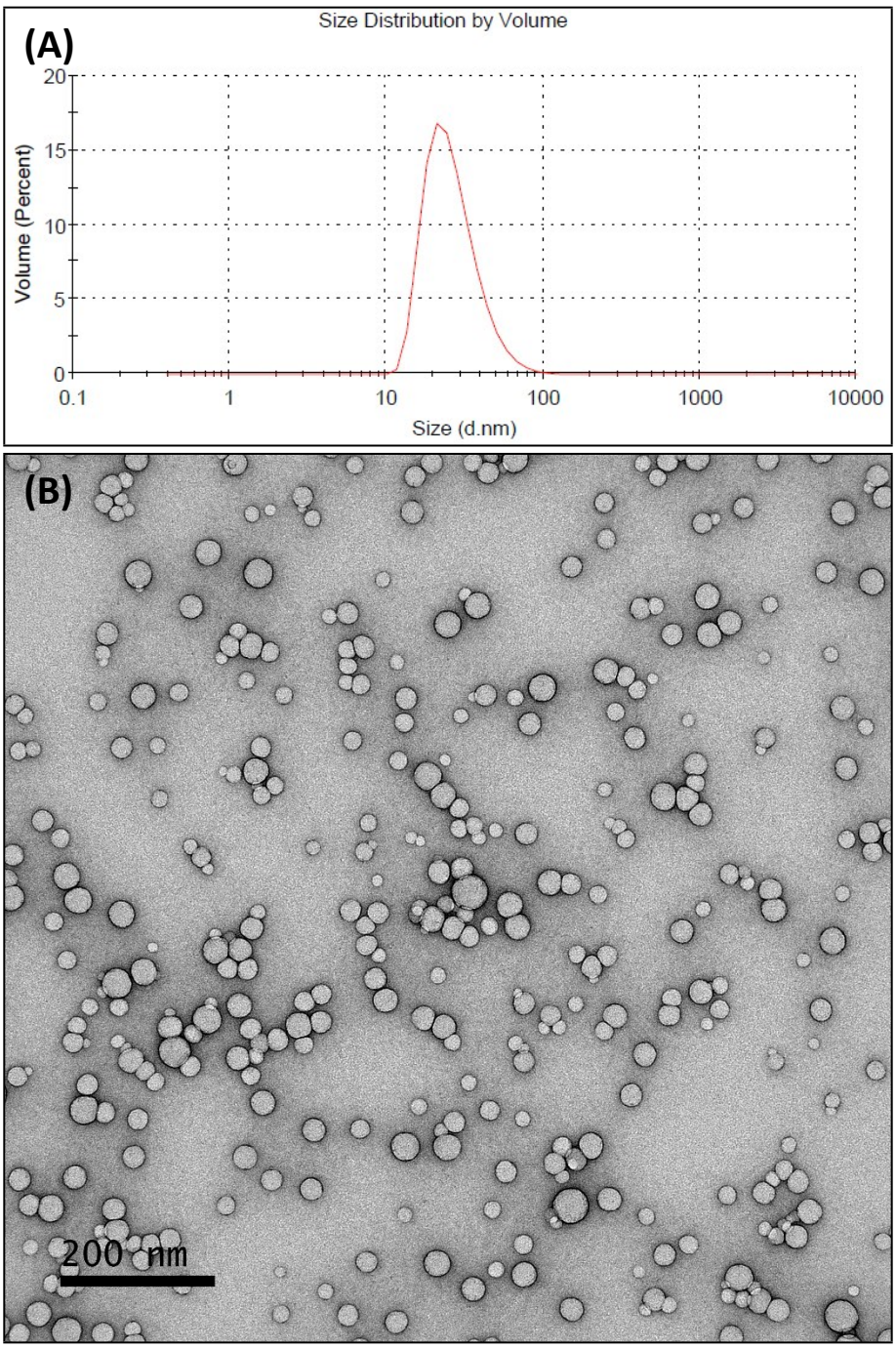

Figure S1. Characterization of nanoplastics. (A) Dynamic light scattering (DLS) and (B) field emission transmission electron microscopy (FE-TEM) were used.

