

SUPPORTING INFORMATION

– CHAPTER 5

BIOLOGICAL INVESTIGATION

**Dissertation zur Erlangung des  
akademischen Grades eines Doktors der Naturwissenschaften  
(Dr. rer. nat.)**

vorgelegt von

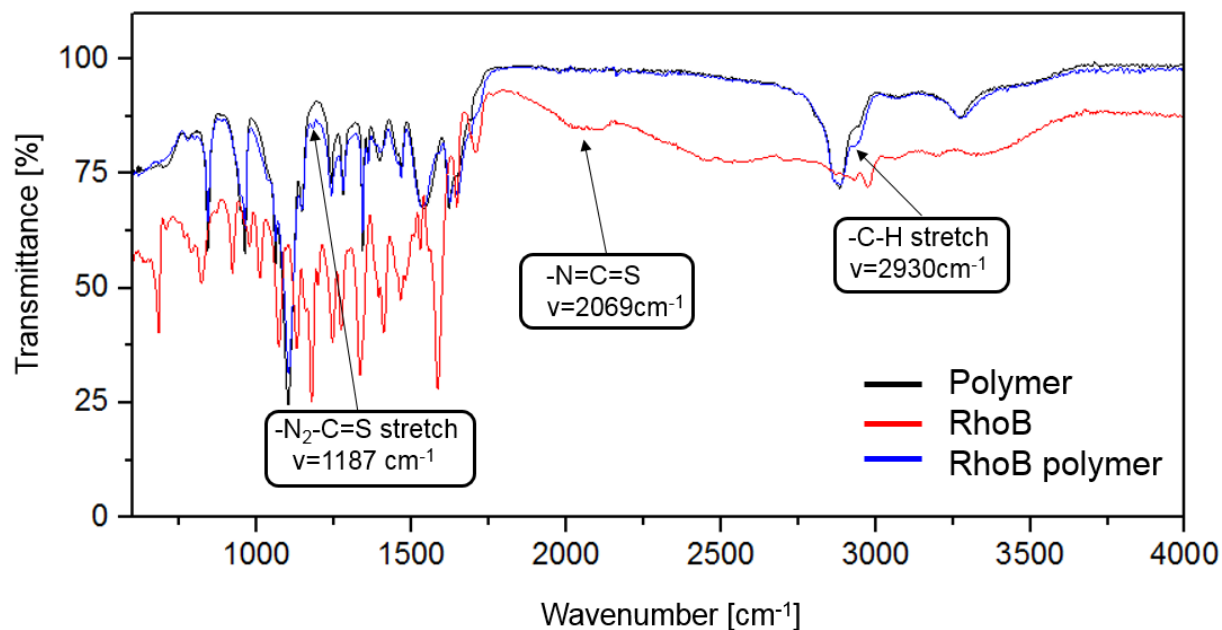
Keckeis, Philipp Maximilian

