Author’s response to reviews

Title: Colchicine causes prenatal cell toxicity and increases tetraploid risk

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Author’s response to reviews:

Dear editor,

We modified the manuscript (PHAT-D-19-00198) according to the reviewer’s comment and changes were highlighted in red.

Reviewer 2:

"Here, we demonstrated that toxic effect of colchicine on CVCs and AFCs was inhibiting cell proliferation, which was consistent with its resulting in pre-term birth, short gestational age and low birth weight."

This statement is speculation since the work presented in this paper does not "demonstrate" an effect of colchicine on preterm birth risk per se and there is no evidence it does this in vivo. At best this works suggests there is an association between factors previously implicated in pre-term birth in an in vitro model which may not necessarily extend to in vivo effects of colchicine per se for various reasons. In addition, previous studies do not suggest this outcome is occurring in humans. ON the contrary, colchicine use has not been associated with an increased risk of fetal malformations or miscarriage (Ben-Chetrit et al., 2004; Indraratna et al., 2018).

Response:

The significance and limitation of our work were given in the last paragraph of discussion.
“Our prenatal cell toxicity data may reflect the influence of colchicine on the placenta and foetus, but it did not completely mimic the toxic reaction in vivo.”

Best wishes,

Sincerely yours,

Xiaofang Sun