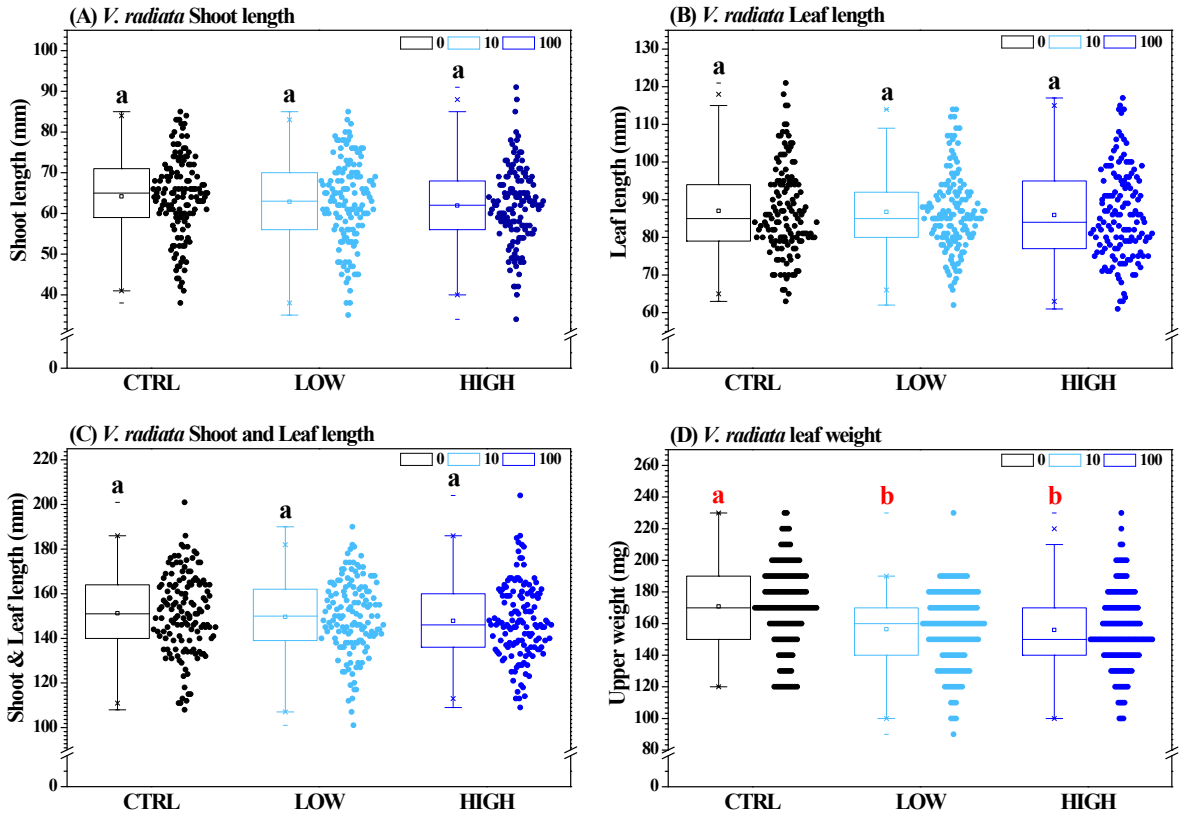

Figure S2. Effects of nanoplastics on *Vigna radiate* shoot and leaf parameters. (A) Shoot length. (B) Leaf length. (C) Shoot and leaf length. (D) Leaf weight. Lowercase letters (a and b) indicate significant differences ($P < 0.05$) between treatment groups ($n = 140$ per group).

