

## **Supporting information**

### **Alkyl chain length in poly(2-oxazoline)-based amphiphilic gradient copolymers regulate the delivery of hydrophobic molecules: a case of the biodistribution and the photodynamic activity of photosensitizer hypericin**

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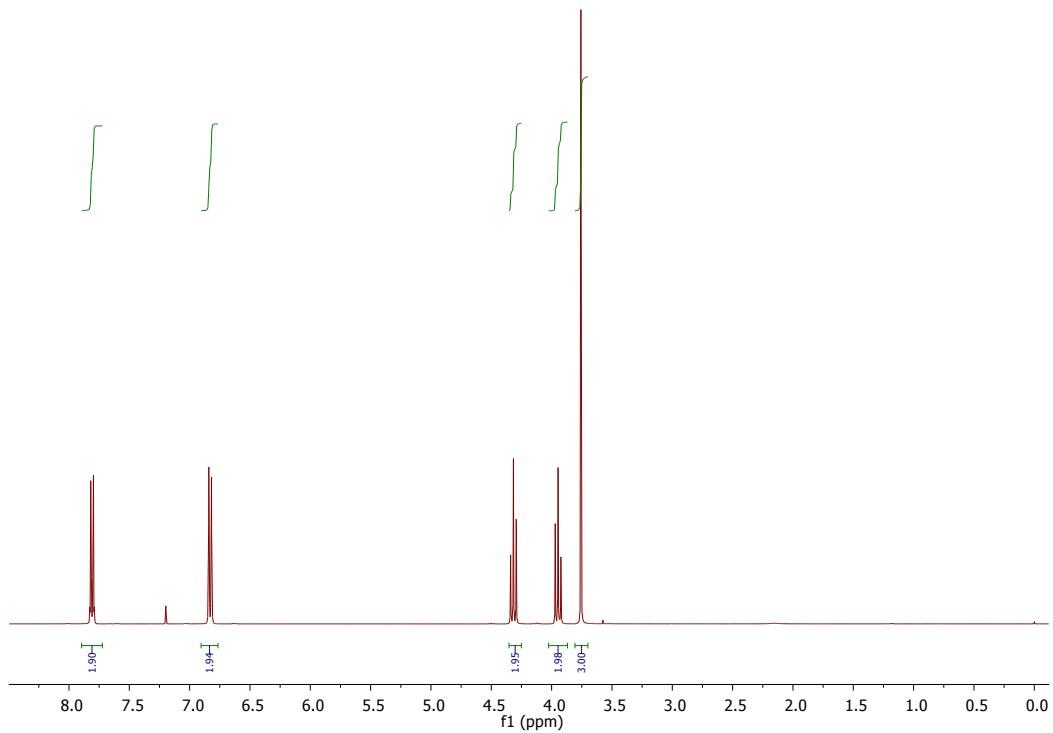
