BMC Musculoskeletal Disorders

CORRECTION

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Correction: The link between osteoporosis and frozen shoulder: exploring the therapeutic effect of TAK715 on reversing fibrosis and protecting against osteoporosis via the p38 MAPK signaling pathway

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Following publication of the original article [1], the authors identified two errors upon a thorough review of this published work and the associated original data. It was discovered that incorrect versions of Figure 3.I and Figure 4.M were inadvertently used. This oversight likely occurred due to the high degree of similarity between the images in both panels and a typographical error. The article has since been corrected to reflect the accurate figures, which are provided below.

[†]Xinhao Li, Yan Yan and Zhuo Wang are co-first authors.

The original article can be found online at https://doi.org/10.1186/s12891-024-08068-8.

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(See figure on next page.)

Fig. 3 The FS tissue was successfully collected and digested into FS synovium fibroblasts. Besides phosphorylation level of p38 was higher and cell apoptosis was more active in the FS group. **A** The arthroscope view of Control (**a**,**b**) and FS (**c**,**d**) patient: the capsular was more thicken and the synovium was hyperemia and inflammation infiltrated. **B** Representative Collagen I and Collagen III immuno-stained tissue sections in control and FS tissue. Scale Bar: 50 μM. **C** The statistics analysis of (**B**): the mean optical density (mean OD) of Collagen I and Collagen III in the control and FS tissues ($n = 3$). **D** The representative flow cytometry results of synovial fibroblasts and the statistic results ($n = 3$). **E**, **F** The western blot analysis of Collagen I, Collagen III, p-p38, Caspase-3 and Bax. The statistic results ($n = 3$) confirmed that the above proteins were higher expressed in the FS group, which were corresponding with the IHC results. *$P < 0.05$; **$P < 0.01$; ***$P < 0.001$; ****$P < 0.0001$. **G** Representative p-p38, Caspase-3 and Bax immuno-stained tissue sections in control and FS tissue. Scale Bar: 50 μM. **H** The statistics analysis of (**A**): the mean optical density (mean OD) of p-p38, Caspase-3 and Bax in the control and FS tissues ($n = 3$). *$P < 0.05$; **$P < 0.01$; ***$P < 0.001$; ****$P < 0.0001$. **I**, **J**, **K** The cell apoptosis was more active in FS group based on the Tunel staining (**I**) and flow cytometry analysis (**G**). Scale Bar: 200 μM. *$P < 0.05$; **$P < 0.01$; ***$P < 0.001$; ****$P < 0.0001$

The corrected Fig. 3 is shown here:

