Author’s response to reviews

Title: Berberine improves glucogenesis and lipid metabolism in nonalcoholic fatty liver disease

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Thanks! According to your suggestion, we have clarified the effect of weight loss (Discussion section, line 269-276, page 13-14) and adjusted the conclusion(Abstract section, line 45-47, page 3 and Conclusion section, line 362-363,365-366, page 18), which are marked in red in the paper.

“After the BBR treatment, obvious weight loss was observed. The possible mechanism was associated with changes in the expression of multiple key genes controlling energy expenditure [22]. Previous studies found that at least a 5-7% of weight loss was required to improve hepatic steatosis [23]. Weight loss could improve hepatic insulin resistance and attenuate liver fat accumulation by reducing FFA flux to the liver for hepatic de novo lipogenesis [24]. Also, weight loss likely attenuates mitochondrial oxidative flux by alleviating the load of FFA and lipotoxicity to hepatic mitochondria [25]. Thus, weight loss is one of the cornerstones of treatment of NAFLD.”

“BBR improved NAFLD by inhibiting glucogenesis and comprehensively regulating lipid metabolism, and its effect on inhibiting hepatic lipogenesis was much stronger. The improvement may be partly mediated by weight loss. Berberine might be a good choice for patients with NAFLD and glucose metabolic disorder. Future clinical trials need to be conducted to confirm these effects.”
References:


