Olive and grape seed extract prevents post-traumatic osteoarthritis damages and exhibits in vitro anti IL-1β activities before and after oral consumption

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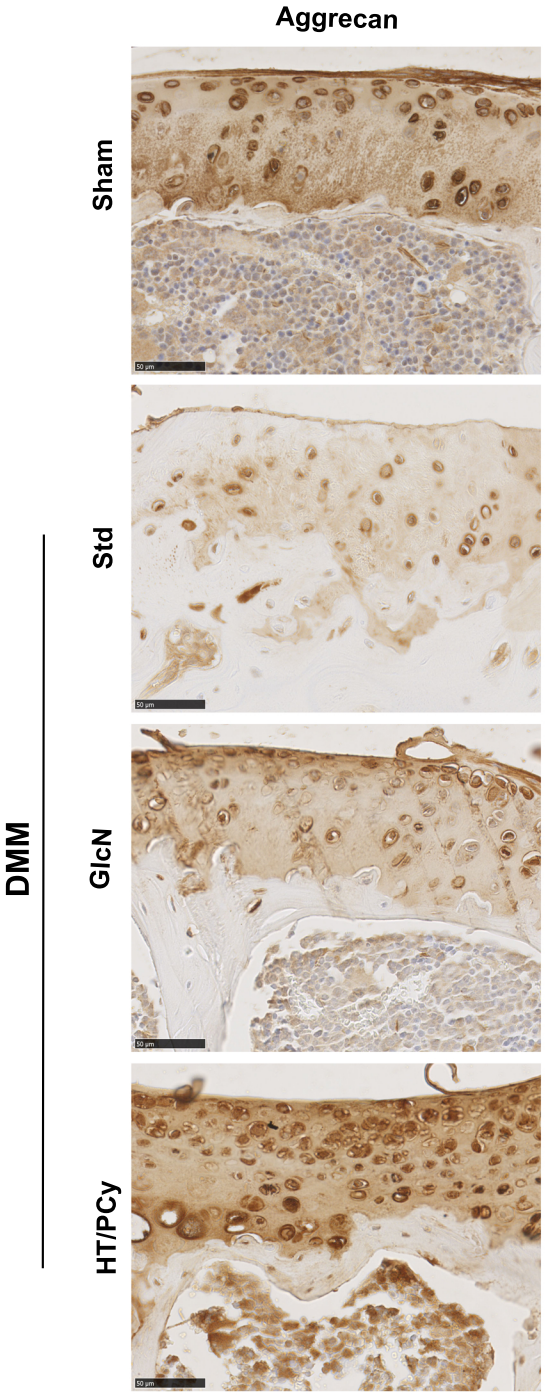

Supplementary Figure 1:
Mice (n=6 per group) underwent sham surgery or DMM bilaterally. Mice received regular diet (Sham and Std groups) or diet supplemented with GlcN, HT/PCy for 12 weeks starting 4 weeks before surgery. Immunohistochemical staining (brown signal) using antibody directed against aggrecan in sham or DMM mice receiving diet supplementation with GlcN, HT/PCy. Bar represents 50µm.

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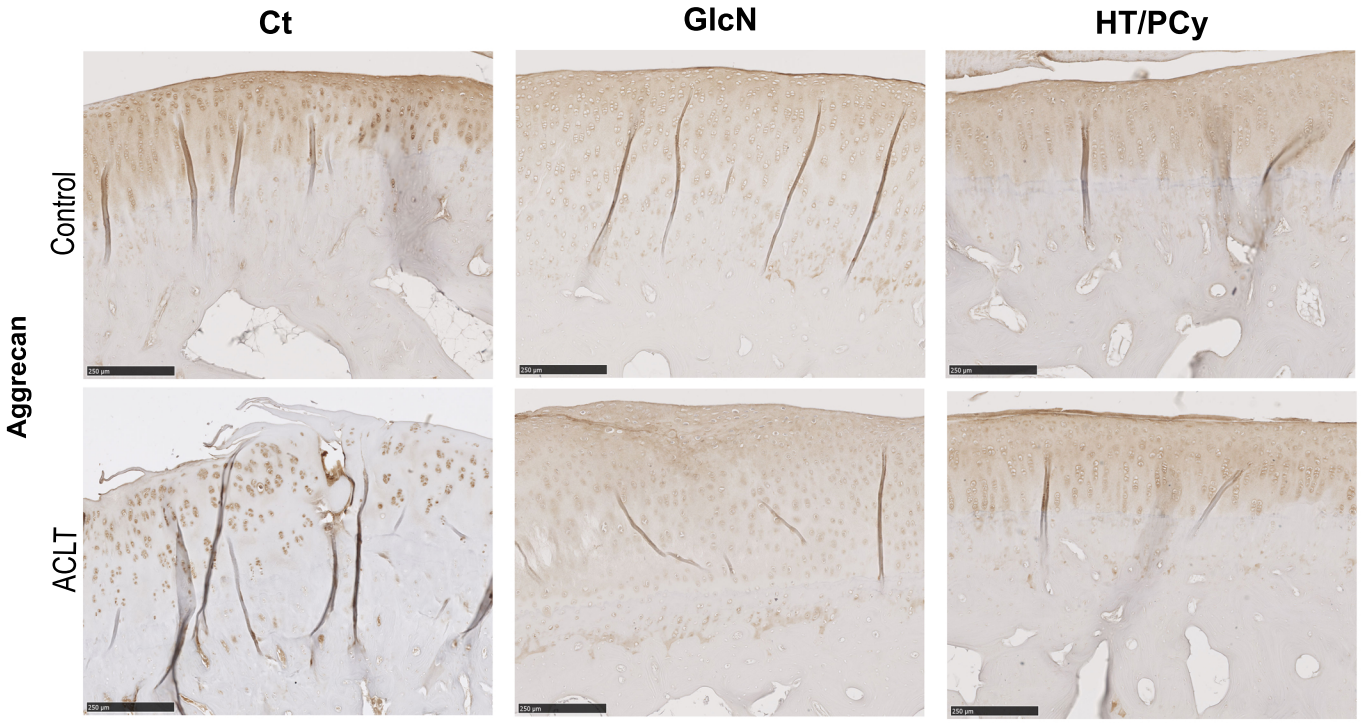

