Characterization of **3a-c**:

*2,3-bis(8-methoxyoctanoyl) DBT (**3a**)*. Pale yellow viscous liquid. ^{1}H-NMR (500 MHz, $CDCl_3$): δ 7.32 (m, 10H, Ar-H), 5.74 (s, 2H, CH), 5.16 (dd, 4H, $ArCH_2$), 3.35 (t, 4H, OCH_2), 3.32 (s, 6H, OCH_3), 2.27 (quin, 2H, CH_2CO), 2.13 (quin, 2H, CH_2CO), 1.54 (m, 8H, CH_2), 1.28 (b, 12H, CH_2). ^{13}C-NMR (500 MHz, $CDCl_3$): δ 171.25, 164.68, 133.81, 127.60, 127.59, 127.46, 71.78, 69.54, 66.62, 57.49, 32.33, 28.54, 28.01, 27.83, 24.92, 23.47. IR (cm^{-1}, thin film from DCM): 1754 (C=O, ester). ESI-MS *m/z*: 665.2 (M+23).

*2,3-bis(10-methoxydecanoyl) DBT (**3b**)*. Pale yellow viscous liquid. ^{1}H-NMR (500 MHz, $CDCl_3$): δ 7.31 (m, 10H, Ar-H), 5.75 (s, 2H, CH), 5.15 (dd, 4H, $ArCH_2$), 3.35 (t, 4H, OCH_2), 3.32 (s, 6H, OCH_3), 2.27 (quin, 2H, CH_2CO), 2.13 (quin, 2H, CH_2CO), 1.54 (m, 8H, CH_2), 1.25 (b, 20H, CH_2). ^{13}C-NMR (500 MHz, $CDCl_3$): δ 172.53, 165.93, 135.04, 128.83, 128.82, 128.69, 73.11, 70.77, 67.85, 58.72, 33.61, 29.86, 29.64, 29.57, 29.35, 29.12, 26.33, 24.77. IR (cm^{-1}, thin film from DCM): 1754 (C=O, ester). ESI-MS *m/z*: 721.4 (M+23).

*2,3-bis(12-methoxydodecanoyl) DBT (**3c**)*. White solid. ^{1}H-NMR (500 MHz, $CDCl_3$): δ 7.23 (m, 10H, Ar-H), 5.68 (s, 2H, CH), 5.07 (dd, 4H, $ArCH_2$), 3.27 (t, 4H, OCH_2), 3.24 (s, 6H, OCH_3), 2.19 (quin, 2H, CH_2CO), 2.05 (quin, 2H, CH_2CO), 1.47 (m, 8H, CH_2), 1.17 (b, 28H, CH_2). ^{13}C-NMR (500 MHz, $CDCl_3$): δ 172.42, 165.90, 135.07, 128.80, 128.67, 73.29, 70.84, 67.75, 58.61, 34.59, 29.87, 29.78, 29.73, 29.70, 29.62, 29.41, 29.13, 26.37, 24.77. IR (cm^{-1}, KBr): 1770 (C=O, ester), 1743 (C=O, ester). ESI-MS *m/z*: 777.4 (M+23).

Characterization of **6a-c**:

6a. Yield: 2.46 g, 77 % (off-white powder). ^{1}H-NMR (500 MHz, $CDCl_3$): δ 5.76 (s, 2H, CH), 2.44 (m, 4H, CH_2CO), 1.65 (m, 4H, CH_2), 1.27 (b, 24H, CH_2), 0.88 (t, 6H, CH_3). ^{13}C-NMR (500 MHz, $CDCl_3$): δ 172.74, 172.00, 70.19, 33.80, 32.09, 29.63, 29.49, 29.41, 29.17, 24.85, 22.89, 14.31. ESI-MS *m/z*: 457.0 (M-1).

6b. Yield: 2.22 g, 74 % (off-white powder). ^{1}H-NMR (500 MHz, $CDCl_3$): δ 5.76 (s, 2H, CH), 2.43 (m, 4H, CH_2CO), 1.64 (m, 4H, CH_2), 1.26 (b, 32H, CH_2), 0.87 (t, 6H, CH_3). ^{13}C-NMR (500 MHz, $CDCl_3$): δ 172.68, 172.12, 70.20, 33.78, 32.14, 29.85, 29.68, 29.58, 29.43, 29.18, 24.86, 22.91, 14.32. ESI-MS *m/z*: 513.1 (M-1).

6c. Yield: 3.51 g, 89 % (off-white powder). ^{1}H-NMR (500 MHz, $CDCl_3$ with DMSO): δ 5.66 (s, 2H, CH), 2.40 (m, 4H, CH_2CO), 1.63 (m, 4H, CH_2), 1.26 (b, 40H, CH_2), 0.88 (t, 6H, CH_3). ^{13}C-NMR (500 MHz, $CDCl_3$ with DMSO): δ 172.61, 168.15, 70.91, 33.85, 31.96, 29.74, 29.71, 29.70, 29.69, 29.53, 29.40, 29.33, 29.08, 24.80, 22.73, 14.22. ESI-MS *m/z*: 569.1 (M-1).

