Theranostic Immunoliposomes for Osteoarthritis

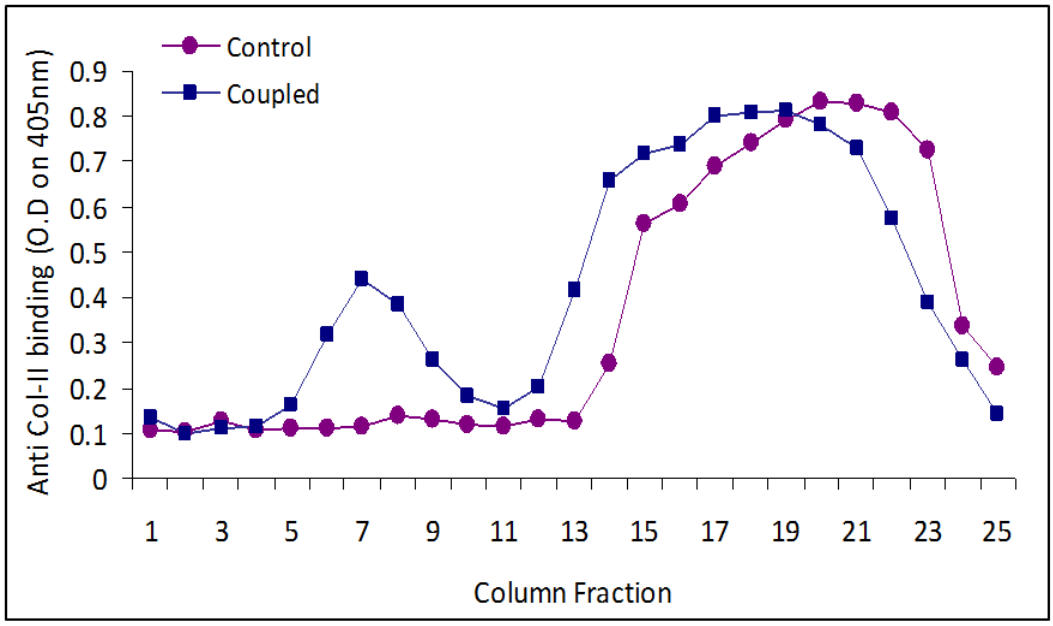
Supplementary Information

Supplementary Information S1. Type II Collagen ELISA with pNPP Substrate

Supplementary Information S2. ABTS enzymatic Assay of Damaged Cartilage Explant Tissue Incubated with Immunoliposomes Containing HRP

Supplementary Information S3. IVIS imaging

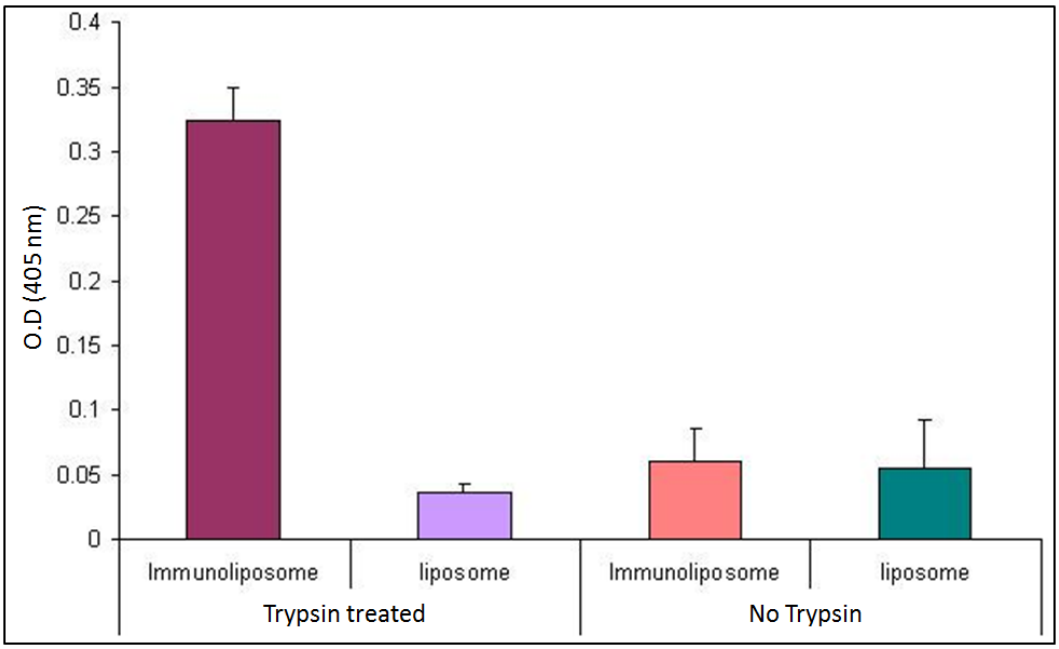
Type II Collagen ELISA with pNPP Substrate



S 1.

