scientific reports

Check for updates

OPEN

Author Correction: Curcumin and *Curcuma longa* L. extract ameliorate lipid accumulation through the regulation of the endoplasmic reticulum redox and ER stress

Published online: 22 March 2024

Hwa-Young Lee, Seung-Wook Kim, Geum-Hwa Lee, Min-Kyung Choi, Han-Wool Chung, Yong-Chul Lee, Hyung-Ryong Kim, Ho Jeong Kwon & Han-Jung Chae

Correction to: *Scientific Reports* https://doi.org/10.1038/s41598-017-06872-y, published online 26 July 2017

The original Article contains errors. Due to mistakes during Figure assembly, there are overlaps within two Figures and with previously published articles.

Within Figure 1e the panel "CL 300" is a duplication of panel "1d CCl4 + Cur". In addition, the panel "4w Cur" overlaps with panel "Curcumin" of Figure 2 in Lee, HY et al.[1].

The corrected Figure 1 and accompanying legend appear below as Figure 1.

Within Figure 2c the panel "4w CL 300" duplicated panel "1d Con", the panel "1d CCl4" is a duplication of "4w CCl4", and the panel "4w CCL4 + CL 300" is duplicated from panel "1d CL 300".

Additionally, in Figure 2c, the panel "4w Con" is similar to the panel "Control, Anti-4HNE" of Figure 4b in Lee, GH et al.[2], the panel "4w CCl4 + CL 100" overlaps with "CCl4, Anti-4HNE" of Figure 4b in[2], the panel "1d Cur" overlaps with "Curcumin + CCl4" of Figure 4b in[2], and "4w Cur" shows similarities to "Curcumin, Anti-4HNE" of Figure 4b in[2].

The corrected Figure 2 and accompanying legend appear below as Figure 2.

