

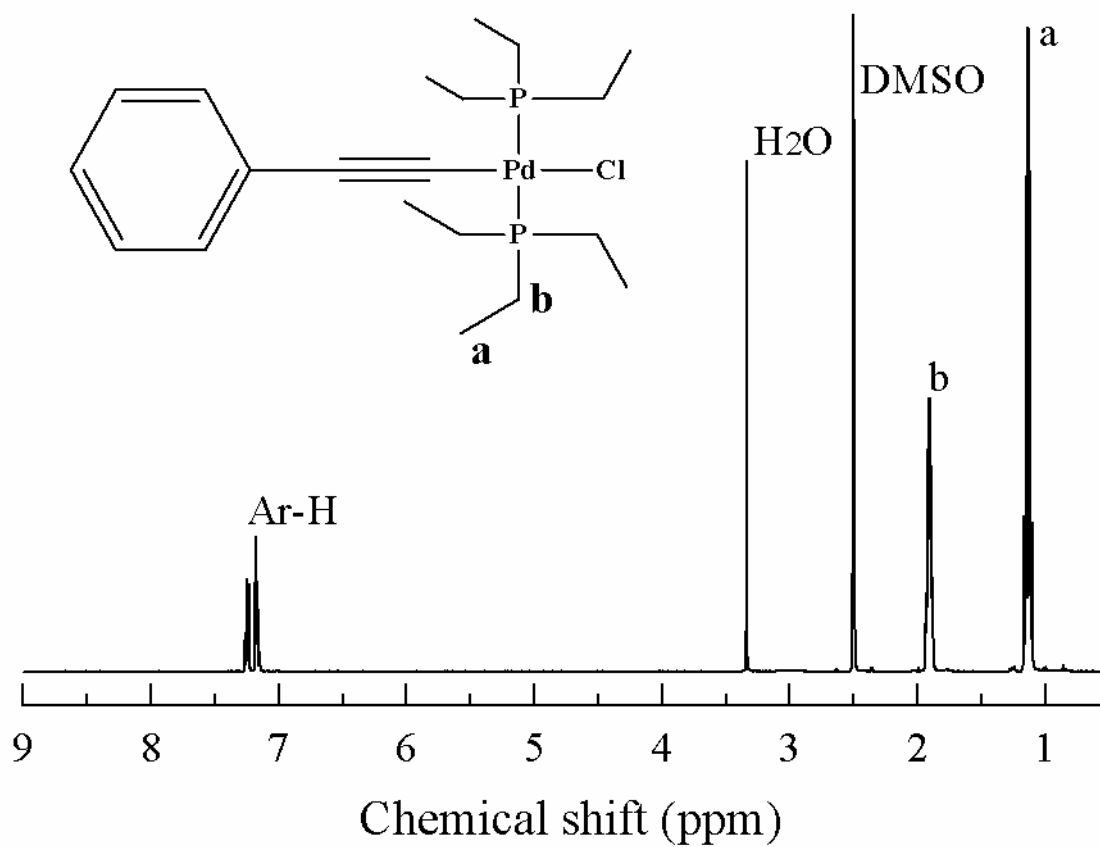
# Supplementary Materials: Design, Synthesis, Antibacterial, and Antitumor Activity of Linear Polyisocyanide Quaternary Ammonium Salts with Different Structures and Chain Lengths

