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Occlusal Effects on Longitudinal Bone Alterations of the Temporomandibular Joint

APPENDIX

Appendix Table 1. Grouping of Rats

Time Point	Micro-CT Scan		Staining Analysis (TMJ on right side)		Real-time PCR Analysis (TMJ on left side)	
	Control	EXP	Control	EXP	Control	EXP
12w	8*	8*	9	9	9	9
32w			9 [#]	9 [#]	9 [#]	9 [#]

* Rats for micro-CT scanning were sacrificed at the end of 32 wks. The TMJ tissues on the right side were utilized for HE and TRAP staining and immunohistochemical (IHC) analysis, and the TMJ tissues on the right side were used for real-time PCR test.

Eight of 9 of these samples were from those examined by micro-CT.

Appendix Table 2. Abbreviations

ALP	alkaline phosphatase
BMD	bone mineral density
BS/BV	the ratio of bone surface area to bone volume
BV/TV	the ratio of bone volume to tissue volume
Col1	type I collagen
DMP-1	dentin matrix protein-1
EXP	Experimental (group)
HE	hematoxylin and eosin (staining)
IHC	immunohistochemistry (staining)
OA	osteoarthritis
OPG	osteoprotegerin
RANKL	nuclear factor-kappa B ligand
ROI	region of interest
Tb.N	trabecular number
Tb.Sp	trabecular separation
Tb.Th	trabecular thickness
TMD	temporomandibular disorder
TMJ	temporomandibular joint
TRAP	tartrate-resistant acid phosphatase
VEGF	vascular endothelial growth factor

Appendix Table 3. Real-time PCR Primers Used in the Experiments

	Forward	Reverse
<i>ALP</i>	CACGTTGACTGTGGTTACTGCTGA	CCTTGTAAACCAGGCCCGTTG
<i>cathepsin K</i>	CGGCTATATGACCACTGCCTTC	TTTGCCGTGGCGTTATACATACA
<i>Col1 a1</i>	CCAGCAAAGGCAATGCTGAA	TTGTTGCAGAGGCCATGGAG
<i>Col1 a2</i>	CCTGGGACTCCTGGACTT	GGACCAGCAGACCCAATG
<i>DMP-1</i>	GAAGACTGTTATCCTCCTTACG	GTGATCCCCTTAGATTCTCC
<i>GAPDH</i>	GGCACAGTCAAGGCTGAGAATG	ATGGTGGTGAAGACGCCAGTA
<i>OPG</i>	CTCATCAGTTGGTGGGAATGAAGA	ACCTGGCAGCTTTGCACAATTA
<i>osteocalcin</i>	AAGGTGGTGAATAGACTCCG	AAACGGTGGTGCCATAGATG
<i>RANKL</i>	GCAGCATCGCTCTGTTCTGTGTA	GCATGAGTCAGGTAGTGCTTCTGTG
<i>TRAP</i>	GTGCATGACGCCAATGACAAG	TTCCAGCCAGCACGTACCA
<i>VEGF</i>	GCCTCAGGACATGGCACTAT	GGAGGAGGAGGAGCCATTAC