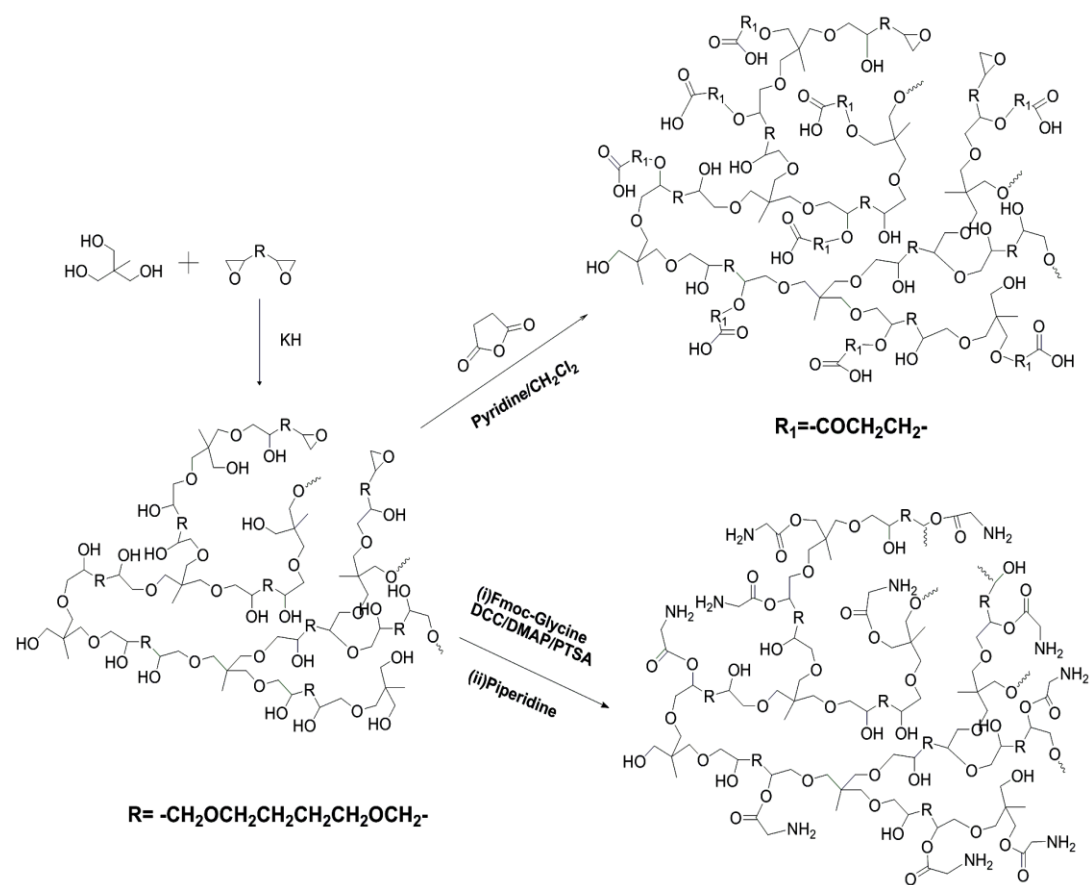
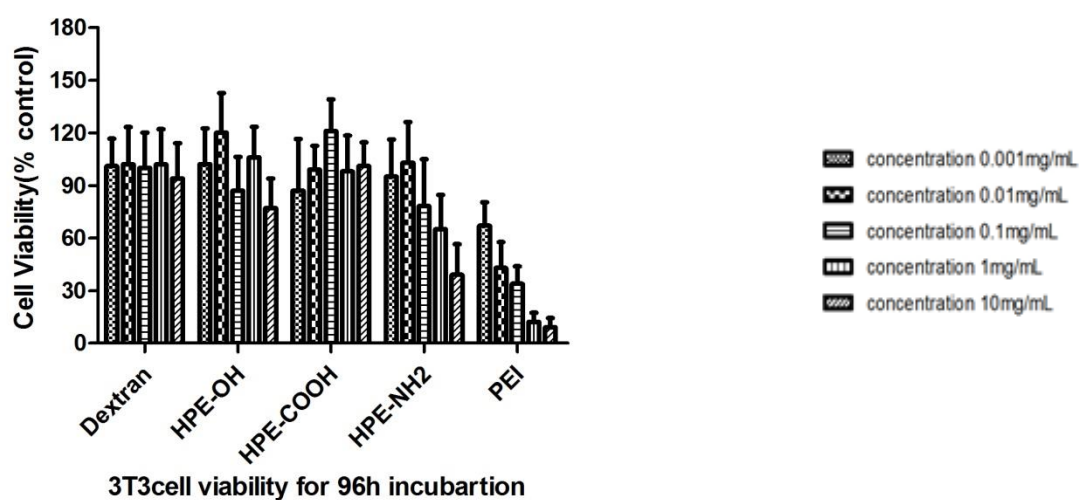