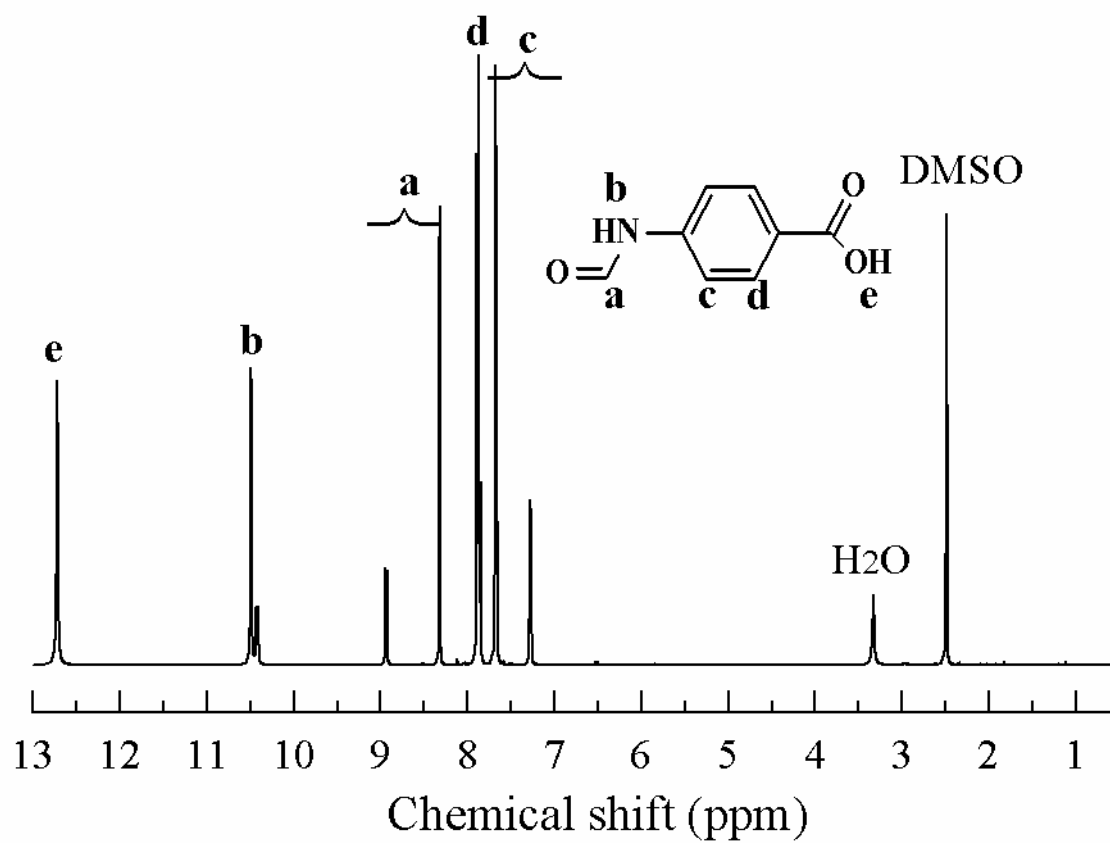
Hongguang Zhang <sup>1</sup>, Lijia Liu <sup>2</sup>, Peng Hou <sup>1</sup>, Jun Liu <sup>1</sup> and Shuang Fu <sup>1,\*</sup>

<sup>1</sup> College of Pharmacy, Qiqihar Medical University, Qiqihar 161006, China; zhanghg@qmu.edu.cn (H.Z.); houp@qmu.edu.cn (P.H.); L\_j2016@qmu.edu.cn (J.L.)

