Supplementary materials

Oral intake of *Streptococcus thermophilius* improves knee osteoarthritis degeneration: a randomized, double-blind, placebo-controlled clinical study

Jia-Ling Lyu^{1,2}, Ting-Ming Wang^{3,4}, Yen-Hao Chen⁵, Shu-Ting Chang¹, Ming-Shiang Wu^{6,7}, Yung-Hao Lin⁸, Yung-Hsiang Lin¹ Chen-Meng Kuan^{1*}

¹Research & Design Center, TCI CO., Ltd., 114 Taipei, Taiwan.

²Department of Cosmeceutics, China Medical University, Taichung 404, Taiwan.

³Department of Orthopaedic Surgery, School of Medicine, National Taiwan University, Taipei 100, Taiwan.

⁴Department of Orthopaedic Surgery, National Taiwan University Hospital, Taipei 100, Taiwan.

⁵Research & Design Center, TCI Gene Inc., Taipei 114, Taiwan.

⁶ Departments of Internal Medicine, School of Medicine, National Taiwan University, Taipei 100, Taiwan.

⁷Departments of Internal Medicine, National Taiwan University Hospital, Taipei 100, Taiwan.

⁸Global Business Center, TCI CO., Ltd., Taipei 114, Taiwan

^{*}Correspondence: Chenmeng.Kuan@tci-bio.com

Table S1. Degree of improvement (based on KL grades 2, 3) (n = 10 for placebo group, n = 25 for TCI633 group)

	Week 4			Week 8		Week 12		
Biomarker	Group	I4-I0 (%) Difference (SE)	Improvement rate	I8-I0	Improvement rate	I12-I0	Improvement rate	
			(%)	Difference	(%)	Difference	(%)	p value
			(improved/total)	(%) (SE)	(improved/total)	(%) (SE)	(improved/total)	
sCTXII	Placebo	-6.50 ± 2.30	50% (5/10)	-15.80 ± 2.58	50% (5/10)	-37.07 ± 6.01	40% (4/10)	$0.047^{a}, 0.019^{b}, < 0.001^{c}$
	TCI633	-20.41 ± 5.52	44% (11/25)	-22.12 ± 6.66	44% (11/25)	-44.22 ± 3.90	44% (11/25)	$0.004^a,0.008^b,<0.001^c$
sCRP	Placebo	-42.95 ± 10.03	40% (4/10)	-45.50 ± 8.35	50% (5/10)	-46.63 ± 4.49	50% (5/10)	0.025 ^a , 0.021 ^b , 0.003 ^c
	TCI633	-45.24 ± 6.13	60% (15/25)	-40.30 ± 8.24	60% (15/25)	-44.35 ± 7.72	52% (13/25)	$< 0.001^{a}, < 0.001^{b}, < 0.001^{c}$

I4-I0 difference: the different between week 0 and week 4. I8-I0 difference: the different between week 0 and week 8. I12-I0 difference: the different between week 0 and week 12. a: comparison between week 0 and week 4. b: comparison between week 0 and week 8. c: comparison between week 0 and week 12.