iScience, Volume *25*

Supplemental information

Expression of PEI-coated gold nanoparticles carrying exogenous gene in periwinkle mesophyll cells and its practice in huanglongbing research

Junzhe Zhang, Wenxue Lei, Yixuan Meng, Chengqian Zhou, Baihong Zhang, Jun Yuan, Min Wang, Dongqing Xu, Xiangchun Meng, and Wenli Chen

Supplemental information

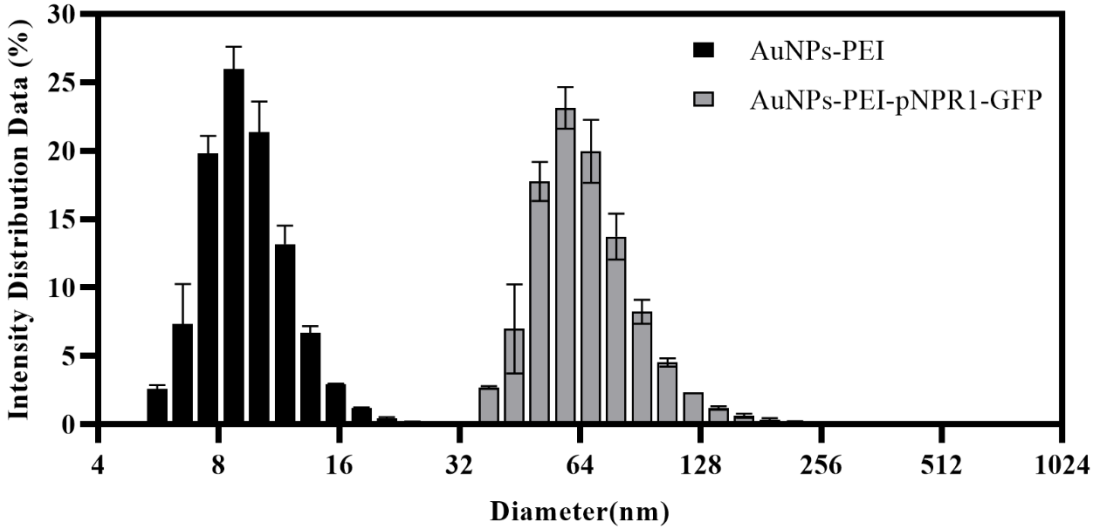

Figure S1. The hydrated particle size of AuNPs-PEI-pNPR1-GFP. Related to Figure 3.
The hydrated particle size of AuNPs-PEI-pNPR1-GFP measured was about 64 nm. Data were represented as means ± S.D. from three repeats.

