

Supporting Information for

Induction of systemic resistance through calcium signaling in Arabidopsis exposed to air plasma-generated dinitrogen pentoxide

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Species	N ₂ O ₅ mode	NO _x mode	O ₃ mode	Low O ₃ mode
N ₂ O ₅	$5.6 \times 10^{15} \text{ cm}^{-3}$ (~230 ppm)	< LOD	$2.1 \times 10^{14} \text{ cm}^{-3}$ (~8.4 ppm)	< LOD
NO	< LOD	$8.6 \times 10^{15} \text{ cm}^{-3}$ (~350 ppm)	< LOD	< LOD
NO ₂	$7.6 \times 10^{14} \text{ cm}^{-3}$ (~31 ppm)	$2.4 \times 10^{15} \text{ cm}^{-3}$ (~99 ppm)	< LOD	< LOD
O ₃	$7.1 \times 10^{14} \text{ cm}^{-3}$ (~29 ppm)	< LOD	$1.9 \times 10^{16} \text{ cm}^{-3}$ (~770 ppm)	$7.9 \times 10^{14} \text{ cm}^{-3}$ (~32 ppm)

Table S1. Reactive species' composition of reactive gases at N₂O₅ mode, NO_x mode, O₃ mode, and low O₃ mode.

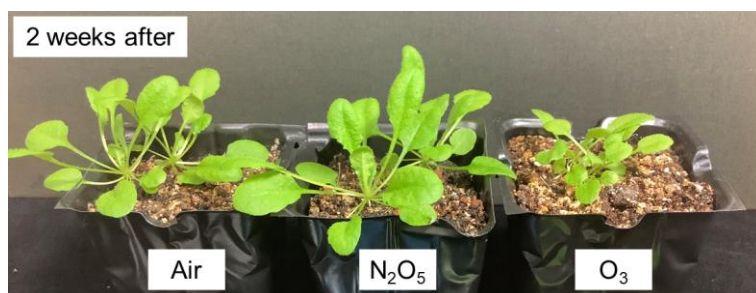


Figure S1. Typical images of plants at 2 weeks after exposure to dry air, N₂O₅, and O₃ gases. Treatment time is 30 s for dry air and N₂O₅, 10 s for O₃, corresponding to total dose of approximately 10 μ mol for N₂O₅ and O₃.

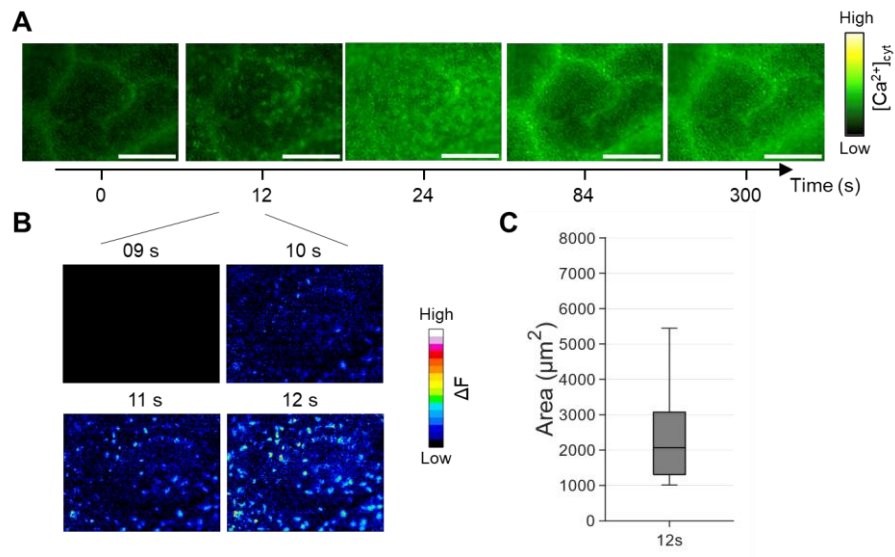


Figure S2. (A) Close-up time-lapse images showing changes in $[Ca^{2+}]_{cyt}$ in the Arabidopsis plant stimulated with the N_2O_5 gas. Scale bars, 1 mm. (B) The difference images from the fluorescence image at 09 s. (C) Box plot of size distribution of bright spot extracted from the fluorescence image at 12 s.

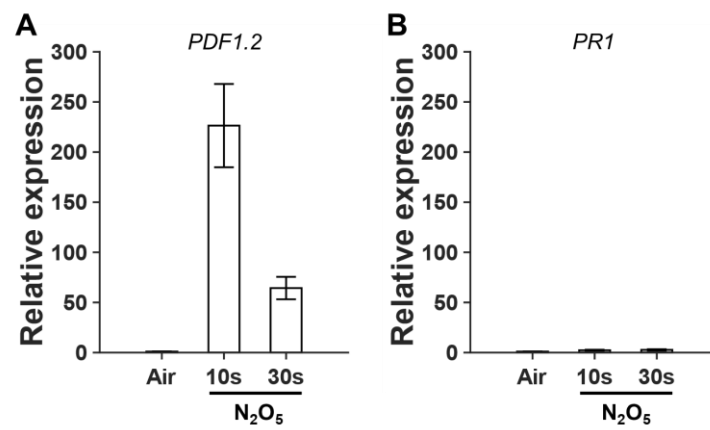


Figure S3. (A) *PDF1.2* and (B) *PR1* expression in plant at 24 hours after exposure of whole body to dry air and N₂O₅ gases. Treatment time is 30 s for dry air and, 10 s and 30 s for N₂O₅.