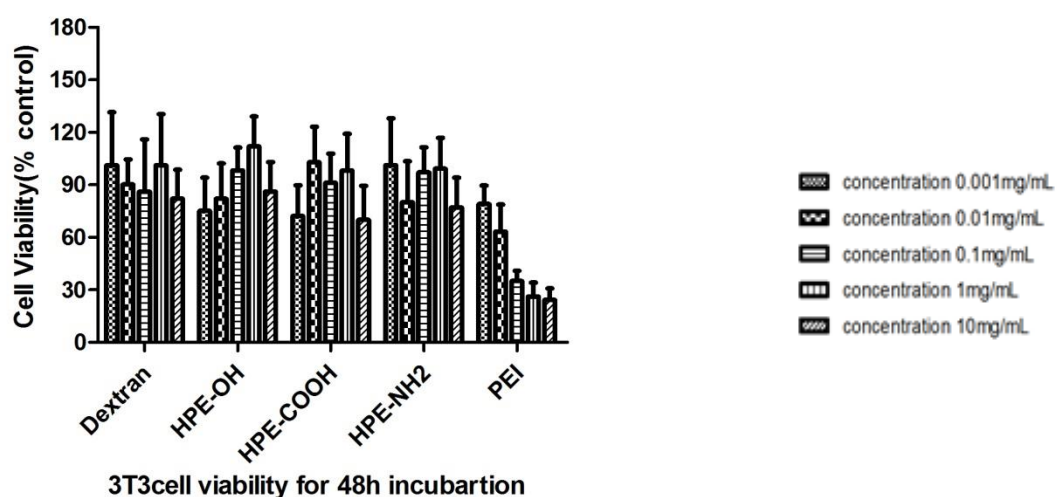
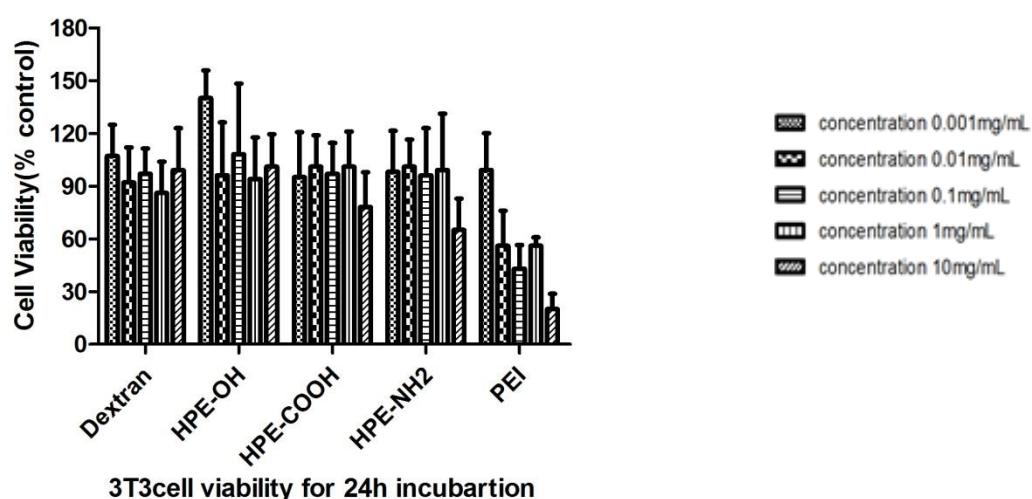