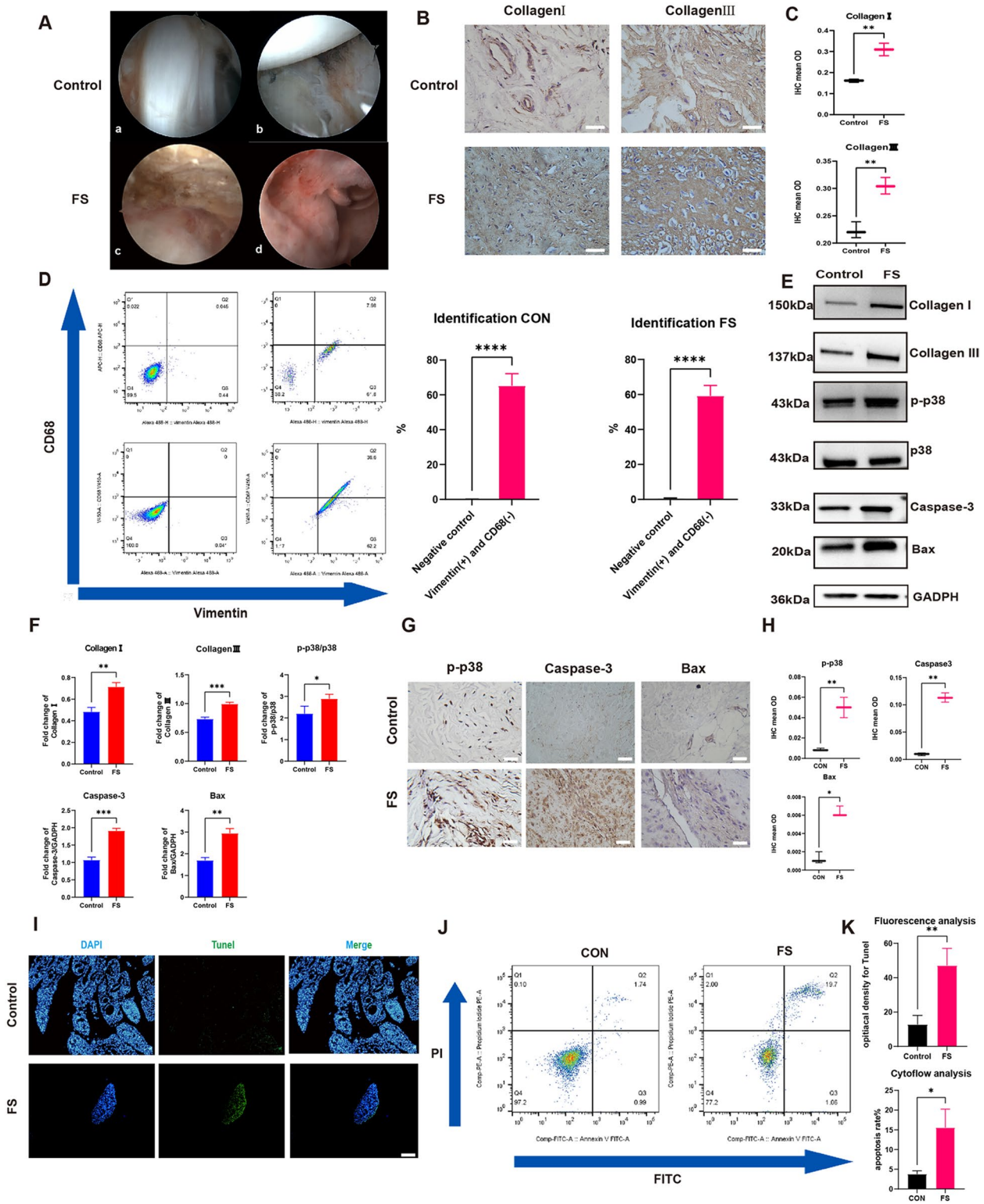

Fig. 3 (See legend on previous page.)

