Reviewer's report

Title: Correlation between 3G mobile phone use and the development of brain tumor

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Reviewer: Sergio Comincini

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As a first comment, looking at the proposed title, one should expect a more exhaustive study, with the employment of several cell lines and animal models: differently, this study is restricted to only a minority of cell models.

On the other hand, this study might have important epidemiologic and social consequences: it is therefore important to better set up clear the scientific hallmarks. In other words, the declared goals of this study are not sufficiently guaranteed by the employment of two quite undefined glioblastoma cell lines.

First of all, the authors have to primary screen over different glioblastoma- and neuroblastoma-derived cell lines such as the well established T98G and U373-MG for the former and, for example, SH-SY5Y for the latter group, including also those described in the paper. Then, the authors have to define the range of sensitivity/resistance of the different cells, and, finally to further select those that merit deeper cellular and molecular investigations. This methodological criticism is important since the authors do not clarify the criteria that sustain the choice of the employed cells. Are these cells particularly resistant to the employed stimuli? One would expect a study-design with the comparison of at least a resistant and a sensitive cell line.

The described cell lines are differently, and erroneously named along the manuscript:
“Two neuroblastoma cell line”; “The human glioma cell lines U251 and U87”; “human neuroglioma cell lines U251 and U87 cells”

In the methods, “The experimental cells (up to four bottles simultaneously) cultured in L-15 medium.............”

The authors must clarify the volumes of culturing “bottles” employed: this description is quite unscientific

In the results, the morphologic studies, as exemplified in Figure 2a, are not adequately performed using such a low-magnification resolution.

Positive autophagy-inducers, such as staurosporine, should be added in vitro and analysed in flow cytometry, Real-time and immunoblotting assays and finally these evidence compared with untreated cells.

SYBR-green based PCR technology is not the best choice for accurate
gene-expression analysis: better is the use of gene-related Taqman validated assays.

Several typing errors (spaces omitted, symbols, etc) are present. English language needs to be improved.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests.