

Supplementary

Effect of Auxin on Cadmium Toxicity-Induced Growth Inhibition in *Solanum lycopersicum*

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Citation: Liu, H.; Wu, Y.; Cai, J.; Chen, Y.; Zhou, C.; Qiao, C.; Wang, Y.; Wang, S. Effect of Auxin on Cadmium Toxicity-Induced Growth Inhibition in *Solanum lycopersicum*. *Toxics* **2024**, *12*, 374. <https://doi.org/10.3390/toxics12050374>

Academic Editor: Luis Alberto Henríquez-Hernández

Received: 9 April 2024
Revised: 15 May 2024
Accepted: 16 May 2024
Published: 19 May 2024



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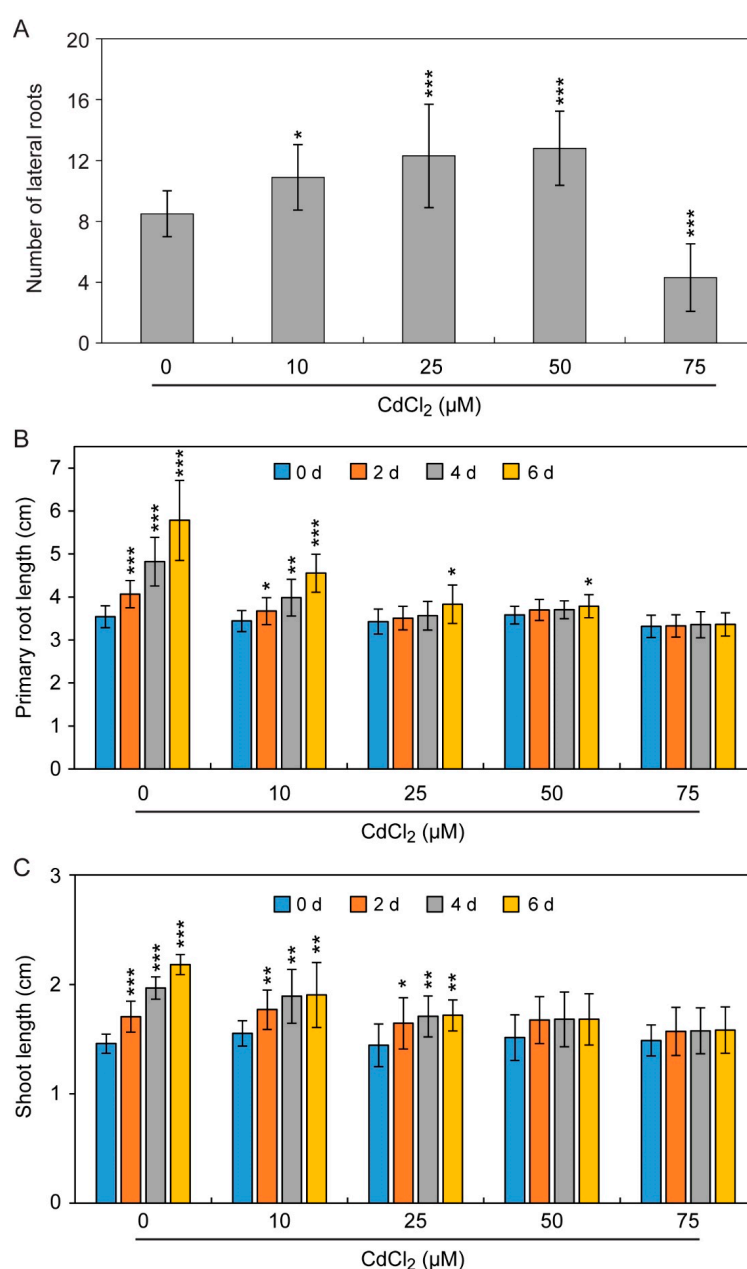


Figure S1. Tomato seedling growth and lateral root development under CdCl₂ treatment.

A–C. Five-day-old tomato seedlings were exposed to culture solutions with different concentrations (10, 25, 50, 75 μM) of CdCl_2 for six days. The number of lateral roots per seedling was calculated (A). Photographs were taken every two days, and the length of the primary root (B) and hypocotyl (C) were measured by ImageJ software. Values represent the averages \pm SD ($n \geq 8$), Student's *t*-test, * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$.

