

Supporting Information

ENHANCED AND PREFERENTIAL INTERNALIZATION OF LIPID NANOCAPSULES
INTO HUMAN GLIOBLASTOMA CELLS: EFFECT OF SURFACE-FUNCTIONALIZING
NFL PEPTIDE

Reatul Karim,^{ab} Elise Lepeltier,^{a} Lucille Esnault,^a Pascal Pigeon,^{cd} Laurent Lemaire,^a*

Claire Lépinoux-Chambaud,^a Nicolas Clere,^a Gérard Jaouen,^c Joel Eyer,^a Géraldine Piel,^b

and Catherine Passirani^a

^a MINT, UNIV Angers, INSERM 1066, CNRS 6021, Angers, France

^b LTPB, CIRM, University of Liège, Liège, Belgium

^c PSL Chimie ParisTech, 11 Rue Pierre & Marie Curie, F-75005 Paris, France

^d Sorbonne Université, Université Pierre et Marie Curie, CNRS, Institut Parisien de Chimie
Moléculaire (IPCM, UMR 8232), F-75005, Paris France

* **Corresponding author:** elise.lepeltier@univ-angers.fr

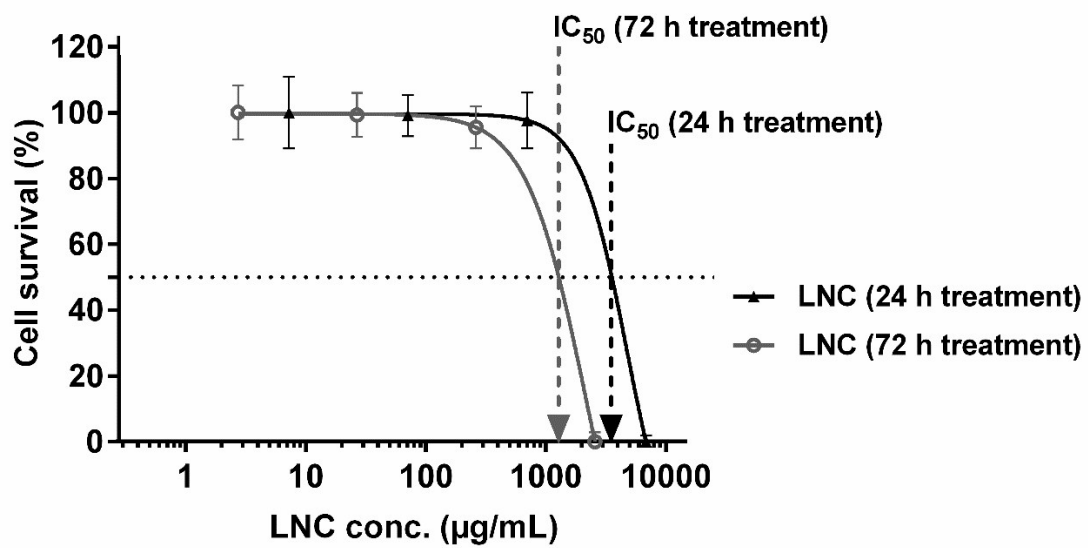


Figure S1. Survival percentages of U87MG cells after 24 h and 72 h treatment with various concentrations of blank LNCs.

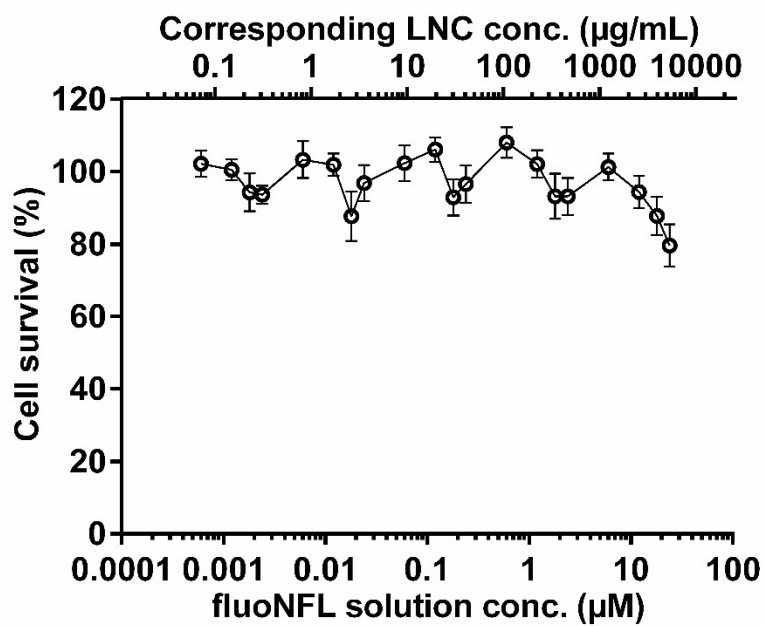


Figure S2. Survival percentages of U87MG cells after 72 h treatment with various concentrations fluoNFL solution.

