

Supplementary Materials: Role of Folic Acid in the Therapeutic Action of Nanostructured Porous Silica Functionalized with Organotin(IV) Compounds Against Different Cancer Cell Lines

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This supplementary material contains:

- 1) FT-IR spectra of MSN. MSU-2, MSN-AP, MSU-2-AP, MSN-AP-FA and MSU-2-AP-FA (Figure S1A-F)
- 2) TG and DSC analysis of MSN. MSU-2, MSN-AP, MSU-2-AP, MSN-AP-FA, MSU-2-AP-FA, MSN-AP-FA-Sn and MSU-2-AP-FA-Sn. (Figures S2-S9 respectively)
- 3) Z-potential measurements (Figure S10)
- 4) Curves dose-response (Figure S11)
- 5) Concentration of FOLR1 secreted by tumour cells subjected to treatment (Figure S12)

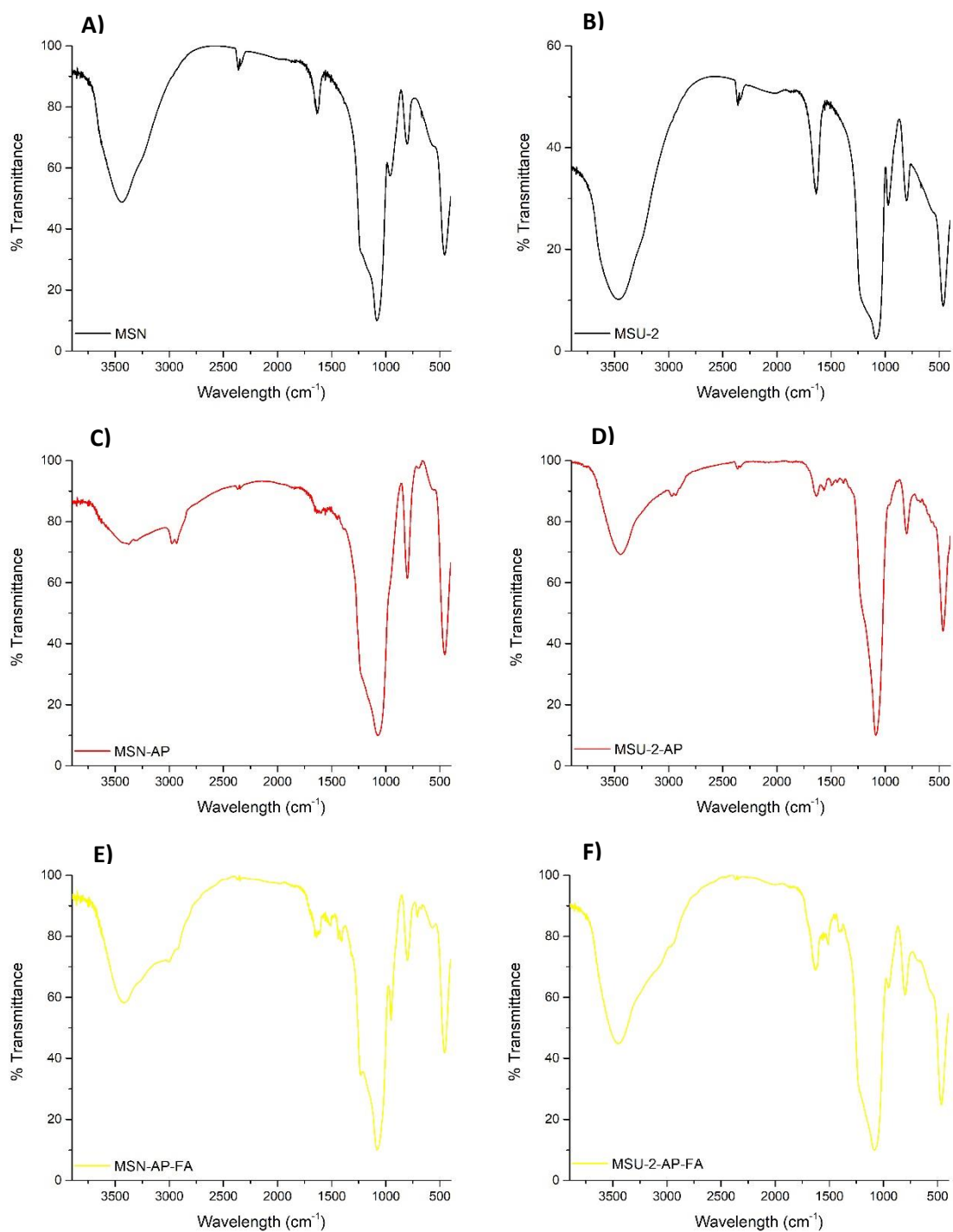


Figure S1. FT-IR spectra of the starting silica materials (A and B), functionalized with AP (C and D) and after the FA incorporation (E and F).

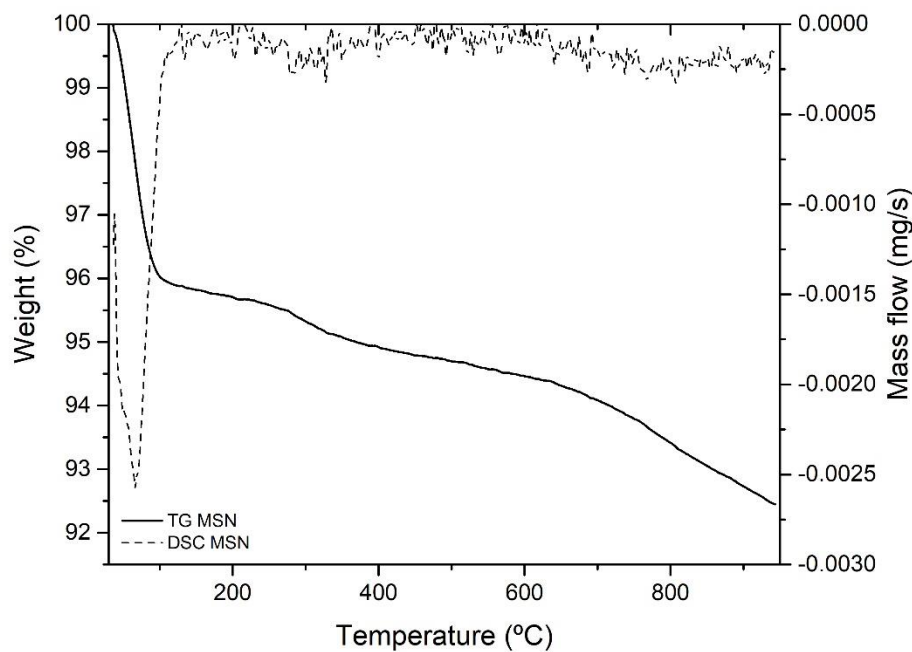


Figure S2. TG-DSC of the starting material MSN.