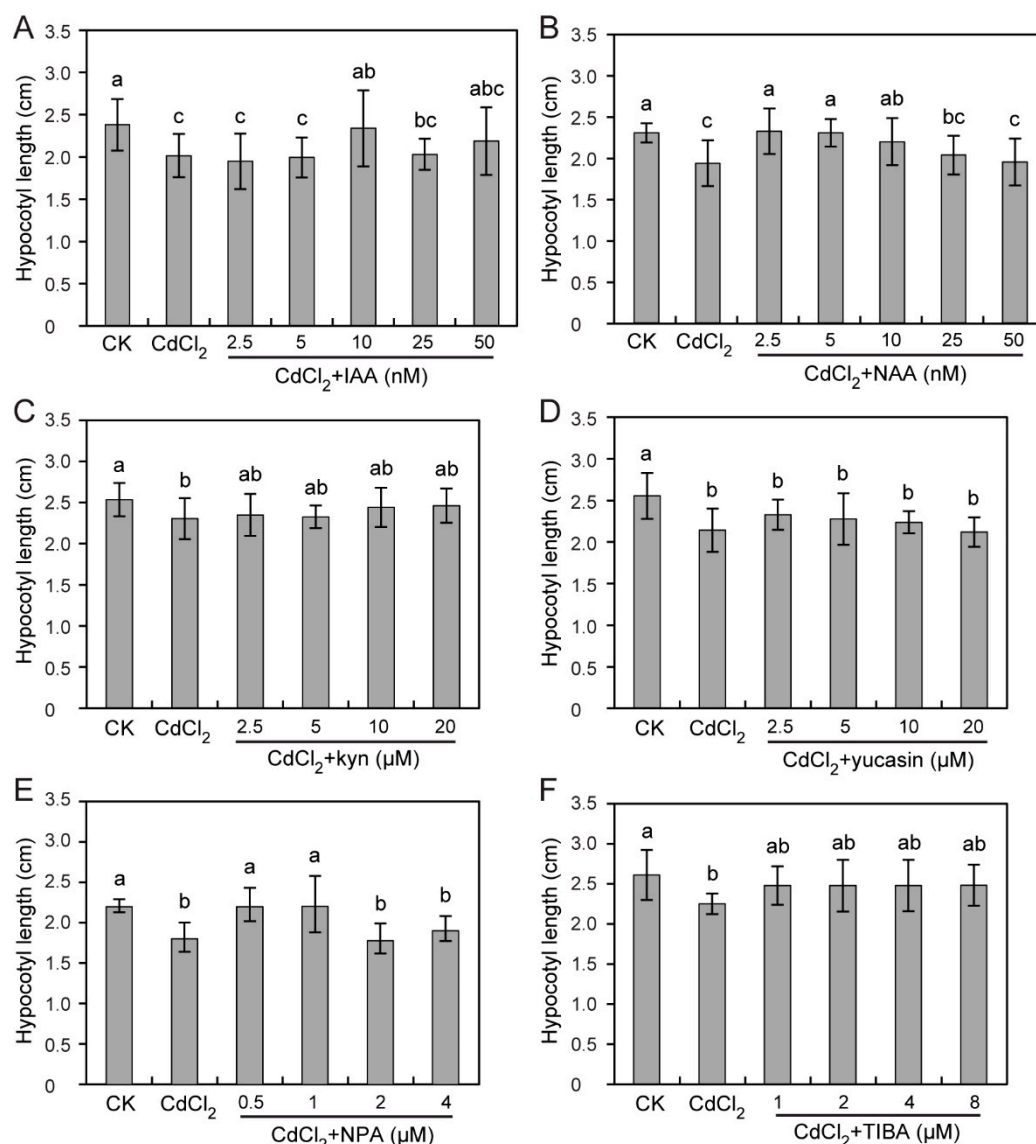


Figure S2. Effect of auxins or auxin inhibitors on tomato seedling hypocotyl elongation under CdCl_2 treatment.

A–F. Effect of exogenous auxins (IAA or NAA), auxin biosynthesis inhibitors (kyn and yucasin), or auxin transport inhibitors (NPA and TIBA) on tomato hypocotyl growth under Cd stress. Five-day-old tomato seedlings were subjected to 25 μM CdCl_2 , or 25 μM CdCl_2 with 2.5–50 nM IAA (A) or NAA (B), 2.5–20 μM kyn (C) or yucasin (D), 0.5–4 μM NPA (E), or 1–8 μM TIBA (F) for six days. Values represent the averages \pm SD ($n \geq 8$, Duncan's test).

