Supplementary Materials

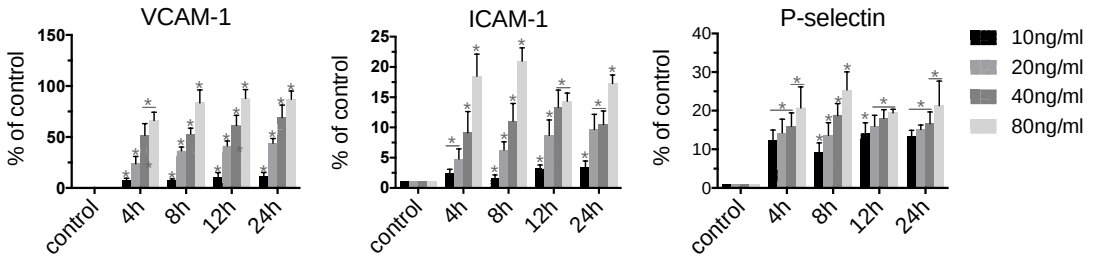

Figure S1. Expression detection of the target receptors on the inflammatory cells stimulated with TNF-α. Expression of VCAM-1, ICAM-1 and P-selectin on bEnd.3 cells which were stimulated by TNF-α with different concentration and incubating time were analyzed by flow cytometry. *P < 0.05.

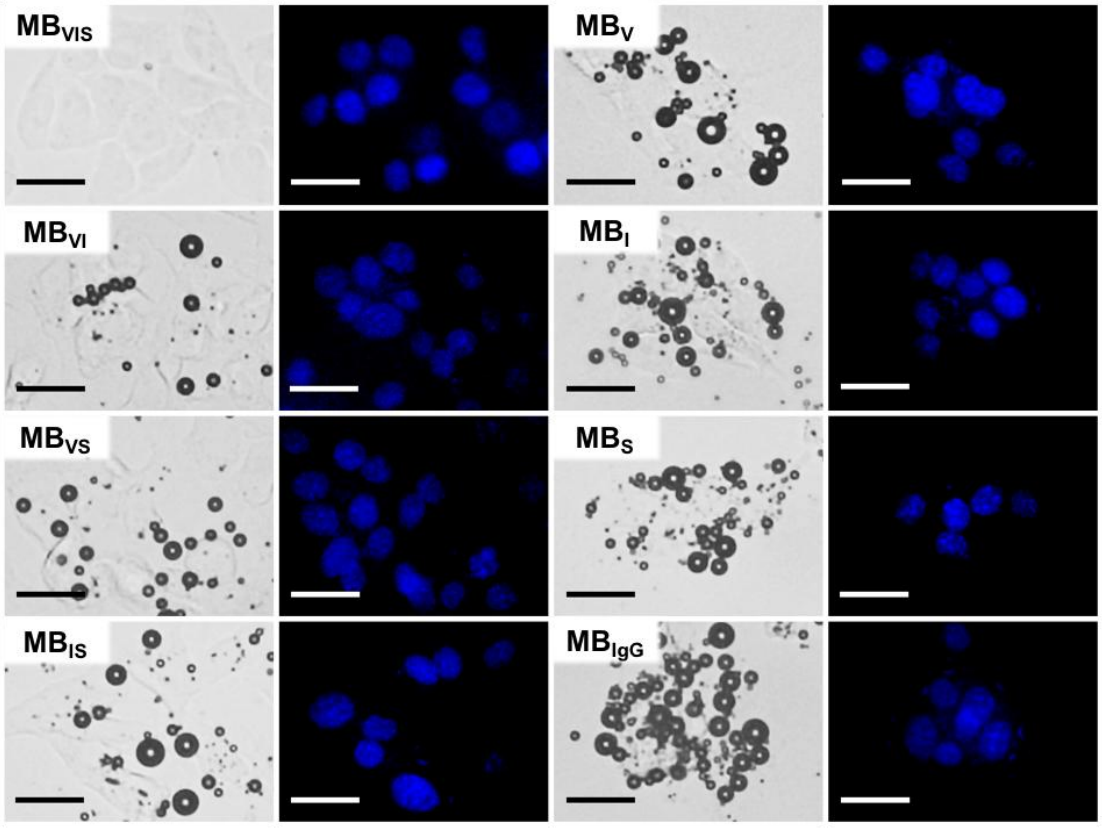

Figure S2. In vitro dynamic adhesion of MBs. Representative micrographs after incubating bEnd.3 cells with targeted MBs for 4 min with a flow velocity at 4 dynes/cm^2 shear stress (bar = 50 μm).