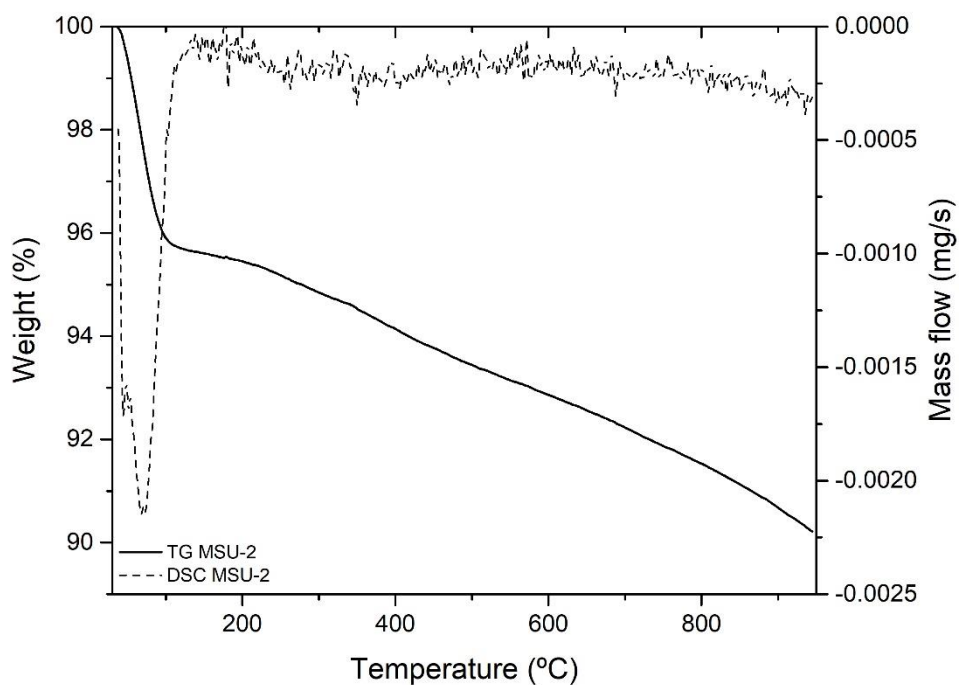


Figure S3. TG-DSC of the starting material MSU-2.

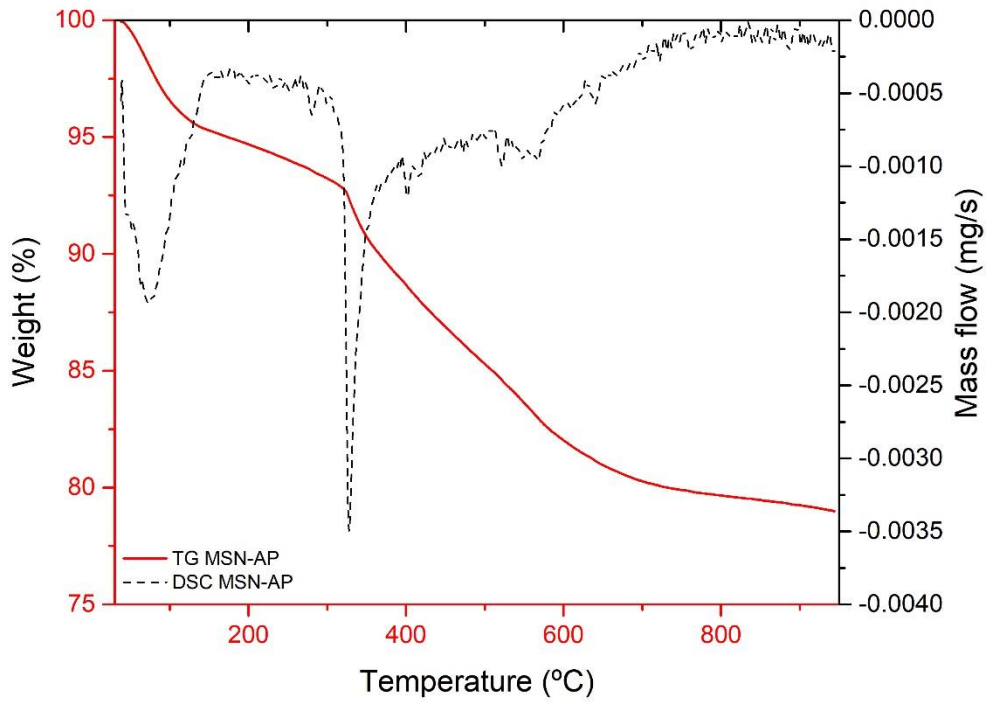


Figure S4. TG-DSC of MSN-AP.

