

## Supplementary Materials

# Cyanine-5 Driven Behaviours of Hyperbranched Polymers Designed for Therapeutic Delivery are Cell-Type Specific and Correlated with Polar Lipid Distribution in Membranes

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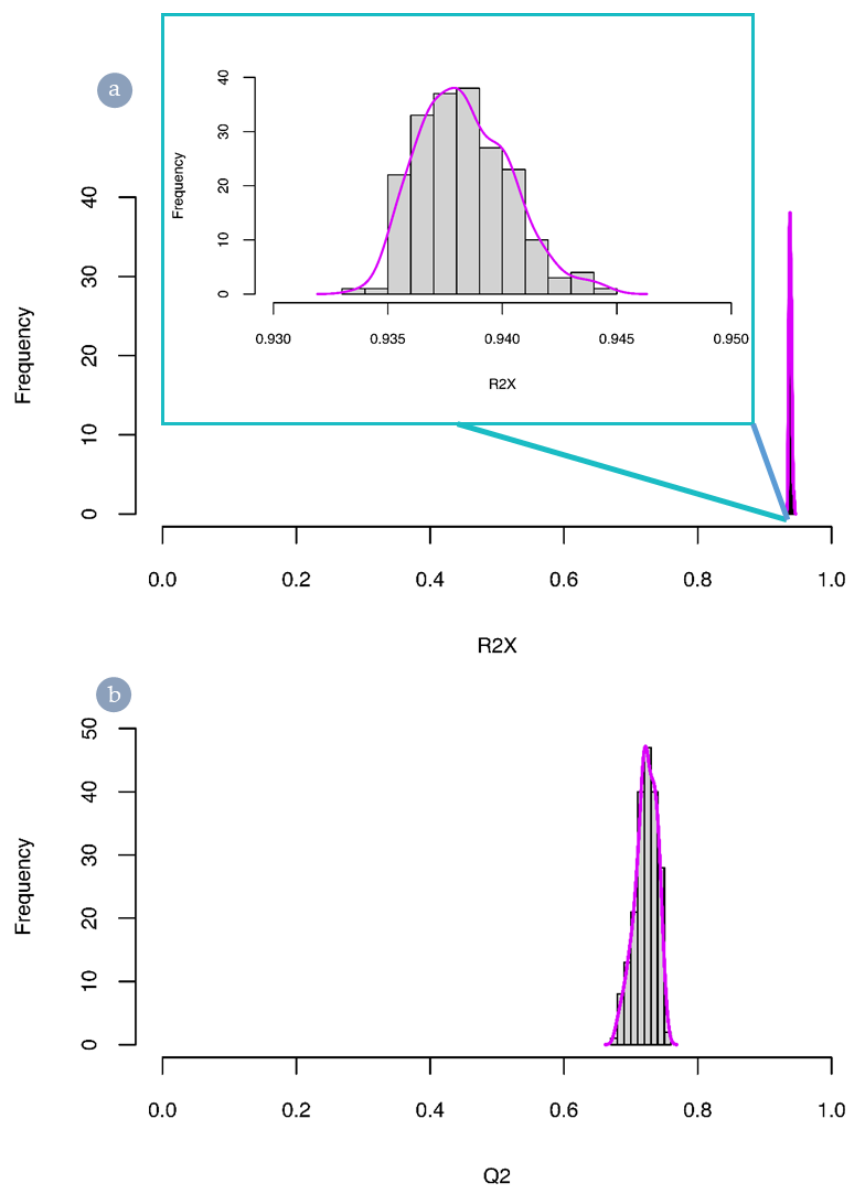
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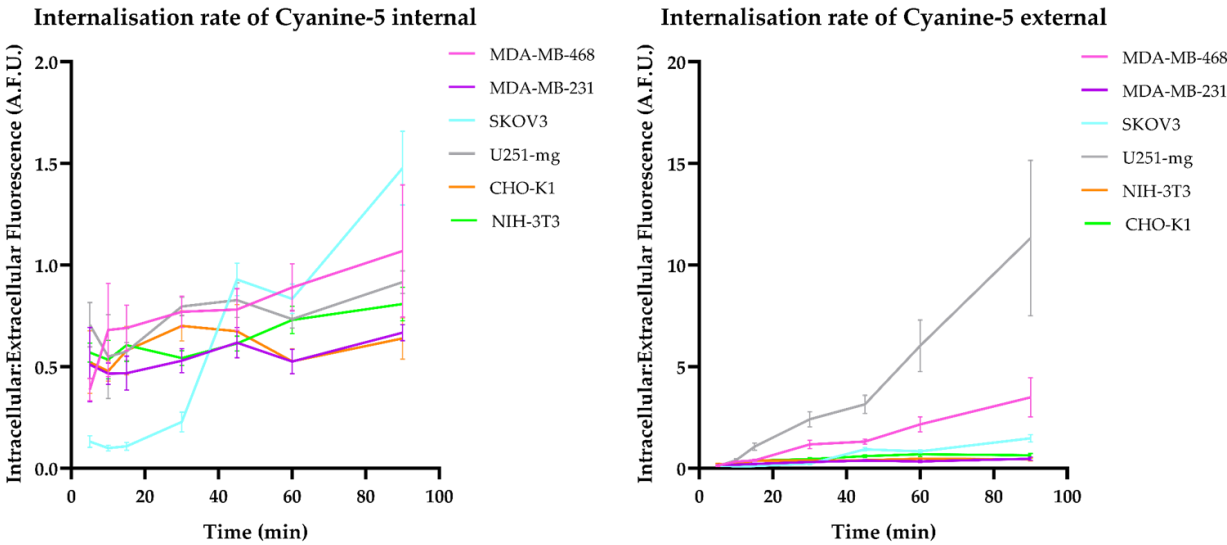