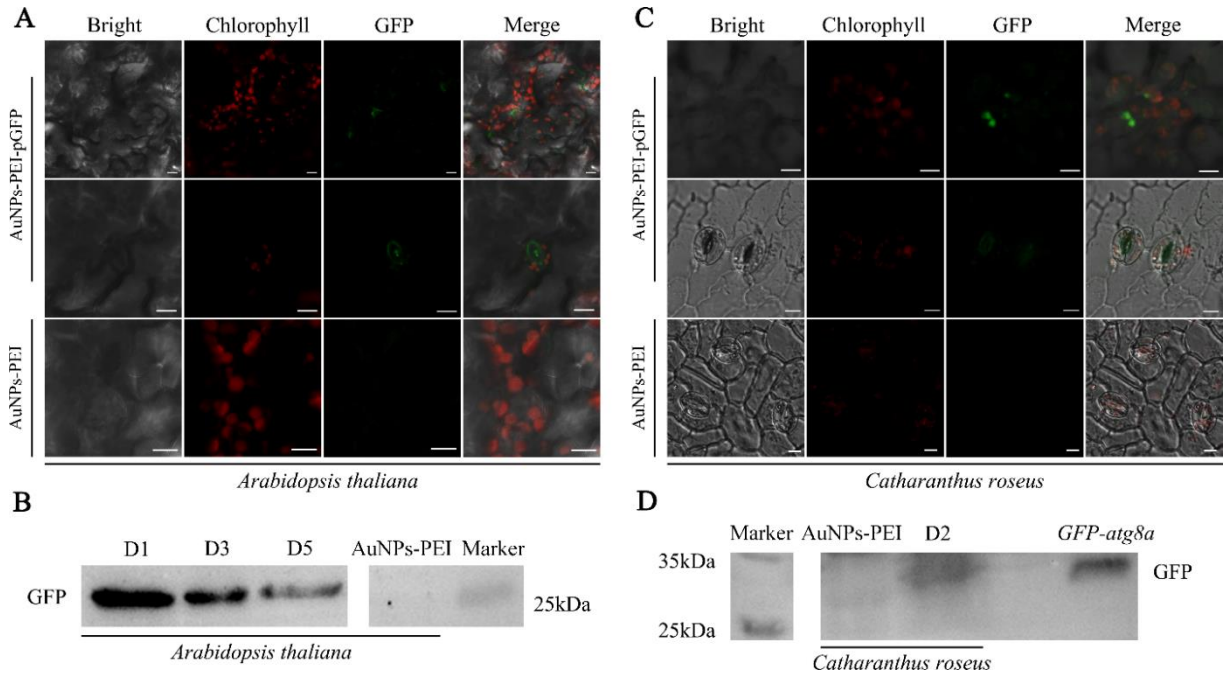

Figure S2. AuNPs-PEI-pGFP could be expressed in *Arabidopsis* and *Catharanthus roseus* leaves by infiltration. Related to Figure 4.

(**A**) 2 days after infiltration, GFP fluorescence was observed in *Arabidopsis* mesophyll cells. No GFP fluorescence was observed in the control group infiltrated with AuNPs-PEI only. The green fluorescence was the fluorescence of GFP, and the red fluorescence was the autofluorescence of chlorophyll. Scale bars, 10 μm. (**B**) Western blot for GFP extracted *Arabidopsis* leaves 1-5 days after infiltration. The molecular weight of the target protein GFP was 27 kDa. Irrelevant or superfluous lanes had been eliminated from the blot. (**C**) 2 days after infiltration, punctate GFP fluorescence were observed in periwinkle mesophyll cells. No GFP fluorescence was observed in the control group infiltrated with AuNPs-PEI only. The green fluorescence was the fluorescence of GFP, and the red fluorescence was the autofluorescence of chlorophyll. Scale bars, 10 μm. (**D**) Western blot for GFP extracted from AuNPs-PEI-pGFP-infiltrated healthy periwinkle leaves 2 days after infiltration. The molecular weight of the target protein GFP was 27 kDa. Irrelevant or superfluous lanes had been eliminated from the blot.

