

## **Responds to the reviewer's comments:**

Reviewer 1

**Comment:** "Stem cells from human exfoliated deciduous teeth ameliorate concanavalin A-induced autoimmune hepatitis by protecting hepatocytes from apoptosis" is an interesting article. The matter is innovative. The study is well designed. Results are clear.

**Response:** We appreciate the reviews positive comments

Reviewer 2

**Comment 1:** Even if in general the paper is clear and is well written, some points need to be described more in detail. Specifically results need to be more detailed and each panel of figures should be well explained. This is especially needed for the paragraph "SHED moderates ConA-induced acute liver injury in mice".

**Response:** Thank you for your valuable advice. We added detailed description in the section of result on Page 10: "Anatomical and histological examinations, which were used to estimate liver injury, showed that the structure of liver lobule and the arrangement of liver cells was clear in the control group, while the structure and arrangement of liver lobules were aberrant, with inflammatory cell infiltration and massive necrotic areas in the ConA group. The arrow indicates the necrotic area of the liver. Moreover, SHED infusion could significantly restore liver structure and reduce inflammatory cell infiltration (Figure 1D, E)."

**Comment 2:** Mice without any treatment or mice injected with SHED cells? It is not described nor in Methods nor in Results. This is a very important point.

**Response:** We appreciate the points raised by the reviewer. The control mice were injected with saline solution and the description was added in the section of method on page 6: " $n = 10$ ; intravenous injections with saline solution"

**Comment 3:** In the anatomical and histological examinations the analysis of SHED cells homing is missing. Where do the cells go? In what tissues and in what quantity?

**Response:** Thank for the reviewer's suggestion, we labeled SHED cells with DiR dye and CFSE respectively. The orientation of SHED cells was detected by in vivo imaging and was added in the result section on Page 10: “ DiR-labeled SHED cells were detected in mouse liver and spleen 1 day, 3 days and 7 days after the transplantation (Figure.S1A) . With the extension of time after SHED injection, the intensity of fluorescent fuel decreases gradually. Moreover, CFSE labeled cells were detected in in mouse liver and spleen, which was also decreased in a time dependent manner. However, No obvious recruitment of SHED cells was observed in lung, kidney and heart(Figure.S1B, C). Results showed that SHED cells recruited in liver in mice which may play protective effects on acute liver injury. ”

**Comment 4:** Authors assert that their results showed that SHED alleviated liver damage by inhibiting the activation of T helper 1 cell-mediated inflammation. This can not be asserted, instead their results showed an immunomodulatory capacity of SHED cells and an inhibition of CD4 and CD8 T cells.

**Response:** We appreciate the reviewer's suggestion. In order to analyze the effect of shed on T cell differentiation, we analyzed the ratio of CD4<sup>+</sup> IFN- $\gamma$ <sup>+</sup> T cells in mice peripheral blood by flow cytometry. We have added this newly generated analysis data in Result section on Page 11: “Besides, we found that the number of CD4<sup>+</sup> IFN- $\gamma$ <sup>+</sup> T cells increased in ConA group, and SHED injection could reverse this situation(Figure 2I, J). ”

**Comment 5:** *In vitro* Results are interesting, but they have a different design compared to *in vivo* experiments. In the *in vivo* experiments SHED cells were injected 7 days before ConA treatment, instead in the *in vitro* experiments ConA treatment and SHED co-culture was performed at the same time. What happens if SHED cells were cocultured 7 day before the ConA treatment? This kind of control/experiment is missing.

**Response:** We thank for the concern raised by the reviewer. To investigate what happens if SHED cells were cocultured 7 day before the ConA treatment, The flow cytometry of co cultured cells were studied. The results of 7 days of co-culture were added in Supplementary Figure 4, most of the results were consistent with the previous results.

To optimize the state of culture cells, we choose 24h (logarithmic growth phase) *in vitro* to do the experiment.