Supplementary Figure 2:
Rabbits (n=6 per group) underwent ACLT of the right knee. NaCl (Std), GlcN or HT/PCy were orally administrated every two days for 13 weeks starting 3 weeks before surgery. Immunohistochemical detection of aggrecan of the articular cartilage matrix of standard diet (Std), GlcN and HT/PCy diet groups at 10 weeks after ACLT. Bar represents 250µm.

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Scoring category	Observation	Score
Chondrocytes death	None	0
	0-10%	1
	10-25%	2
	25-50%	3
	50-75%	4
	75-100%	5
Hypertrophy	None	0
	Presence	1
Clusters	None	0
	Superficial zone	1
	Middle zone	2
	Complexe structures	3
	Mild layer cyst formation	4
Loss of Safranin-O staining	None	0
	Superficial zone of non-calcified cartilage	1
	Middle zone of non-calcified cartilage	2
	Non-calcified cartilage and intense staining around clusters	3
	Total with staining around clusters	4
	Total	5
Surface	Intact	0
	Superficial fibrillation or abrasion	1
	Deep fibrillation	2
	Vertical fissures	3
	Delamination/ excavation	4
Bone	None	0
	Denudation	4
	Microfracture	5
	Remodeling	6
	Total	**25**

Supplementary Table 1: The OARSI scoring system used to evaluate OA severity adapted from Glasson, S.S., *et al*., 2010 and Pritzker, K.P., *et al*., 2005.

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	Scoring category	Observation	Score
	Menisci calcification	None	0
		1	1
		2	2
Number of visible osteophytes	Medial tibial condyle	None	0
		Low - Moderate	1
		Moderate - Severe	2
	Medial femoral condyle	None	0
		Low - Moderate	1
		Moderate - Severe	2
	Medial fabella	Absence	0
		Presence	1
	Structural modifications of subchondral bone (sclerosis)	None	0
		Low - Moderate	1
		Moderate - High	2
	Width of the joint space	Normal	0
		Reduced	1
		Absent	2
	Calcification of tendons and ligaments	None	0
		1 site	1
		> 1 site	2
		Total	13

Supplementary Table 2: The radiographic scoring system used to evaluate OA severity inspired by Kellgren, J.H. and J.S. Lawrence, 1957 and and Boulocher C.B., *et al*., 2010.

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Species	Amplified gene	Primer sequences (5'-3')	Gene Bank Reference	Amplicon Size (bp)
Rabbit	iNOS	FP : TGACGTCCAGCGCTACAATA RP : TGCGTCTCCAGTCCCATC	NM_000625.4	60
	COX2	FP : GGAAGCGCTCTACGGCGACA RP : CCCCAAAGATGGCATCCGGGC	NM_001082388.1	86
	MMP13	FP : TTTTGAAGACACGGGCAAG RP : TCATCATAGCTCCAGACTTGGTT	NM_002427.2	60
	ACTB	FP : CCCATCTACGAGGGCTACGC RP : TCCTTGATGTCCCGCACGATC	NM_001101683.1	152

Supplementary Table 3: Amplified gene, sequences of primers and gene bank accession reference used for real-time PCR analysis and size of PCR products. iNOS : inducible nitric oxide synthase ; COX2 : cyclo-oxygenase; MMP-13: matrix metallopeptidase 13; ACTB: β-actin; FP: forward primer; RP: reverse primer.