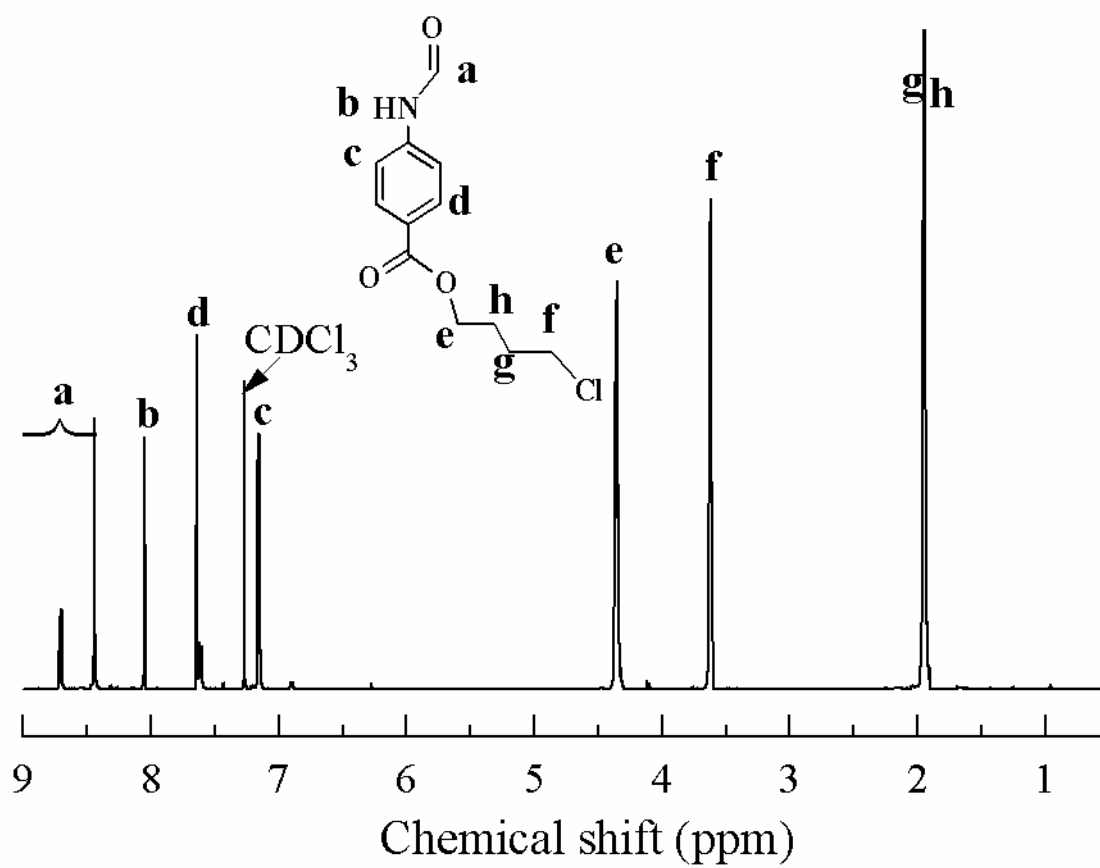
<sup>2</sup> Key Laboratory of Superlight Materials & Surface Technology, Ministry of Education, Institute of Advanced Marine Materials, College of Materials Science and Chemical Engineering, Harbin Engineering University, Harbin 150001, China; liulijia@hrbeu.edu.cn