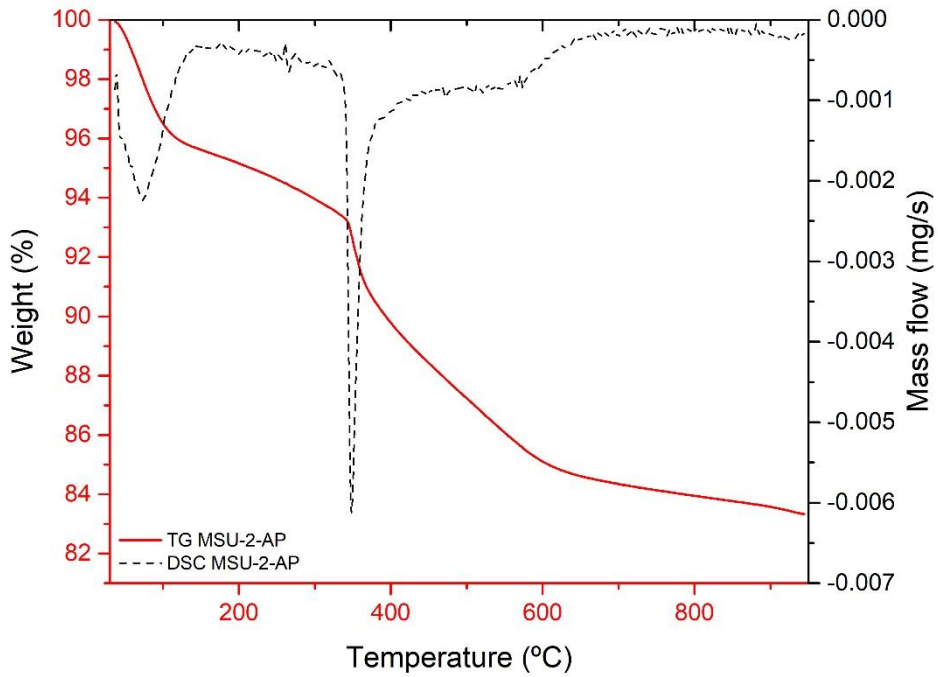


Figure S5. TG-DSC of MSU-2-AP.

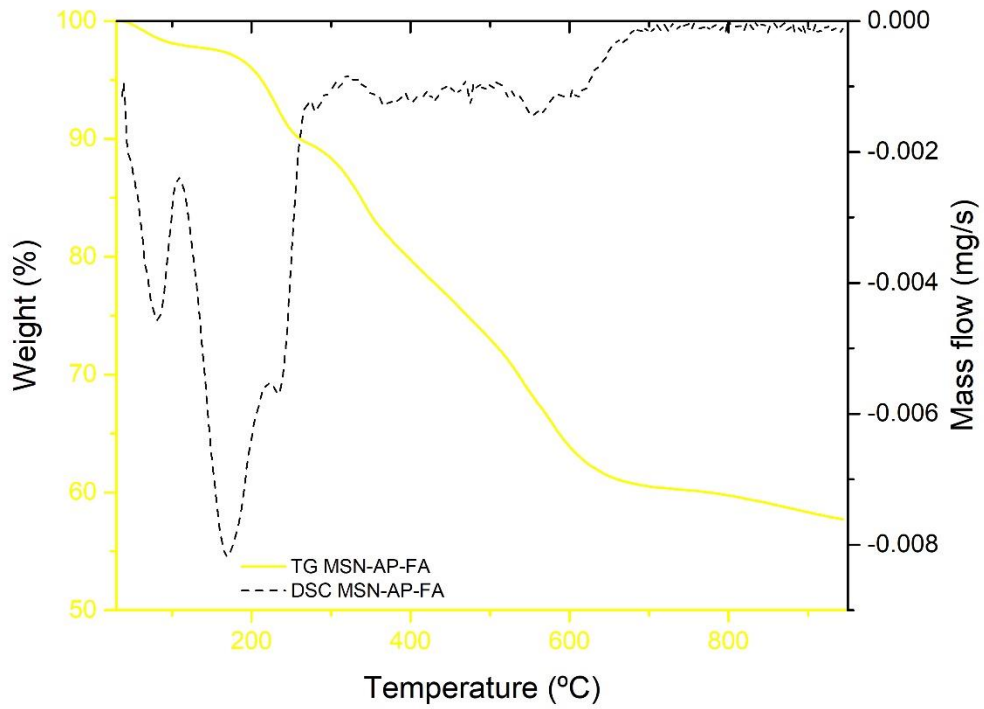


Figure S6. TG-DSC of MSN-AP-FA.