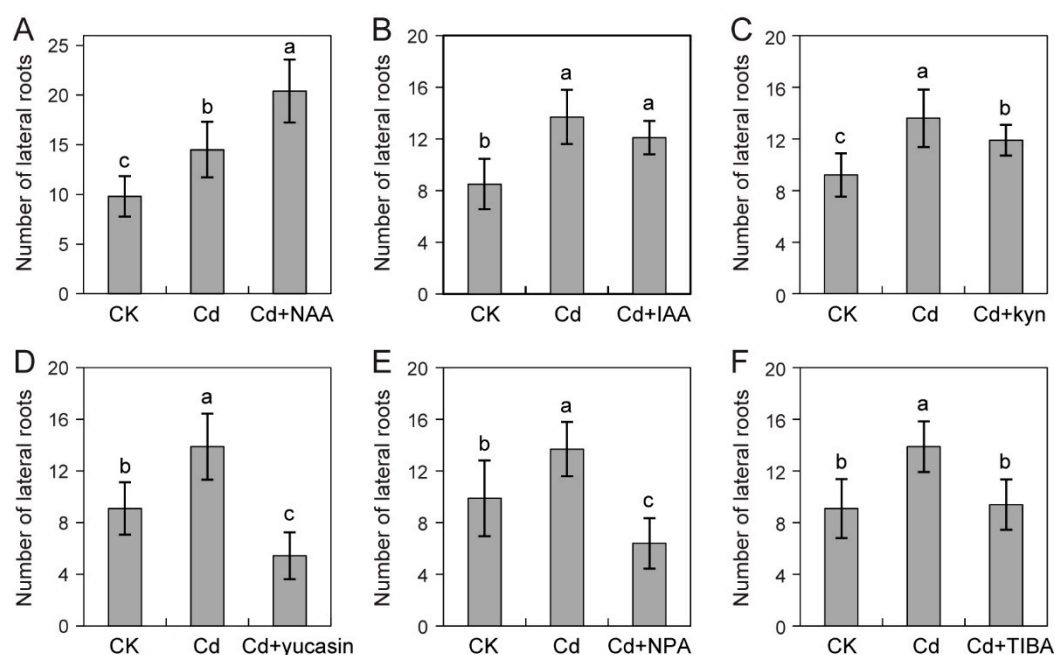


Figure S3. Impact of auxins or auxin inhibitors on tomato lateral root density under CdCl_2 treatment.

The number of lateral roots per seedling was calculated. Five-day-old seedlings were subjected to $25 \mu\text{M}$ CdCl_2 or $25 \mu\text{M}$ CdCl_2 with 50 nM NAA (A), 50 nM IAA (B), $20 \mu\text{M}$ kyn (C), $20 \mu\text{M}$ yucasin (D), $4 \mu\text{M}$ NPA (E), or $8 \mu\text{M}$ TIBA (F) for six days. Values represent the averages \pm SD ($n \geq 8$, Duncan's test).