**Figure S1:** PCA model validation, **(a)** Histogram of  $R^2$  information, showing good fit quality of all permuted models, **(inset)** zoomed-in histogram for clarity, **(b)** histogram depicting  $Q^2$  information.

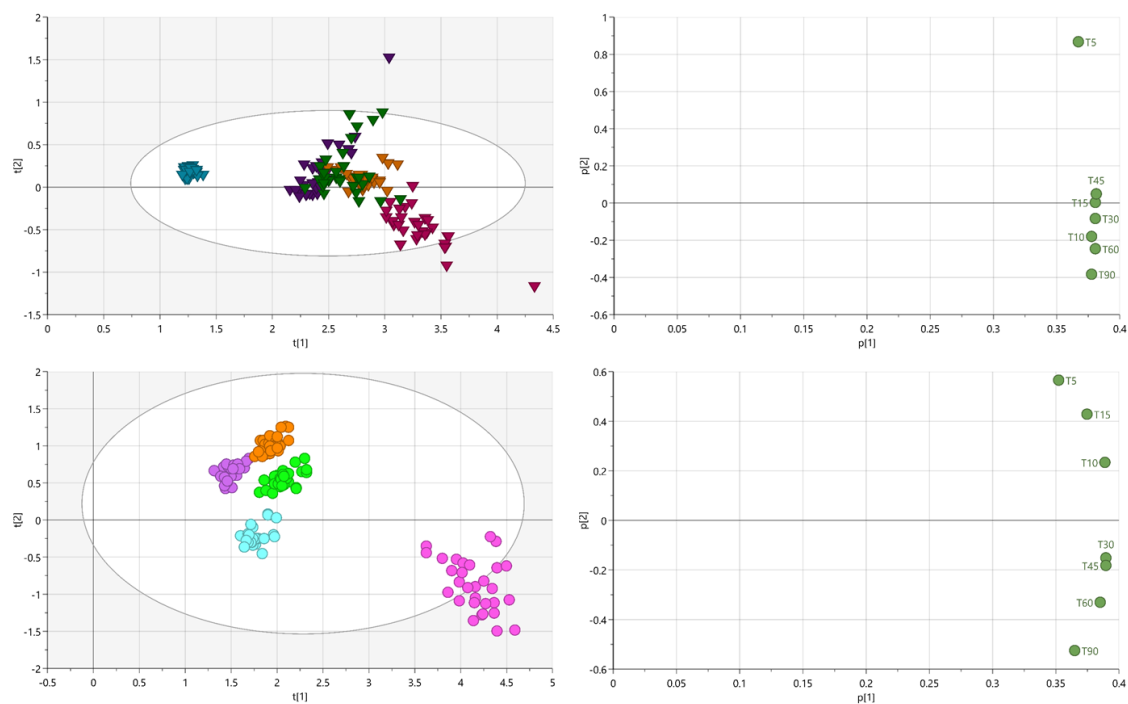
**Table S1:** Figures of merit for PCA model analysis.