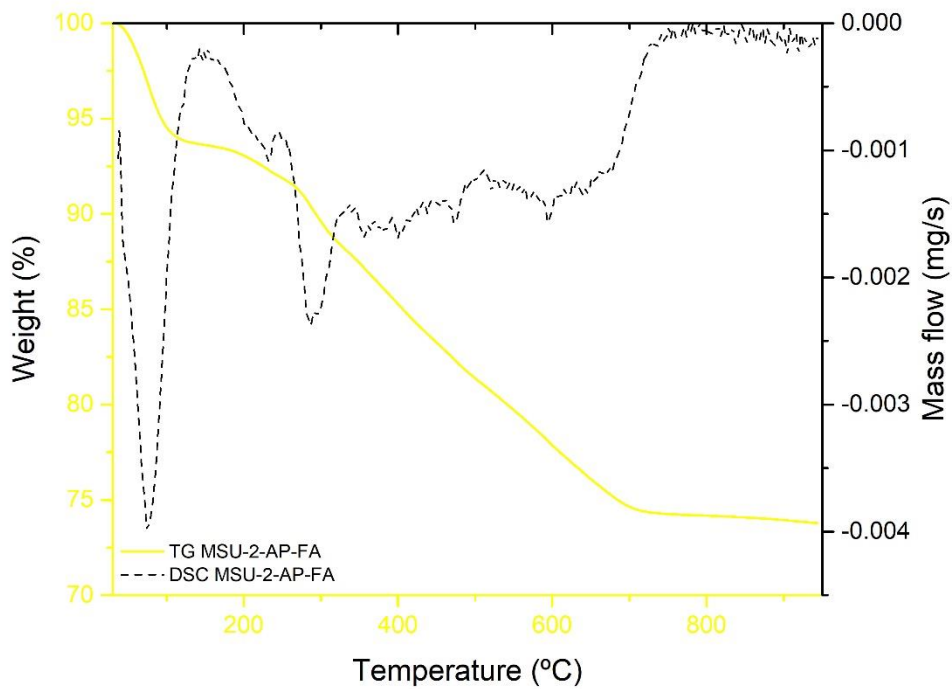


Figure S7. TG-DSC of MSU-2-AP-FA.

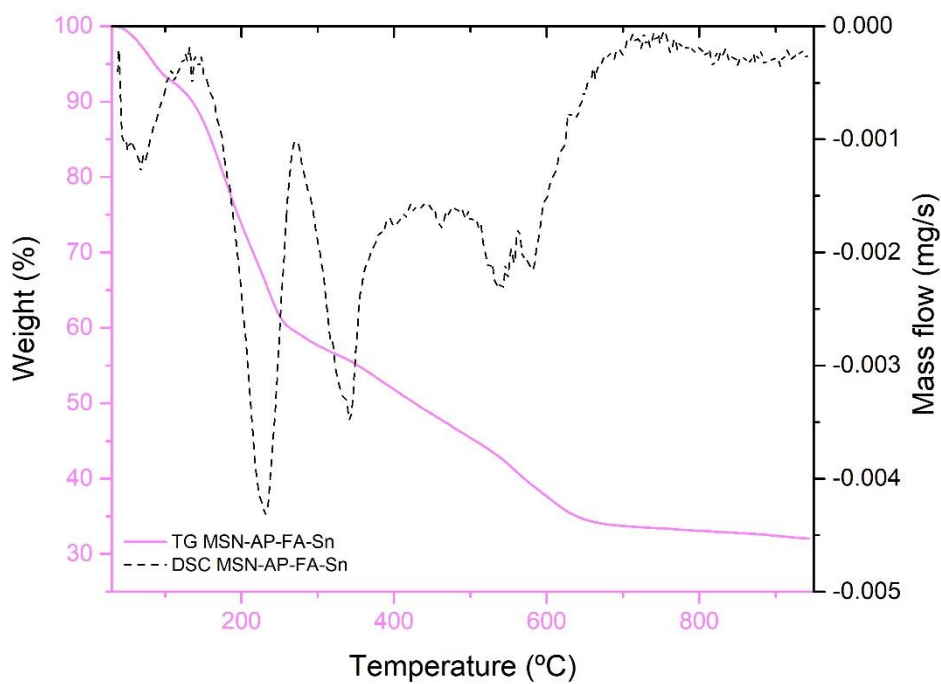


Figure S8. TG-DSC of MSN-AP-FA-Sn.