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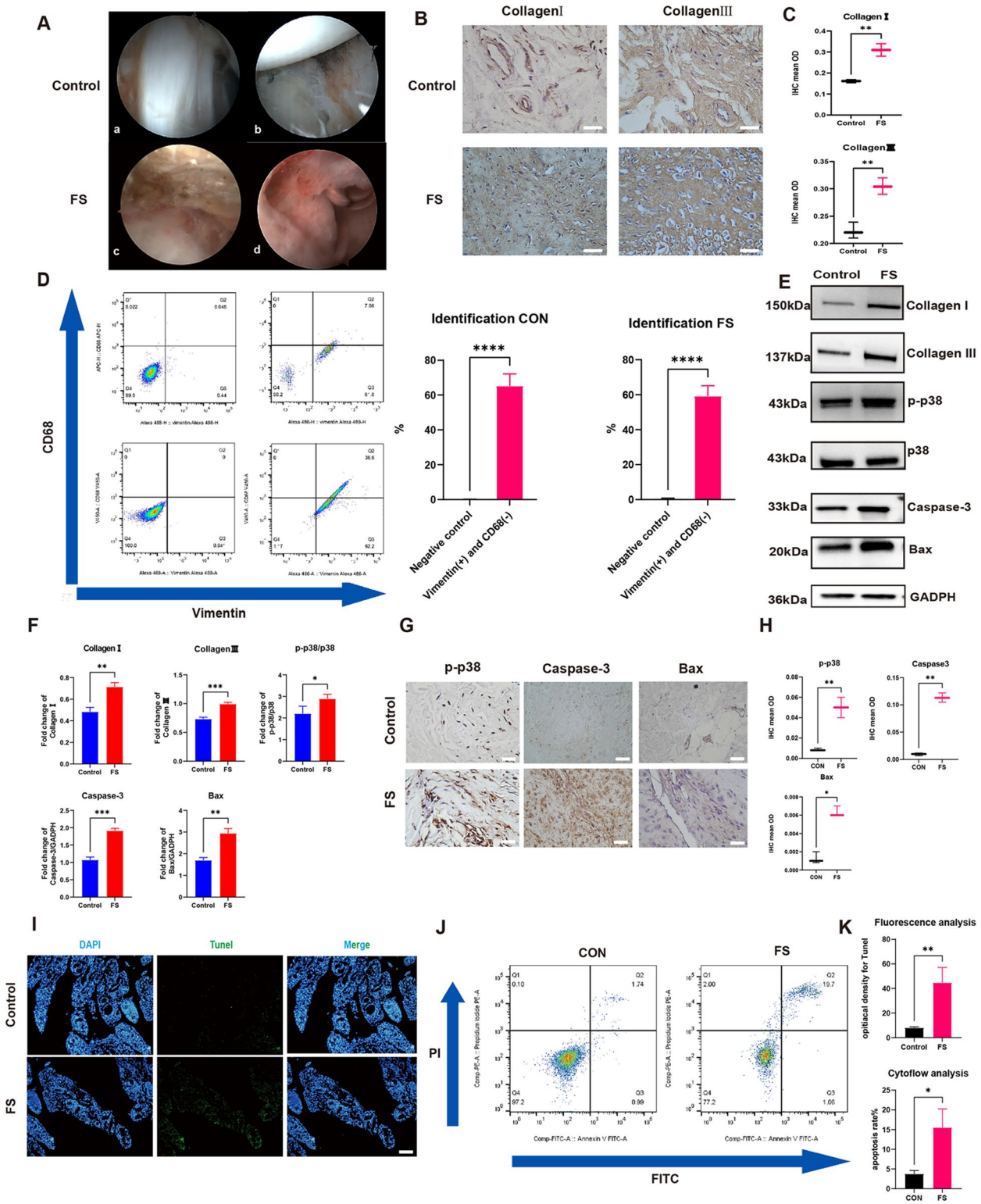

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Fig. 4 The TAK715 was safe and could reverse the fibrotic process of FS synovium fibroblasts and the inappropriate SFs apoptosis was inhibited during this process. Moreover, the TAK715 showed remarkable anti-inflammatory effects. **A** The flowchart of the fibrosis and inflammation experiments. **B** The CCK 8 analysis confirmed the TAK715 was safe for synovium fibroblasts at the concentration of 1 μM, 5 μM and 10 μM. **C**, **D** The western blot analysis of the TAK715 effect on reversing the fibrotic process of FS synovium fibroblasts. The statistic results ($n = 3$) confirmed that the TAK715 could reverse the fibrotic process of FS synovium fibroblasts at the final concentration of 1 μM, 5 μM and 10 μM. *$P < 0.05$; **$P < 0.01$; ***$P < 0.001$; ****$P < 0.0001$. **E** The transwell analysis confirmed the TAK715 could decrease the migration ability of FS synovium fibroblasts, which was consistent with the western-blot analysis. Scale bar: 1000 μM. *$P < 0.05$; **$P < 0.01$; ***$P < 0.001$; ****$P < 0.0001$. **F**, **G**, **H**, **I** the TAK715 could inhibit the FS synovium fibroblasts apoptosis at the effective concentration of 5 μM and 10 μM in western-blot (F)(H) and flow cytometry analysis (G)(I). **J** the flow cytometry of the TAK715 effect on inhibit the M1 polarization. **K**, **L** The western blot analysis of the TNF-α stimulating the control synovium fibroblasts into the fibrotic process and the TAK715 could inhibit this stimulation on synovium fibroblasts. The statistic results ($n = 3$) confirmed that the TNF-α could stimulate the control synovium fibroblasts into the fibrotic process at the final concentration of 100 ng/mL significantly and the TAK715 could inhibit this process at 5 μM effectively. M, N the confocal image showed that under the stimulation of TNF-α at 100 ng/mL the p65 enter the cell nuclear to perform the subsequent process and the TAK715 could interpose this process at 5 μM. Scale Bar: 50 μm. *$P < 0.05$; **$P < 0.01$; ***$P < 0.001$; ****$P < 0.0001$

