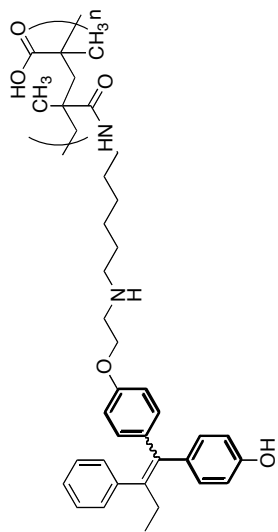


# Synthesis and Characterization of Bioactive Tamoxifen-conjugated Polymers: Supporting information

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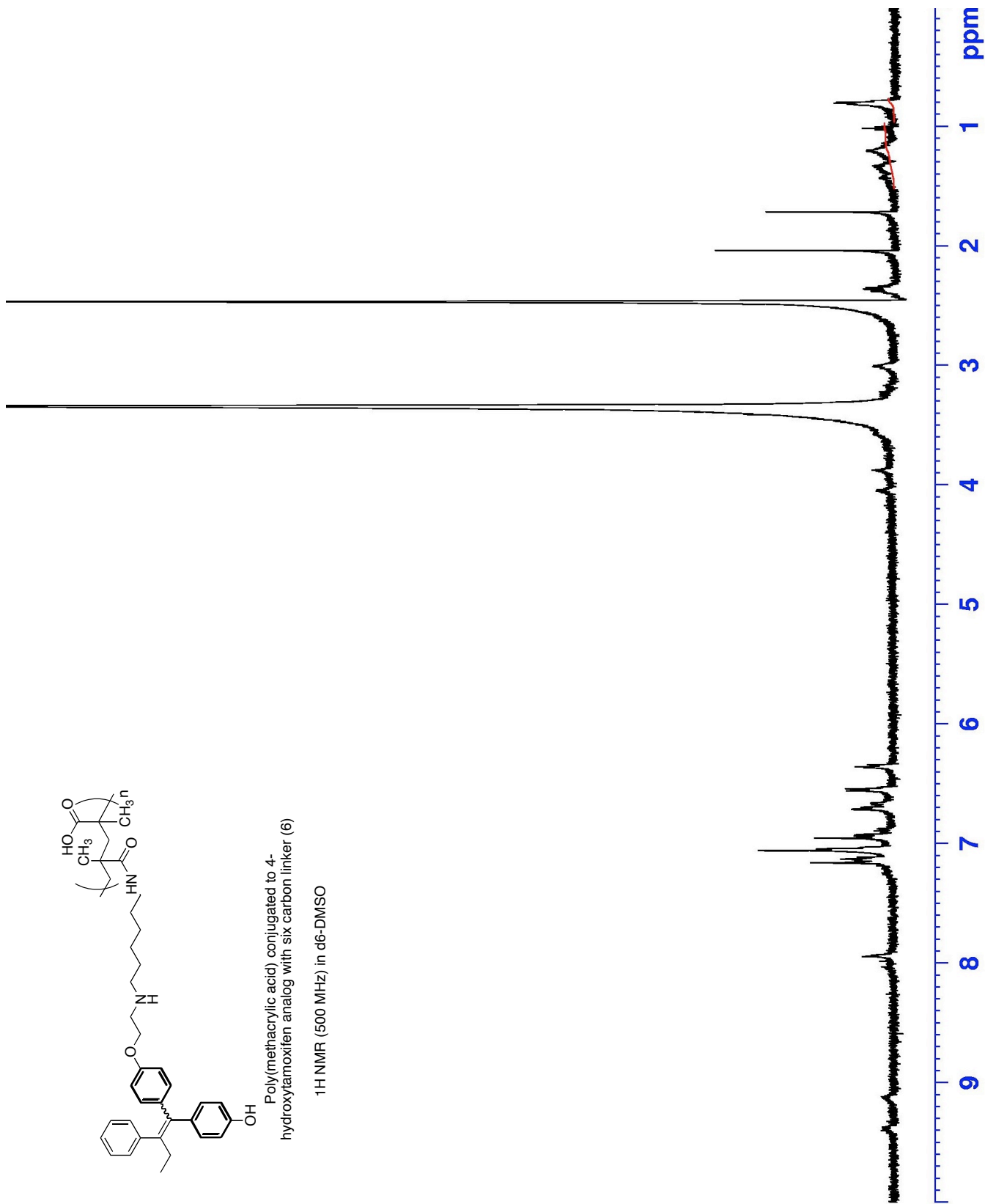
## **Figures**