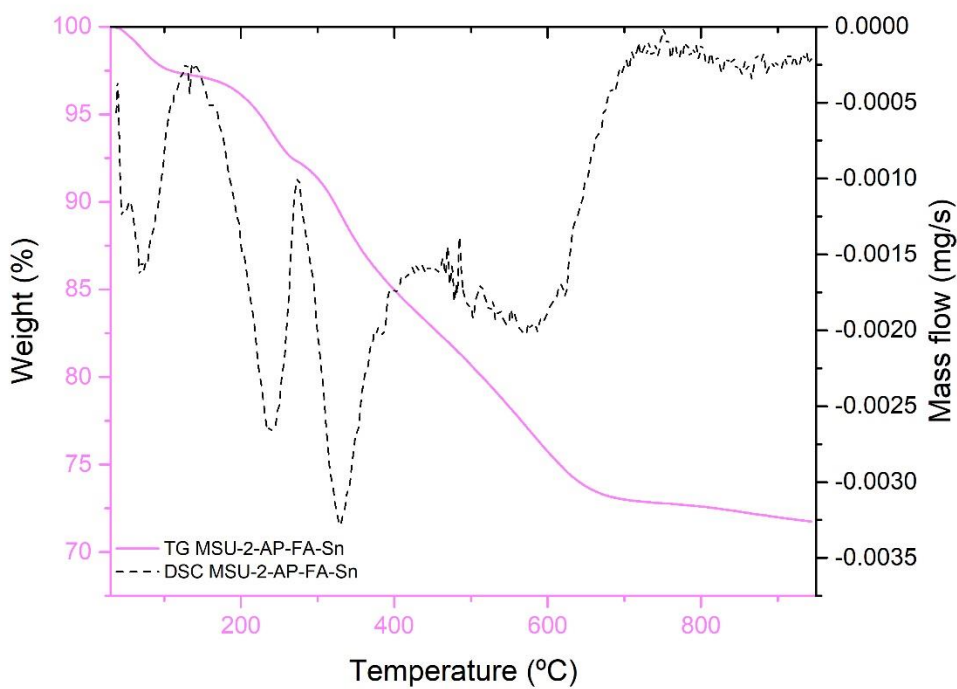


Figure S9. TG-DSC of MSU-2-AP-FA-Sn.

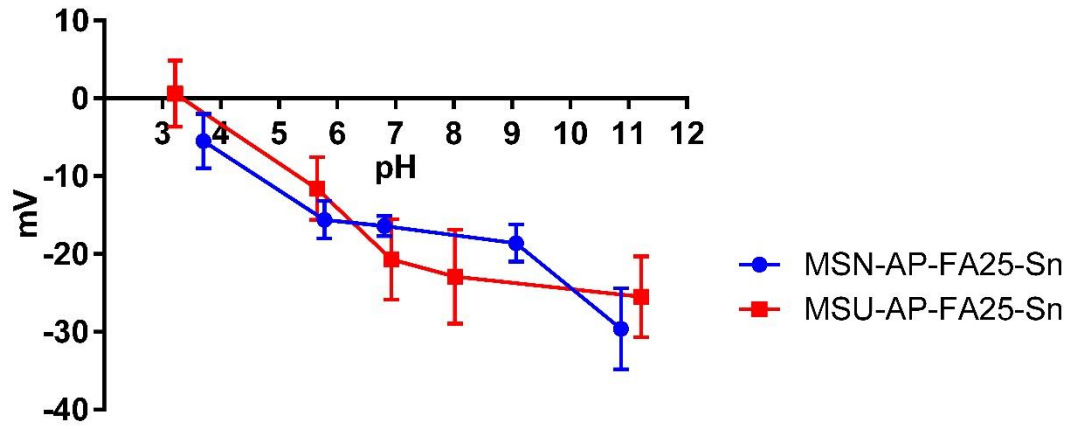


Figure S10. Z-potential measurements between pH 3 and pH 12 for MSN-AP-FA25-Sn and MSU-2-AP-FA25-Sn