Supplementary data 1.

Scheme. End-functionalization between HPE and amino group/carbonyl group

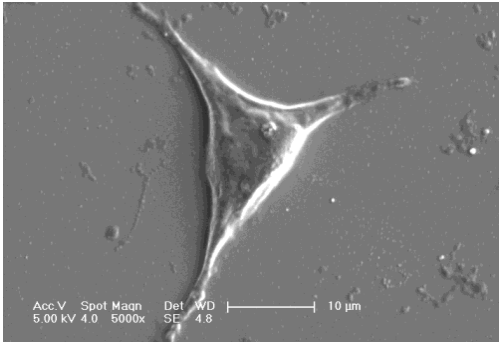
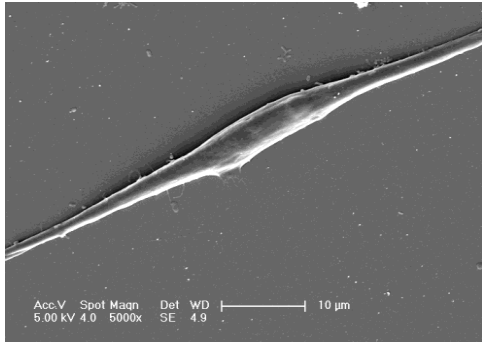
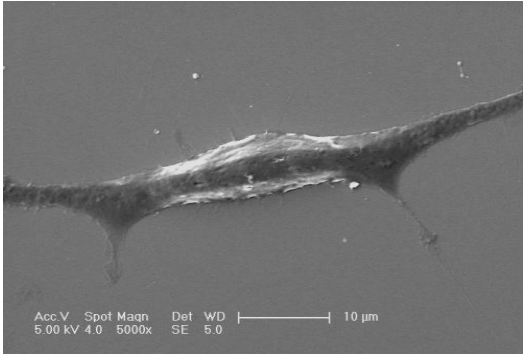
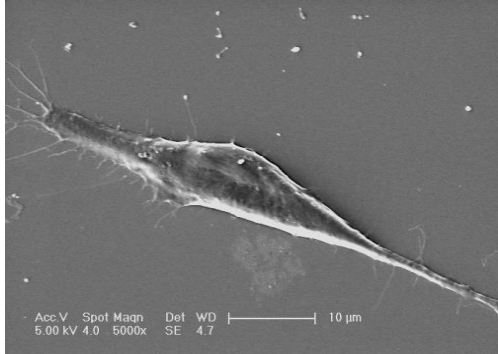
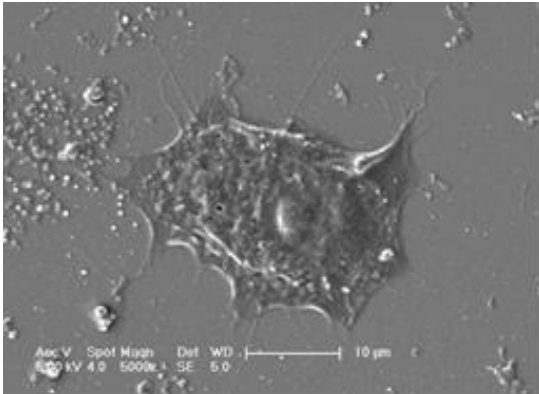
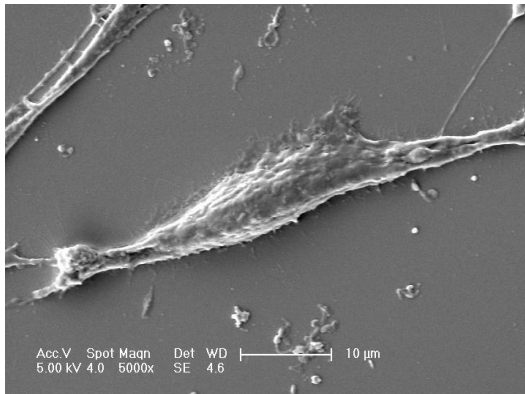


Supplementary data 2-1. 3T3 cell viability following treatment with various concentrations of HPE-derivatives