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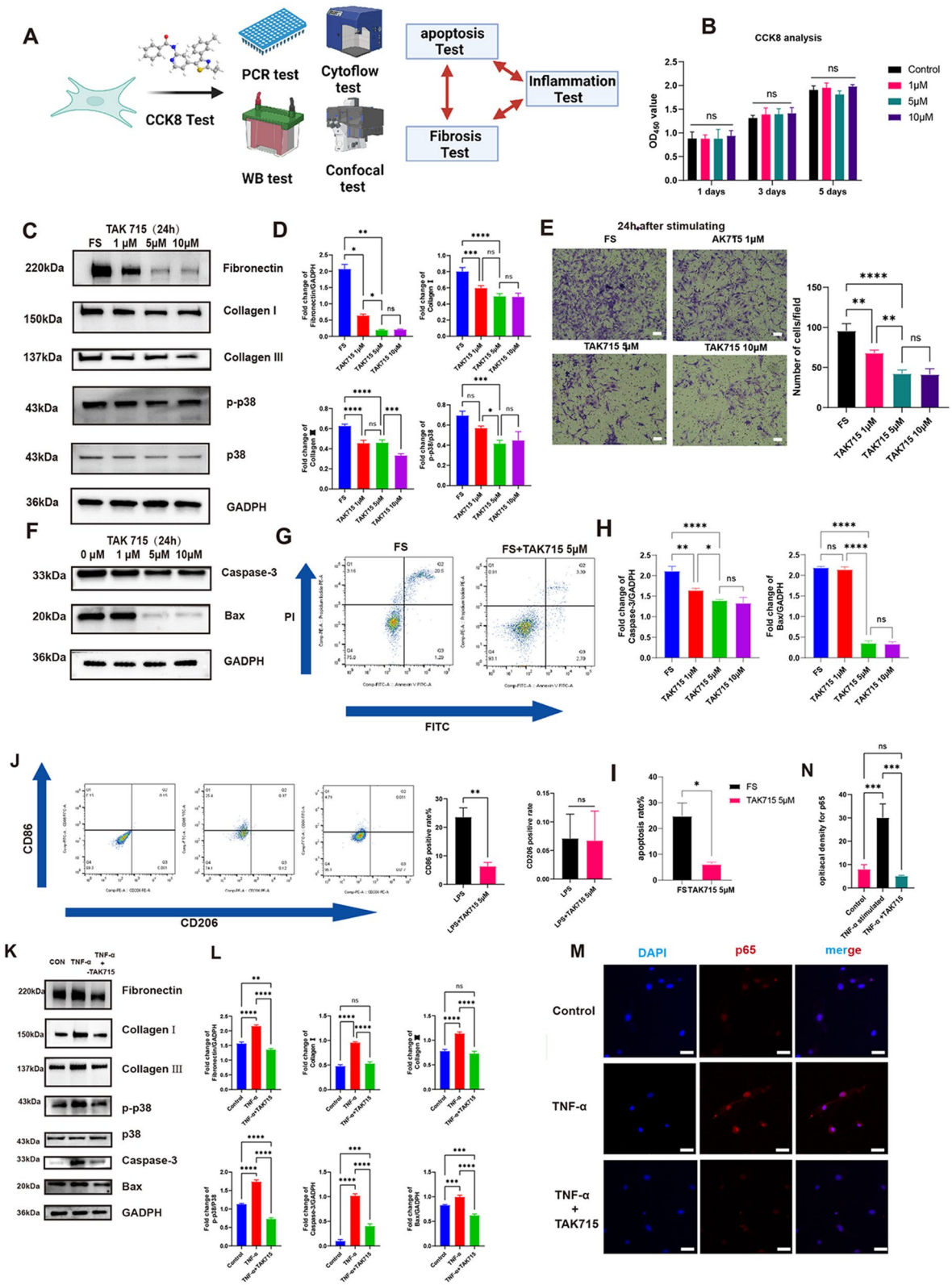

