



Supplementary Materials

TNFSF11 as a Key Regulator in Osteoarthritis Pathogenesis: Integrated Bioinformatics Analysis and Potential Therapeutic Targets

Fumin Yuan^{1,2,†}, Xiwei Fan^{1,2,3,4,5,†}, Indira Prasadam^{3,4}, Antonia Rujia Sun^{3,4}, Xiaoxin Wu^{1,2,5}, Yanping Wang^{6,*} and Xinzhan Mao^{1,2,5,*}

¹ Department of Orthopaedic Surgery, The Second Xiangya Hospital of Central South University, Changsha 410011, China

² Traumatic Orthopaedic Research Lab, The Second Xiangya Hospital of Central South University, Changsha 410011, China

³ Centre for Biomedical Technologies, Queensland University of Technology, Brisbane, QLD 4059, Australia

⁴ School of Mechanical, Medical & Process Engineering, Queensland University of Technology, Brisbane, QLD 4059, Australia

⁵ National Clinical Research Centre for Metabolic Diseases, Department of Metabolism and Endocrinology, The Second Xiangya Hospital of Central South University, Changsha 410011, China

⁶ Health Management Center, Xiangya Hospital of Central South University, Changsha 410028, China

* Correspondence: 1374715114@qq.com (Y.W.); Tel.: +86-135-7484-3486 (Y.W.); xinzhan.mao@csu.edu.cn (X.M.); Tel.: +86-139-7580-6781 (X.M.)

† These authors contributed equally to this work.

How To Cite: Yuan, F.; Fan, X.; Prasadam, I.; et al. TNFSF11 as a Key Regulator in Osteoarthritis Pathogenesis: Integrated Bioinformatics Analysis and Potential Therapeutic Targets. *Regenerative Medicine and Dentistry* 2026, 3(1), 4. <https://doi.org/10.53941/rmd.2026.100004>

Table S1. Detailed demographic and clinical data of 20 individual study participants.

Patient ID	Group	Age (years)	Gender	BMI (kg/m ²)	K-L Radiographic Grade	Exclusion Criteria Compliance
OA-01	OA	58	Female	26.3	Grade 3	Yes
OA-02	OA	67	Female	29.8	Grade 4	Yes
OA-03	OA	62	Male	25.1	Grade 3	Yes
OA-04	OA	70	Female	31.2	Grade 4	Yes
OA-05	OA	63	Female	27.5	Grade 3	Yes
OA-06	OA	69	Male	28.7	Grade 3	Yes
OA-07	OA	65	Female	26.9	Grade 3	Yes
OA-08	OA	65	Female	29.1	Grade 3	Yes
OA-09	OA	67	Male	27.8	Grade 3	Yes
OA-10	OA	69	Female	30.5	Grade 4	Yes
CON-01	CON	56	Male	26.7	Grade 0	Yes
CON-02	CON	62	Female	25.9	Grade 0	Yes
CON-03	CON	53	Female	28.3	Grade 0	Yes
CON-04	CON	65	Male	27.1	Grade 0	Yes
CON-05	CON	58	Female	26.5	Grade 0	Yes
CON-06	CON	49	Male	29.2	Grade 0	Yes
CON-07	CON	55	Female	27.8	Grade 0	Yes
CON-08	CON	61	Male	25.7	Grade 0	Yes
CON-09	CON	51	Female	28.5	Grade 0	Yes
CON-10	CON	57	Female	26.9	Grade 0	Yes

Table S2. Primer sequences of target genes and endogenous reference gene.

Gene	Primer	Sequence (5'-3')
Homo GAPDH	Forward	TCAAGAAGGTGGTGAAGCAGG
	Reverse	TCAAAGGTGGAGGAGTGGGT
TNFSF11	Forward	GATGGTGGATGGCTCATGGT
	Reverse	TTGGAGATCTTGGCCCAACC
TNFRSF11A	Forward	TGCAGCTCAACAAGGACACA
	Reverse	TCCAGGGTCTGCATTTGTCC
MMP9	Forward	ACCTTCACTCGCGTGTACAG
	Reverse	GGACCACAACCTCGTCATCGT
MMP1	Forward	AGAGCAGATGTGGACCATGC
	Reverse	TGTCCCGATGATCTCCCCT
FCGR1A	Forward	TGGCACCTACCATTGCTCAG
	Reverse	GTGGGGATGTACAGATGCA

