

Cellular uptake and viability switch in the properties of lipid coated carbon quantum dots for potential bioimaging and therapeutics

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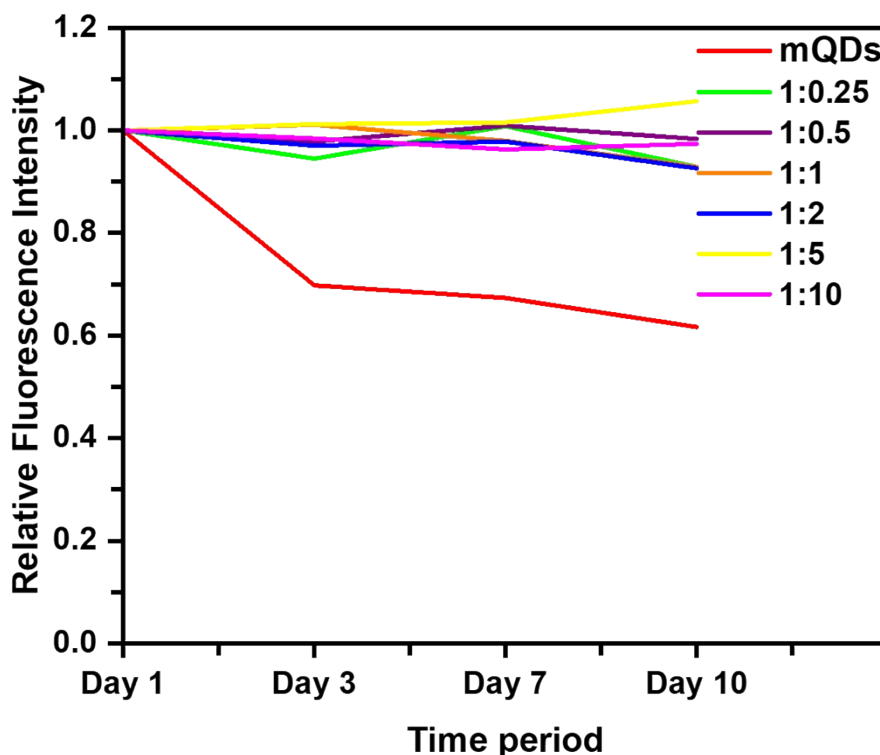


Figure S1: The relative fluorescence intensity was measured for 10 days. It shows that the fluorescence intensity of mQDs has dropped to about 61.8% than on day 1 at 679nm. Whereas in case of mQDs coated with DOTMA (1:0.25, 1:0.5, 1:1, 1:2, 1:5, 1:10) we observed that the fluorescence intensity was 93%, 98%, 93%, 93%, 106%, 97%. We observed that in ratio 1:5 the fluorescence is increasing with time.