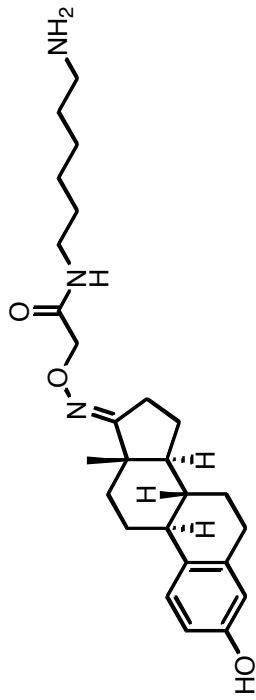
- S1. NMR spectrum of Poly(methacrylic acid) conjugated to 4-hydroxytamoxifen analog with 6 carbon linker (**5**)
- S2. NMR spectrum of N-[6-aminohexyl]-2-({[3-hydroxyestra-1(10),2,4-trien-17-ylidene]amino}oxy)acetamide (**6**)
- S3. NMR spectrum of Poly(methacrylic acid) conjugated N-[6-aminohexyl]-2-({[3-hydroxyestra-1(10),2,4-trien-17-ylidene]amino}oxy)acetamide (**7**)
- S4. Example of calculation of ligand incorporation in conjugate **5**.



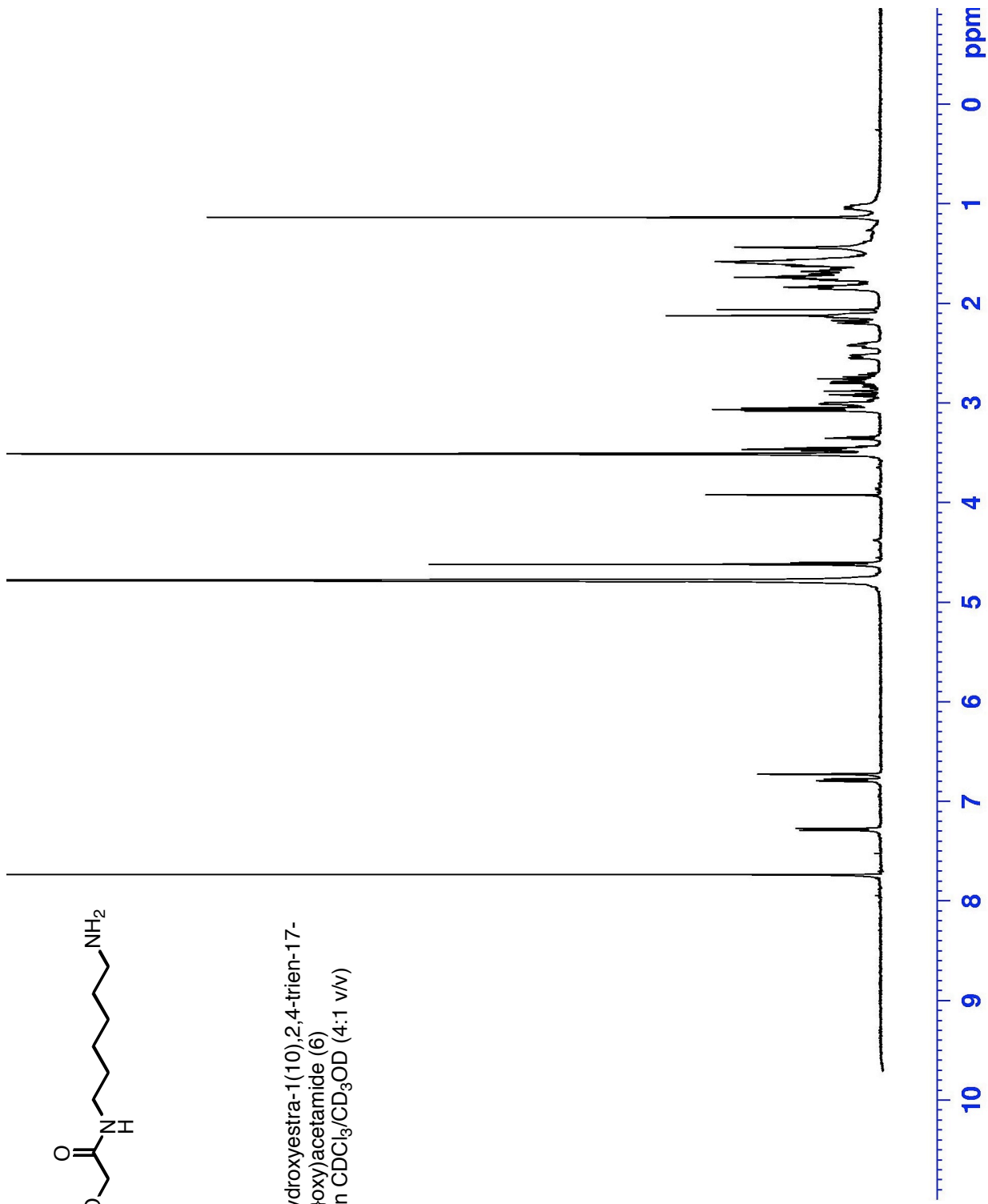
Poly(methacrylic acid) conjugated to 4-hydroxytamoxifen analog with six carbon linker (6)

