



Corrigendum: MELK Inhibition Effectively Suppresses Growth of Glioblastoma and Cancer Stem-Like Cells by Blocking AKT and FOXM1 Pathways

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A Corrigendum on

MELK Inhibition Effectively Suppresses Growth of Glioblastoma and Cancer Stem-like Cells by Blocking AKT and FOXM1 Pathways

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In the original article, there was a mistake in **Figures 1D, 4G, 6E** as published. Incorrect images were used in the figure assembly process. The corrected **Figures 1, 4 and 6** appear below.

The authors apologize for this error and state that this does not change the scientific conclusions of the article in any way. The original article has been updated.

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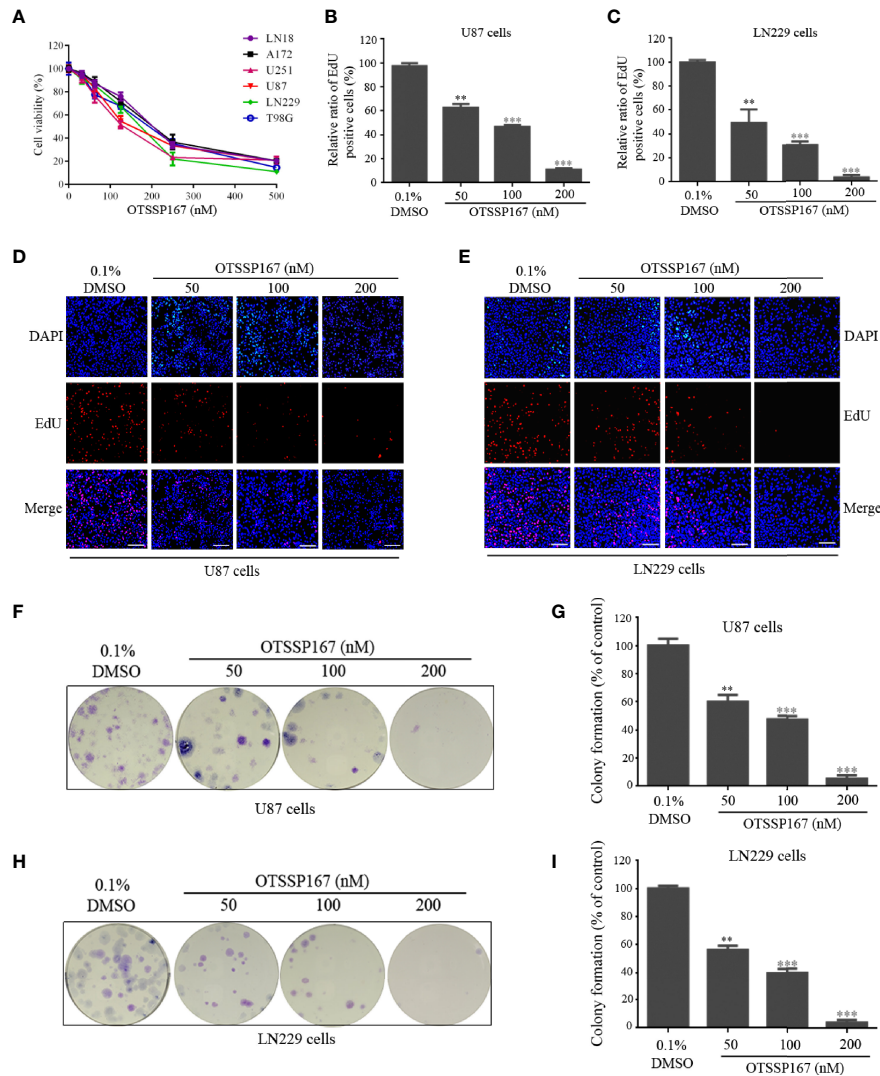


FIGURE 1 | OTSSP167 inhibits GBM cell proliferation and colony formation. **(A)** CCK-8 viability analysis of cells treated with six OTSSP167 concentrations, including 0 nM, 31.25 nM, 62.5 nM, 125 nM, 250 nM, and 500 nM for 72 h. **(B–E)** The U87 and LN229 cells were treated with indicated concentrations of OTSSP167 for 24 h, and the EdU assay was performed to assess cell proliferation. Panels **(B, C)** show the results of the quantitative analysis of the EdU test; panels **(D, E)** show the representative images of EdU analysis after OTSSP167 treatment of the U87 and LN229 cells. **(F–I)** OTSSP167 inhibits colony formation in U87 and LN229 cells in a dose-dependent manner. Quantitative analysis of the results of the colony formation experiment was performed. All the Data are presented as means \pm SEM. $**P < 0.01$, $***P < 0.001$ compared with the 0.1% DMSO treated group.