\* Correspondence: fsjt1980@qmu.edu.cn; Tel.: +86-45-2266-3152

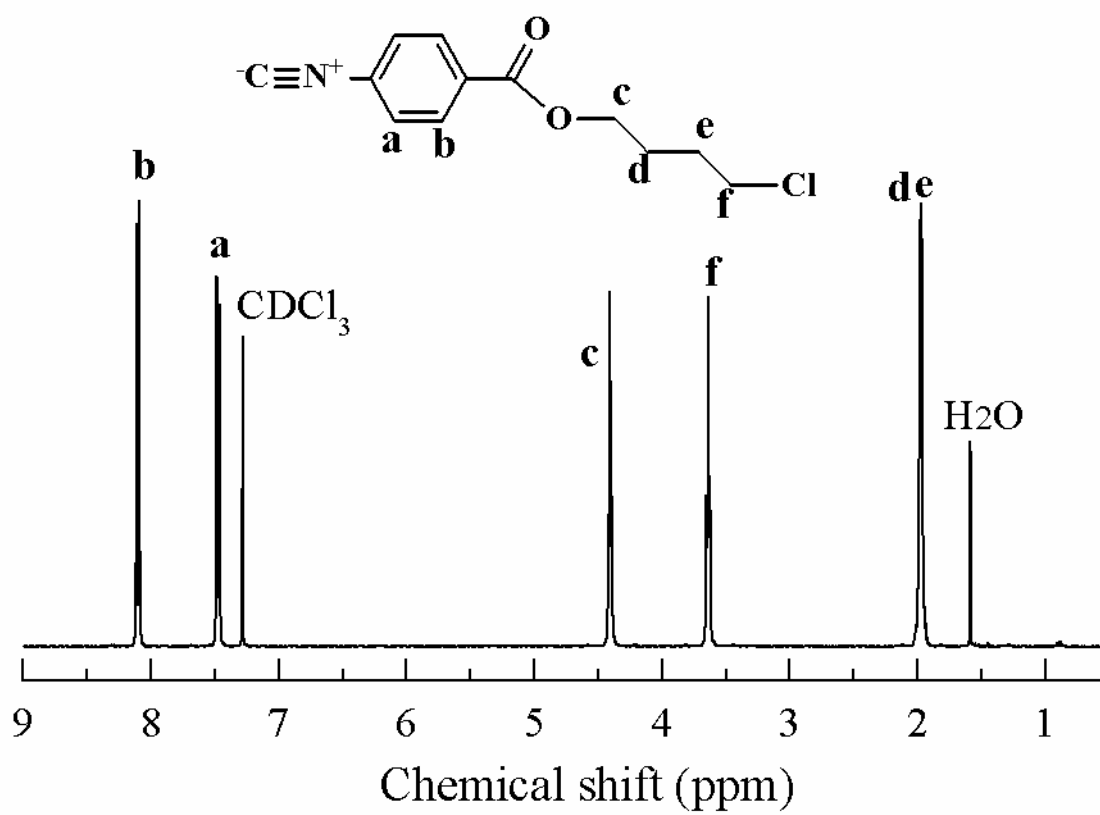
(a)  $^1\text{H}$  NMR spectra of the palladium catalyst

(b)  $^1\text{H}$  NMR spectra of the intermediate a

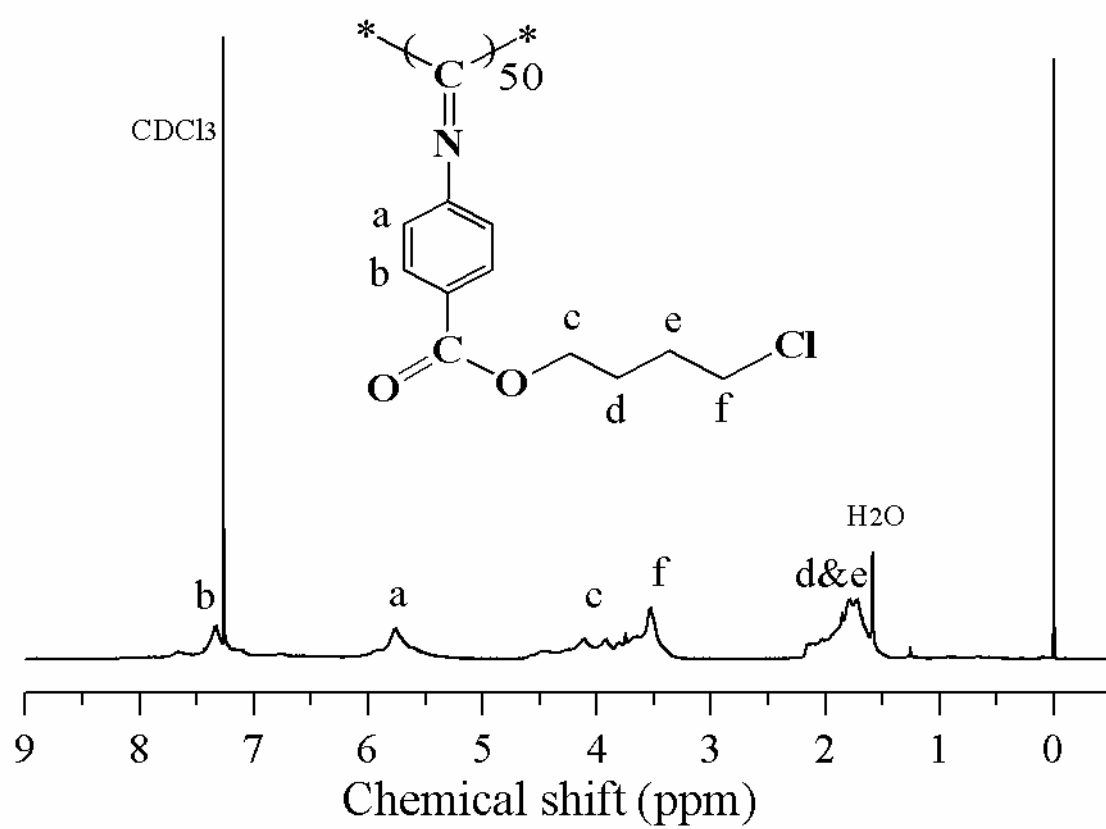
(c)  $^1\text{H}$  NMR spectra of the intermediate **b**

