Reviewer’s report

Title: Comprehensive Analysis of Differentially Expressed Genes Associated with PLK1 in Bladder Cancer

Version: 1 Date: 10 Aug 2017

Reviewer: Alcides Chaux

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In this study, authors evaluate the effect of silencing PKL1 expression (a well-known oncogene) in the proliferation, invasion and migration of bladder cell lines (normal urothelium and cancer cells). The study also included the evaluation of these downstream effects in human tissue samples from patients with urothelial carcinoma, in association with clinicopathologic and outcome features. The manuscript has been considerably improved by the authors. All the recommendations given by the reviewers have been taken into consideration and have been properly addressed. The English grammar and style of the manuscript have achieved an adequate level of written quality. A few additional recommendations are provided below.

ABSTRACT: Please correct the sentence "Statistical analysis showed that the five genes expressions were significantly correlation with the PLK1 expression in normal bladder tissues and bladder cancer tissues."

INTRODUCTION: It seems that references are missing from the first paragraph of this section. Statements such as "Bladder cancer is a most common urological malignancy which causes approximately 150,000 deaths annually worldwide" and "Approximately (sic) 15-25% of non-muscle-invasive bladder cancer will progress to muscle-invasive bladder cancer" usually require citations. Also, past results and well-known facts are usually stated in the present tense, so sentences such as "Though the improved therapeutic strategies were given, there was still a high mortality" need to be rephrased. Finally, for the third paragraph in this section (the one beginning with "We previously determined …"), please consider removing the text (or moving it to the Discussion) from the second sentence ("To explore the molecular …") up to the end of the paragraph, and to merge the remainder with the next paragraph ("In the current study …"). The reason for the last recommendation is to shorten this section, providing only the essentials to understand the context and rationale of the study. Previous studies carried out by the authors that are related to the current study can be discussed at length in the Discussion section.
FIGURES: In the boxplots, it is not necessary to include 6 decimal points for the P values. One decimal point in scientific notation will be enough, and will be easier to read in the plots. Please consider updating the plots using this recommendation (v.g., instead of P=4.793990e-006, use P=4.8e-6). This would also reduce the clutter from the plots. For the correlation plots, if the clusters represent 2 different population samples, then maybe it would be better to analyze them separately. Please consider this option.

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

Yes

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

Yes

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

**Quality of written English**
Please indicate the quality of language in the manuscript:

Acceptable

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