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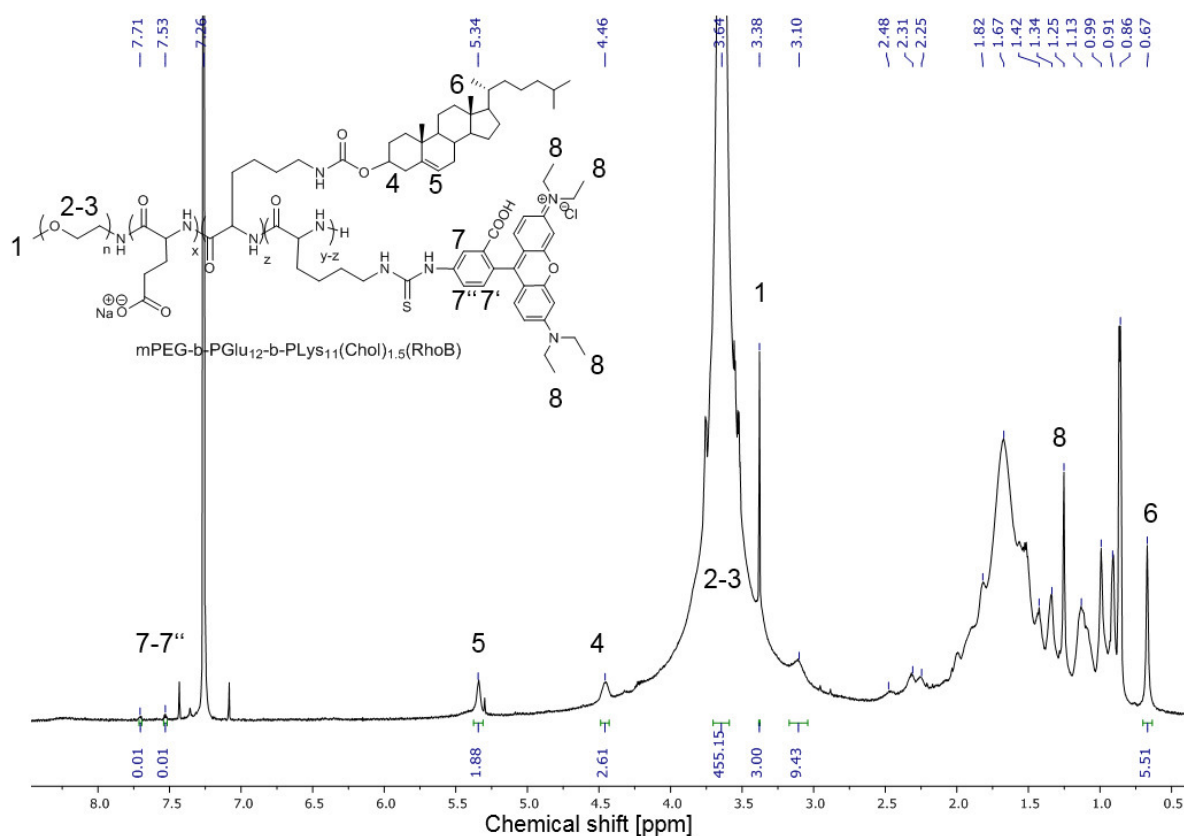
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# 1 Visualization of cellular cholesterol uptake inside living cells

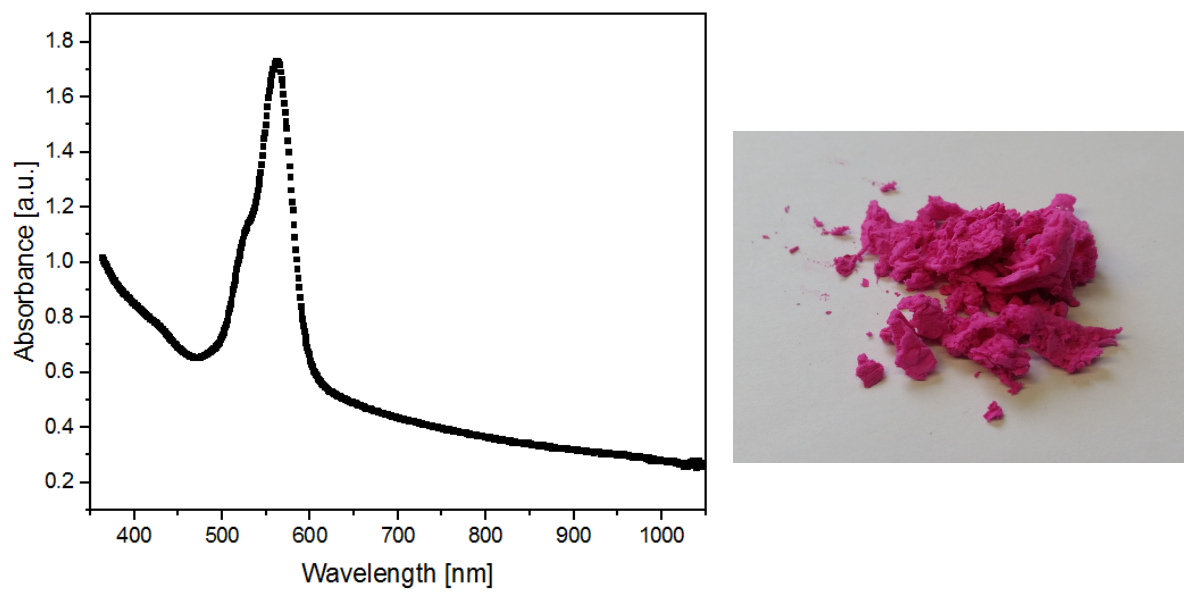
## 1.1 Synthesis of RhoB labelled polymer