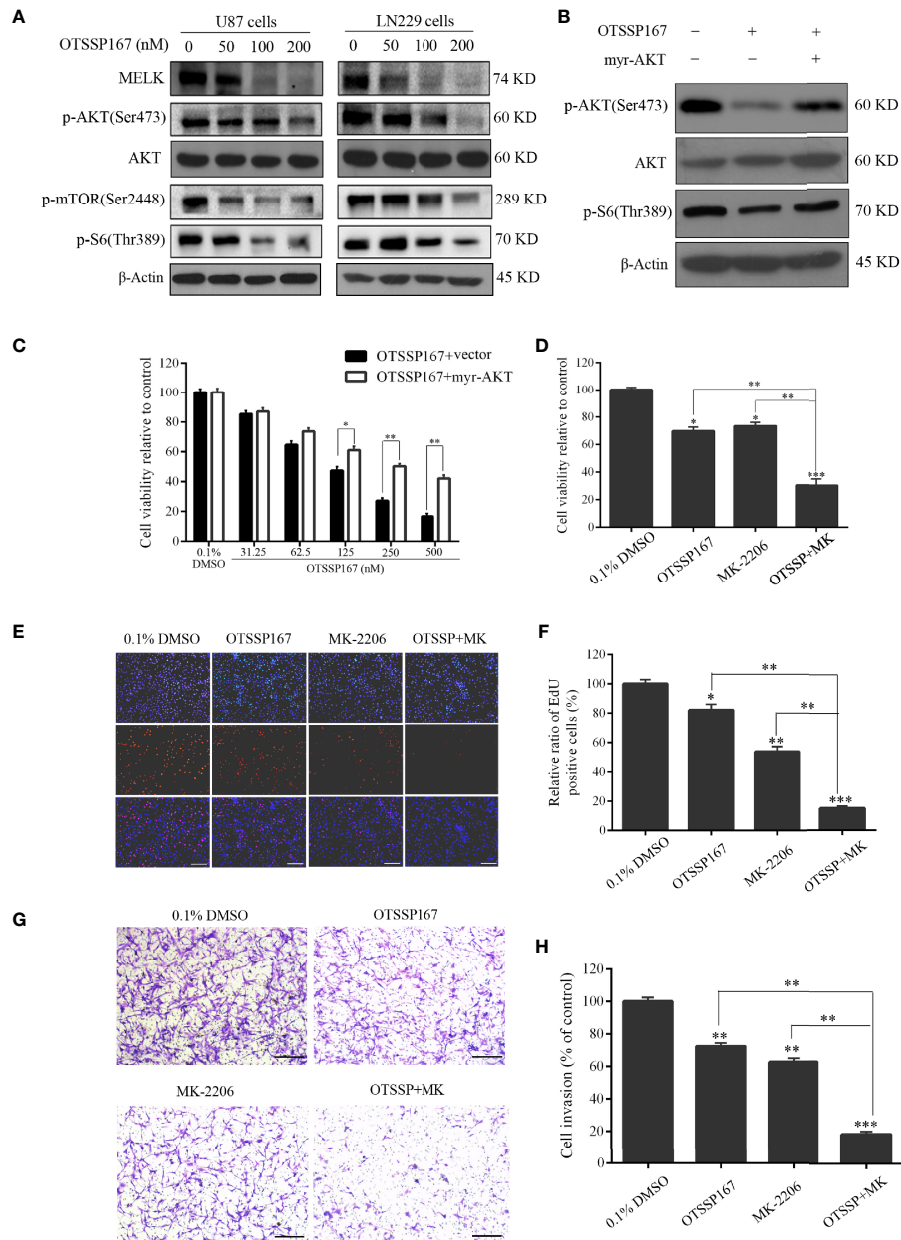


FIGURE 4 | OTSSP167 reduces MELK protein expression and blocks AKT pathway activation, thereby inhibiting the proliferation and invasion of GBM cells. **(A)** U87 and LN229 cells were treated with OTSSP167 for 24 h. Western blotting showing the expression levels of MELK, p-AKT(Ser473), AKT, p-mTOR(Ser2448), and p-S6 (Thr389) proteins. **(B)** U87 cells transfected with myr-AKT plasmid were treated with OTSSP167, followed by western blotting to assess changes in p-AKT(Ser473), AKT, and p-S6(Thr389) expression. **(C)** CCK-8 assay shows the effects of OTSSP167 treatment on U87 cells transfected with myr-AKT plasmid compared to the control group. **(D)** CCK-8 assay showing the viability of U87 cells treated with 50 nM OTSSP167 and 1 μ M MK-2206 (AKT inhibitor) alone or combined OTSSP167 and MK-2206 treatment for 72 h. **(E)** Measurement of cell proliferation after treating with 50 nM OTSSP167 and 1 μ M MK-2206 alone or their combinations by EdU incorporation assay. **(F, H)** Quantitative analysis of proliferative and invading cell numbers. The numbers of proliferative and invading cells were normalized to that of the control group. **(G)** U87 cells were incubated with 50 nM OTSSP167 and 1 μ M MK-2206 alone or their combinations. Cell invasive abilities were evaluated by transwell assay. Results were expressed as means \pm SEM of three independent experiments. * P < 0.05, ** P < 0.01 and *** P < 0.001 compared with control group.