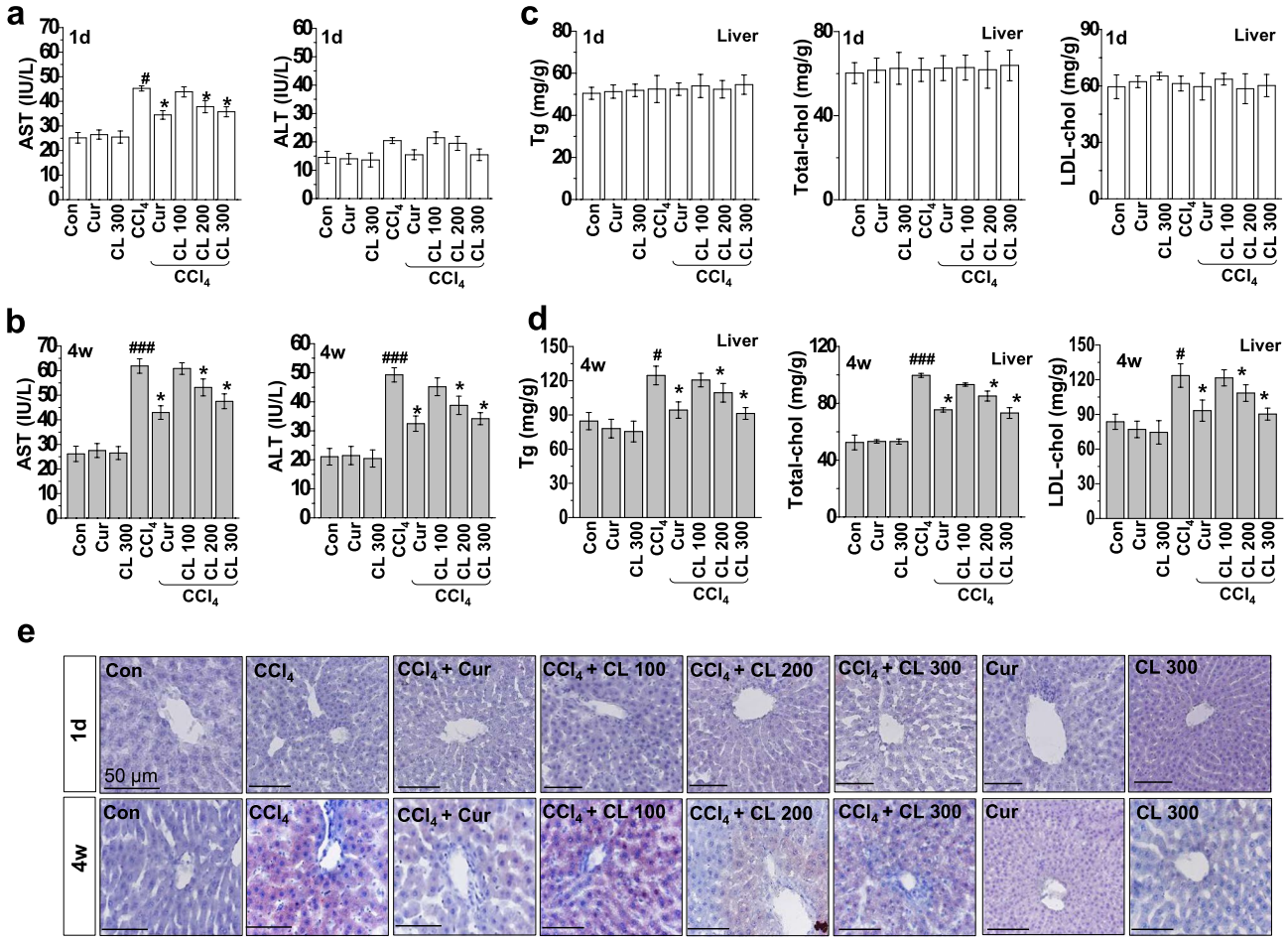

Figure 1. Curcumin and *Curcuma longa* L. extract regulate serum levels of AST and ALT and hepatic lipid accumulation in acute and chronic CCl_4-models. Rats were intraperitoneally treated with CCl_4 (0.1 mL/100 g, body weight) one time for (**a**) 1 day or (**b**) every other day for 4 weeks. Curcumin (200 mg/kg) or *Curcuma longa* L. extract (100, 200, or 300 mg/kg) was given each day for 3 days before CCl_4 treatment and once daily after CCl_4 treatment. Liver and blood samples were collected from all sacrificed animals. Six-h fasting serum levels of AST and ALT were determined. Six h fasting liver triglyceride, total cholesterol, and LDL-cholesterol levels were measured in the (**c**) 1 day and (**d**) 4 week CCl_4-treated rats. (**e**) Representative images of liver sections from each group stained with hematoxylin–eosin and Oil-Red-O for lipid content. Scale bars = 50 μm. The experiments were repeated three times using tissues from at least three different rats. $^{\#}P < 0.05$, $^{\#\#\#}P < 0.001$ vs. the control group; $^{*}P < 0.01$ vs. the CCl_4 group (n = 10 rats per group). Cur: curcumin, CL: *Curcuma longa* L., AST: aspartate aminotransferase, ALT: alanine aminotransferase.

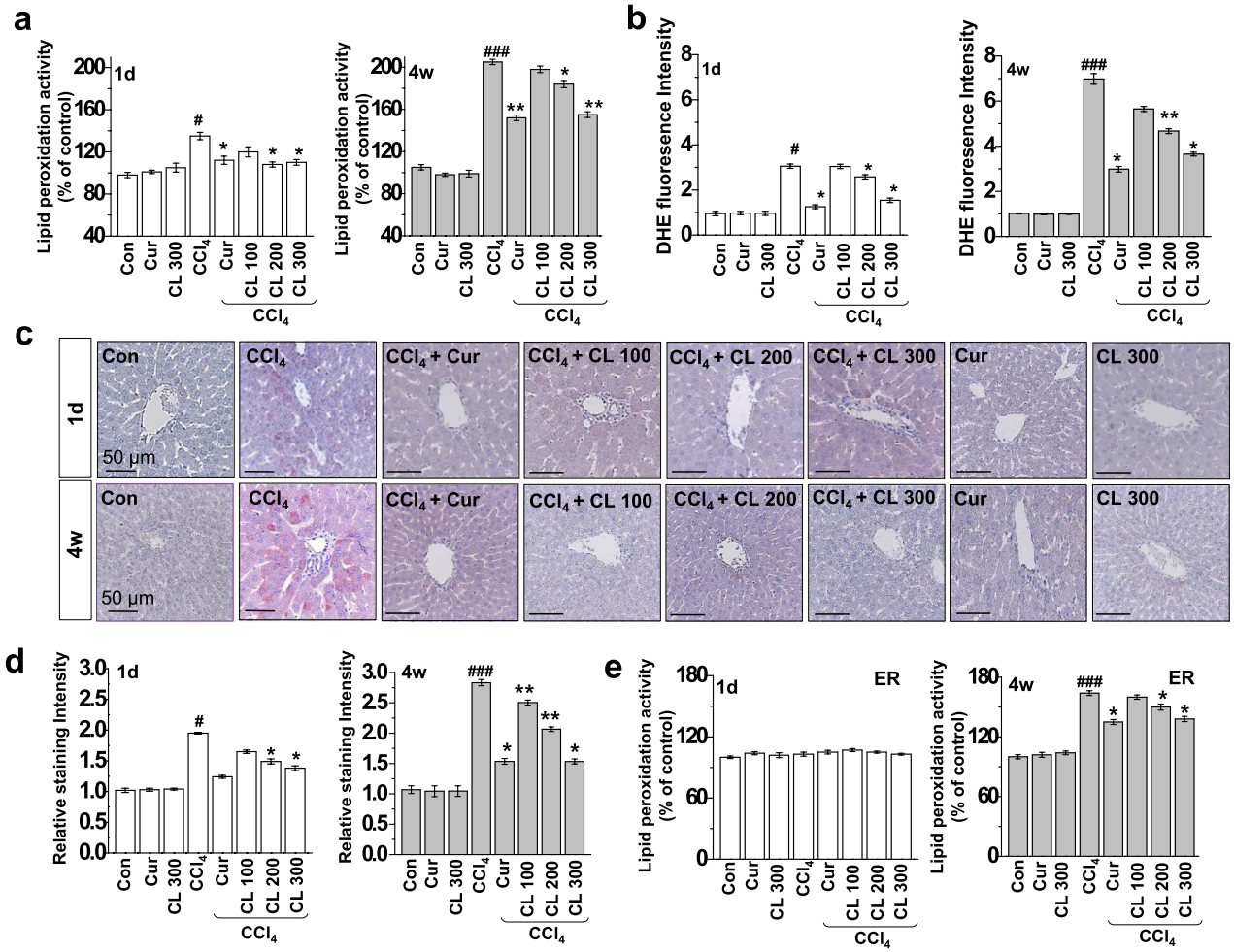

Figure 2. Curcumin and *Curcuma longa* L. extract regulate ROS accumulation in acute and chronic CCl_4-models. Rats were intraperitoneally treated with CCl_4 (0.1 mL/100 g body weight) one time for 1 day or every other day for 4 weeks. Curcumin (200 mg/kg) or *Curcuma longa* L. extract (100, 200, and 300 mg/kg) was given once daily. (**a**) Lipid peroxidation activity was measured in 1 day and 4 week CCl_4-treated rats. (**b**) DHE staining in the liver was measured in 1 day and 4 week CCl_4-treated rats. (**c**) Liver tissues from 1 day and 4 week CCl_4-treated rats were stained with 4-HNE, and (**d**) the staining intensity of 4-HNE-positive cells was calculated. (**e**) Lipid peroxidation activity was measured in the ER fractions from the liver tissues of CCl_4-treated rats. The experiments were repeated three times using tissues from at least three different rats. $^{\#}P<0.05$, $^{\#\#\#}P<0.001$ vs. the control group; $^{*}P<0.01$, $^{**}P<0.05$ vs. the CCl_4 group (n = 10 rats per group). Cur: curcumin, CL: *Curcuma longa* L.

References

1. Lee, H. Y. *et al.* Turmeric extract and its active compound, curcumin, protect against chronic CCl_4-induced liver damage by enhancing antioxidation. *BMC Complement. Altern. Med.* **16**, 316. https://doi.org/10.1186/s12906-016-1307-6 (2016).
2. Lee, G. H. *et al.* Protective effect of *Curcuma longa* L. extract on CCl4-induced acute hepatic stress. *BMC Res. Notes* **10**, 77. https://doi.org/10.1186/s13104-017-2409-z (2017).