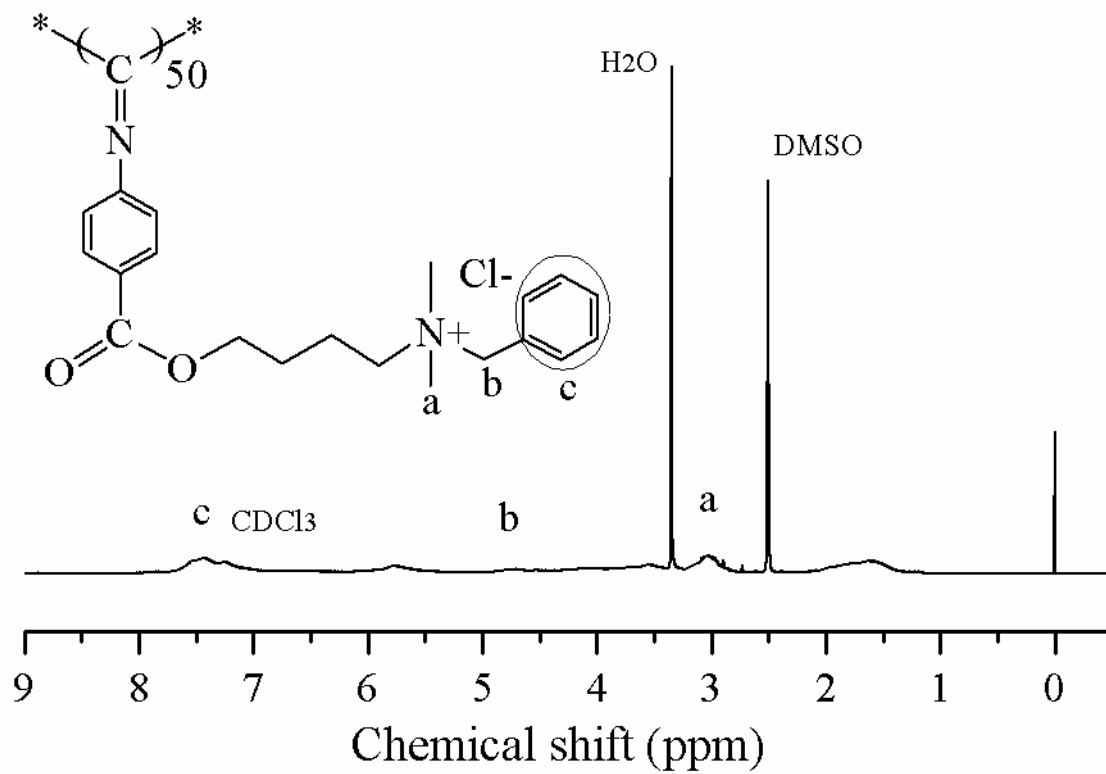


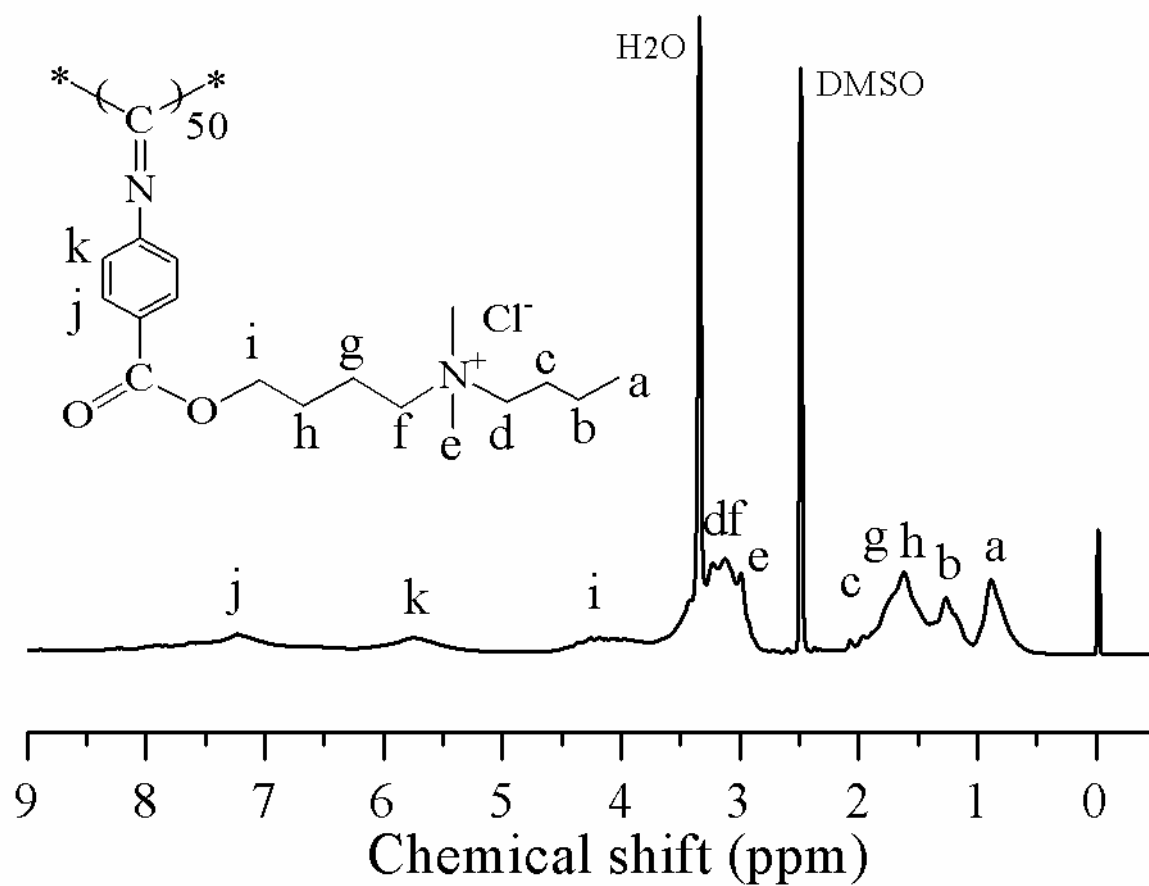
(d)  $^1\text{H}$  NMR spectra of the isonitrile monomer



(e)  $^1\text{H}$  NMR spectra of the L-P-M<sub>50</sub>



(f)  $^1\text{H}$  NMR spectra of the L-PBnQAS- $\text{M}_{50}$ 

(g)  $^1\text{H}$  NMR spectra of the L-PBuQAS- $\text{M}_{50}$ 



(h)  $^1\text{H}$  NMR spectra of the L-POcQAS-M<sub>50</sub>