Number	Model	Type	A	N	Models			Model Content
					R <sup>2</sup> X	R <sup>2</sup> Y(cum)	Q <sup>2</sup>	
1	M1	PCA-X	3	360	0.974	N/A	0.906	All Data
2	M2	PCA-X	3	150	0.985	N/A	0.939	Internals Only (U251 Removed)
3	M3	PCA-X	3	150	0.978	N/A	0.935	Externals Only (U251 Removed)

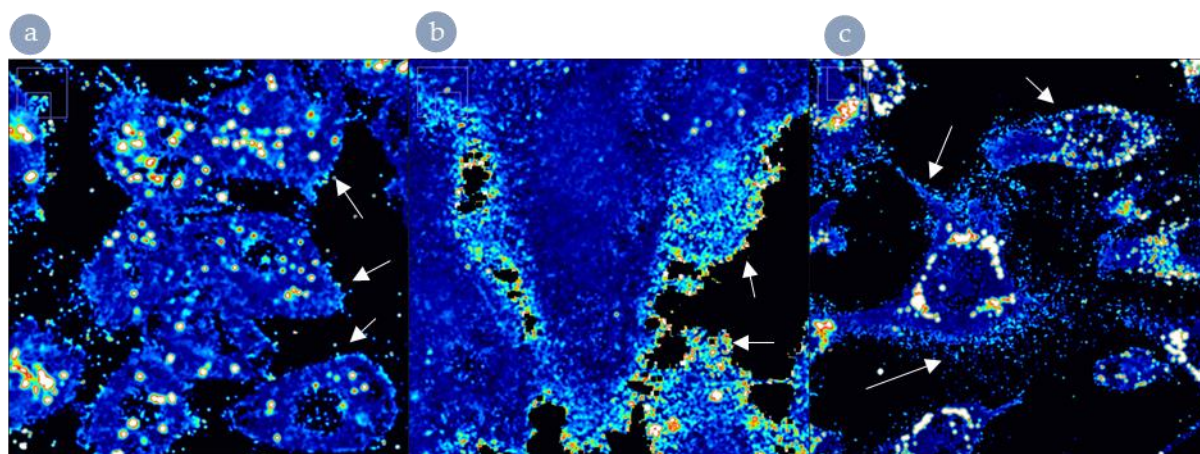
A = number of principal components; N = number of samples in the model; R<sup>2</sup>X = fraction of the variance of the X variables explained by the model; Q<sup>2</sup> = predictive ability parameter of the model.



**Figure S2:** ROI kinetic rate data plotted by HBP analogue, **(a)** Cy5 internal, and **(b)** Cy5 external.



**Figure S3:** PCA results of U251-mg excluded data, showing separation along  $t[1]$  and  $t[2]$ .



**Figure S4:** Polar lipid-rich membrane microdomains identified through ratiometric images, (a) zoomed-in image of an MDA-MB-468 cell membrane (b) zoomed-in image of a U251-mg cell membrane, (c) zoomed-in image of an SK-OV-3 cell membrane.