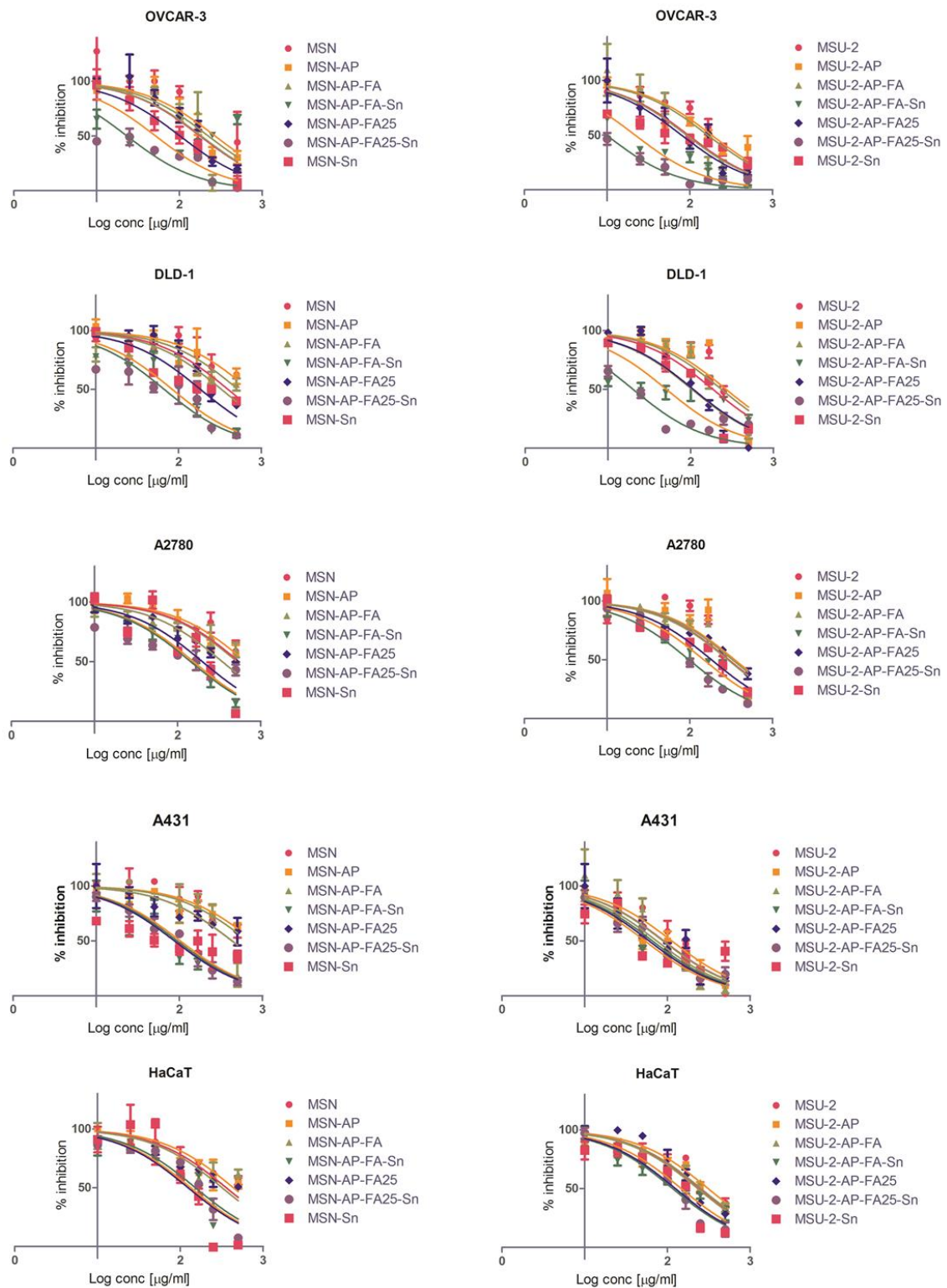


Figure S11. Nonlinear dose-response relationship between the concentration *vs* the cell growth inhibition following the 24-hours treatment with MSU-2 and MSN materials *in vitro*.

