

Deficiency of *Cbfb* in articular cartilage leads to osteoarthritis-like phenotype through Hippo/Yap, TGF β , and Wnt/ β -catenin signaling pathways

Yan Zhang^{1,2}, Huiwen Chen¹, Jinjin Wu¹, Abigail McVicar³, Yilin Chen³, Jiacaan Su⁴, Yi-Ping Li^{1,3*}, Wei Chen^{1,3*}

¹ Department of Pathology, University of Alabama at Birmingham, Birmingham, AL 35294, USA.

² Key Laboratory of Biomedical Information Engineering of Ministry of Education, Biomedical Informatics and Genomics Center, School of Life Science and Technology, Xi'an Jiaotong University, Shaanxi, Xi'an 710049, P.R. China.

³ Division in Cellular and Molecular Medicine, Department of Pathology and Laboratory Medicine, Tulane University School of Medicine, Tulane University, New Orleans, 70112, USA.

⁴ Institute of Translational Medicine, Shanghai University, Shanghai, P.R. China.

* Corresponding authors:

Supplemental Figure 1

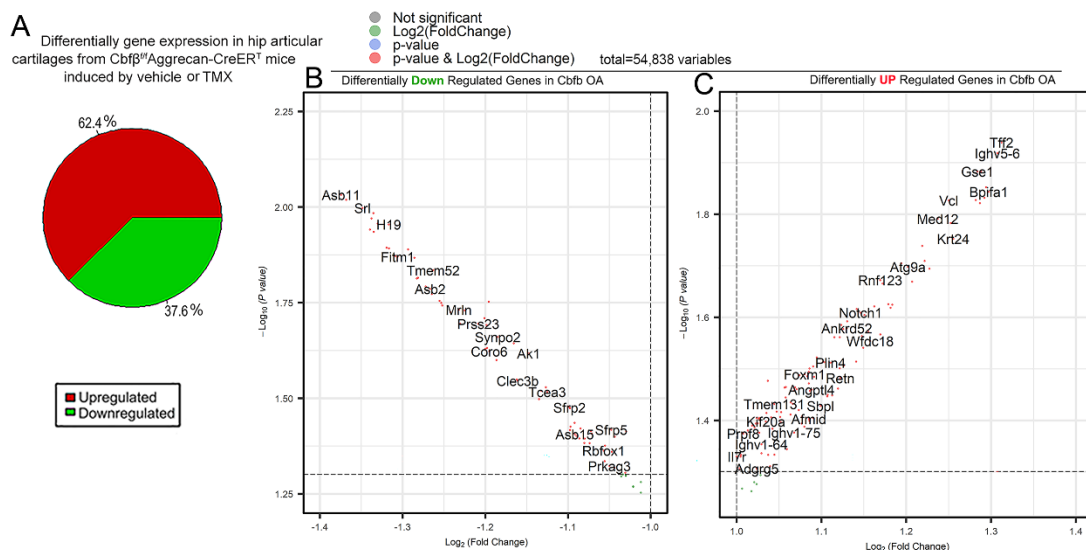


Figure S1. RNA-sequencing found differentially expressed genes (DEGs) in hip articular cartilages from 3-month-old female *Cbfb*^{fl/fl}Aggrecan-CreER^T mice induced by vehicle and TMX. (A) Pie chart of differentially regulated gene expression in hip articular cartilages. The percentages of genes upregulated and downregulated are shown in red and green, respectively. (B) Down DEGs from volcano plot. (C) Up DEGs from volcano plot.

Supplemental Table 1

Table S1. qRT-PCR primer sequences

Primer name (Mouse)	Primer sequences (5'-3')
Cbf β -Forward primer	ACAAACACCTAGCCGGGAATA
Cbf β -Reverse primer	GCTGTGAAACTCTCACCTCCATT
Runx1-Forward primer	GATGGCACTCTGGTCACCG
Runx1-Reverse primer	GCCGCTCGGAAAAGGACAA
Col2a1-Forward primer	GGAATGTCCTCTGCGATGAC
Col2a1-Reverse primer	GAAGGGGATCTCGGGGTTG
Sox9-Forward primer	GAGCCGGATCTGAAGAGGGA
Sox9-Reverse primer	GCTTGACGTGTGGCTTGTTT
Mmp13-Forward primer	CTTCTTCTTGTTGAGCTGGACTC
Mmp13-Reverse primer	CTGTGGAGGTCAGTGTAGACT
β -catenin (Ctnnb1)-Forward primer	ATGGAGCCGGACAGAAAAGC
β -catenin (Ctnnb1)-Reverse primer	CTTGCCACTCAGGGAAGGA
Yap-Forward primer	ACCCTCGTTTTGCCATGAAC
Yap-Reverse primer	TGTGCTGGGATTGATATTCCGTA
Gapdh-Forward primer	AGGTCGGTGTGAACGGATTTG
Gapdh-Reverse primer	TGTAGACCATGTAGTTGAGGTCA