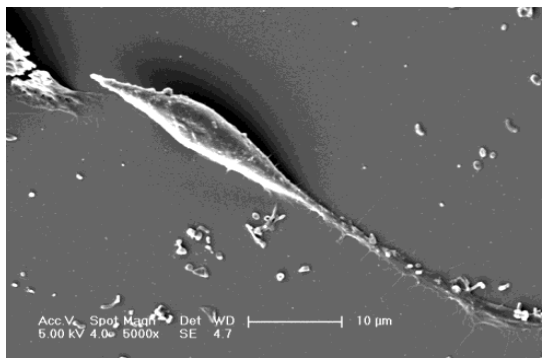
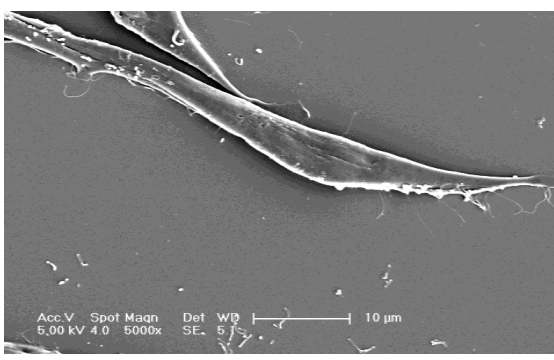
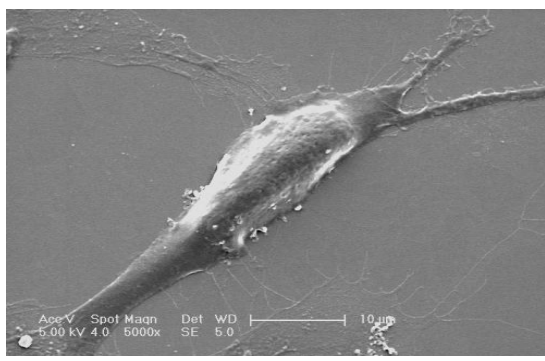
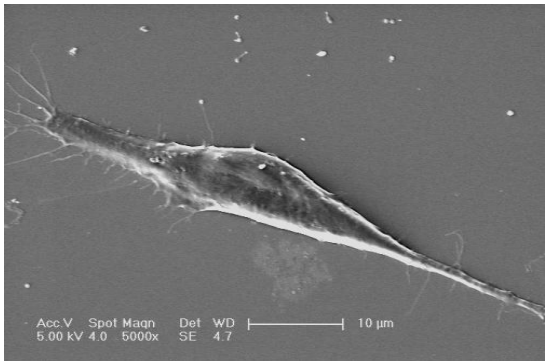
Supplementary data 2-2-1. visualization of surface morphological features of 3T3

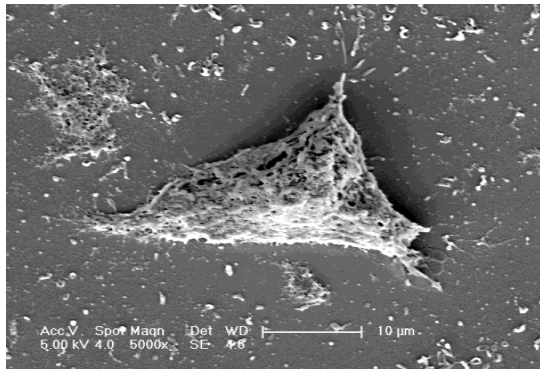
cells following incubation with low concentration (10 µg/ml) of functionalized HPE-derivatives and controls.

	
<p><i>Cell incubated in low-concentration HPE-OH for 1h</i></p>	<p><i>Cell incubated in low-concentration HPE-COOH for 1h</i></p>
	
<p><i>Cell incubated in low-concentration HPEE-NH2 for 1h</i></p>	<p><i>Cell incubated in PBS (as Blank Control) for 1h</i></p>
	
<p><i>Cell incubated in low- concentration PEI (as control)</i></p>	<p><i>Cell incubated in low-concentration HPE-CHO for 1h</i></p>

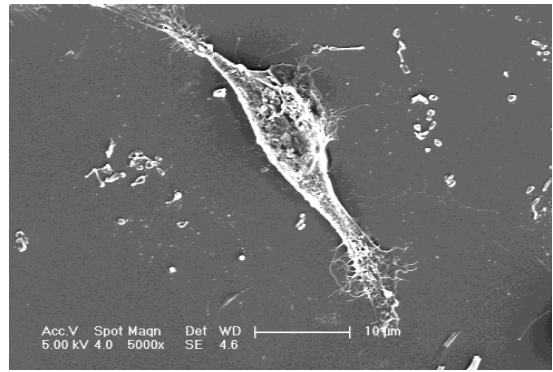
<i>Positive Control) for 1h</i>	<i>Dextran (as Negative Control) for 1h</i>
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Supplementary data 2-2-2. SEM visualization of surface morphological features of 3T3 cells following incubation with a high concentration (1 mg/ml) of functionalized HPE-derivatives and controls.

	
<i>Cell incubated in high-concentration HPE-OH for 1h</i>	<i>Cell incubated in high-concentration HPE-COOH for 1h</i>
	
<i>Cell incubated in high-concentration HPE-NH2 for 1h</i>	<i>Cell incubated in PBS (as Blank Control) for 1h</i>



*Cell incubated in high-concentration PEI
(as Positive Control) for 1h*



*Cell incubated in high-concentration
Dextran (as Negative Control) for 1h*