Supplemental data for:

## Longitudinal monitoring of skin accumulation of nanocarriers and biologicals with fiber optic near infrared fluorescence spectroscopy (FONIRS)

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**Supplemental Fig. S1.** Elimination profile of IR Dye 800-dextran 500kDa. Box shows half-life (biexponential half-life, hours). N=2.



**Supplemental Fig. S2. Deposition of liposomes in the skin.** The skins from experiment in Fig. 5 were used. Epidermis was separated from dermis with a blade, and both parts were scanned with Li-COR (800nm channel). Most of fluorescence is in the dermis, although in some mice the epidermis also contained some liposomes (possibly due to incomplete separation of the dermal layer).

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Еуе		Liver
Kidney Spleen	Pancreas	Intestine
Heart Lung	Muscle	Ovary
Control		

## Supplemental Fig. S3. Scan of organs from control (non-injected) mouse.

Organs show some fluorescence in the 700 nm channel (autofluorescence) but no signal in the 800 nm channel.



**Supplemental Fig. S4.** Blood from a mouse injected with DiR labeled PEGylated liposomes was separated into plasma and blood cells, applied on a membrane (2  $\mu$ l spot on a nitrocellulose membrane) and fluorescence was measured with Li-COR. Majority of fluorescence was associated with plasma fraction (5h post-injection).



**Supplemental Fig. S5.** Nude mice were injected with PEGylated DiR labeled liposomes (similar to Fig. 5). **A**) FONIRS profile in the skin measured over time. Dotted line is a baseline (n=4); **B**) whole skin fluorescence (800nm channel–Li-COR). The fluorescence was more abundant on the flanks (red arrows) than along the spine (red dotted line).