**Figure S1.** ATR-IR spectra of the polymer (black line), Rhodamine B (red line) and the RhoB polymer (blue line).

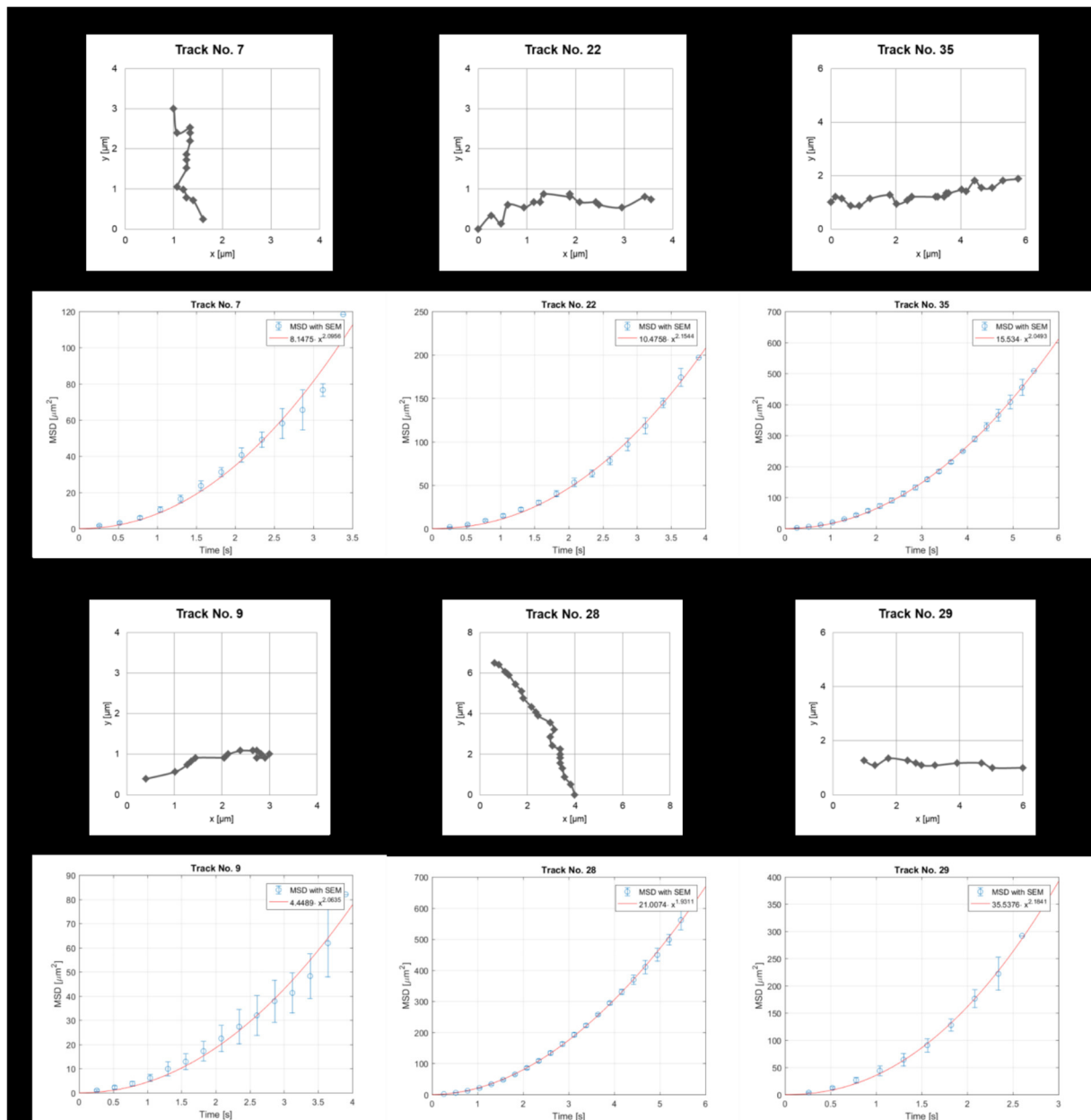


**Figure S2.** Proton NMR spectrum (400 MHz, CDCl<sub>3</sub>) of the RhoB polymer.



**Figure S3.** UV/Vis spectroscopy of the aqueous RhoB polymer dispersion (0.5 mg/mL).

## 1.2 Cellular uptake



**Figure S4.