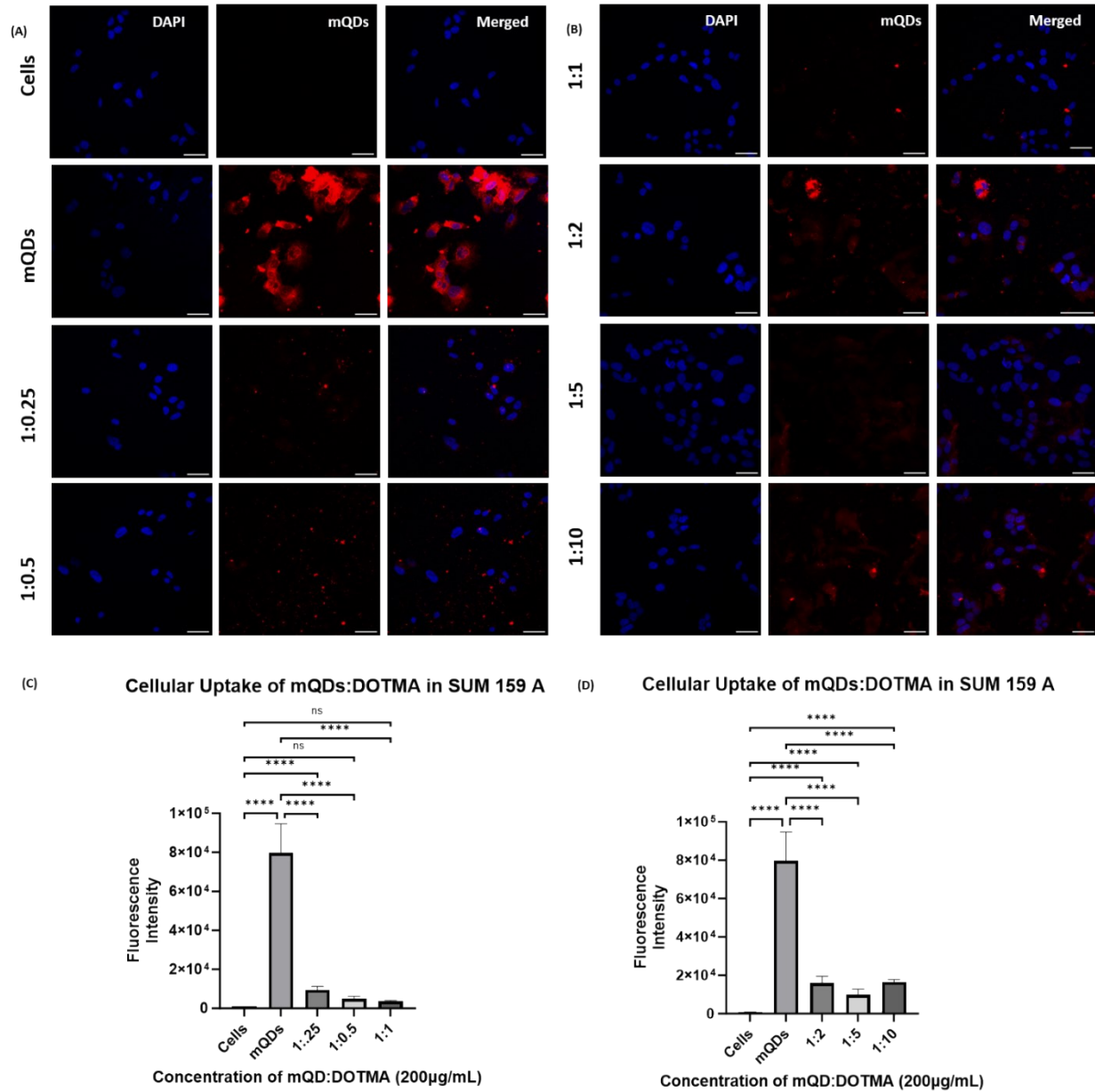


Figure S2: - Cellular uptake of mQD:DOTMA conjugates in SUM-159A cells. Concentration - 200µg/mL, Scale bar- 5µm (A) Uptake of mQDs and mQD:DOTMA conjugate (1:0.25 and 1:0.5). (B) Uptake of mQD:DOTMA conjugate (1:2, 1:5, 1:10). (C) Quantified fluorescence intensity of mQDs and mQD:DOTMA conjugates (1:0.25, 1:0.5, 1:1). (D) Quantified fluorescence intensity of mQD:DOTMA conjugates (1:2, 1:5, 1:10). The statistical significance was tested by one-way ANOVA in the Prism Software and is represented as **** when $p < 0.0001$ and ns when there is no significant difference. (n=30)