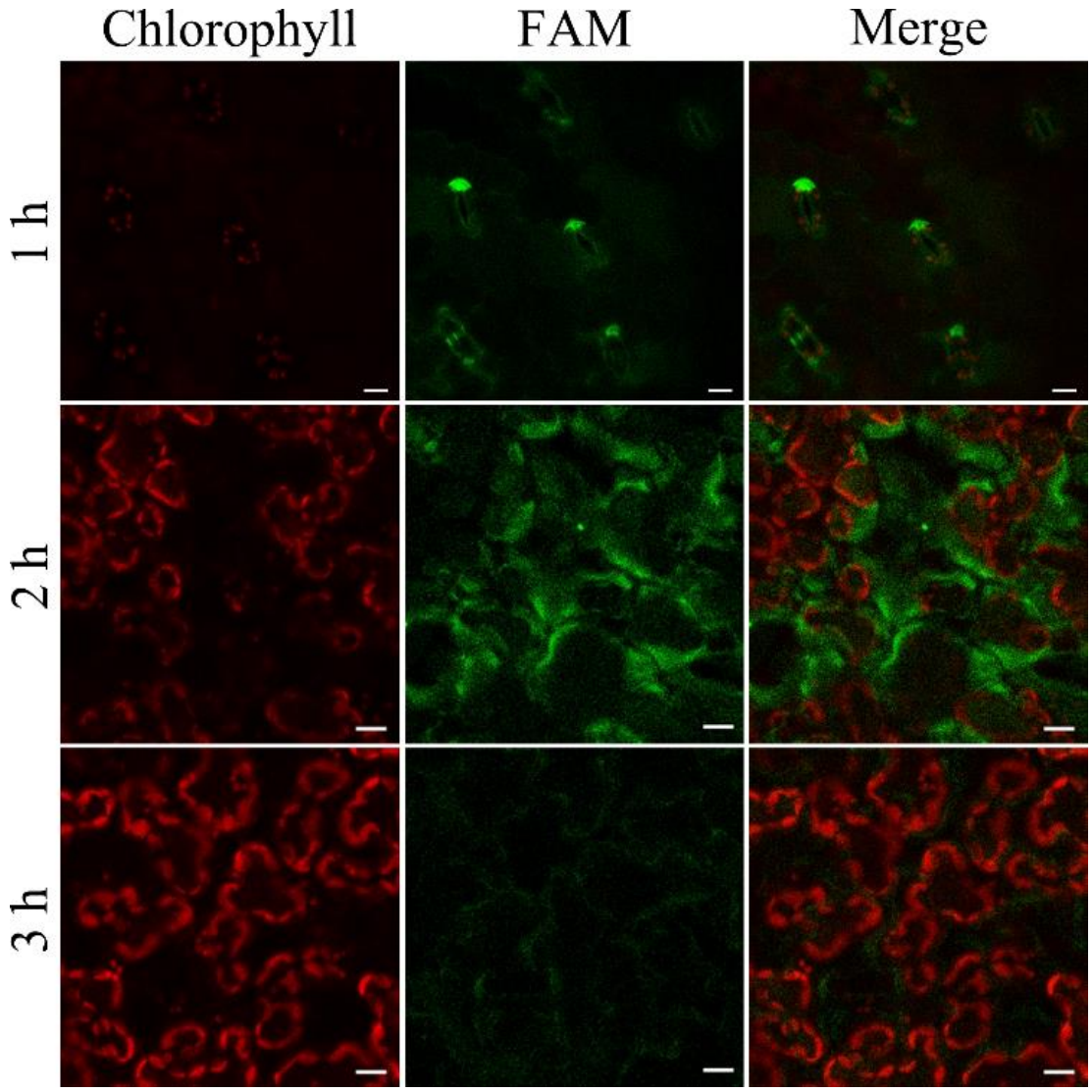

Figure S3. Confocal observation of healthy periwinkle leaves after FAM-siRNA$_{NPR1}$ infiltration at different time points. Related to Figure 5.

The green fluorescence came from FAM-siRNA$_{NPR1}$ or FAM. The red fluorescence was the autofluorescence of chlorophyll. Scale bars, 10 μm.

Figure S4. Schematic diagram of infiltrating periwinkle leaves. Related to STAR Methods.
Leaves were infiltrated at 8-10 am. The criterion for completion of the infiltration was that the entire leaf was moistened.

Table S1. Primers used for qPCR. Related to STAR Methods.

Name	Sequence (5'-3')	Use
Cr18S-F	GACTACGTCCCTGCCCTTTG	*18S rDNA* of periwinkle
Cr18S-R	AACACTTCACCGGACCATTCA	*18S rDNA* of periwinkle
CrPR1a-F	CAATGGACAAAGGAACAGATGC	*PR1* of periwinkle
CrPR1a-R	ATAATGTCCACAAACTCCGCCT	*PR1* of periwinkle
CrPR2-F	GGAATCGAAGTACAAGATGGT	*PR2* of periwinkle
CrPR2-R	AGCCACTTTCAGATACCACA	*PR2* of periwinkle
CrPR5-F	TACAATCTCCGCCTCCCA	*PR5* of periwinkle
CrPR5-R	GCACCACCACAGTCACCA	*PR5* of periwinkle
CrICS-F	TTGCAGGCAGATTACGCTCT	*ICS* of periwinkle
CrICS-R	TGCCCGTGCATCTTCCATAG	*ICS* of periwinkle
mGFP-F	AGTGGAGAGGGTGAAGGTGATG	*NPR1-GFP*
mGFP-R	GCATTGAACACCATAAGAGAAAGTAGTG	*NPR1-GFP*
HLBr	GCGTTATCCCGTAGAAAAAGGTAG	16S rDNA of *C*Las
HLBas	TCGAGCGCGTATGCAATACG	16S rDNA of *C*Las
HLBp	FAM-AGACGGGTGAGTAACGCG-BHQ1	TaqMan probes of *C*Las