** Representative vesicle tracks, exported from films of fluorescent particles in liver and kidney cells.

## 2 In vivo biodistribution in mouse models

### 2.1 Synthesis of the radiolabeled polymer

*BOCPip<sub>0.78</sub>-PMeOx<sub>61</sub>-PBuOx<sub>11</sub>*

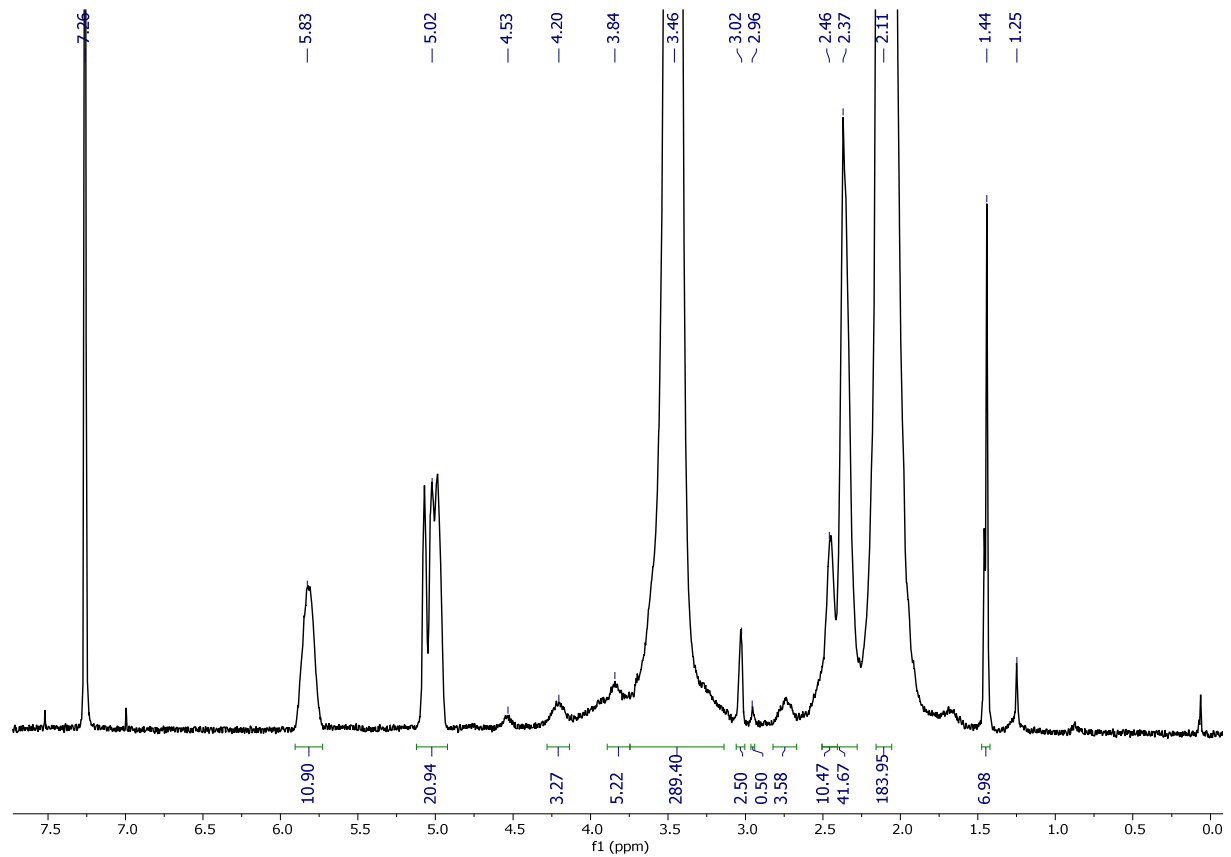


Figure S5. Proton NMR spectrum (400MHz, CDCl<sub>3</sub>).

