

SUPPLEMENTARY INFORMATION

DESIGNER DNA HYDROGELS TO PROGRAM CELL SPREADING AND 3D *EX-VIVO* CELL INVASION BY STIMULATING RECEPTOR EXPRESSION AND MEMBRANE ENDOCYTOSIS

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Table SI 1: Sequences of oligonucleotides used for the synthesis of DNA hydrogels

S. N.	Name	Sequence
1	X1	5'-CACGTG CGA CCG ATG AAT AGC GGT CAG ATC CGT ACC TAC TCG-3'
2	X2	5'-CACGTG CGA GTA GGT ACG GAT CTG CGT ATT GCG AAC GAC TCG-3'
3	X3	5'-CACGTG CGA GTC GTT CGC AAT ACG GCT GTA CGT ATG GTC TCG-3'
4	X4	5'-CACGTG CGA GAC CAT ACG TAC AGC ACC GCT ATT CAT CGG TCG-3'
5	Y1	5'- CACGTG CGA CCG ATG AAT AGC GGT CAG ATC CGT ACC TAC TCG-3'
6	Y2	5'- CACGTG CGA GTC GTT CGC AAT ACG ACC GCT ATT CAT CGG TCG-3'
7	Y3	5'- CACGTG CGA GTA GGT ACG GAT CTG CGT ATT GCG AAC GAC TCG-3'
8	T1	5'- CACGTG CGA CAG CTG ACT AGA GTC ACG ACC TGT ACC TAC TCG-3'
9	T2	5'- CACGTG CGA GTC GTT CTC AAG ACG TAG CTA GGA CTC TAG TCA GCT GTC G-3'
10	T3	5'- CACGTG CGA GTA GGT ACA GGTCGT CGT CTT GAG AAC GAC TCG-3'

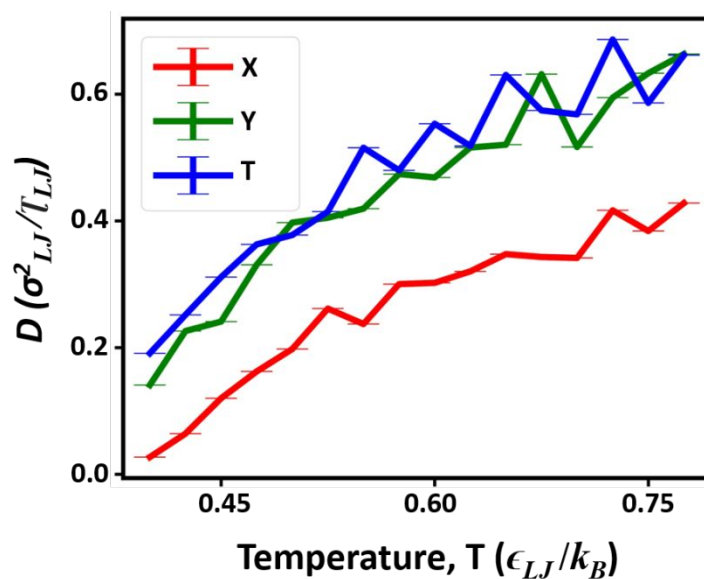


Figure SI 1: Diffusion constant as a function of temperature for different nanostar system calculated from the slope of mean-squared displacement vs time data given in the main text. The lines are guide to the eye only.

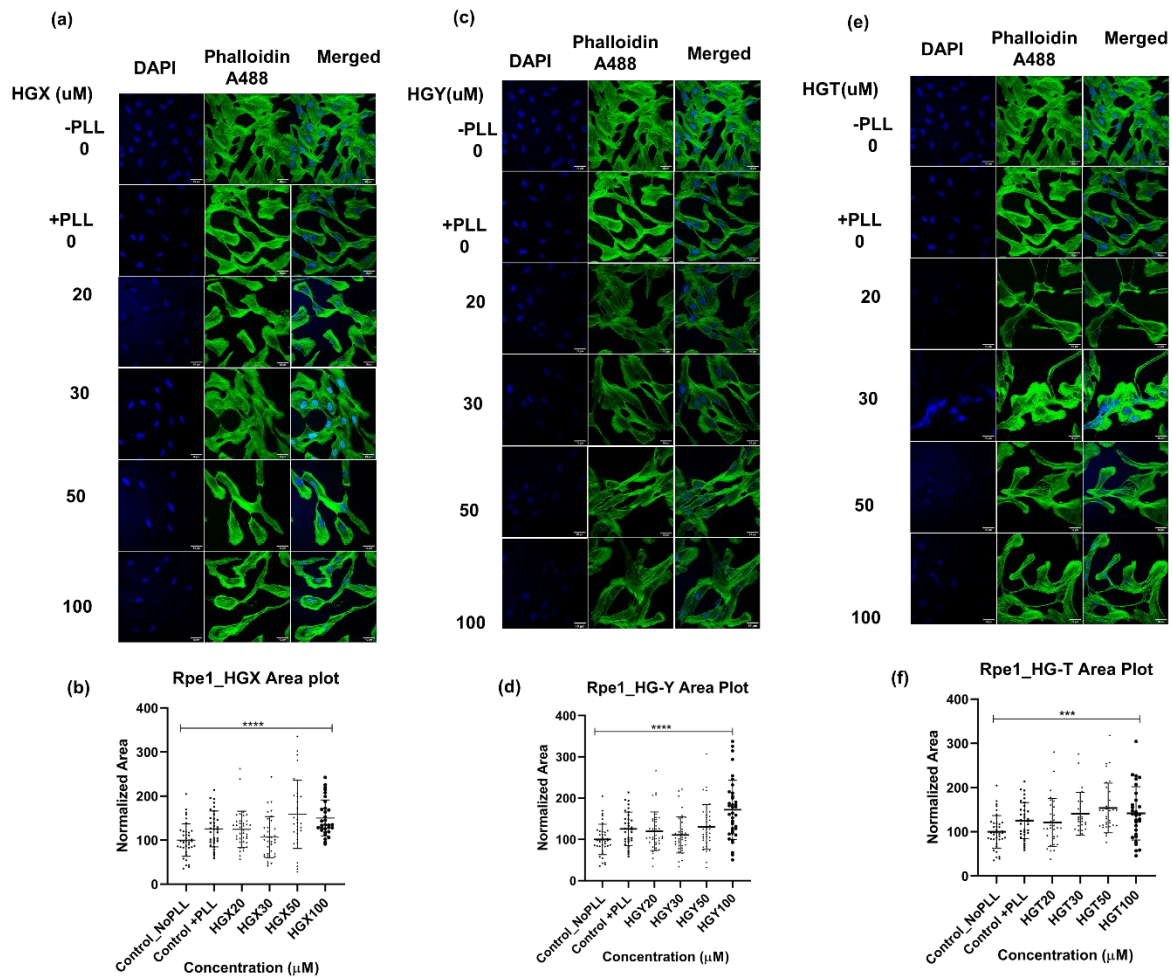


Figure SI 2: DNA hydrogels stimulate cell adhesion and enhance cell spreading. RPE cells were incubated with 20, 30 50 and 100 μM of DNA hydrogels for 24 h and the actin cytoskeleton was stained using Phalloidin. (a) HGX (c) HGY and (e) HGT (Scale bar-. Quantification of normalized cell area w.r.t concentration. (b) HGX (d) HGY and (f) HGT. **** Indicates statistically significant value of $p < 0.0001$ (one-way ordinary ANOVA).