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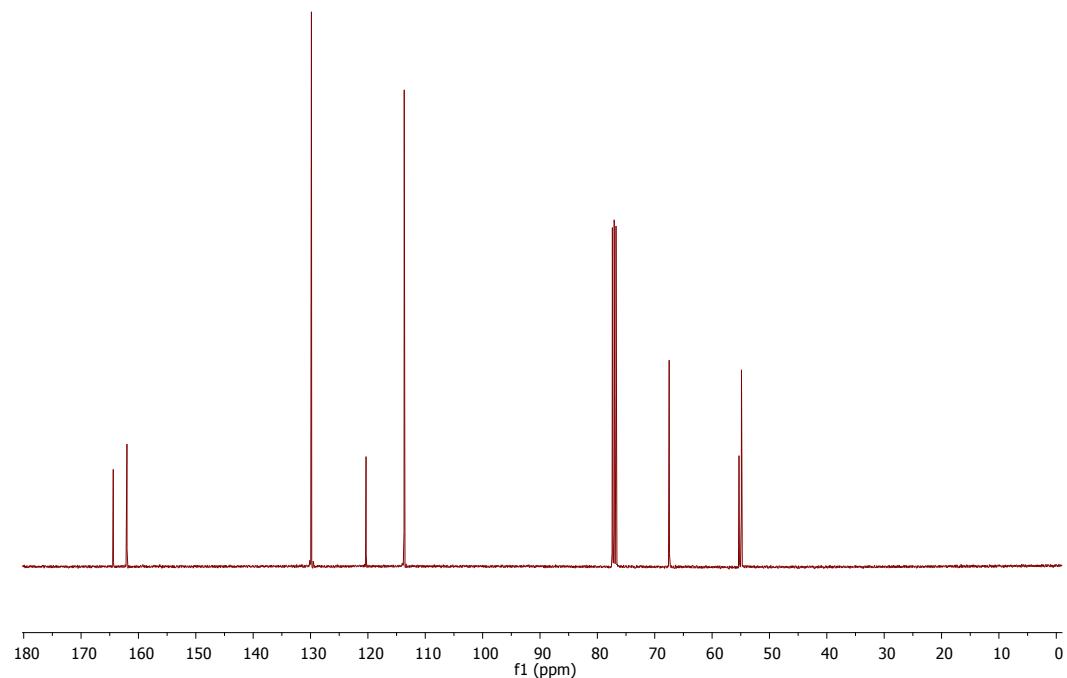
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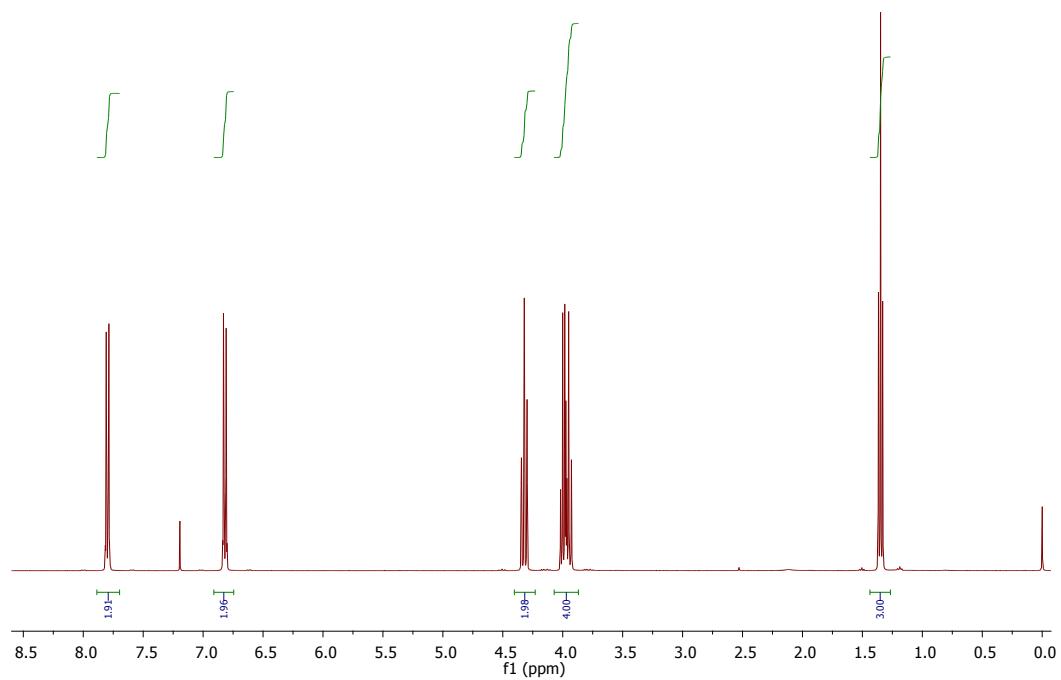
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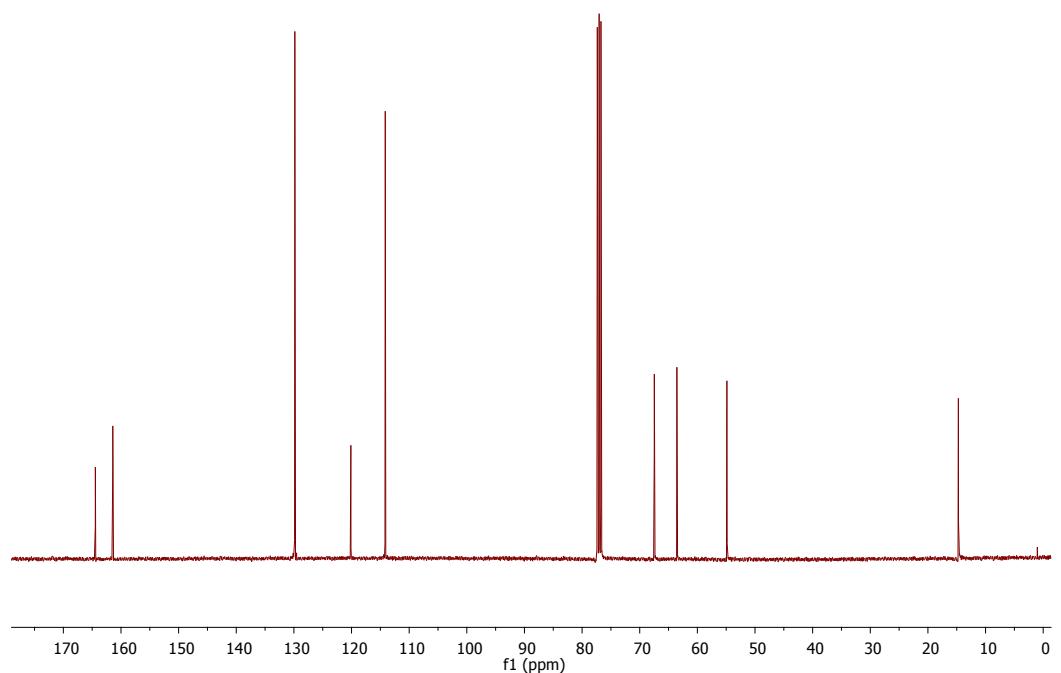
**Figure S1.** <sup>1</sup>H NMR spectrum of 2-(4-methoxyphenyl)-2-oxazoline (MeOPhOx) measured in CDCl<sub>3</sub>.