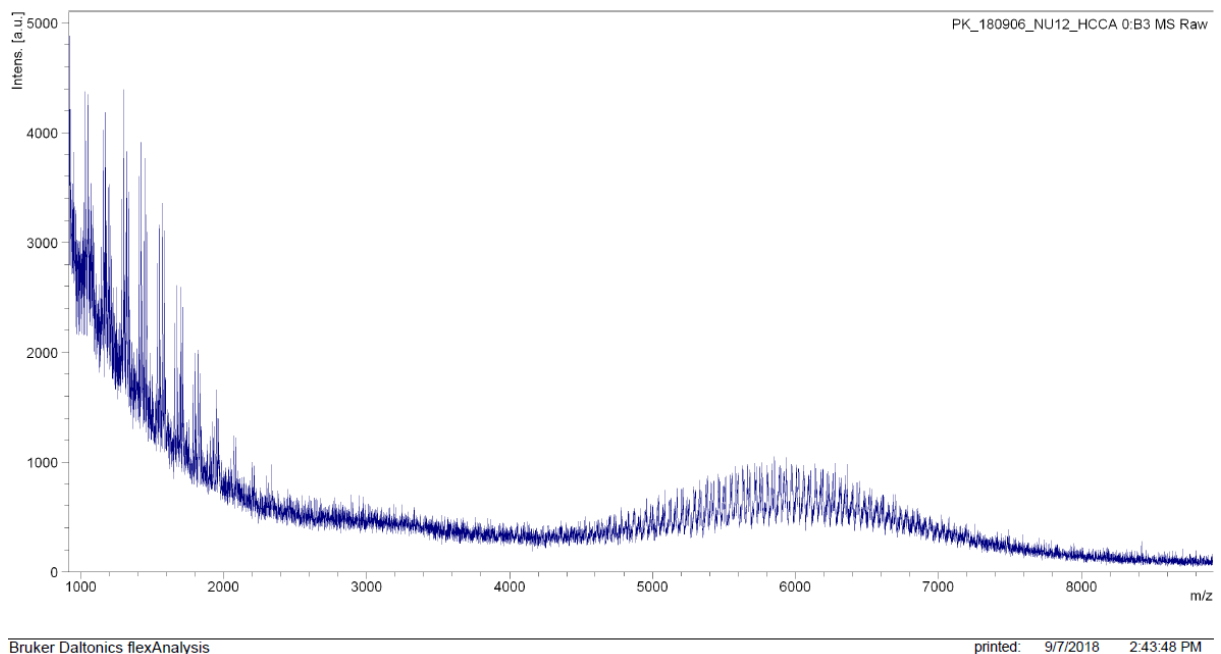
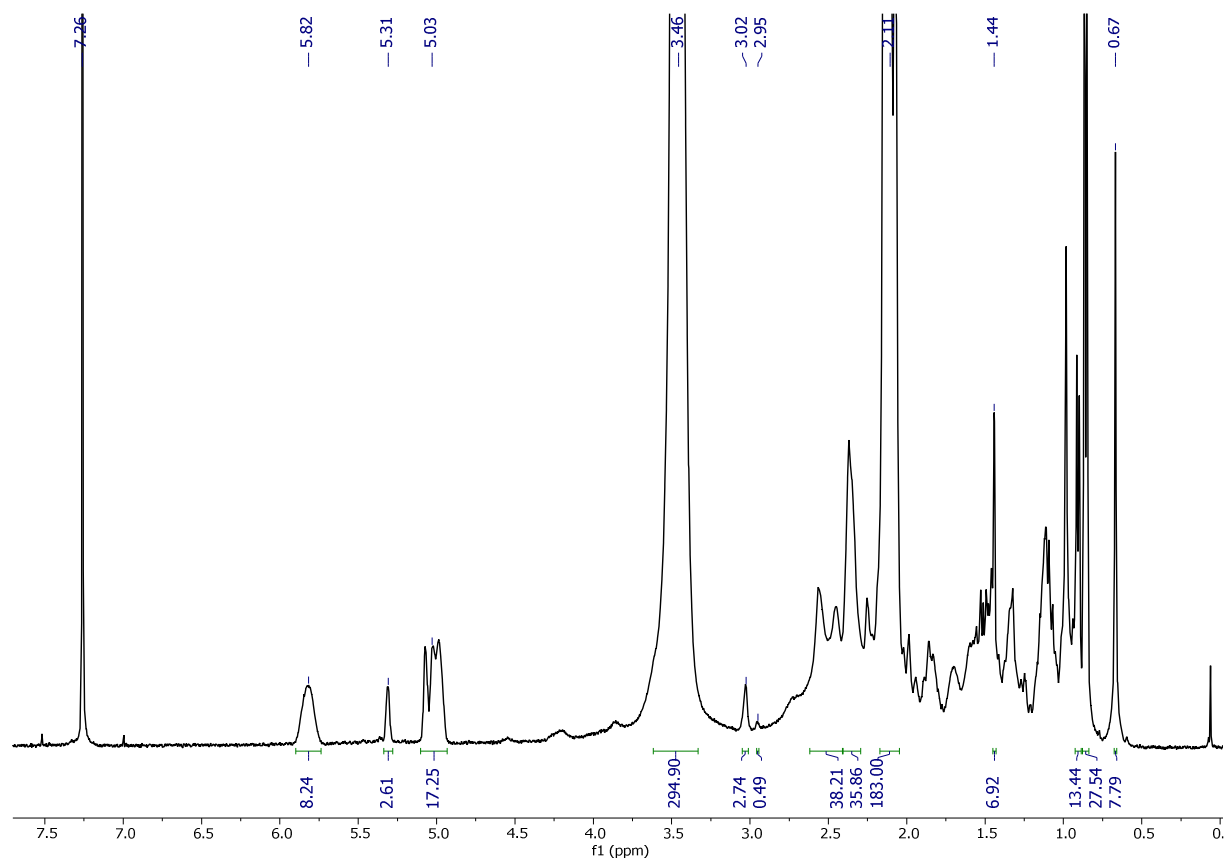


Figure S6. MALDI-TOF MS spectrum.

