



ESPS PEER REVIEW REPORT

Name of journal: World Journal of Gastroenterology

ESPS manuscript NO: 12513

Title: The miR-21/RASA1 axis affects malignancy of colon cancer cells by RAS pathways

Reviewer code: 00181101

Science editor: Yuan Qi

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Table with 4 columns: CLASSIFICATION, LANGUAGE EVALUATION, RECOMMENDATION, CONCLUSION. It lists various review grades (A-E) and corresponding actions like 'Accept', 'High priority for publication', 'Rejection', 'Minor revision', and 'Major revision'.

COMMENTS TO AUTHORS

Reviewer's comments This is a very interesting study comprehensively exploring the role of RASA1 and its inhibitor miR21 in colon cancer cells. Minor revisions should be addressed: ? Abstract should be self-explaining. Please simplifying the text taking into consideration that MTT, pre-miR-21-LV cells, anti-miR-21-LV cells, siRASA1, pcDNA3.1 are not terms understandable to all readers . Moreover the choice of RKO cells for transfection experiments should already be explained in the methods ? Page 4, line 12, please change 'diagnostic' with 'prognostic/predictive' ? Please add, whenever the anti-EGFR antibody cetuximab is cited, also the other anti-EGFR panitumumab ? Page 4, last line: '...in relation to abnormal or missing expression of some molecules...' instead of '...in relation to abnormal expression or missing ...' ? In METHODS, 'Transfection of RKO cells with plasmid vector for RASA1 up/down-regulation' section: Please specify how GV102 vector down-regulates RASA1 and what is the molecular difference between siRASA1 and siRASA1-NC ? Please spell out RT-PCR at first appearance ? In METHODS the pGL3-promoter vector is labeled as 'negative control': Is this a real 'negative' control? Or rather a 'positive control' as light emission is not inhibited by miR21? See figure 3 ? In METHODS, In cell proliferation assay section, first line: Please, specify what 'negative control and control' are (are they native cells?) ? RESULTS section, in 'Validation of lentivirus and plasmid vector transfection efficiency' : Please specify what controls are (non-coding LV? Native RKO cells?) ? 'Role of miR-21 and RASA1 in the RAS signaling pathway' section, third line: please change 'close' with 'switch off' ? In RESULTS, '...We analyzed the changes



BAISHIDENG PUBLISHING GROUP INC

8226 Regency Drive, Pleasanton, CA 94588, USA

Telephone: +1-925-223-8242

Fax: +1-925-223-8243

E-mail: bpgoffice@wjgnet.com

<http://www.wjgnet.com>

in Raf-1, KRAS, AKT and p-AKT, ERK1/2 and p-ERK1/2...': KRAS is not a downstream signal of RAS, but it is the RAS protein itself, therefore authors should explain the mechanism by which total RAS amount changes, rather than just its activation, through miR21 and RASA1 modulation, so they should for changes in total amount of downstream proteins (why does not it change just their phosphorylated status?) ? In figures: where the line representing standard error appears in the bar graphs, number of tests performed for each experiment should be specified