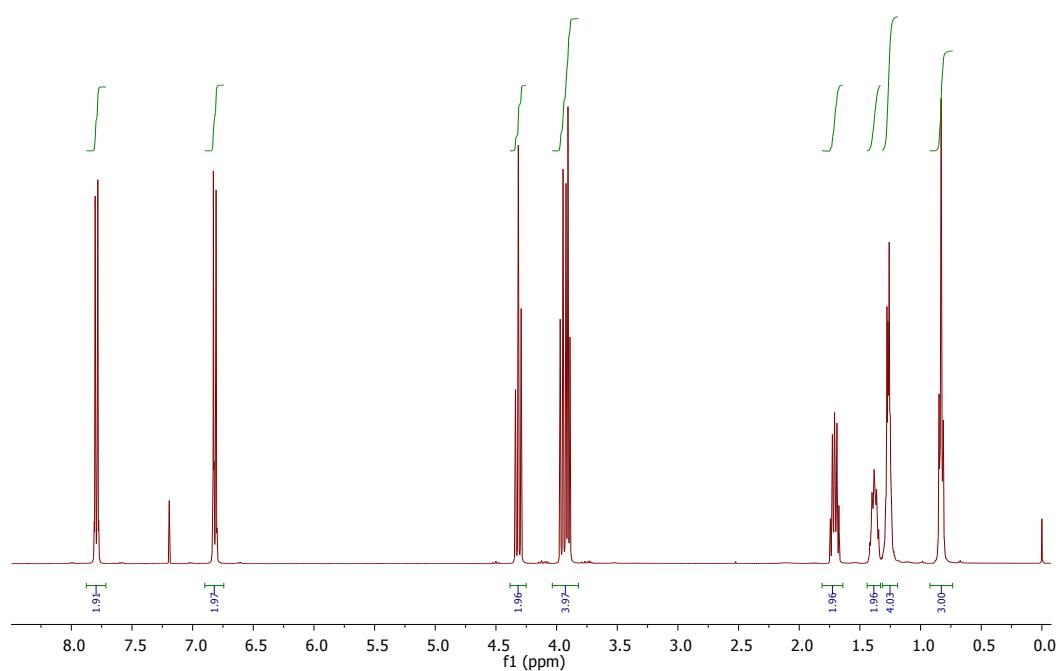
**Figure S2.** <sup>13</sup>C NMR spectrum of 2-(4-methoxyphenyl)-2-oxazoline (MeOPhOx) measured in CDCl<sub>3</sub>.