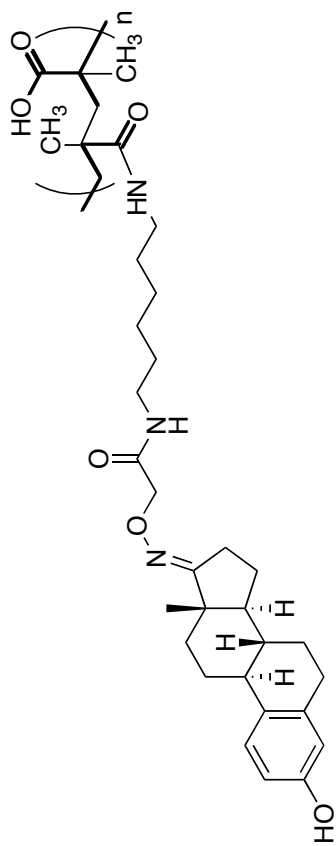
<sup>1</sup>H NMR (500 MHz) in d<sub>6</sub>-DMSO





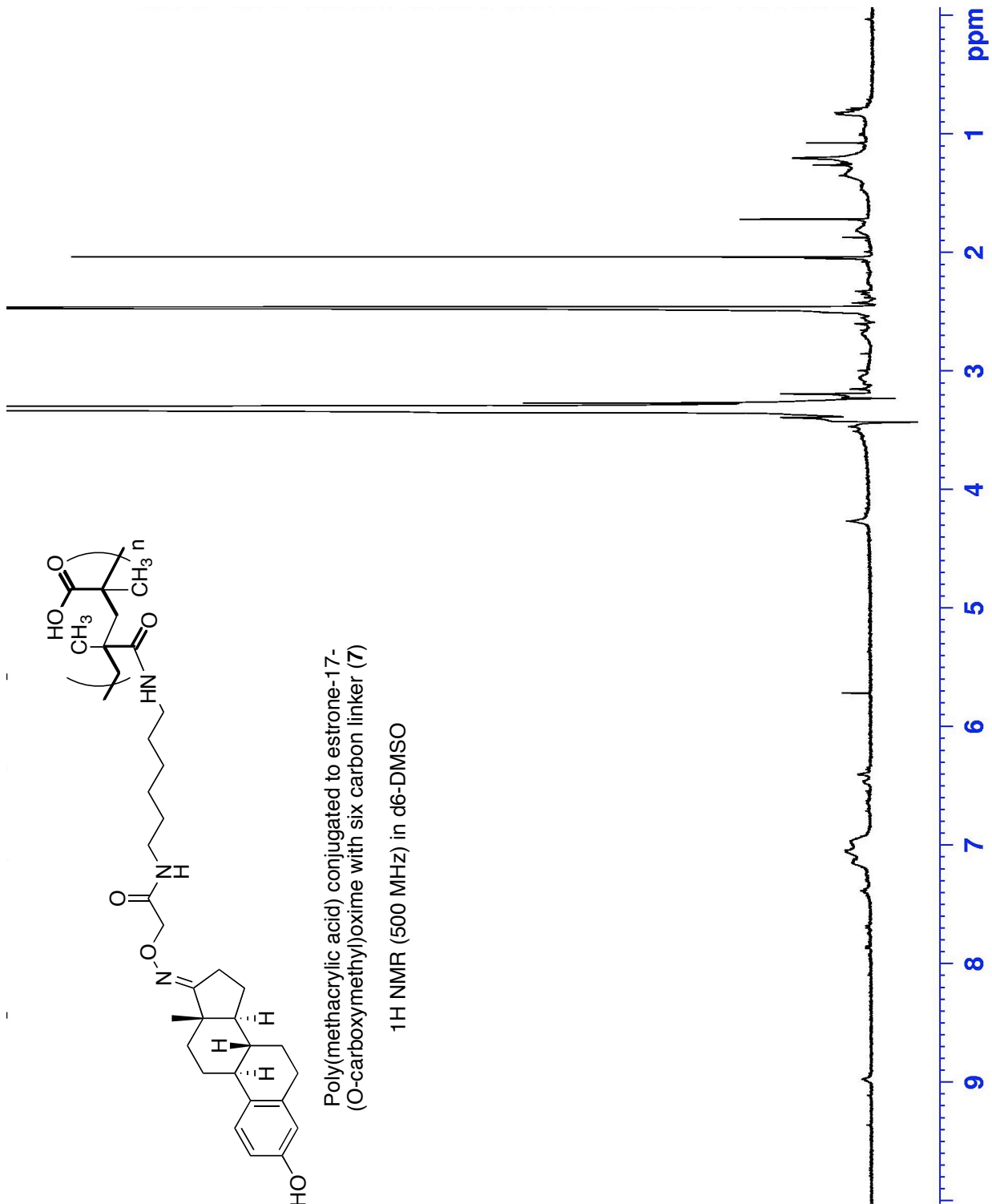
N-[6-aminoheptyl]-2-([3-hydroxyestra-1(10),2,4-trien-17-ylidene]amino)oxy)acetamide (6)  
1H NMR (500 MHz) in CDCl<sub>3</sub>/CD<sub>3</sub>OD (4:1 v/v)