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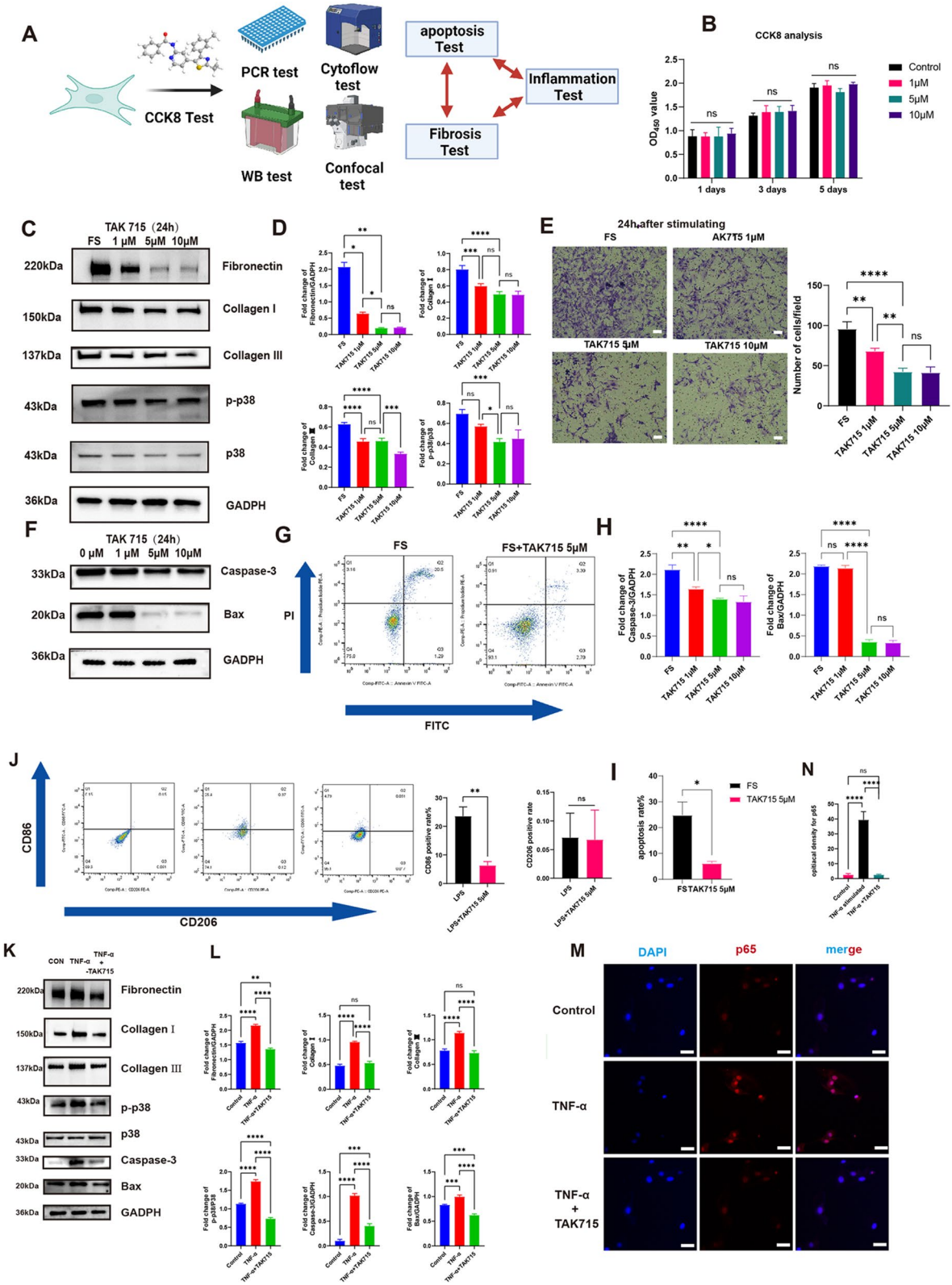

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Reference

1. Li X, Yan Y, Wang Z, et al. The link between osteoporosis and frozen shoulder: exploring the therapeutic effect of TAK715 on reversing fibrosis and protecting against osteoporosis via the p38 MAPK signaling pathway. BMC Musculoskelet Disord. 2024;25:942. https://doi.org/10.1186/s12891-024-08068-8.