Supplementary Information

Polypeptide derivative of metformin with the combined advantage of a gene carrier and anticancer activity

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Figure S1. Schematic synthesis of metformin from dimethylamine HCL and 2-cyanoguanidine

Figure S2. FTIR analysis of poly-L-Lysine, dicyandiamide, physical mixture (poly-L-Lysine + dicyandiamide), LysMET and Metformin
Figure S3. Gel electrophoresis analysis of miRNA binding efficiency towards LysMET at different N/P ratio

Figure S4. Stability analysis of mLysMET and A-Lipo@mLysMET in phosphate buffered saline (PBS, pH 7.4) for 30 days
Figure S5. Apoptosis analysis of HT-29 colon cancer cells after treatment with respective formulations. The cells were stained with Hoechst 33342 to observe the nuclear fragmentation.
Figure S6. The tissue distribution of Cy5.5-labeled A-Lipo@mLysMET and Lipo@mLysMET in HT-29 cancer cell-bearing tumor xenograft model. The mice were sacrificed and individual organs were extracted and imaged using FOBI apparatus.
Figure S7. Body weight analysis of xenograft tumor mice treated with different formulations.

The body weight analysis was performed until the end of the study.