Chromatographic purification of liposomes coupled to MAbCII from the free antibody.Binding of type II collagen by MAbCII antibody-coupled liposomes in each fraction after molecular sieve chromatography (control; w/o antibody coupled; immuno-liposome with MAbCII conjugated). The absorbance of the pNPP substrate measured at 405nm.

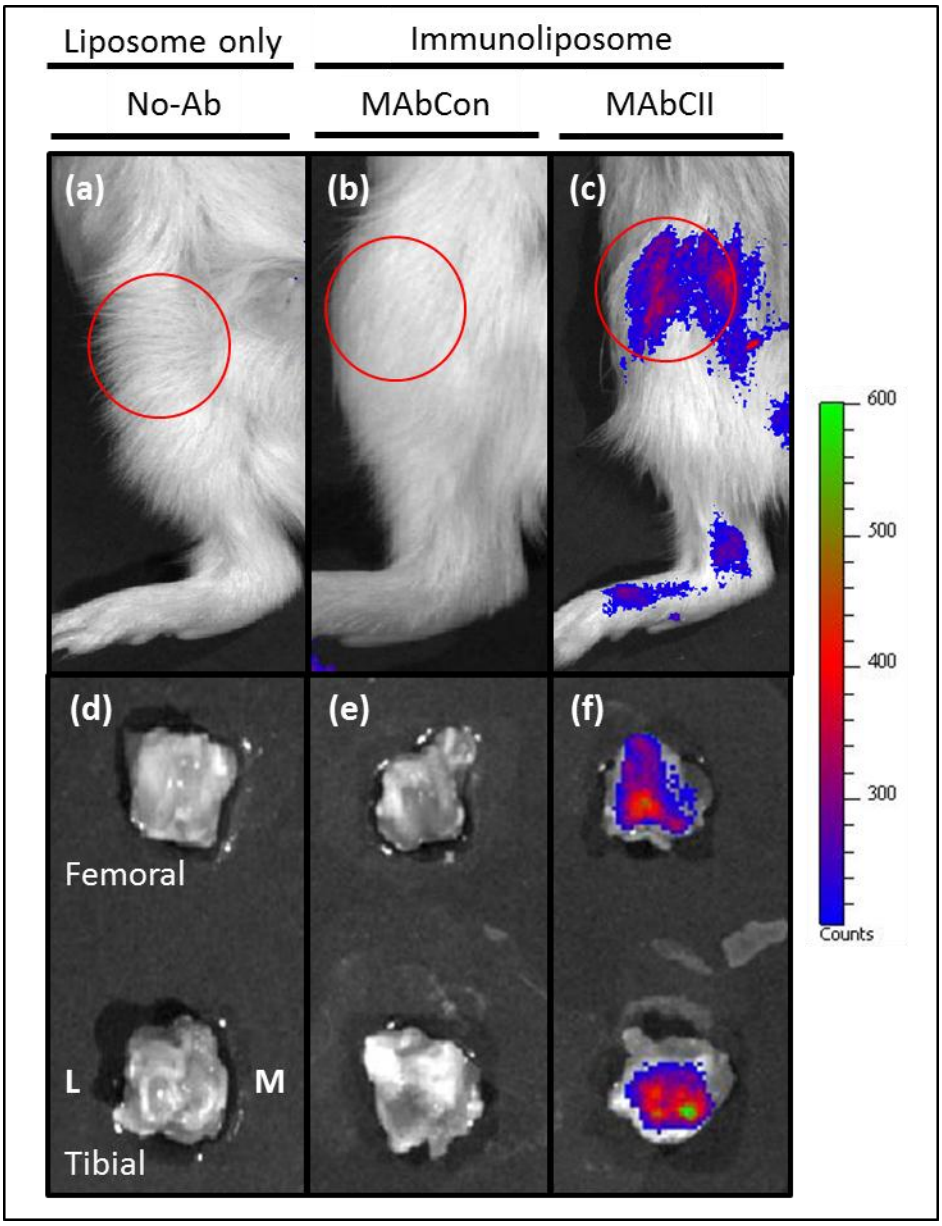
ABTS enzymatic Assay of Damaged Cartilage Explant Tissue Incubated with Immunoliposomes Containing HRP



S 2.

Cartilage explants treated with trypsin bind peroxidase filled liposomes coupled to MAbCII. After incubation of HRP immuno-liposomes with the damaged cartilage, the samples were reacted with ABTS substrate and the absorbance was measured at 405nm.

Optical images



S3. Optical images: Investigation of nonspecific binding of immunoliposomes

A representative optical image of older DH-guinea pig knee joints and dissected femoral and tibial cartilage tissues at 24 hours after (a and d) injection with liposomes alone (No-Ab), (b and e) injection with immunoliposome coupled to a control mouse IgG antibody (MAbCon), (c and f) injection with immunoliposomes coupled to type II collagen antibody (MAbCII). Circled areas indicate knee joint. The orientation of the cartilage specimens are as follows: M medial, L lateral.