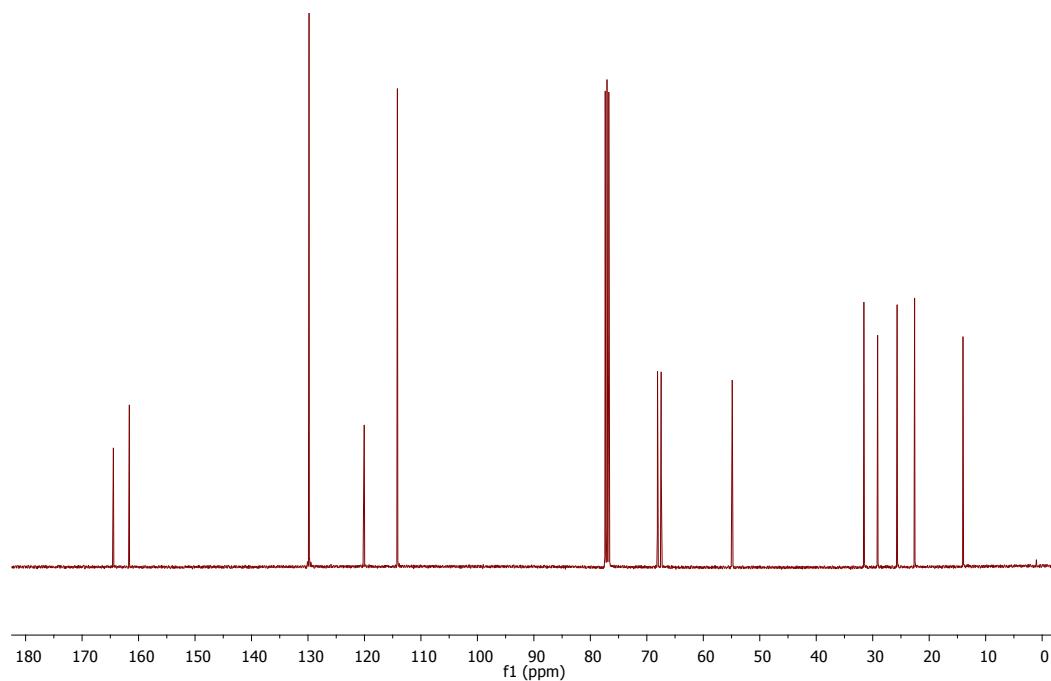
**Figure S3.**  $^1\text{H}$  NMR spectrum of 2-(4-ethoxyphenyl)-2-oxazoline (EtOPhOx) measured in  $\text{CDCl}_3$ .