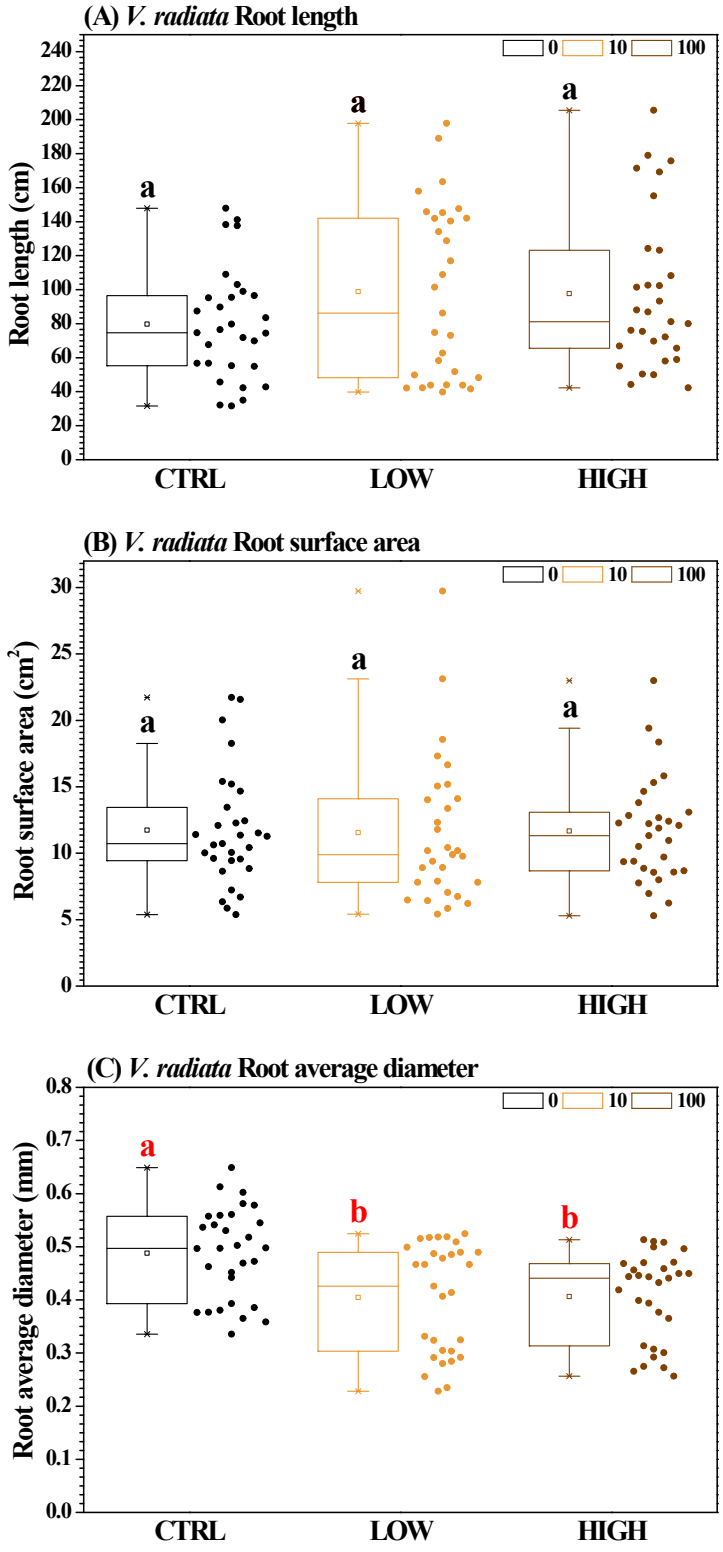

Figure S3. Effects of nanoplastics on *Vigna radiata* root parameters. (A) Root length. (B) Root surface area. (C) Root average diameter. Lowercase letters (a and b) indicate significant differences ($P < 0.05$) between treatment groups ($n = 30$ per group).

