

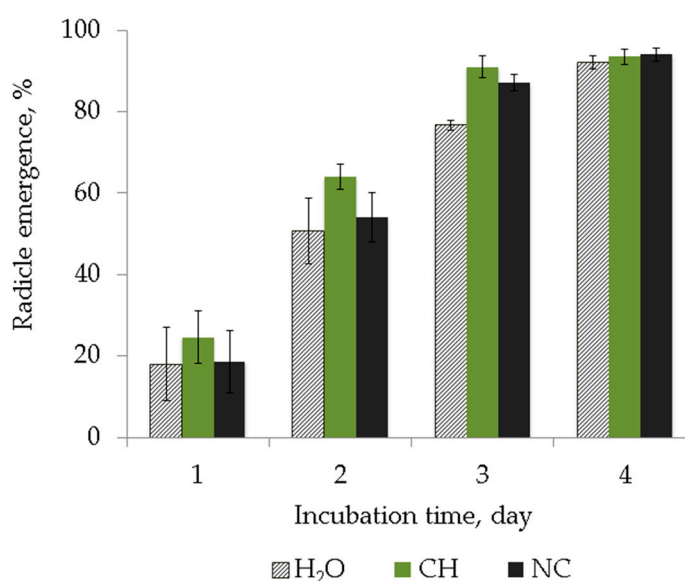
Supplementary materials

# Effect of Seed Priming with Chitosan Hydrolysate on Lettuce (*Lactuca sativa*) Growth Parameters

Tatiana Lyalina \*, Balzhima Shagdarova, Yuliya Zhuikova, Alla Il'ina, Alexey Lunkov and Valery Varlamov \*

Institute of Bioengineering, Research Center of Biotechnology of the Russian Academy of Sciences. 33, bld. 2 Leninsky Ave., Moscow 119071, Russia

\* Correspondence: t.s.lyalina@gmail.com (T.L.); varlamov@biengi.ac.ru (V.V.); Tel.: +7 (499)135-6556



**Figure S1.** Percentage of seeds with emerged radicle in the germination test. Seeds were treated with H<sub>2</sub>O, CH 0.1 mg/mL (dilution ratio 1:250) and NC (dilution ratio 1:250). Error bars represent the standard deviation (SD) for three replicates.

**Table S1.** Effects of CH-, NC- and H<sub>2</sub>O -priming on the morphology of lettuce plants at 10 d after sowing. Seedlings were grown on moistened filter paper.

Parameters	H <sub>2</sub> O	CH concentration mg/ml (dilution ratio)			NC dilution ratio		
		0.01 (1:2,500)	0.1 (1:250)	1 (1:25)	1:2,500	1:250	1:25
Root length, mm	46.2±6.7	48.7±8.4	56.4±2 <sup>a</sup>	54.8±7.5	52.4±7.1	53.7±3.8	47.6±2.9
Branched root plants, %	25.1±5.0	18.8±5.0	29.2±7.5	29.2±4.0	20.7±3.6	27.7±8.5	26.5±10.1
Hypocotyl length, mm	1.8±0.2	1.7±0.1	1.6±0.2	1.7±0.3	1.6±0.4	1.9±0.3	1.6±0.3
Cotyledon length, mm	5.7±0.7	5.1±0.6	5.5±0.6	5.3±0.3	5.4±0.8	5.6±0.5	5.0±0.7
Plants with true leaves, %	54.8±5.4	54.5±16.6	54.6±9.9	58.4±16.6	49.6±15.7	43.9±15.6	47.4±29.2

<sup>a</sup>Significant relative to H<sub>2</sub>O according to Mann-Whitney U-test (p < 0.05).

**Table S2.** Effects of CH-, NC- and H<sub>2</sub>O -priming on the shoot and root dry weight of lettuce plants at the 24th and 38th days after sowing.

Parameter	24 day			38 day		
	H <sub>2</sub> O	CH*	NC**	H <sub>2</sub> O	CH*	NC**
Shoot DW, mg	44±16	69±17 <sup>a</sup>	43±7	283±23	404±30 <sup>a</sup>	359±133
Root DW, mg	7±5	13±0.2 <sup>a,b</sup>	8±1	113±58	210±6 <sup>a</sup>	171±54

<sup>a</sup>Significant relative to H<sub>2</sub>O according to Mann-Whitney U-test ( $p < 0.05$ ).

<sup>b</sup> Significant relative to NC solution according to Mann-Whitney U-test ( $p < 0.05$ );

\* CH concentration – 0.1 mg/mL (dilution ratio 1:250);

\*\* Dilution ratio of NC solution 1:250.