

Exosomes transferring long non-coding RNA *FAL1* to regulate ovarian cancer metastasis through the PTEN/AKT signaling pathway

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The article “Exosomes transferring long non-coding RNA *FAL1* to regulate ovarian cancer metastasis through the PTEN/AKT signaling pathway, by Q. Zhang, T.-Y. Len, S.-X. Zhang, Q.-H. Zhao, L.-H. Yang, published in *Eur Rev Med Pharmacol Sci* 2020; 24 (1): 43-54–DOI: 10.26355/eurrev_202001_19894–PMID: 31957817” has been withdrawn from the authors stating that “after the manuscript has been accepted, we are ready to continue to study the exosomes and their mechanism of action. Before the research, we read the latest guideline of exosomes research, MISEV2018. This guideline first suggests that extracellular vesicles should be used to refer to these cell-derived noncellular membrane structures, while exosomes are only applicable to those vesicles released from intracellular sources to extracellular cells by special means. Secondly, the guidelines suggest that when performing key functional verification experiments with extracellular vesicles, methods such as density gradient centrifugation should be used to purify the vesicles. Thirdly, strict negative control should be set up in the functional study of cells, such as cell-conditioned medium treated with extracellular vesicle production inhibitor (GW4869), so as to exclude the false positive of other non-extracellular vesicle components in functional analysis. In our published manuscripts, we called extracellular vesicles as exosomes, and used exosomes separation kit with low purity to separate the exosomes. No appropriate negative control is used in the functional analysis. Most importantly, the conclusion we made in our study is “SKOV3-secreted exosomes inhibited the PTEN/AKT signaling pathway by transferring lncRNA *FAL1*, thus inhibiting OC cell metastasis in vitro and in vivo”. However, the study did not confirm whether lncRNA *FAL1* was encapsulated by extracellular vesicles and transferred to OC cells or induced by extracellular vesicles to upregulate its expression in OC cells. Based on the above reasons, we believe that our understanding of extracellular vesicles is not deep enough, which leads to the inaccuracy and over-interpretation of the experimental results. In order to avoid the readers’ misunderstanding of extracellular vesicles and ensure the preciseness of scientific research, all of our authors decided to withdraw this article. We will conduct our research again according to MISEV2018, interpret the experimental results and write articles again, and will submit to ERMPS in the near future”.

The Publisher apologizes for any inconvenience this may cause.