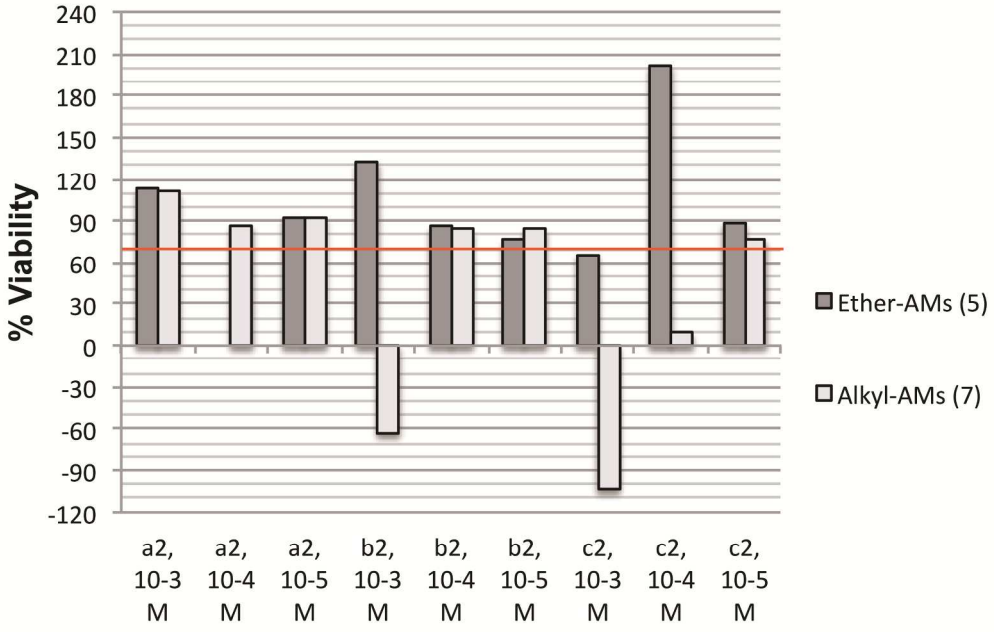

Figure S1. Cell viability screening results for varying concentrations of 2000 M_w ether- and alkyl-AMs. The cell viability cut-off of 70% is denoted as a red line on the graph. Compound $5a_2$ at 10^{-4} M was included during oxLDL uptake studies, although its viability was not assessed, as it was non-toxic at 10^{-3} M.

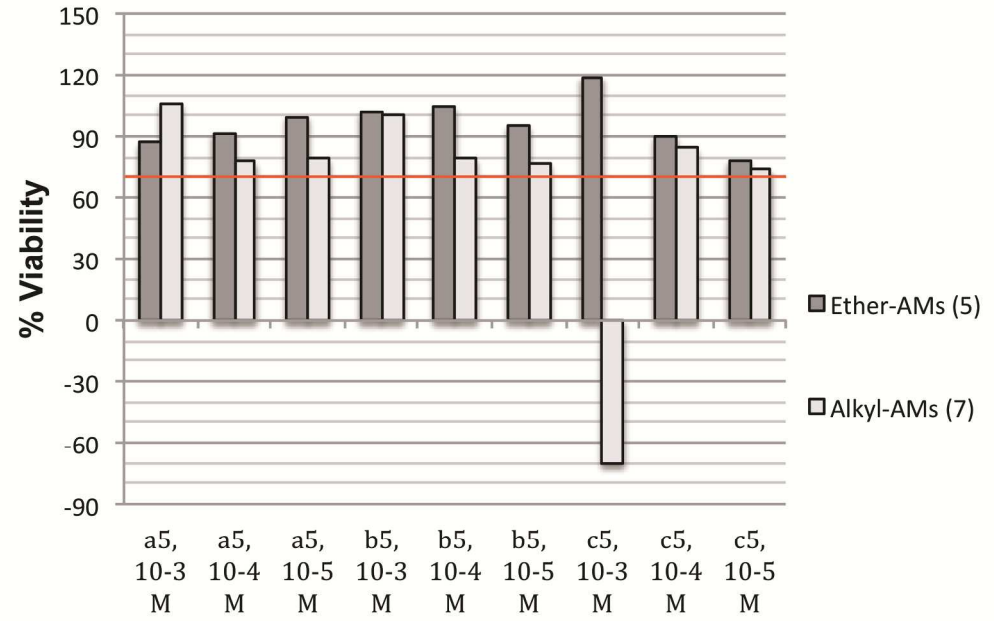

Figure S2. Cell viability screening results for varying concentrations of 5000 M_w ether- and alkyl-AMs. The cell viability cut-off of 70% is denoted as a red line on the graph.