*BOCPip*<sub>0.78</sub>-*PMeOx*<sub>61</sub>-*PBuOx*<sub>11</sub>(*Chol*)<sub>2.6</sub>



**Figure S7.** Proton NMR spectrum (400MHz, CDCl<sub>3</sub>).

$HN_{0.78}-PMeOx_{61}-PBuOx_{11}(Chol)_{2.6}$

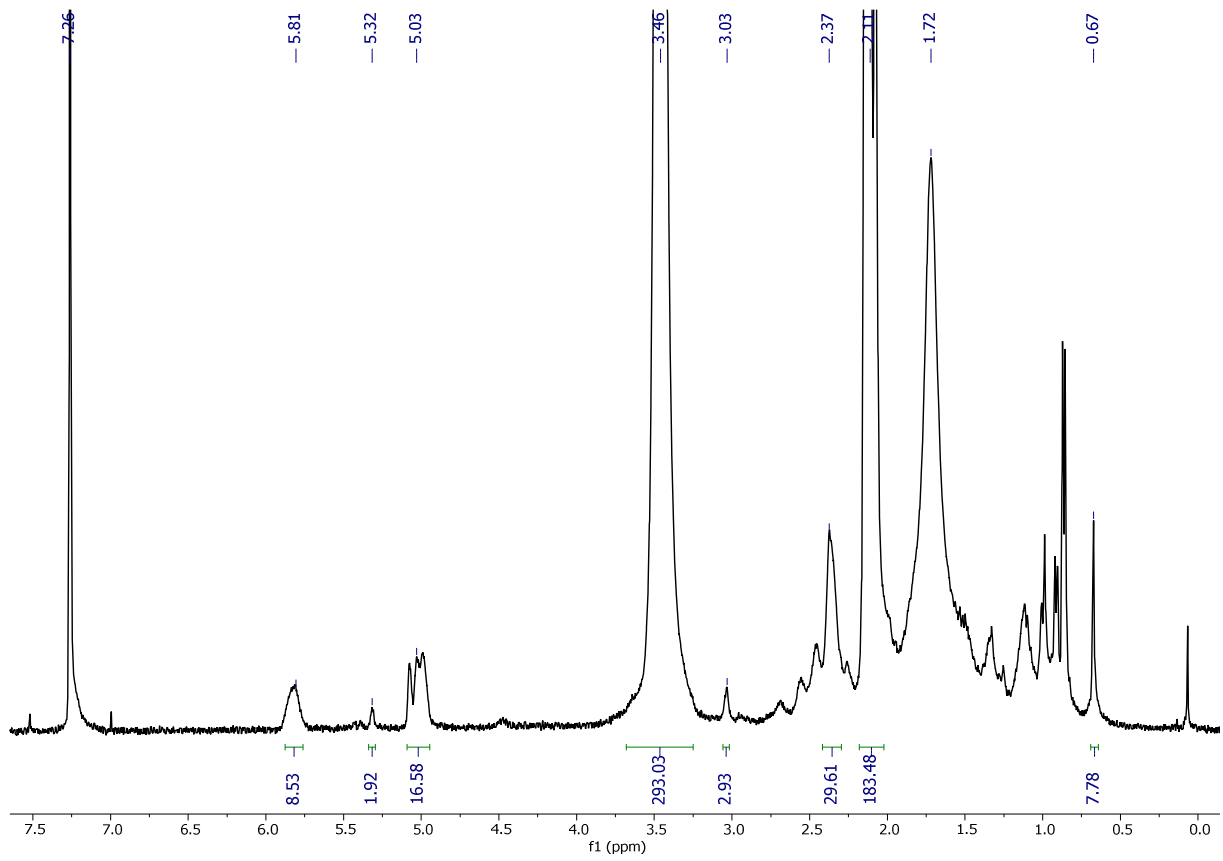
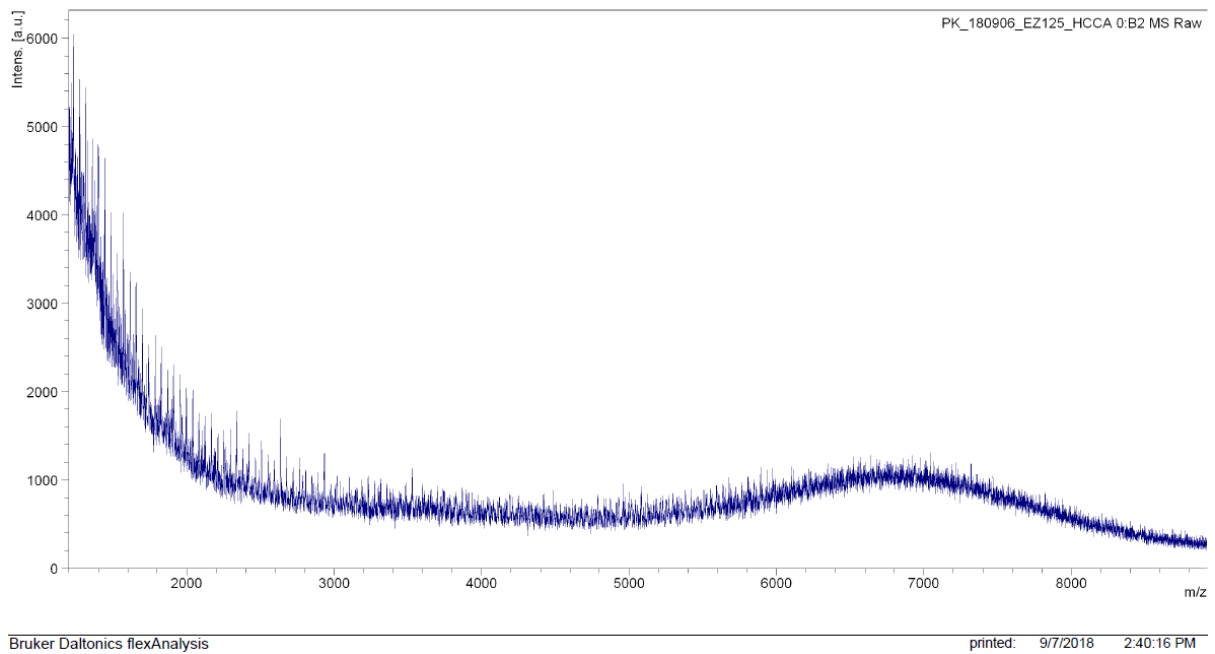