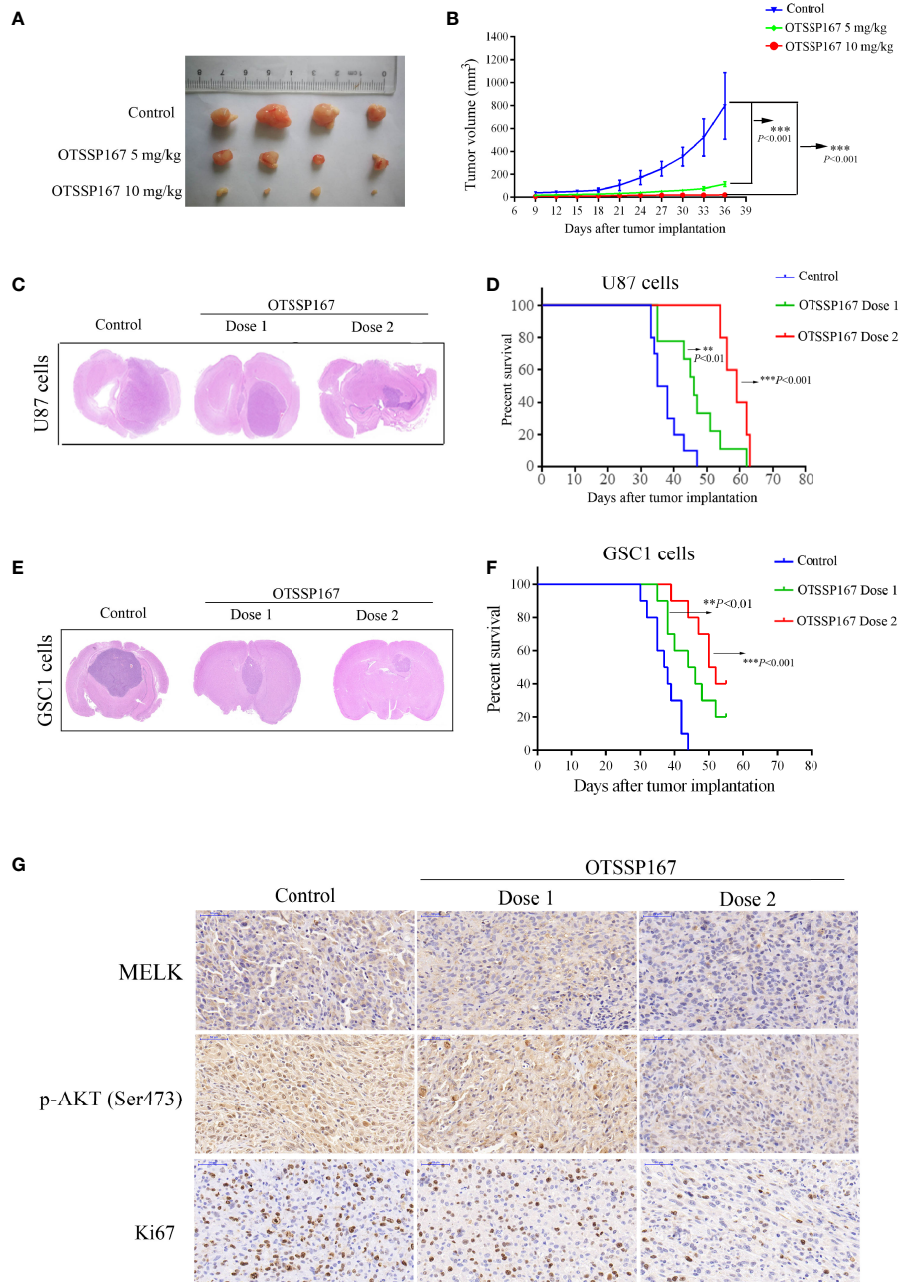


FIGURE 6 | OTSSP167 suppresses tumor growth *in vivo* and increases the survival of animals bearing intracranial GBM. **(A)** Representative tumors isolated from the control and OTSSP167-treated groups of subcutaneous tumor model. **(B)** The mean tumor volumes were assessed at the indicated numbers of days after tumor implantation. **(C)** Mice bearing U87 xenograft tumor were treated with OTSSP167 (5 μ L of 1 μ M (dose 1) or 2 μ M (dose 2) OTSSP167 in 1% DMSO in PBS per mouse) or vehicle control by intratumoral injection once a week for 4 weeks. Representative images of H&E staining of whole brain sections from control group and OTSSP167 treatment group. **(D)** Kaplan-Meier survival curves of mice implanted with U87 cells ($n=10$, $**P < 0.01$, $***P < 0.001$). *In vivo* animal studies to investigate the effect of OTSSP167 administration on the growth of GSC-driven tumor. Tumor size **(E)** and survival time **(F)** were analyzed by using the above same treatment. The survival time of tumor-bearing mice was counted by the end of the 55th day after tumor implantation. **(G)** Representative IHC staining images of p-AKT(Ser473) and Ki67 expression in U87 xenograft tumor of control and OTSSP167 treatment groups. Sections were counterstained with hematoxylin.