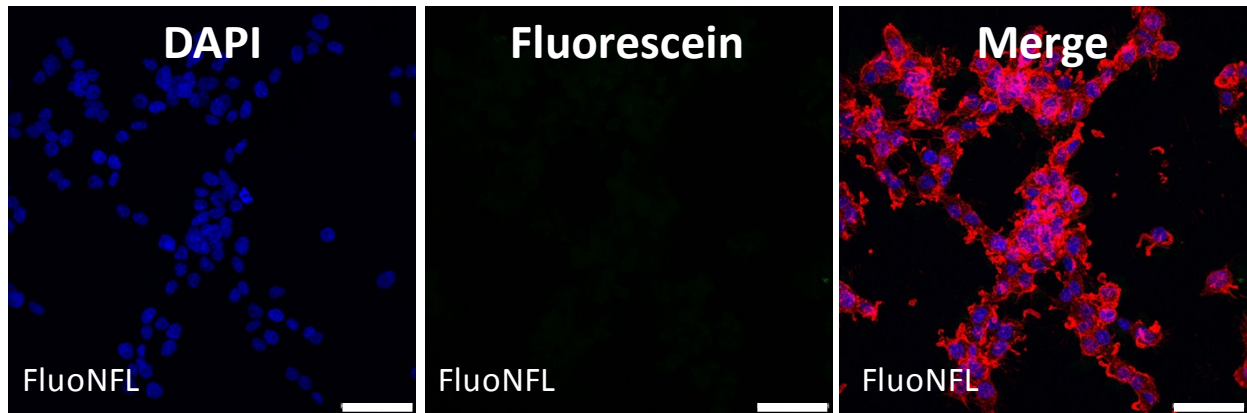


Figure S3. Representative confocal microscopy images of fluoNFL internalization into U87MG. Cells were treated at 37 °C for 6 h with 1 μ M of fluoNFL. Blue is DAPI staining (nuclei), green is carboxyfluorescein (fluoNFL) and red is phalloidin-TRITC staining (F-actin, cytoskeleton). White bar = 50 μ m.

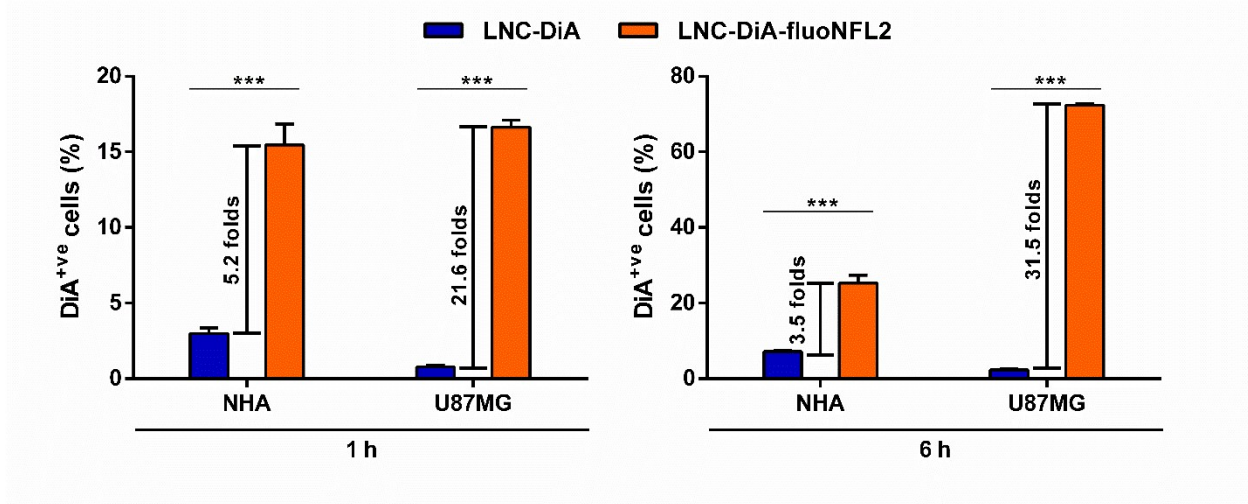


Figure S4: Enhanced LNC Internalization into NHA and U87MG cells due to LNC surface functionalization using fluoNFL peptide. The cells were incubated with 1.23 mg/mL of LNC-DiA and LNC-DiA-fluoNFL2 for 1 h and 6 h. Twenty thousand events per sample were analyzed and percentages of DiA^{+ve} cells were measured. The experiments were performed in triplicate. Statistical analysis was performed with t-test ($p < 0.05$ is denoted by (*), $p < 0.01$ by (**) and $p < 0.001$ by (***), $n=3$).