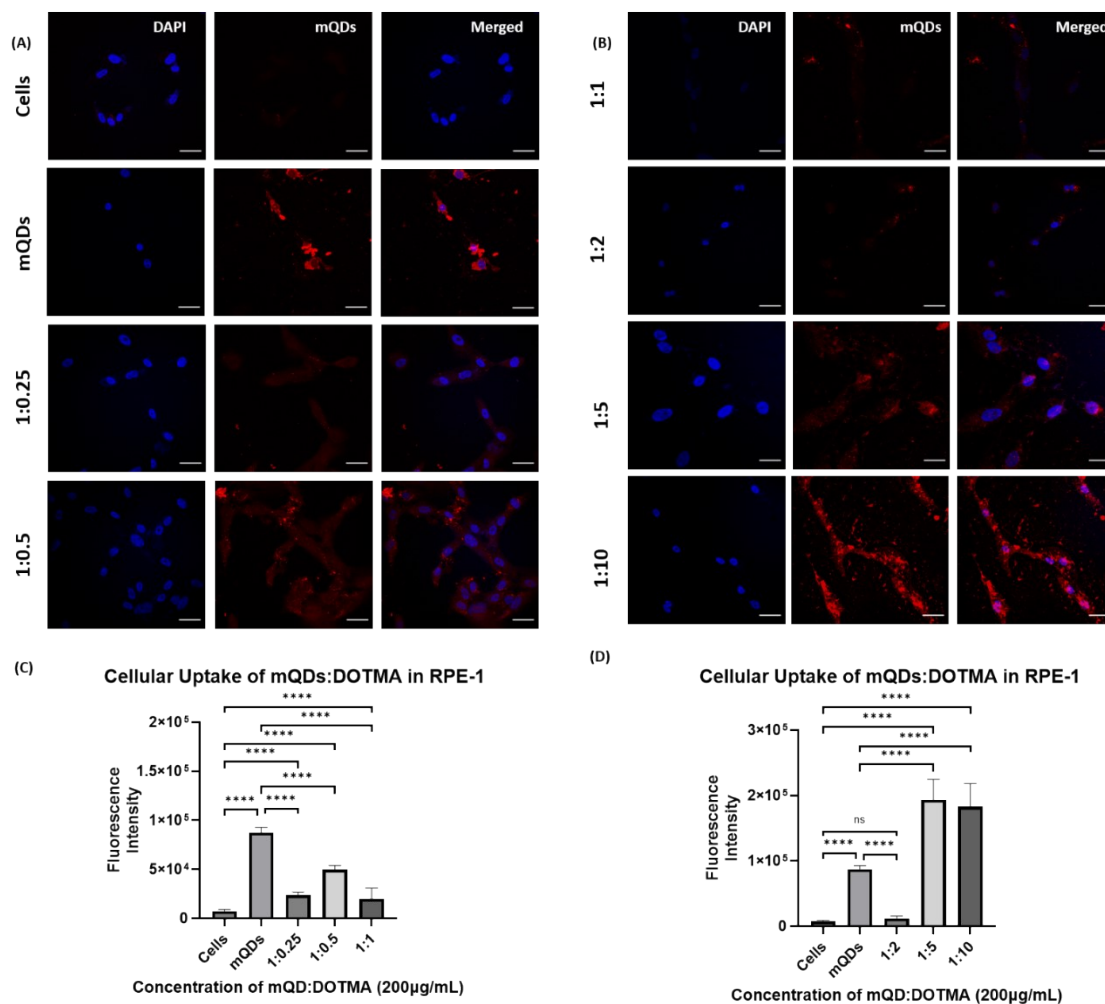


Figure S3: - Cellular uptake of mQD:DOTMA conjugates in RPE-1 cells. Concentration - 200µg/mL, Scale bar- 5µm (A) Uptake of mQDs and mQD:DOTMA conjugate (1:0.25 and 1:0.5). (B) Uptake of mQD:DOTMA conjugate (1:2, 1:5, 1:10). (C) Quantified fluorescence intensity of mQDs and mQD:DOTMA conjugates (1:0.25, 1:0.5, 1:1). (D) Quantified fluorescence intensity of mQD:DOTMA conjugates (1:2, 1:5, 1:10). The statistical significance was tested by one-way ANOVA in the Prism Software and is represented as **** when $p < 0.0001$ and ns when there is no significant difference. (n=30)