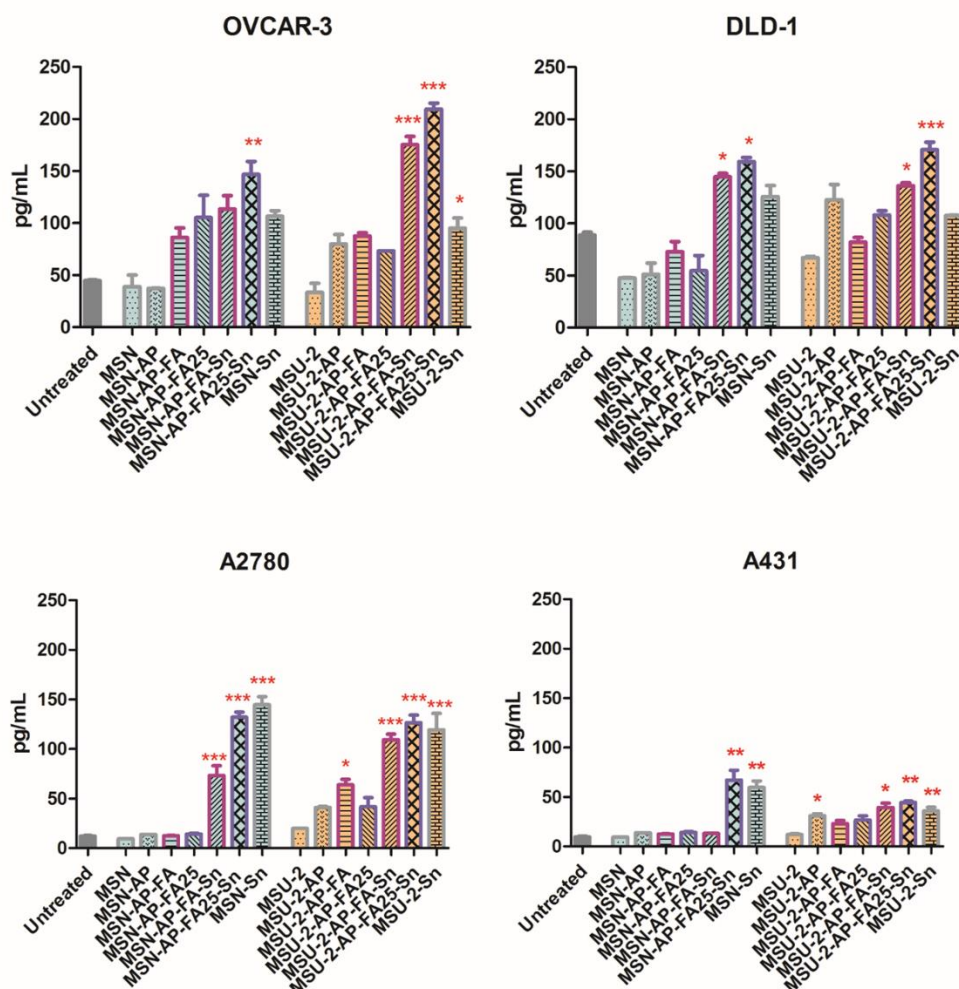


Figure S12. Concentration of FOLR1 secreted by tumour cells subjected to treatment with mesoporous compounds. In the upper row the folate receptor-positive DLD-1 and OVCAR-3 cells, in the lower row are the A2780 and A431 cells, with low folate receptor expression. The statistically significant changes in FOLR1 level *vs* the untreated reference are evidenced by starring: * represents $p < 0.05$, ** $p < 0.01$ while *** $p < 0.001$. The columns with magenta border represents the materials functionalized with 10%FA, the blue border represents the materials functionalized with 25% FA.