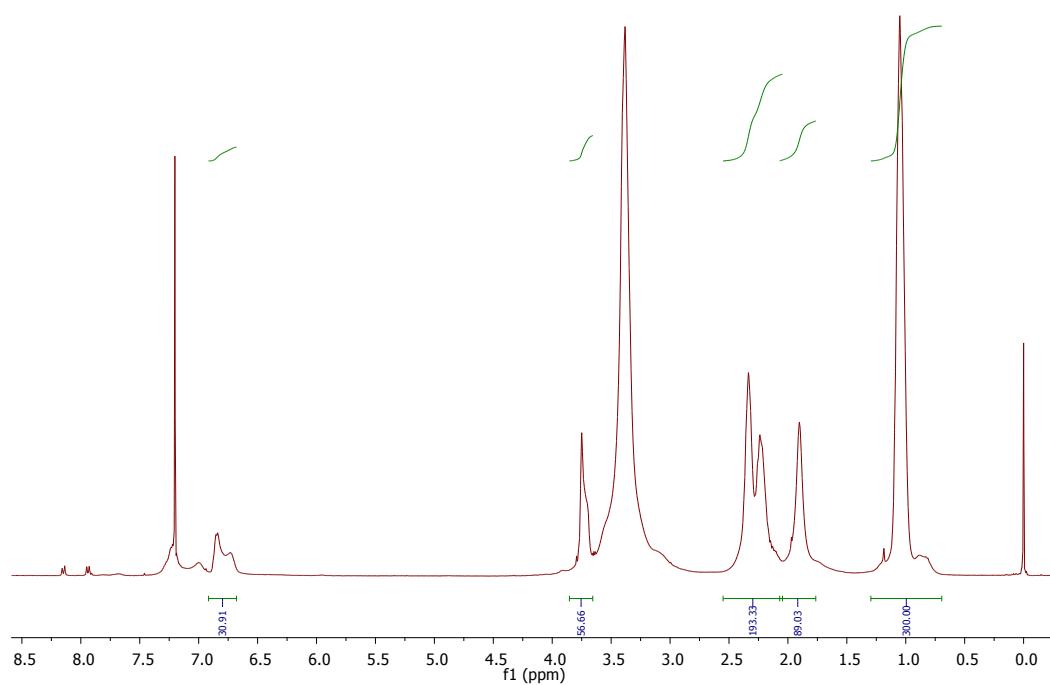
**Figure S4.**  $^{13}\text{C}$  NMR spectrum of 2-(4-ethoxyphenyl)-2-oxazoline (EtOPhOx) measured in  $\text{CDCl}_3$ .



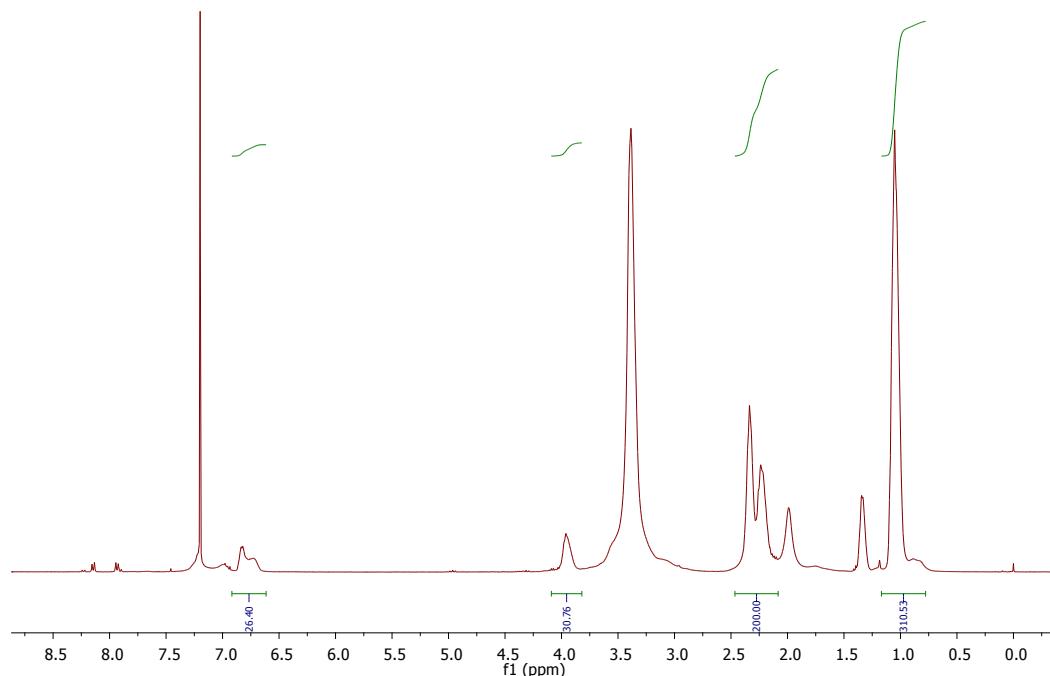
**Figure S5.** <sup>1</sup>H NMR spectrum of 2-(4-hexyloxyphenyl)-2-oxazoline (HexOPhOx) measured in CDCl<sub>3</sub>.



