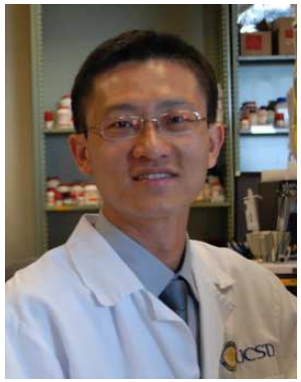

総合研究機構
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Redox-responsive Transfection Activated by the Processing of Enzyme Logic Gate Inputted with Cancer Biomarkers

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2013年7月24日(水) 14:30～ （於1011教室）

Cell transfections implemented by a cationic lipid bearing ferrocenyl tails in its hydrophobic ends are recently exploited to accomplish a redox-based control of nucleic acid delivery. We report here that a ferrocene-containing lipid, when coupled in connection to a tailor-designed enzyme logic system, can construct an autonomous delivery vesicle for siRNA against cancer cells. Such the targeted control of release is activated by elevated level of dual cancer biomarkers to ultimately induce either expression of specific protein or apoptosis.