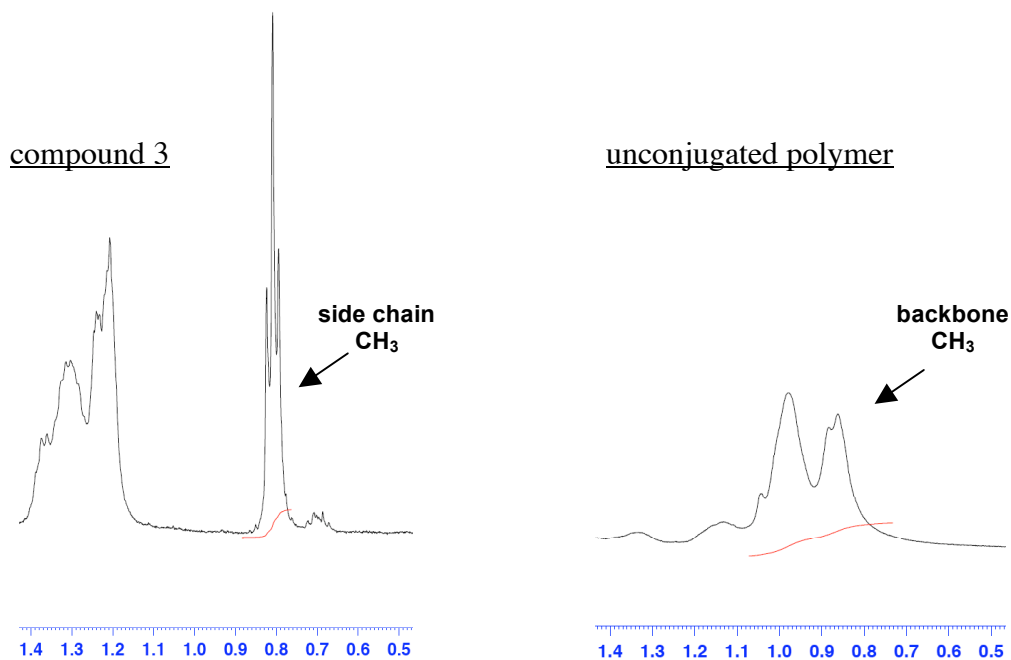
Poly(methacrylic acid) conjugated to estrone-17-(O-carboxymethyl)oxime with six carbon linker (7)

<sup>1</sup>H NMR (500 MHz) in d<sub>6</sub>-DMSO



#### **Figure S4. Determination of ligand incorporation of conjugate**

The concentration of ligand was determined by taking the relative integration of the methyl group on the ethyl side chain of the ligand with the backbone methyl groups of the PMAA. Comparing those numbers allows one to determine the average molecular weight of a monomer unit in the polymer which then allows for the calculation of the concentration of conjugated ligand. There is some unavoidable overlap of the peaks used for the integration, but we believe the effects of overlap on the integration from the ligand and the polymer backbone cancel each other out.



#### conjugated polymer 5

