

Exogenous Salicylate Application Affects the Lead and Copper Accumulation Characteristics of *Lemna gibba* L.

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Previous studies have shown that salicylates can change the ion permeability of root cells. Therefore the possible effects of exogenous salicylate application on lead (Pb) and copper (Cu) accumulation and its protective role against DNA damage due to metal exposure in *Lemna gibba* were studied. *L. gibba* was exposed to 5, 10, and 25 μM Pb and Cu for six days in the presence and absence of sodium salicylate (SA) (0.1, 0.5, and 1 mM). At all concentrations tested, SA application decreased Pb accumulation. On the other hand, application of 0.5 mM SA increased Cu accumulation. SA did not reduce DNA damage resulting from Pb and Cu toxicity. In summary, SA may be useful for reducing Pb accumulation, and application of SA at 0.5 mM may be useful for the phytoextraction of Cu.

Key words: *Lemna gibba*, Metal, Salicylate