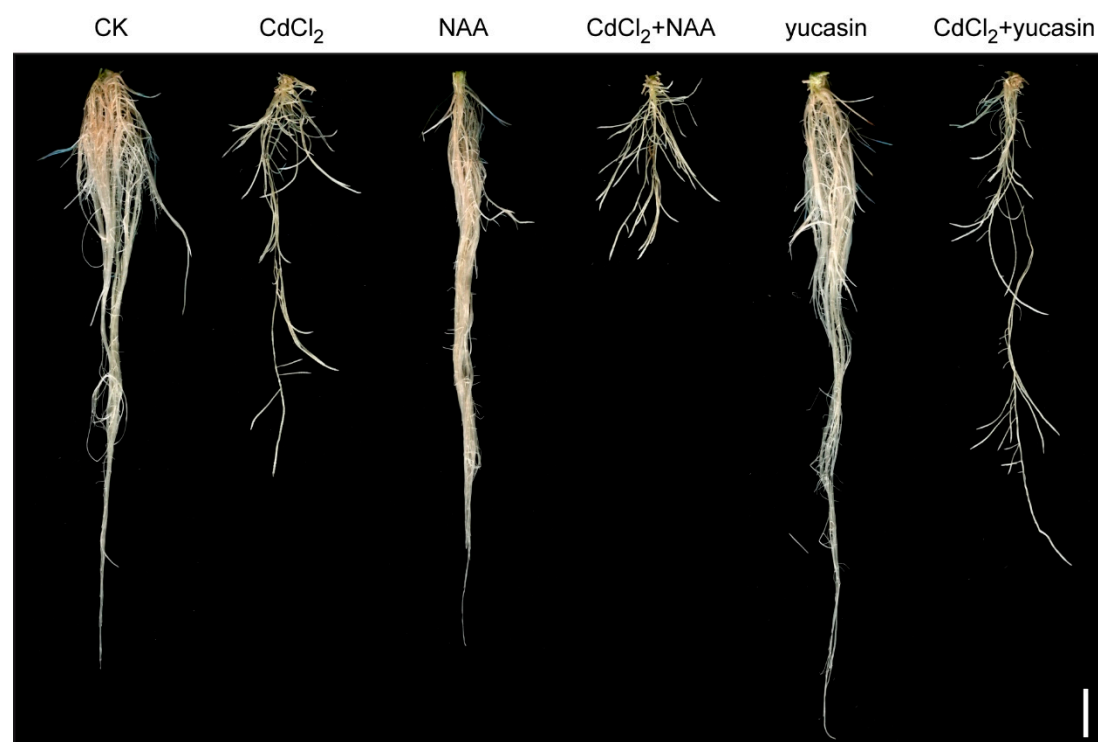


Figure S4. Yucasin stimulates tomato primary root growth under CdCl_2 treatment.

Five-day-old tomato seedlings were subjected to $15 \mu\text{M}$ CdCl_2 or $15 \mu\text{M}$ CdCl_2 with 2.5 nM NAA (A, B) or $1 \mu\text{M}$ yucasin (C, D) for three weeks. The solution was refreshed every three days.

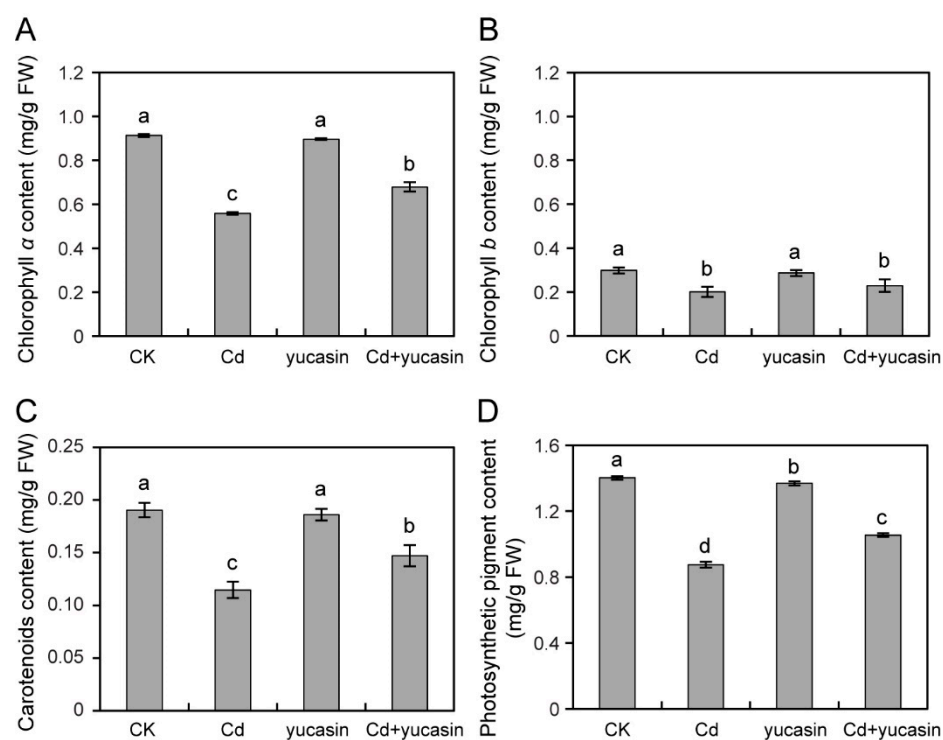


Figure S5. Yucasin attenuates the decrease in photosynthetic pigment contents induced by CdCl₂ treatment.

A-D Five-day-old tomato seedlings were treated without or with 25 μ M CdCl₂, 2.5 μ M yucasin, and both 25 μ M CdCl₂ and 2.5 μ M yucasin for four days. Chlorophyll *a* (A), *b* (B), carotenoid (C), and total pigment content (D). Data represent the averages \pm SD.

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