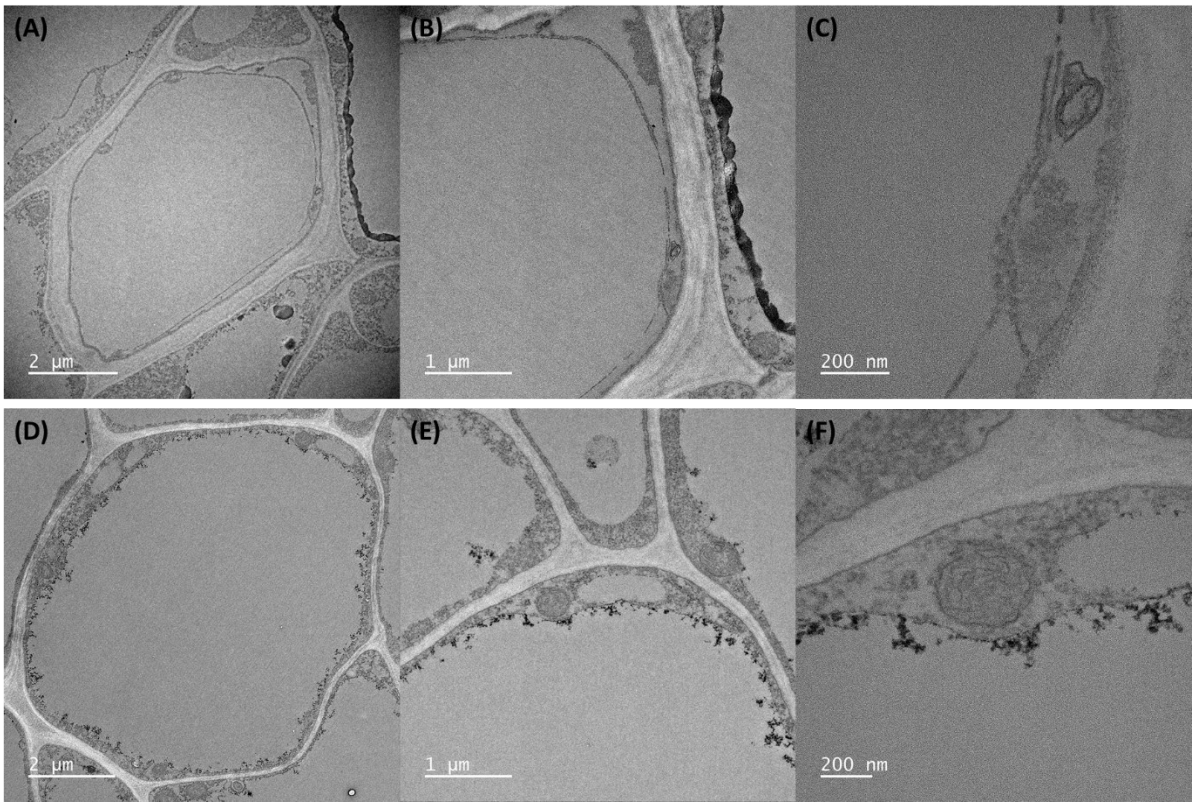

Figure S4. Nanoplastics in the vessels of mung bean. Transmission electron microscope (TEM) images of the vessel walls of mung bean (*Vigna radiata*) leaves in (A-C) control group and (D-F) exposure group (exposed to 100 mg kg^{-1}).

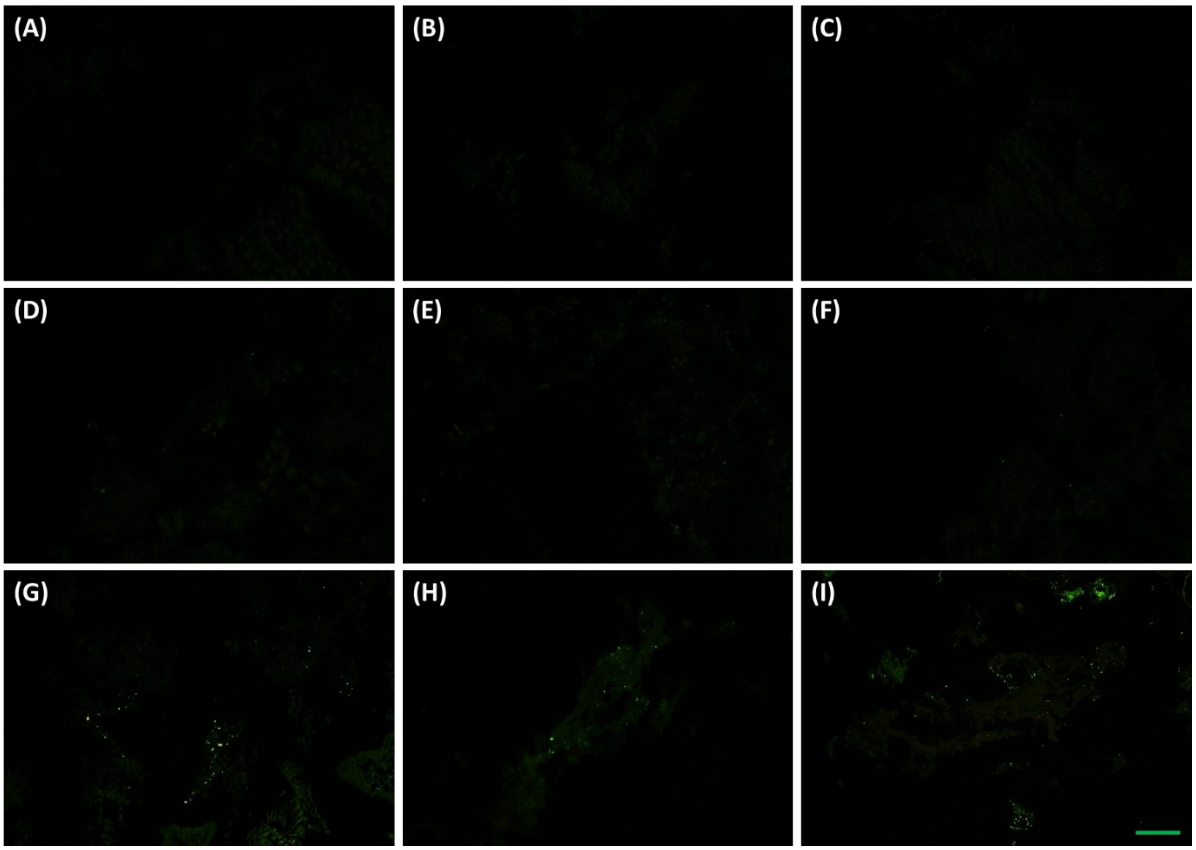

Figure S5. Stomach contents of *Achatina fulica* following nanoplastic intake. (A–C) Ingestion of non-contaminated food. (D–I) Ingestion of food contaminated with low (D–F) and high (G–I) concentrations of nanoplastics. Nanoparticles (green fluorescent dots) were observed in the stomach of snails exposed to nanoplastics. Scale bar (green) = 50 μm.