Figure S8. Proton NMR spectrum (400MHz, CDCl<sub>3</sub>).



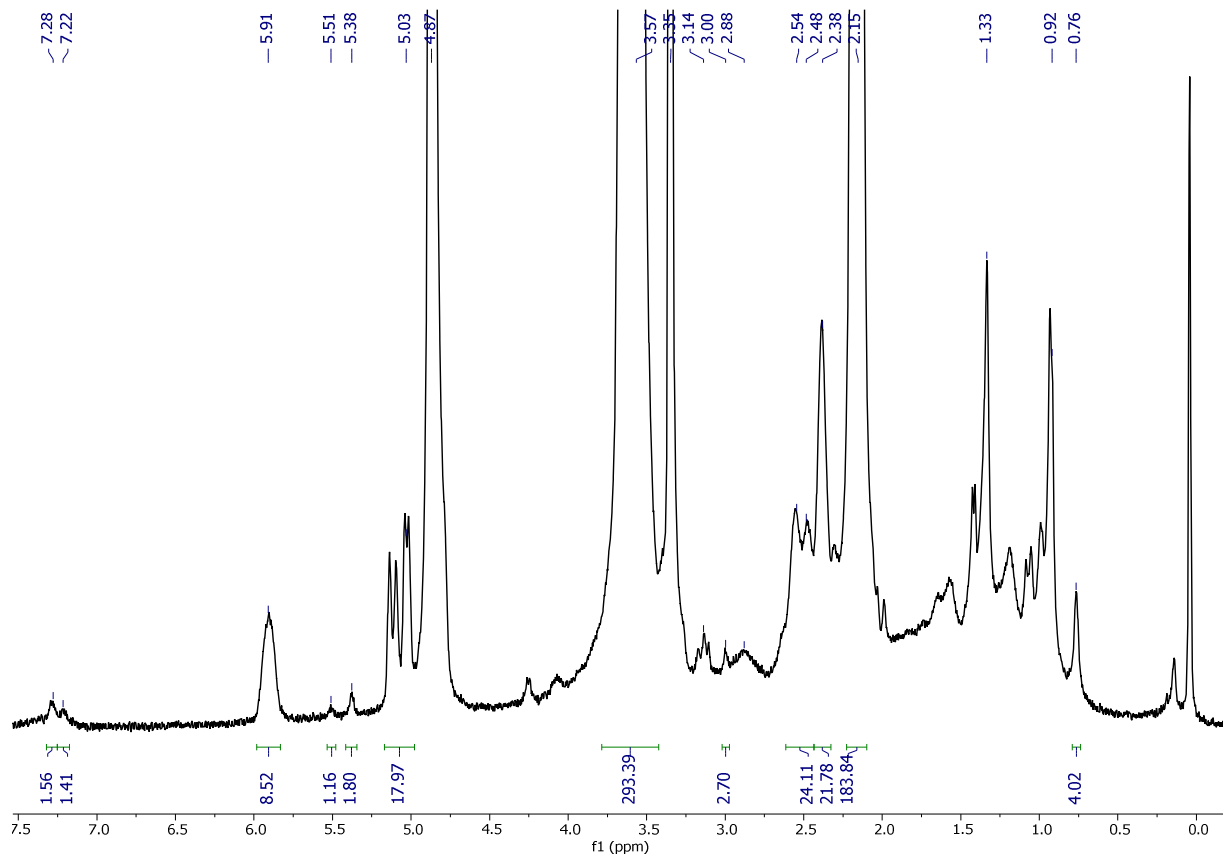
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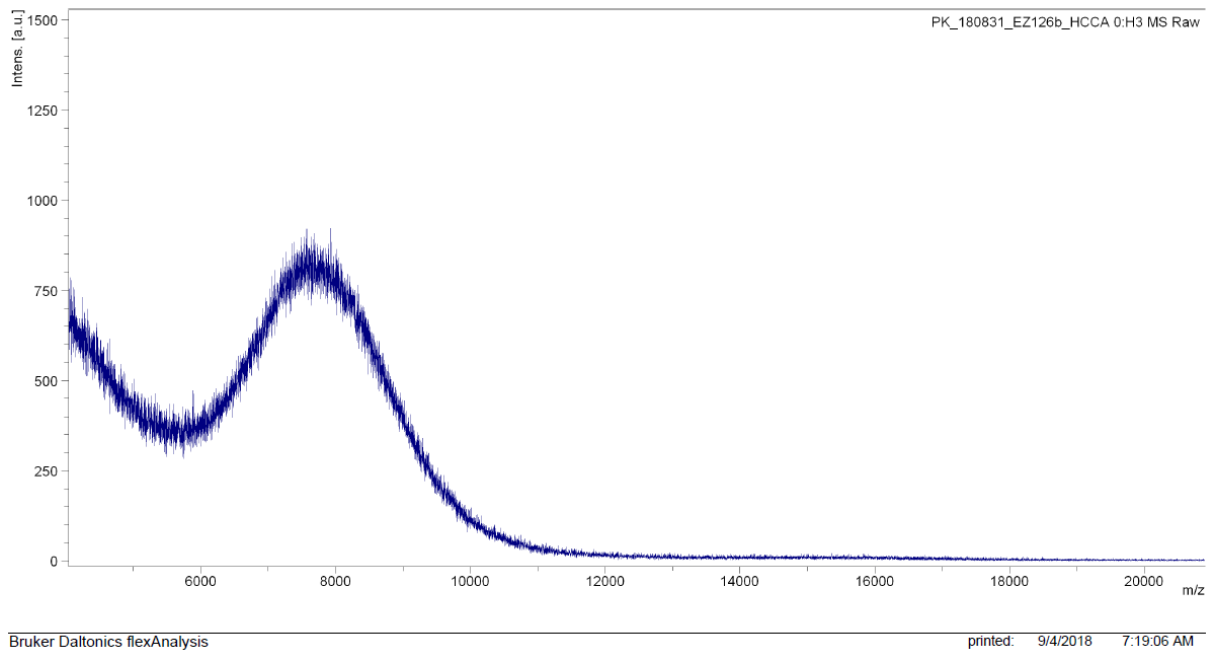
Figure S9. MALDI-TOF MS spectrum.



*DOTA*<sub>0.75</sub>-*PMeOx*<sub>61</sub>-*PBuOx*<sub>11</sub>(*Chol*)<sub>2.6</sub>



**Figure S10.** Proton NMR spectrum (4z00MHz, MeOD).



**Figure S11.** MALDI-TOF MS spectrum.