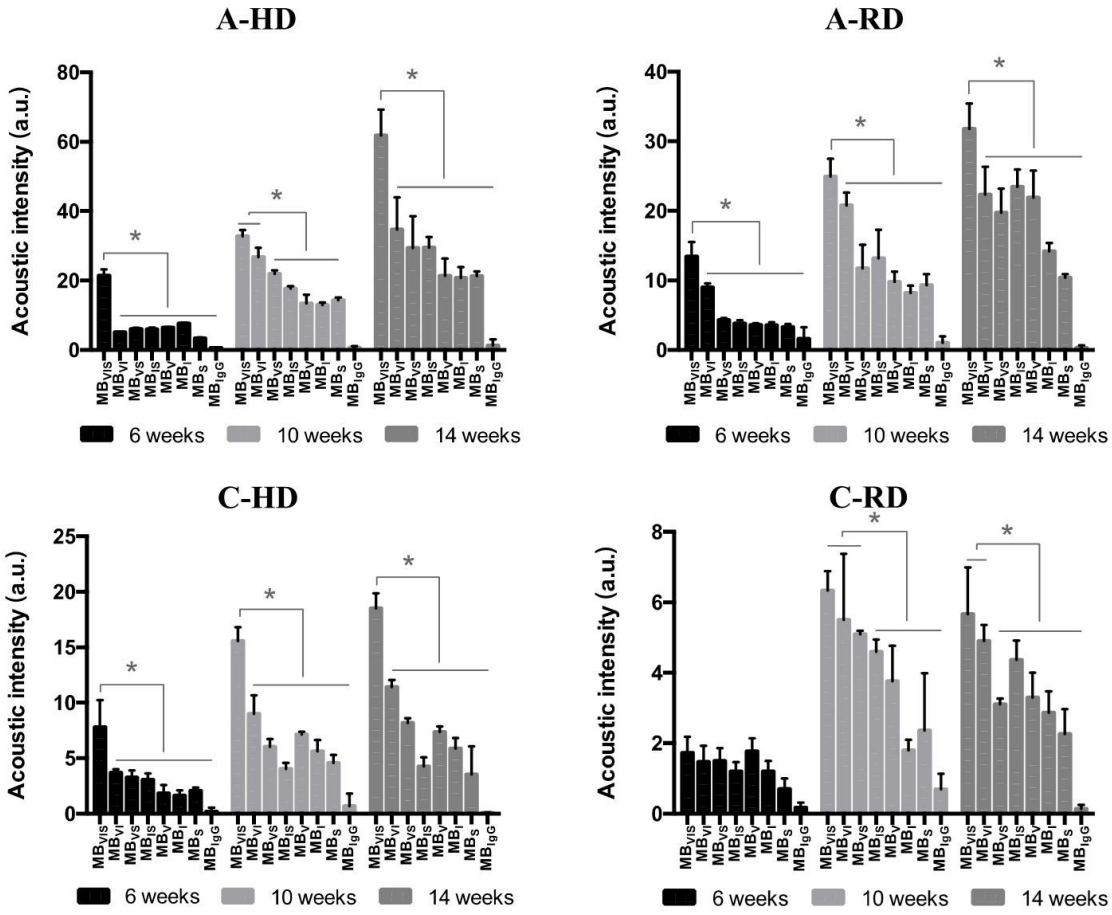

Figure S3. In vivo results of UMI performed with MB_{VIS} and control MBs in ascending aorta. Mice from four different groups were detected by UMI at 6-, 10- or 14-week feeding time point, respectively. A good performance of MB_{VIS} could be discovered. Molecular imaging effect of targeted MBs had a significant enhancement than that of MB_{IgG} (*: $P<0.05$), and MB_{VIS} had better imaging effect than that of the single- and dual-targeted MBs in the most time points and animal groups (*: $P<0.05$). The signal intensity of all targeted MBs showed an increasing trend along with feeding time.

Table 1. Particle size of the targeted MBs and control isotype MBs.

Sample	Number-weighted diameter (μm)		
	Mean ± SD	Median ± SD	Mode ± SD
MB_{IgG}	2.34 ± 0.50	1.78 ± 0.28	1.75 ± 0.06
MB_V	2.05 ± 0.29	1.59 ± 0.21	1.61 ± 0.22
MB_I	2.01 ± 0.17	1.62 ± 0.03	1.75 ± 0.06
MB_S	2.07 ± 0.34	1.60 ± 0.09	1.71 ± 0.06
MB_{VI}	2.19 ± 0.56	1.71 ± 0.06	1.75 ± 0.30
MB_{VS}	2.13 ± 0.17	1.63 ± 0.18	1.57 ± 0.13
MB_{IS}	2.33 ± 0.52	1.7 ± 0.06	1.81 ± 0.25
MB_{VIS}	2.40 ± 0.45	1.63 ± 0.18	1.69 ± 0.18

Table 2. The ligand amount conjugated onto the microbubble surface.

	VCAM-1 antibody (10^5/ microbubble)	ICAM-1 antibody (10^5/ microbubble)	Sialyl Lewis-X polymer (10^5/ microbubble)
MB_V	12.9±0.87	--	--
MB_I	--	13.68±0.68	--
MB_S	--	--	2.25±0.19
MB_{VI}	5.71±0.21	6.98±0.36	--
MB_{VS}	4.71±0.18	--	0.91±0.04
MB_{IS}	--	6.31±0.73	1.29±0.40
MB_{VIS}	4.26±0.27	5.51±0.29	0.93±0.04

Note: "--" means that the ligand amount was not detected.

Table S3. Serum lipid profile of A-HD mice under atorvastatin or placebo treatment.

ApoE$^{-/-}$HD mice		HDLC(mmol/L)	LDLC(mmol/L)	TG(mmol/L)	T-CHO(mmol/L)
Control	6 weeks	1.4 ±0.55	1.15 ±0.26	1.36 ±0.44	12.52 ±2.95
Ator	10 weeks	2.13 ±1.13	2.88 ±1.38	2.67 ±1.72	22.21 ±3.31$^{\#}$
	14 weeks	2.45 ±0.61$^{\#}$	2.62 ±0.57*	4.27 ±0.48*$^{\#}$	15.31 ±3.95$^{\#}$
Placebo	10 weeks	2.13 ±1.13	2.88 ±1.38	2.67 ±1.72	22.21 ±3.31
	14 weeks	6.34 ±0.97*	5.71 ±1.92*	6.61 ±1.43*	25.53 ±5.15*

Note: HDLC is for high density lipoprotein cholesterol, LDLC for low density lipoprotein cholesterol, TG for triglyceride, T-CHO for total cholesterol. They were measured by enzymatic assays. *: $P<0.05$, compare with the serum lipid value of six-week-feeding A-HD mice. $^{\#}$: $P<0.05$, compare with the serum lipid value of placebo treated groups.