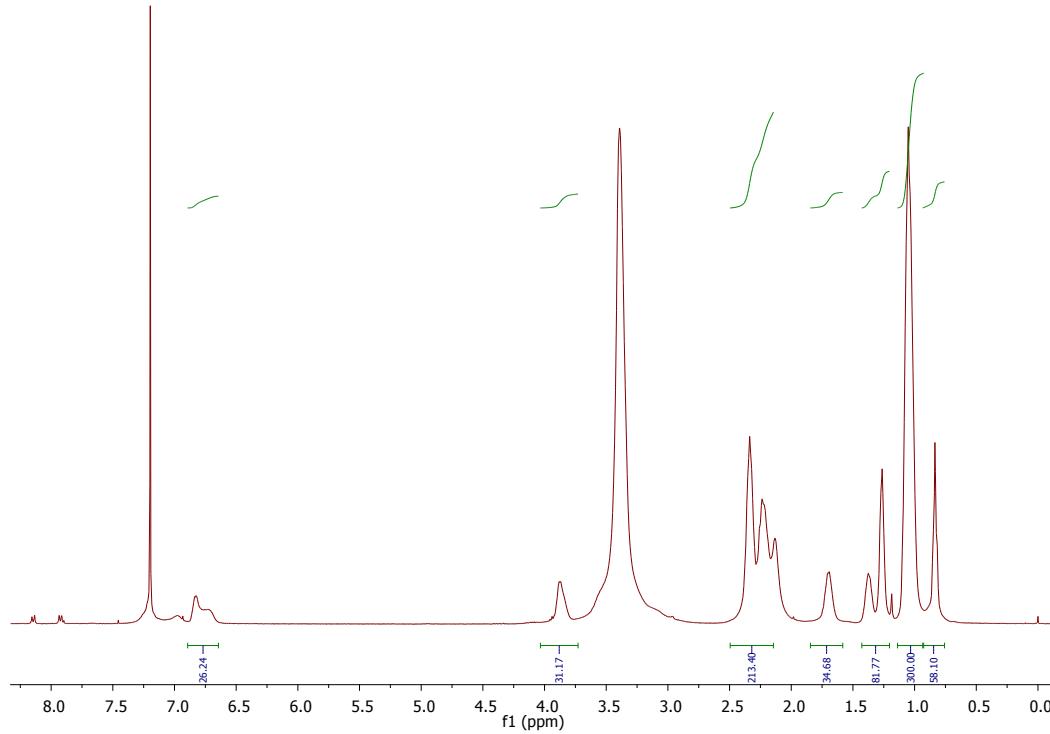
**Figure S6.** <sup>13</sup>C NMR spectrum of 2-(4-hexyloxyphenyl)-2-oxazoline (HexOPhOx) measured in CDCl<sub>3</sub>.



**Figure S7.**  $^1\text{H}$  NMR spectrum of  $(\text{EtOx})_{88}\text{-}(\text{MeOPhOx})_{12}$  measured in  $\text{CDCl}_3$ .



**Figure S8.**  $^1\text{H}$  NMR spectrum of  $(\text{EtOx})_{88}\text{-}(\text{EtOPhOx})_{12}$  measured in  $\text{CDCl}_3$ .



**Figure S9.** <sup>1</sup>H NMR spectrum of (EtOx)<sub>88</sub>-grad-(HexOPhOx)<sub>12</sub> measured in CDCl<sub>3</sub>.